GRE JAN 2016

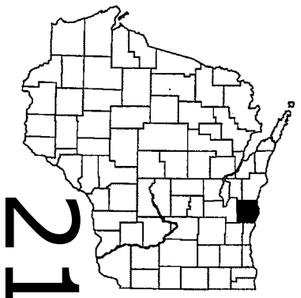
PROJECT ID: 4540-23-71

WITH: N/A

COUNTY: SHEBOYGAN

ORDER OF SHEETS

TOTAL SHEETS = 208



21

DESIGN DESIGNATION

A.A.D.T.	2015	=	11,900
A.A.D.T.	2035	=	16,000
D.H.V.		=	1,780
D.D.		=	58/42
T.		=	5.6%
DESIGN SPEED		=	50 MPH
ESALS		=	2,321,400

CONVENTIONAL SYMBOLS

COUNTY LINE
CORPORATE LIMITS
PROPERTY LINE
LIMITED EASEMENT
EXISTING RIGHT OF WAY
PROPOSED OR NEW R/W LINE
FENCE
GUARD RAIL
SLOPE INTERCEPT
ORIGINAL GROUND
MARSH OR ROCK PROFILE (To be noted as such) — ROCK
MARSH AREA
WOODED OR SHRUB AREA
STREAM OR WATER EDGE
BUSH
PINE TREE (SIZE)
TREE (SIZE)
TRAFFIC SIGNAL CONTROL CABINET
TRAFFIC SIGNAL
TRAFFIC SIGNAL MAST-ARM
TRAFFIC SIGNAL WITH LIGHT
EXISTING PULL BOX
BOLLARD

COMBUSTIBLE FLUIDS — CAUTION
UNDERGROUND UTILITIES
GAS — (SIZE) G
SANITARY SEWER — (SIZE) SAN
STORM SEWER — (SIZE) SS
WATER — (SIZE) W
ELECTRIC — E
TELEPHONE — T
FIBER OPTIC — FO
CABLE TELEVISION — TV
FORCE MAIN — FM
MANHOLE — MH
UTILITY PEDESTAL
FIBER OPTIC HAND HOLE — HH
POWER POLE
TELEPHONE POLE
RAILROAD
HYDRANT
LIGHT POLE
RAILROAD SIGNAL
SIGN
TRANSMISSION TOWER
VALVE — (TYPE)
CURB STOP — CS
EXISTING CULVERT — (SIZE, TYPE)
PROPOSED CULVERT (Box or Pipe)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CITY OF SHEBOYGAN FALLS

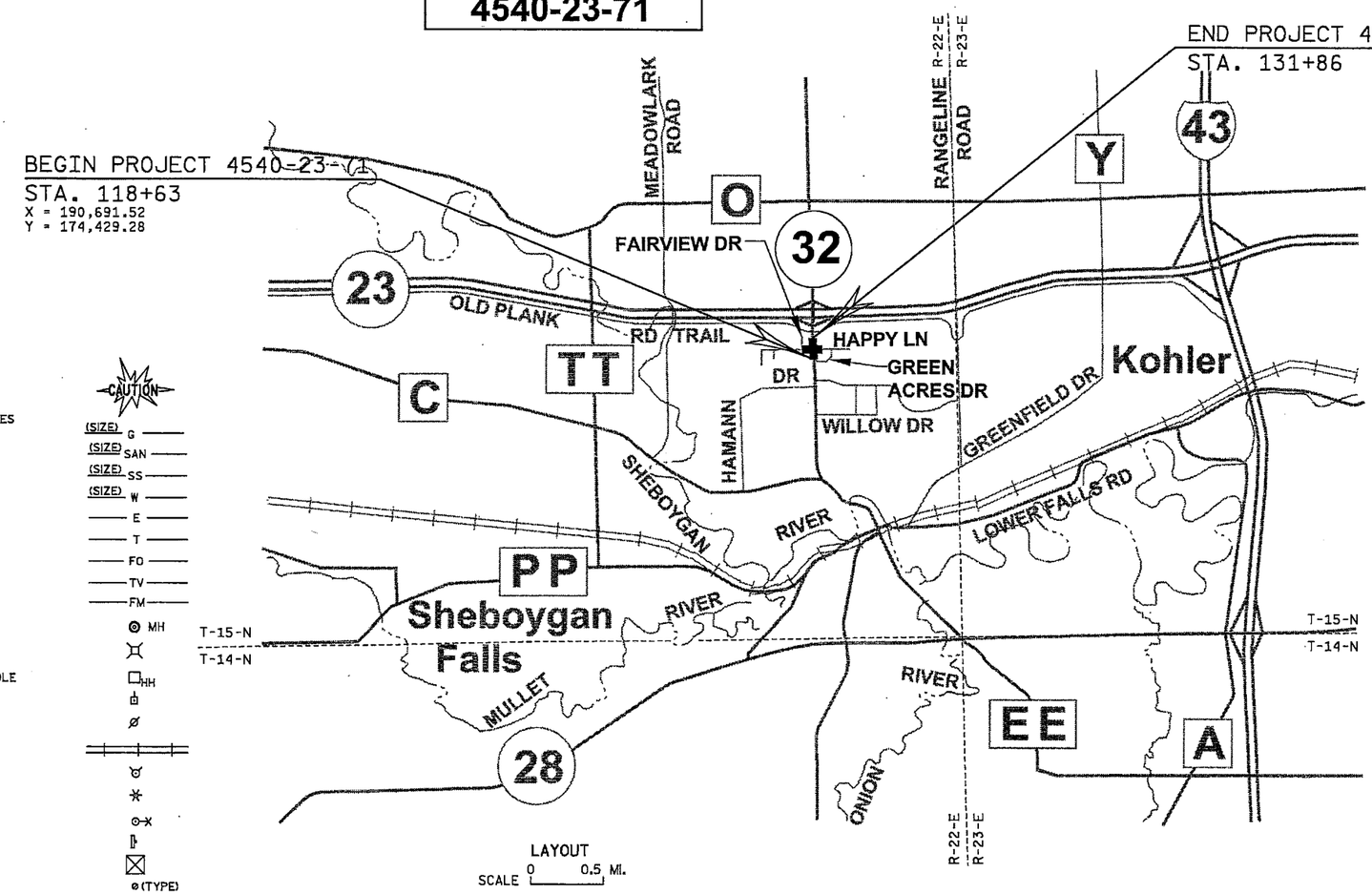
STH 32 & HAPPY LANE INTERSECTION

STH 32

SHEBOYGAN COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4540-23-71		

STATE PROJECT NUMBER
4540-23-71



TOTAL NET LENGTH OF CENTERLINE = 0.251 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), SHEBOYGAN COUNTY, NAD83 (1997).

VERTICAL DATUM: NAVD88 (1991)

ORIGINAL PLANS PREPARED BY

R.A. Smith National

Beyond Surveying and Engineering

16745 W. Bluemound Road, Brookfield WI 53005
262-781-1000 Fax 262-781-8468
www.rasmithnational.com

WISCONSIN
BRAD E. SEVERSON
E-39758
APPLETON
WISCONSIN
PROFESSIONAL ENGINEER

10/23/2014 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	R.A. SMITH NATIONAL (DMS/BES)
Project Manager	PAUL BRAUER
Regional Examiner	
Regional Supervisor	ROBERT WAGNER

APPROVED FOR THE DEPARTMENT
DATE: 10/24/2014 (Signature)

E

2

GENERAL NOTES

1 THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS IN THE AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK.

2 SEE SUBSURFACE EXPLORATION REPORTS FOR SOIL BORING INFORMATION. REPORTS ARE AVAILABLE FROM THE WISDOT NE REGION BY CONTACTING PAUL BRAUER, PROJECT MANAGER, PHONE (920) 492-0135

3 THE EXACT LOCATION OF PRIVATE ENTRANCES AND DRIVEWAYS IS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

4 ALL OPENINGS OF HOLES BELOW SUBGRADE RESULTING FROM REMOVALS OR ABANDONMENTS SHALL BE BACKFILLED WITH GRANULAR BACKFILL.

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

6 PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL FIELD VERIFY RELATED DRAINAGE INFORMATION IN THE PLANS AND PROVIDE DOCUMENTATION TO THE ENGINEER IN ACCORDANCE WITH THE SPECIFICATIONS.

ORDER OF SECTION 2 SHEETS

2

DESIGNER

R.A.SMITH NATIONAL, INC
100 WEST LAWRENCE STREET, SUITE 412
APPLETON, WI 54911
MR. BRAD SEVERSON, P.E.
PROJECT ENGINEER
(920) 731-8397, EXT. 3410
brad.severson@rasmithnational.com

DNR LIAISON

WISCONSIN DEPT OF NATURAL RESOURCES
DNR NORTHEAST REGIONAL HEADQUARTERS
2984 SHAWANO AVE
GREEN BAY, WI 54313
JAY SCHIEFELBEIN
(920) 662-5130
jeremiah.schiefelbein@wisconsin.gov

UTILITY CONTACTS

JOEL TAUSCHEK
SHEBOYGAN FALLS UTILITIES - ELECTRIC
375 BUFFALO STREET
PO BOX 186
SHEBOYGAN FALLS, WI 53085
(920) 467-7900
joel@shebfalls.com

TOM HARYCKI
CHARTER COMMUNICATIONS - COMMUNICATION LINE
2312 CONTINENTAL DRIVE
WEST BEND, WI 53095
(262) 306-8756 EXT. 20702
tharycki@chartercom.com

JERRY BENSZSCHAWEL
SHEBOYGAN FALLS UTILITIES - SEWER/WATER
111 HAMANN DRIVE
SHEBOYGAN FALLS, WI 53085
(920) 467-7901 EXT. 301
920-980-7817 (MOBILE)

CHARLES BARTELT
AT&T WISCONSIN - COMMUNICATION LINE
70 E DIVISION STREET
FOND DU LAC, WI 54935
(920) 929-1013
cb1461@att.com

MIKE LOWTHER
WISCONSIN PUBLIC SERVICE CORPORATION - GAS/PETROLEUM
933 S WILDWOOD AVE
SHEBOYGAN, WI 53081
(920) 451-3743
mllowther@wisconsinpublicservice.com
.

2

STH 23 EB OFFRAMP

OLD PLANK ROAD TRAIL

STH 23 EB ONRAMP

OLD PLANK ROAD TRAIL

N

2

END PROJECT 4540-23-71
STA. 131+86
MATCH EXISTING

TOWN OF SHEBOYGAN FALLS

WETLAND LIMITS

NON-JURISDICTIONAL WETLANDS (ARTIFICIAL)

PROPOSED TEMPORARY ACCESS ROAD

FAIRVIEW DRIVE (PRIVATE ROAD)

BP GAS STATION/ MC DONALD'S

BEGIN CONSTRUCTION
STA. 54+30
MATCH EXISTING

NON-JURISDICTIONAL WETLANDS (ARTIFICIAL)

SINGLE LANE ROUNDABOUT

END CONSTRUCTION
STA. 61+38
MATCH EXISTING

HAPPY LANE

CHANGE ACCESS TO RIGHT IN/RIGHT OUT ONLY

HARRIS BANK

END CONSTRUCTION
STA. 13+20

BEGIN CONSTRUCTION
STA. 12+15
MATCH EXISTING

PRIVATE ROAD

STH 32

GREEN ACRES DRIVE

CITY OF SHEBOYGAN FALLS

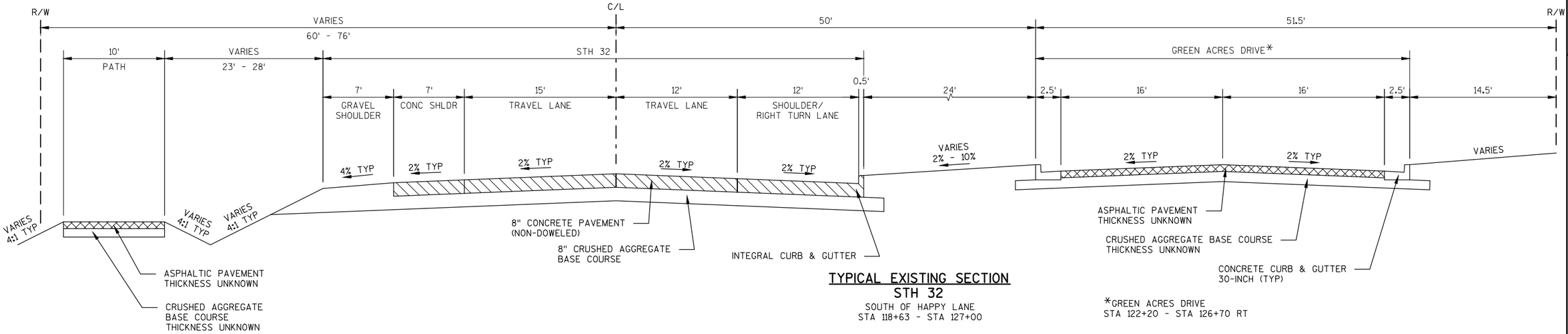
PROPOSED TEMPORARY ACCESS ROAD

BEGIN PROJECT 4540-23-71
STA. 118+63
MATCH EXISTING

PRIVATE ROAD

NON-JURISDICTIONAL WETLANDS (ARTIFICIAL)

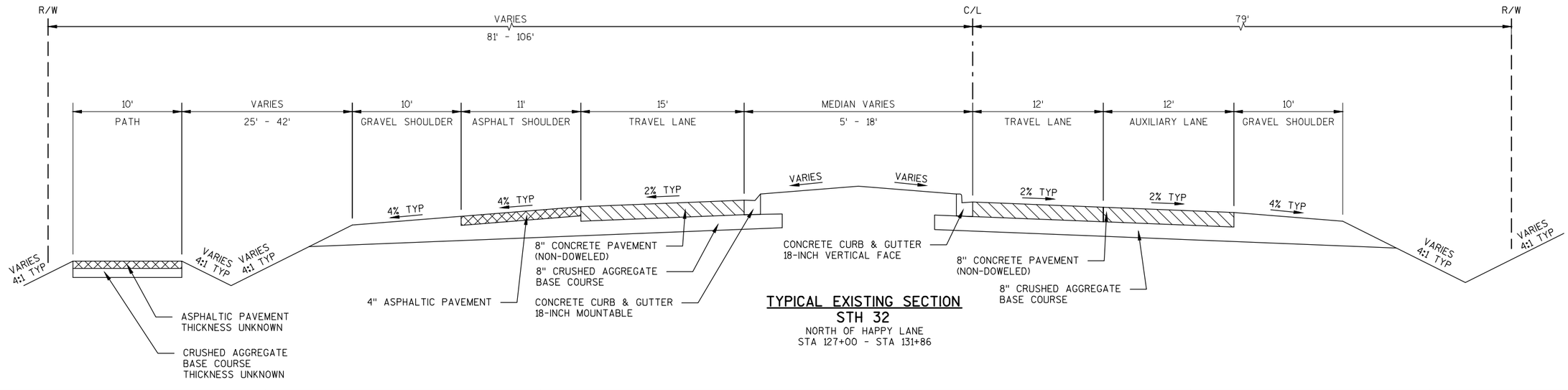
PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PROJECT OVERVIEW	SHEET 3	E



TYPICAL EXISTING SECTION
STH 32

SOUTH OF HAPPY LANE
STA 118+63 - STA 127+00

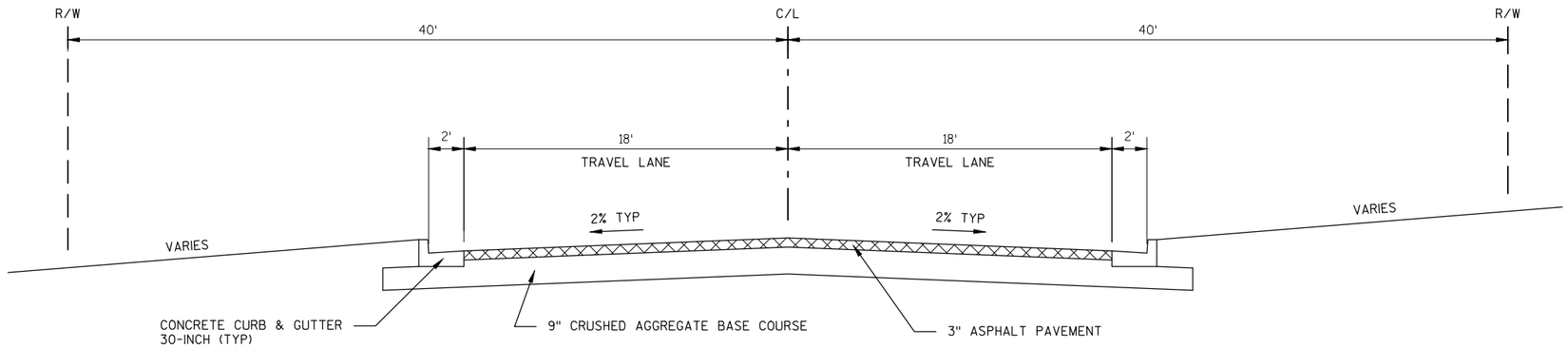
*GREEN ACRES DRIVE
STA 122+20 - STA 126+70 RT



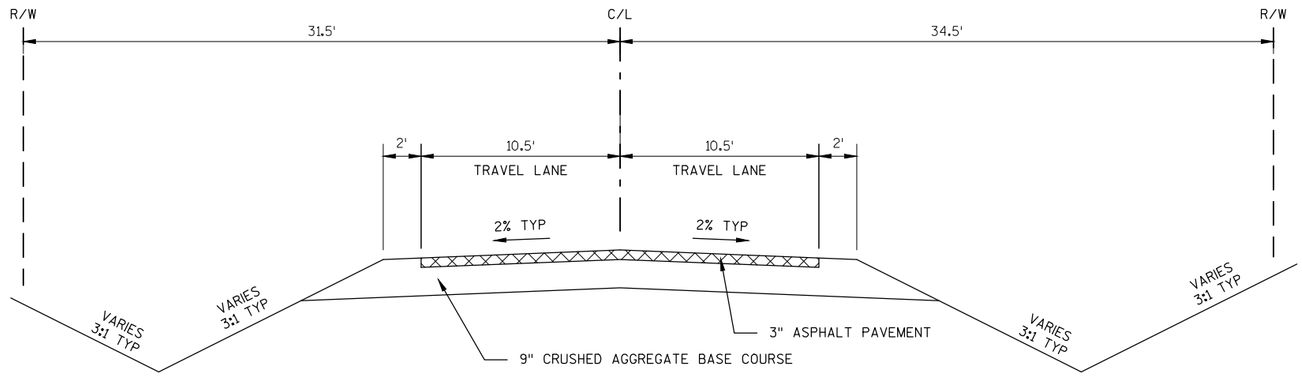
TYPICAL EXISTING SECTION
STH 32

NORTH OF HAPPY LANE
STA 127+00 - STA 131+86

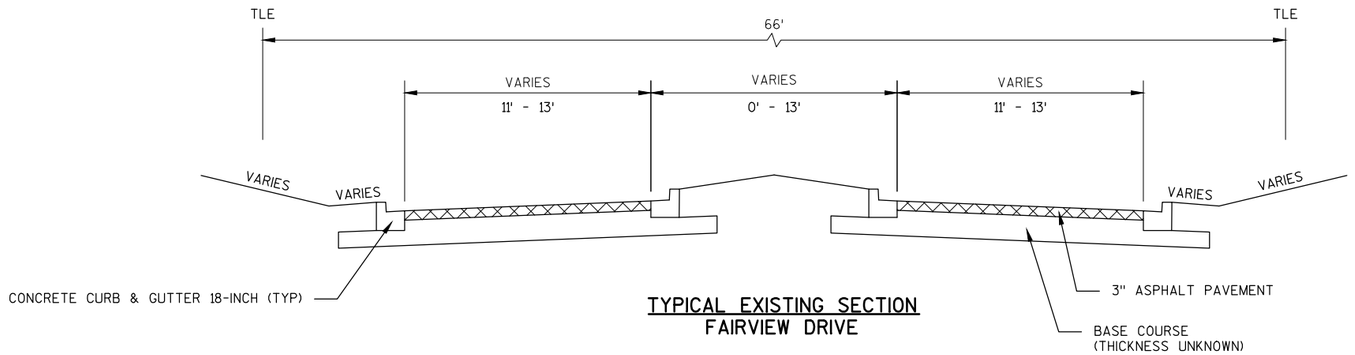
PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SCALE, FEET 0 NTS	SHEET 4	E



TYPICAL EXISTING SECTION
HAPPY LANE
STA 54+30 - STA 57+50

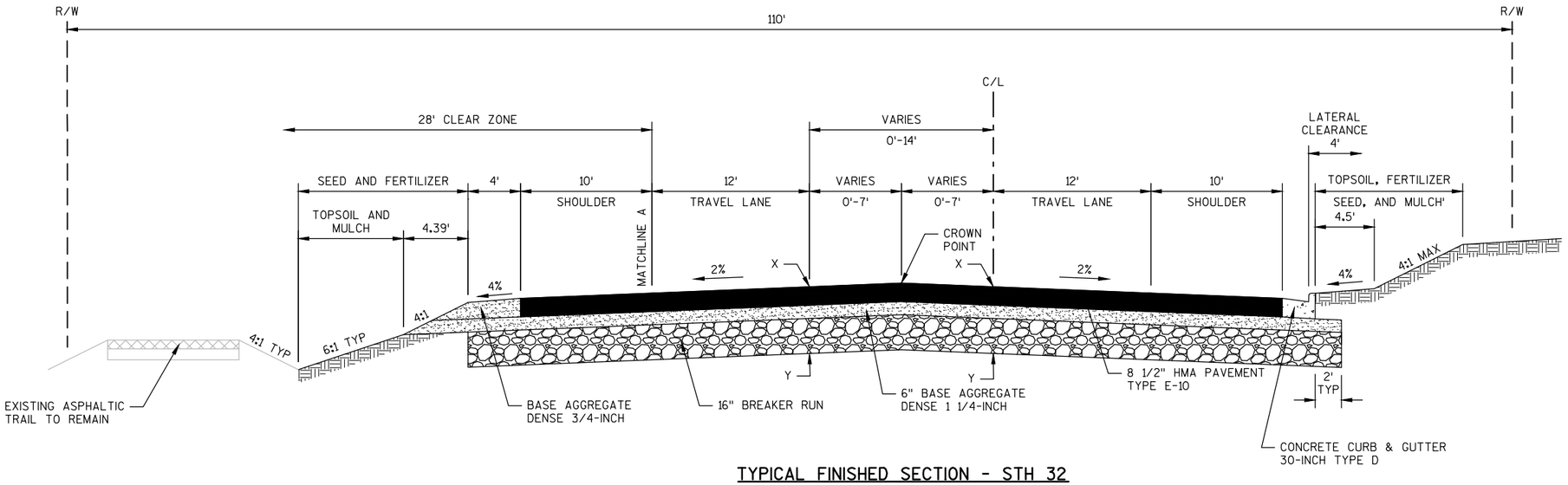


TYPICAL EXISTING SECTION
HAPPY LANE
STA 57+50 - STA 61+38



TYPICAL EXISTING SECTION
FAIRVIEW DRIVE

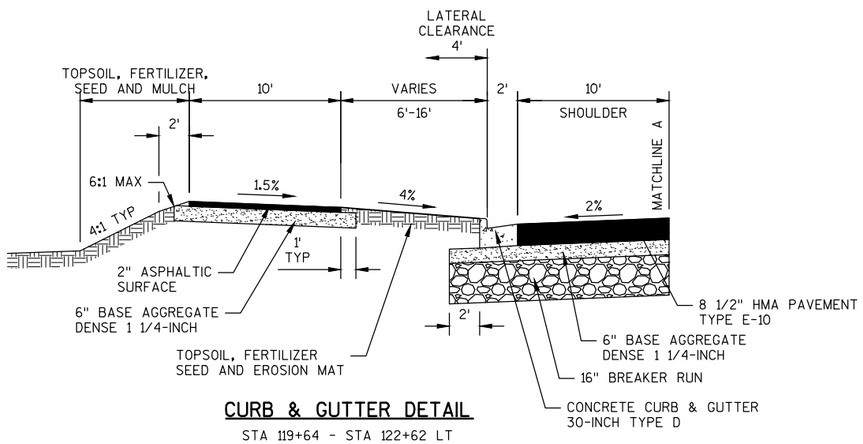
PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SCALE, FEET 0 NTS	SHEET 5	E



TYPICAL FINISHED SECTION - STH 32

STA 118+63 - STA 122+62

"X" = POINTS REFERRED TO ON PROFILE
"Y" = POINTS REFERRED TO ON CROSS SECTIONS



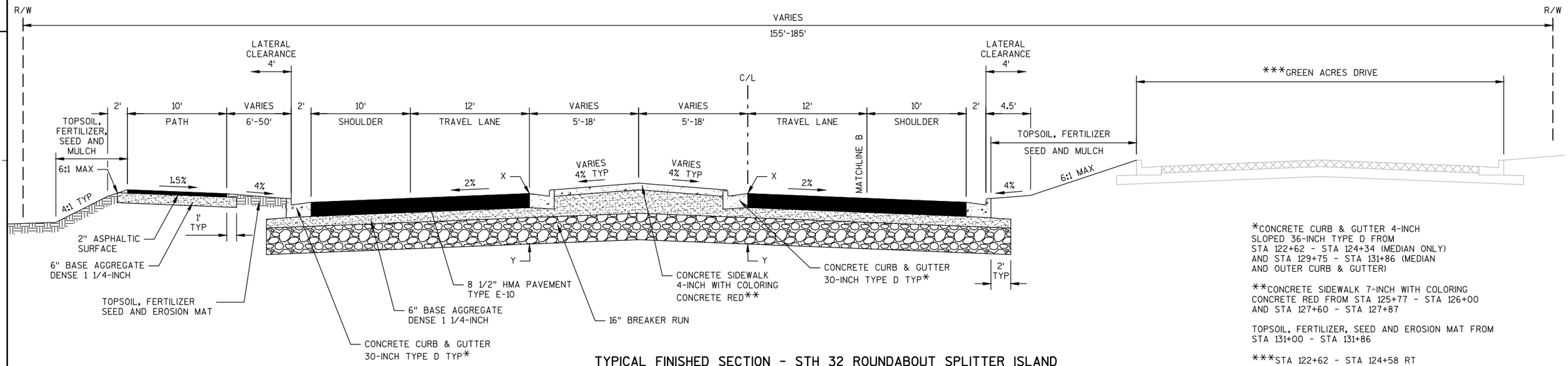
CURB & GUTTER DETAIL

STA 119+64 - STA 122+62 LT

HMA PAVEMENT TYPE E-10 SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

THICKNESS	LAYERS	NOM MAX SIZE GRADATION	ASPHALTIC MATERIAL
8 1/2-INCH	ONE 2" UPPER LAYER TWO 3 1/4" LOWER LAYERS	12.5mm 19.0mm	PG64-28 PG64-28

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SCALE, FEET 0 NTS	SHEET 6	E



TYPICAL FINISHED SECTION - STH 32 ROUNDABOUT SPLITTER ISLAND

SECTION A-A
STA 122+62 - STA 126+00
STA 127+60 - STA 131+86

*CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D FROM STA 122+62 - STA 124+34 (MEDIAN ONLY) AND STA 129+75 - STA 131+86 (MEDIAN AND OUTER CURB & GUTTER)

**CONCRETE SIDEWALK 7-INCH WITH COLORING CONCRETE RED FROM STA 125+77 - STA 126+00 AND STA 127+60 - STA 127+87

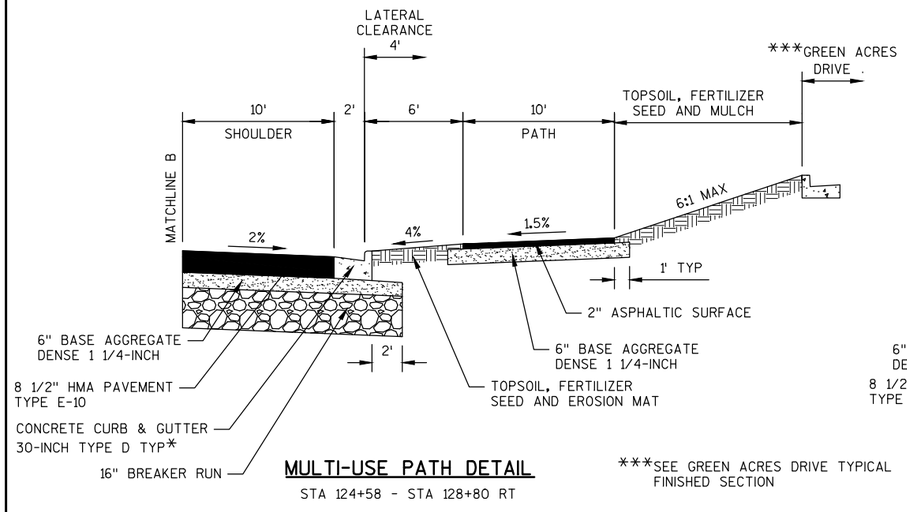
TOPSOIL, FERTILIZER, SEED AND EROSION MAT FROM STA 131+00 - STA 131+86

***STA 122+62 - STA 124+58 RT

"X" = POINTS REFERRED TO ON PROFILE
"Y" = POINTS REFERRED TO ON CROSS SECTIONS

. HMA PAVEMENT TYPE E-10 SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

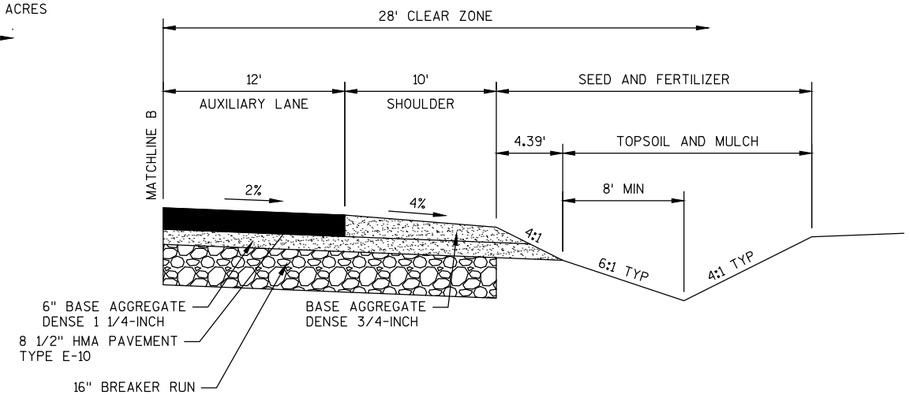
THICKNESS	LAYERS	NOM MAX SIZE GRADATION	ASPHALTIC MATERIAL
8 1/2-INCH	ONE 2" UPPER LAYER TWO 3 1/4" LOWER LAYERS	12.5mm 19.0mm	PG64-28 PG64-28



MULTI-USE PATH DETAIL

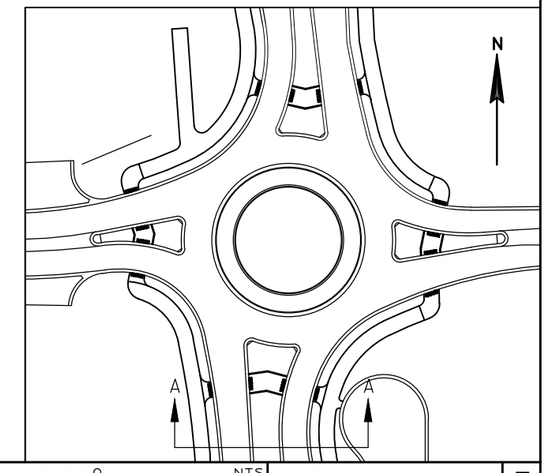
STA 124+58 - STA 128+80 RT

***SEE GREEN ACRES DRIVE TYPICAL FINISHED SECTION

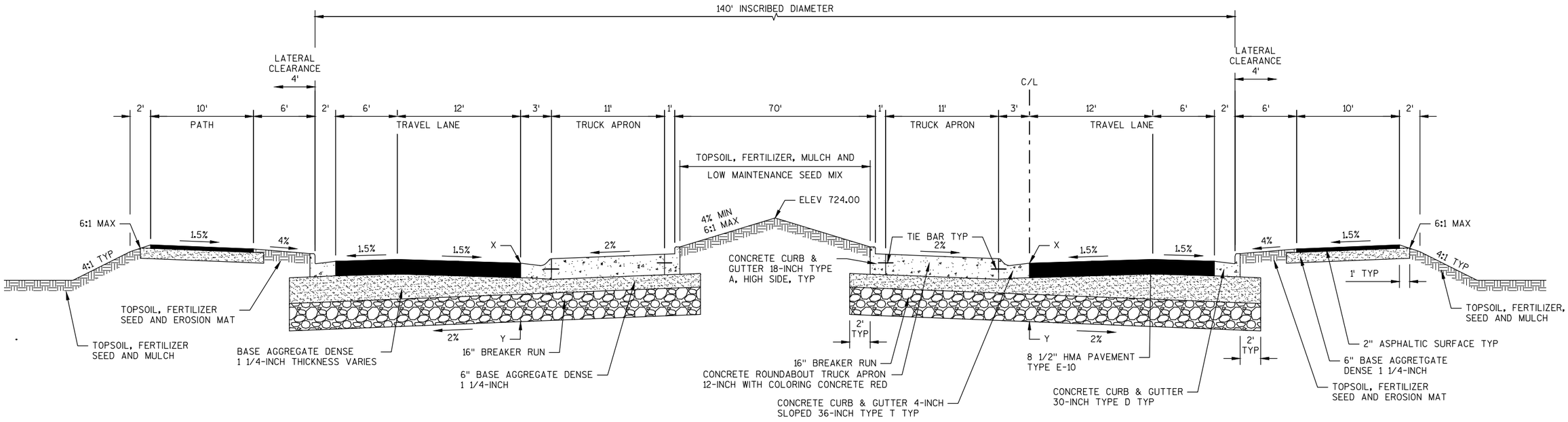


RURAL SHOULDER DETAIL

STA 128+80 - STA 131+86 RT



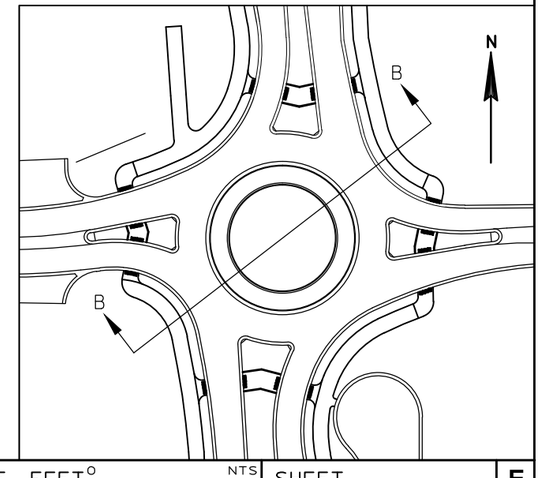
PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SCALE, FEET 0 NTS	SHEET 7	E



TYPICAL FINISHED SECTION - ROUNDABOUT

SECTION B-B

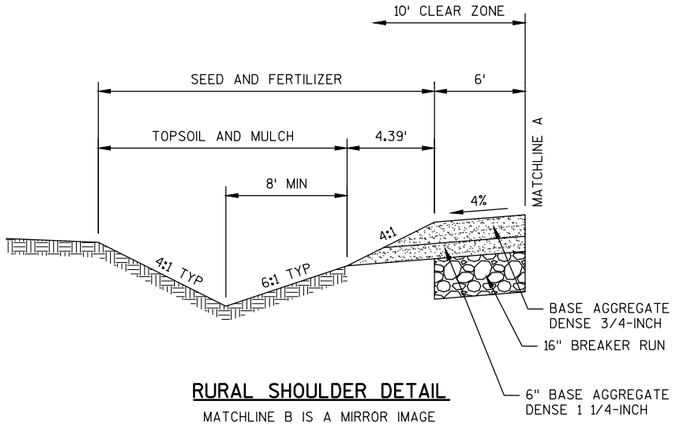
"X" = POINTS REFERRED TO ON PROFILE
"Y" = POINTS REFERRED TO ON CROSS SECTIONS



HMA PAVEMENT TYPE E-10 SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

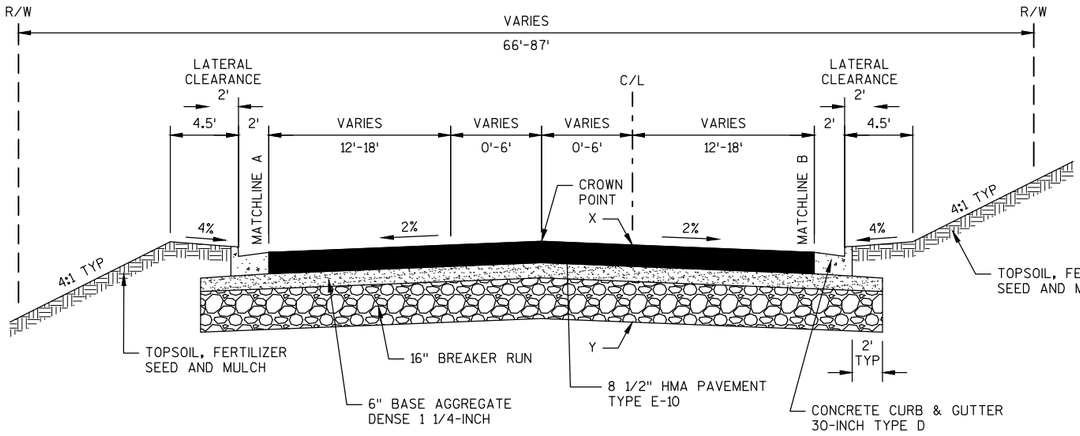
THICKNESS	LAYERS	NOM MAX SIZE GRADATION	ASPHALTIC MATERIAL
8 1/2-INCH	ONE 2" UPPER LAYER TWO 3 1/4" LOWER LAYERS	12.5mm 19.0mm	PG64-28 PG64-28

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SCALE, FEET 0 NTS	SHEET 8	E



RURAL SHOULDER DETAIL

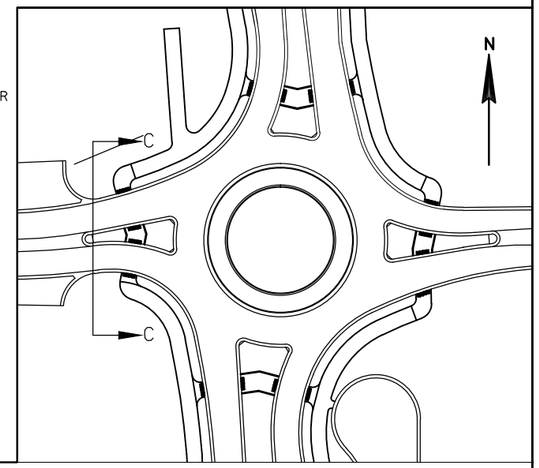
MATCHLINE B IS A MIRROR IMAGE
STA 60+10 - STA 61+38 LT
STA 60+67 - STA 61+38 RT

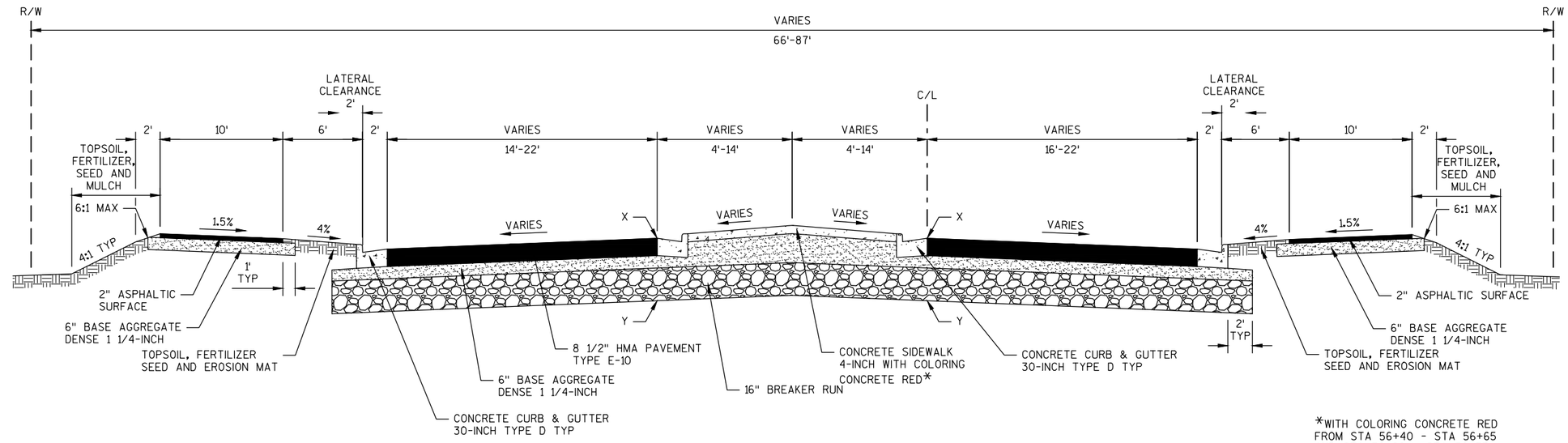


TYPICAL FINISHED SECTION - HAPPY LANE

STA 54+30 - STA 56+05
STA 59+04 - STA 61+38

"X" = POINTS REFERRED TO ON PROFILE
"Y" = POINTS REFERRED TO ON CROSS SECTIONS





HMA PAVEMENT TYPE E-10 SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

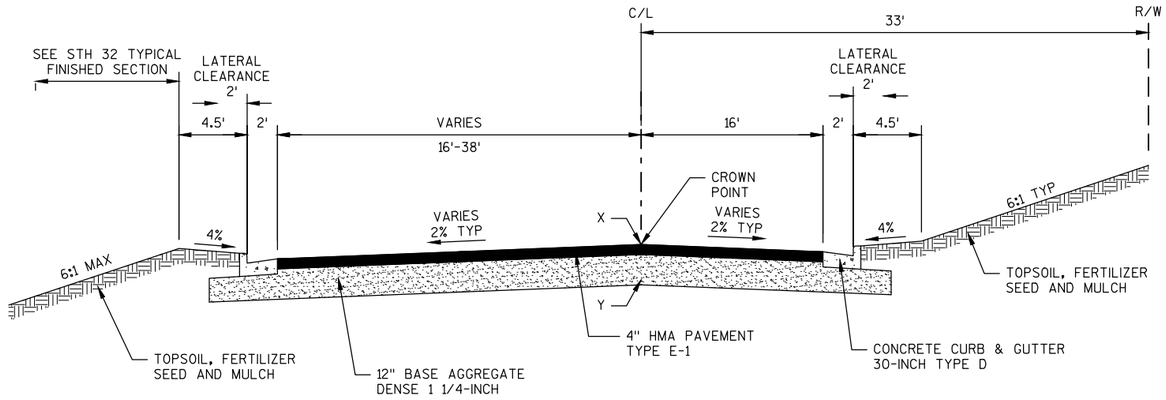
THICKNESS	LAYERS	NOM MAX SIZE GRADATION	ASPHALTIC MATERIAL
8 1/2-INCH	ONE 2" UPPER LAYER TWO 3 1/4" LOWER LAYERS	12.5mm 19.0mm	PG64-28 PG64-28

TYPICAL FINISHED SECTION - HAPPY LANE ROUNDABOUT SPLITTER ISLAND

SECTION C-C
STA 56+05 - STA 56+65
STA 58+28 - STA 59+04

*WITH COLORING CONCRETE RED FROM STA 56+40 - STA 56+65 AND STA 58+28 - STA 58+53

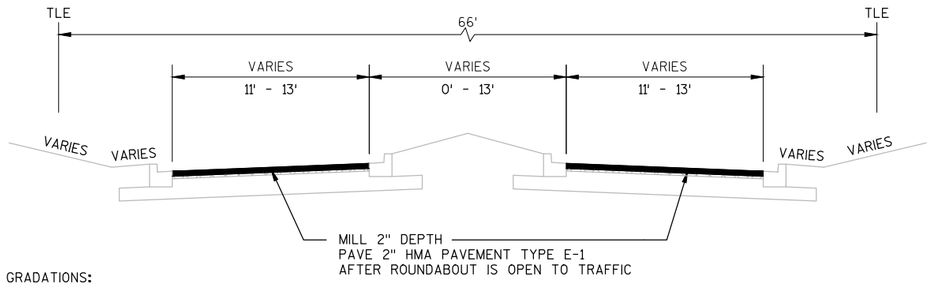
"X" = POINTS REFERRED TO ON PROFILE
"Y" = POINTS REFERRED TO ON CROSS SECTIONS



TYPICAL FINISHED SECTION - GREEN ACRES DRIVE

STA 12+15 - STA 13+20

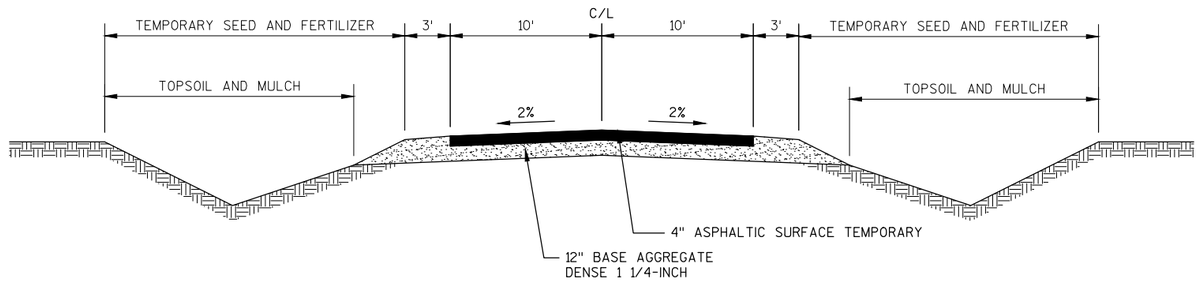
"X" = POINTS REFERRED TO ON PROFILE
"Y" = POINTS REFERRED TO ON CROSS SECTIONS



TYPICAL FINISHED SECTION
FAIRVIEW DRIVE

HMA PAVEMENT TYPE E-1 SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

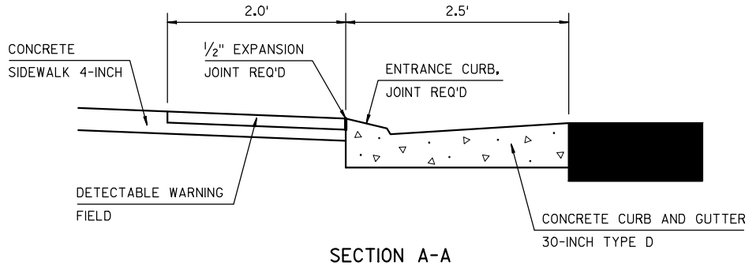
THICKNESS	LAYERS	NOM MAX SIZE GRADATION	ASPHALTIC MATERIAL
2-INCH	ONE 2" UPPER LAYER	12.5mm	PG64-28
4-INCH	ONE 1 3/4" UPPER LAYER ONE 2 1/4" LOWER LAYER	12.5mm 19.0mm	PG64-28 PG64-28



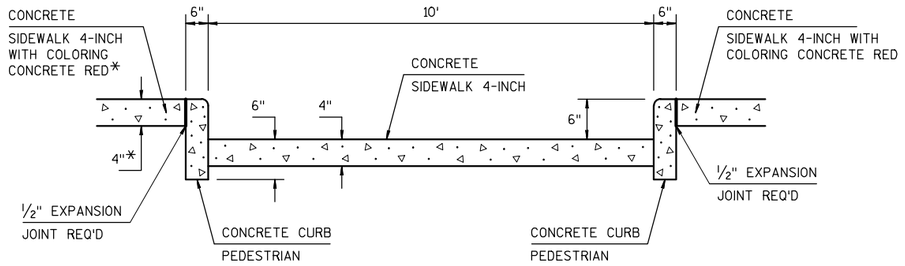
TEMPORARY ACCESS ROADS

NE QUADRANT STA 20+11 - STA 23+93
NW QUADRANT STA 10+24 - STA 14+02

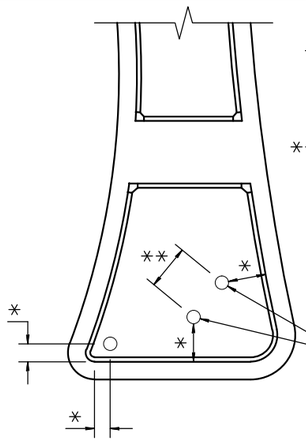
PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SCALE, FEET 0 NTS	SHEET 10	E



SECTION A-A



SECTION B-B



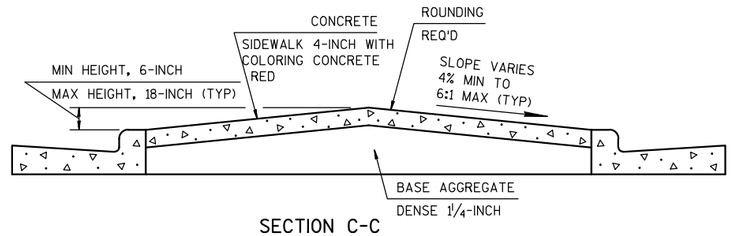
* DISTANCE TO BE LAID OUT IN THE FIELD BASED ON SIGN SIZE. TWO FOOT MINIMUM CLEARANCE BETWEEN THE EDGE OF SIGN AND THE FACE OF CURB.

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

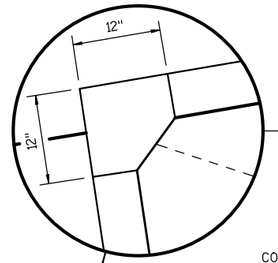
USE A 18-INCH MINIMUM INSIDE DIAMETER PVC PIPE BOX OUT IN CONCRETE FOR SIGN POST (TYP). THE NUMBER OF BOX OUTS REQUIRED VARIES BY WIDTH OF THE SIGN AND SHALL BE VERIFIED BEFORE PLACING THE CONCRETE IN THE ISLAND.

ISLAND SIGN LOCATION DETAIL (TYP)

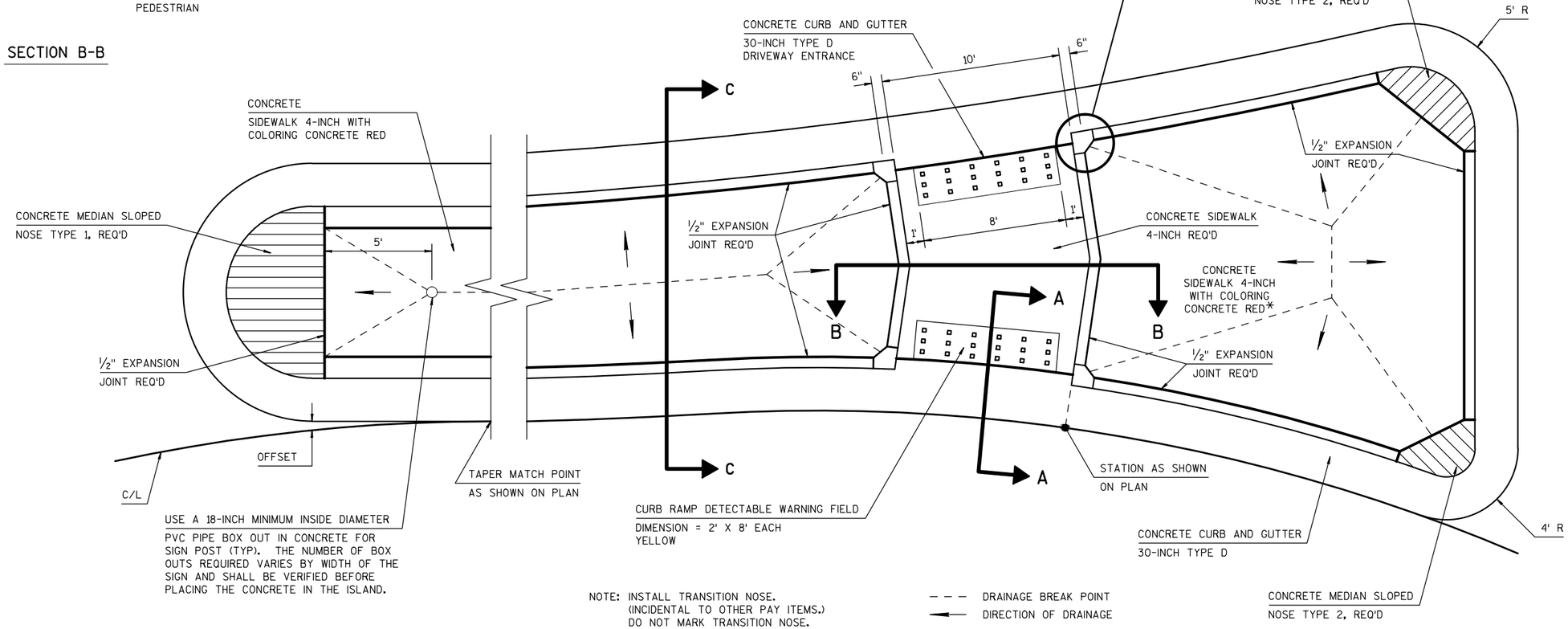
NOTIFY THE REGIONAL TRAFFIC UNIT AT 920-492-5653 A MINIMUM OF TWO WEEK PRIOR TO THE NEED FOR SIGN PLACEMENT TO ALLOW FOR STAKING OF ANY PERMANENT SIGNING REQUIRED ON THE PROJECT.



SECTION C-C



TRANSITION NOSE TYPICAL
AT 4 CROSSWALK CORNERS



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.

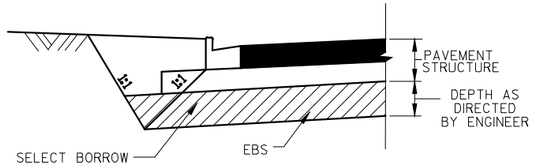
NOTE: INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

– – – DRAINAGE BREAK POINT

⟵ DIRECTION OF DRAINAGE

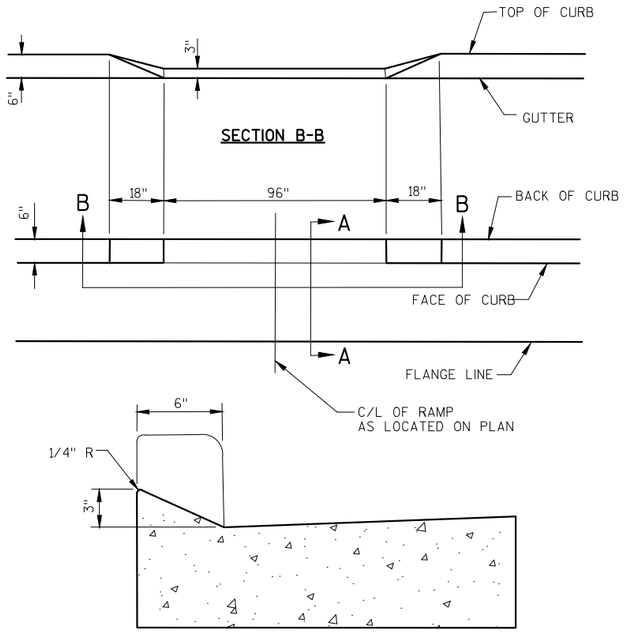
SPLITTER ISLAND DETAIL

*CONCRETE SIDEWALK 7-INCH WITH COLORING CONCRETE RED ON STH 32 STA 125+77 - STA 126+00 AND STA 127+60 - STA 127+87



NOTES: 1. THIS DETAIL TO BE USED AS DIRECTED BY ENGINEER FOR AREAS OF UNSTABLE SUBGRADE NOT SHOWN ON CROSS SECTIONS.
2. EBS SHALL BE PAID AS EXCAVATION COMMON.

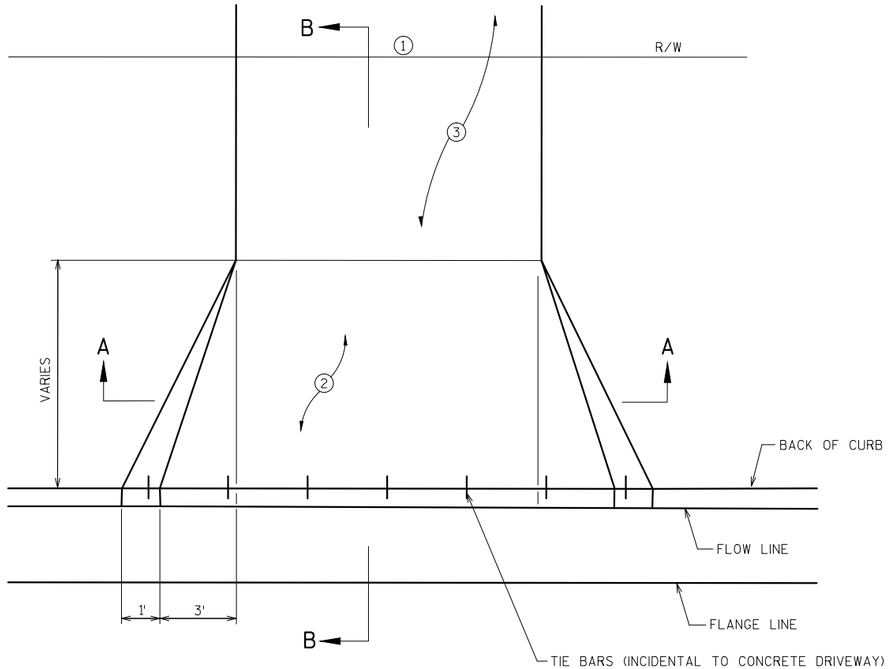
EXCAVATION BELOW SUBGRADE (EBS)



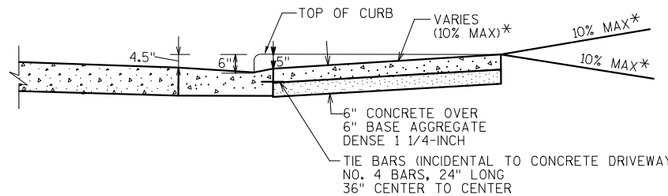
SECTION A-A

MAINTENANCE RAMP

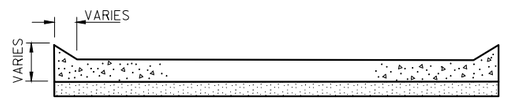
STA 127+35 LT, CENTRAL ISLAND



PLAN VIEW



SECTION B-B



SECTION A-A

NOTES:

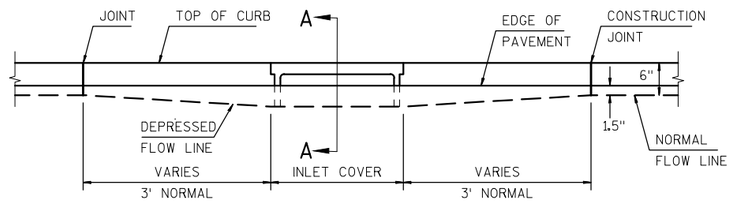
1. DRIVEWAY WIDTHS
   COMMERCIAL 35' MAX 12' MIN
   NON-COMMERCIAL 24' MAX 12' MIN
2. ALL DRIVEWAY APPROACHES SHALL BE 7" CONCRETE ON 4" BASE AGGREGATE DENSE 1 1/4-INCH.
3. DRIVEWAY SURFACE SHALL BE REPLACED IN-KIND WITH MINIMUM SECTION OF:
   ASPHALT - 4" ASPHALTIC SURFACE FOR DRIVEWAYS AND FIELD ENTRANCES ON 4" BASE AGGREGATE DENSE 1 ¼-INCH
   CONCRETE - 6" CONCRETE ON 6" BASE AGGREGATE DENSE 1 1/4-INCH
   BASE AGGREGATE - 6" BASE AGGREGATE DENSE ¾-INCH

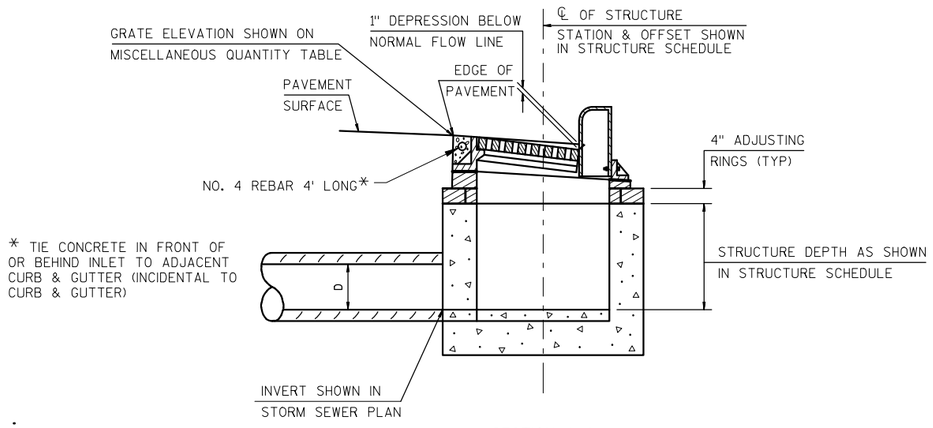
* 14% MAX GRADE BREAK IN FILL

URBAN DRIVEWAY DETAIL

HAPPY LANE
STA 59+79 RT
STA 60+43 RT

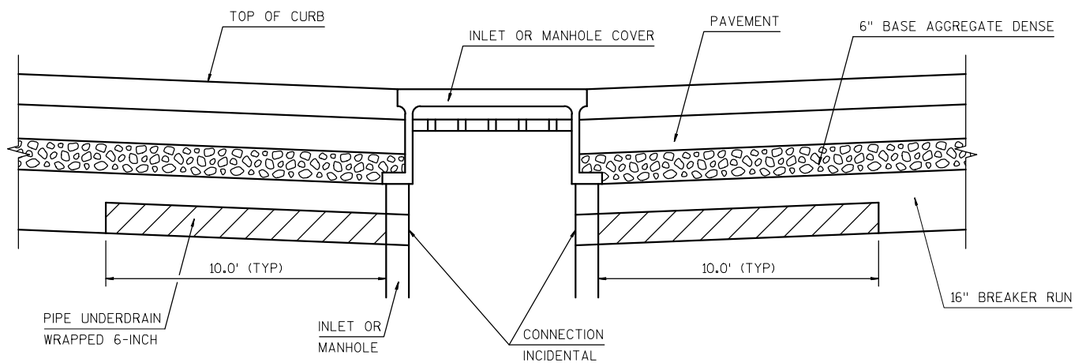
GREEN ACRES DRIVE
STA 12+30 RT





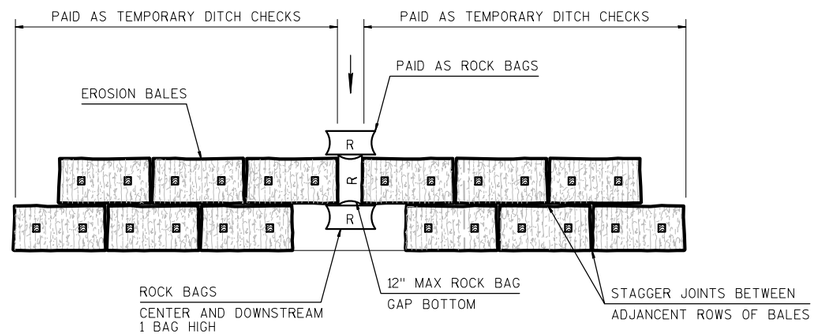
SECTION A-A

DETAIL OF CURB AND GUTTER AT INLETS

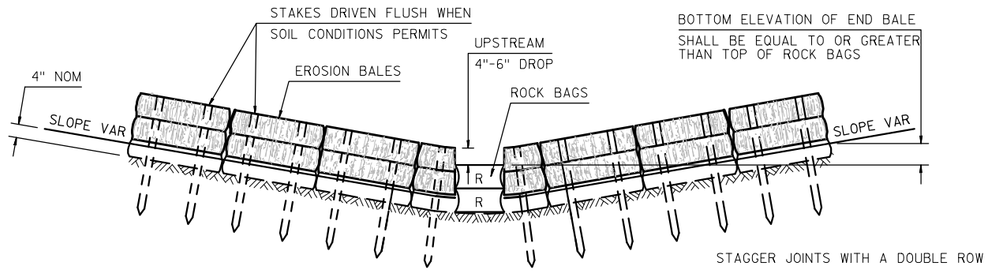


PIPE UNDERDRAIN DETAIL

STORM STRUCTURES 7, 7A, 12A, 12B, 12C, 12D, 13A, 13B, 14, & 14A
SEE STORM SEWER PLAN FOR LOCATIONS



PLAN VIEW

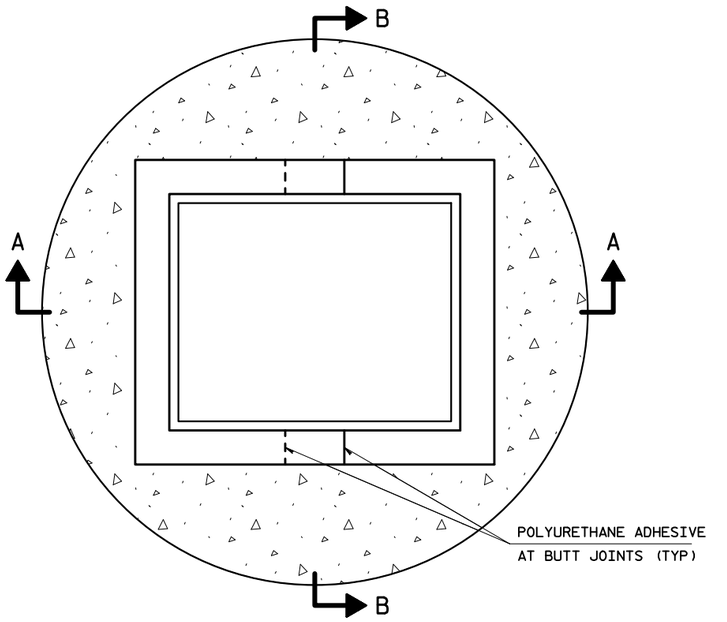


FRONT ELEVATION

GENERAL NOTES

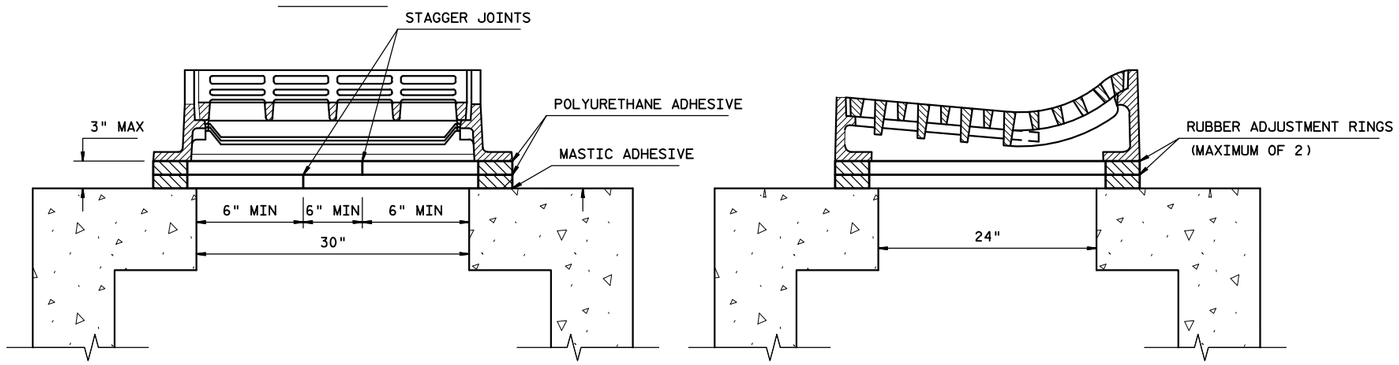
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

TEMPORARY DITCH CHECKS WITH ROCK BAG RELIEF



PLAN VIEW

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

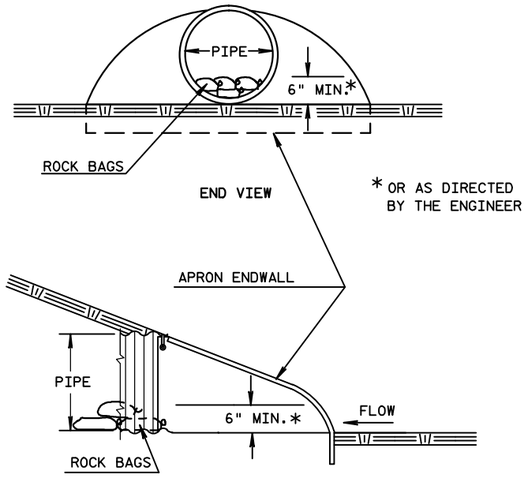


SECTION A-A

SECTION B-B

RUBBER RING CUTTING DETAIL FOR INLETS 4-FT DIAMETER SPECIAL

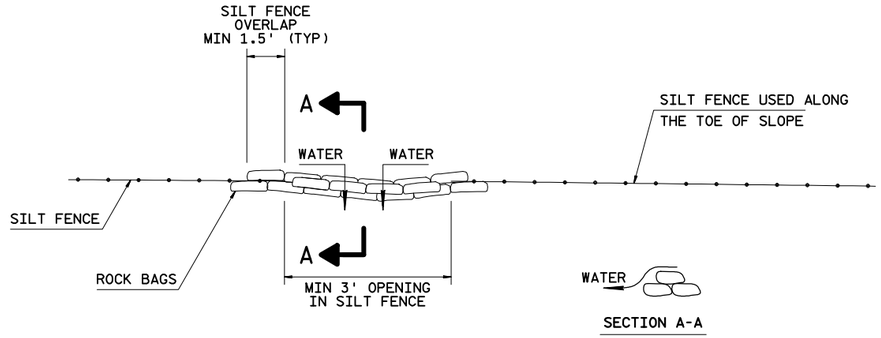
SEE STORM SEWER TABLE FOR LOCATIONS



END VIEW

SIDE VIEW

CULVERT PIPE DITCH CHECK



TOP VIEW

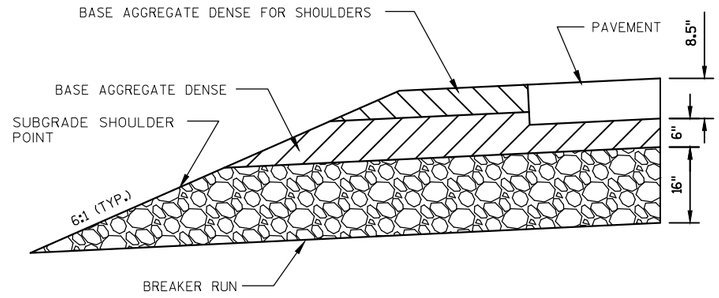
ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL

PAID AS ROCK BAGS

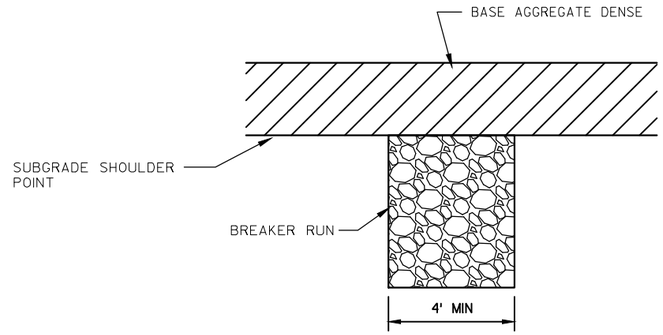
RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

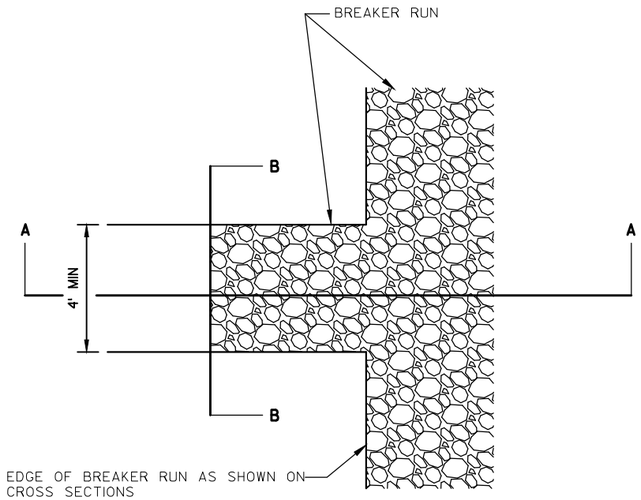
TOTAL PROJECT AREA = 5.7 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 5.8 ACRES



SECTION A-A



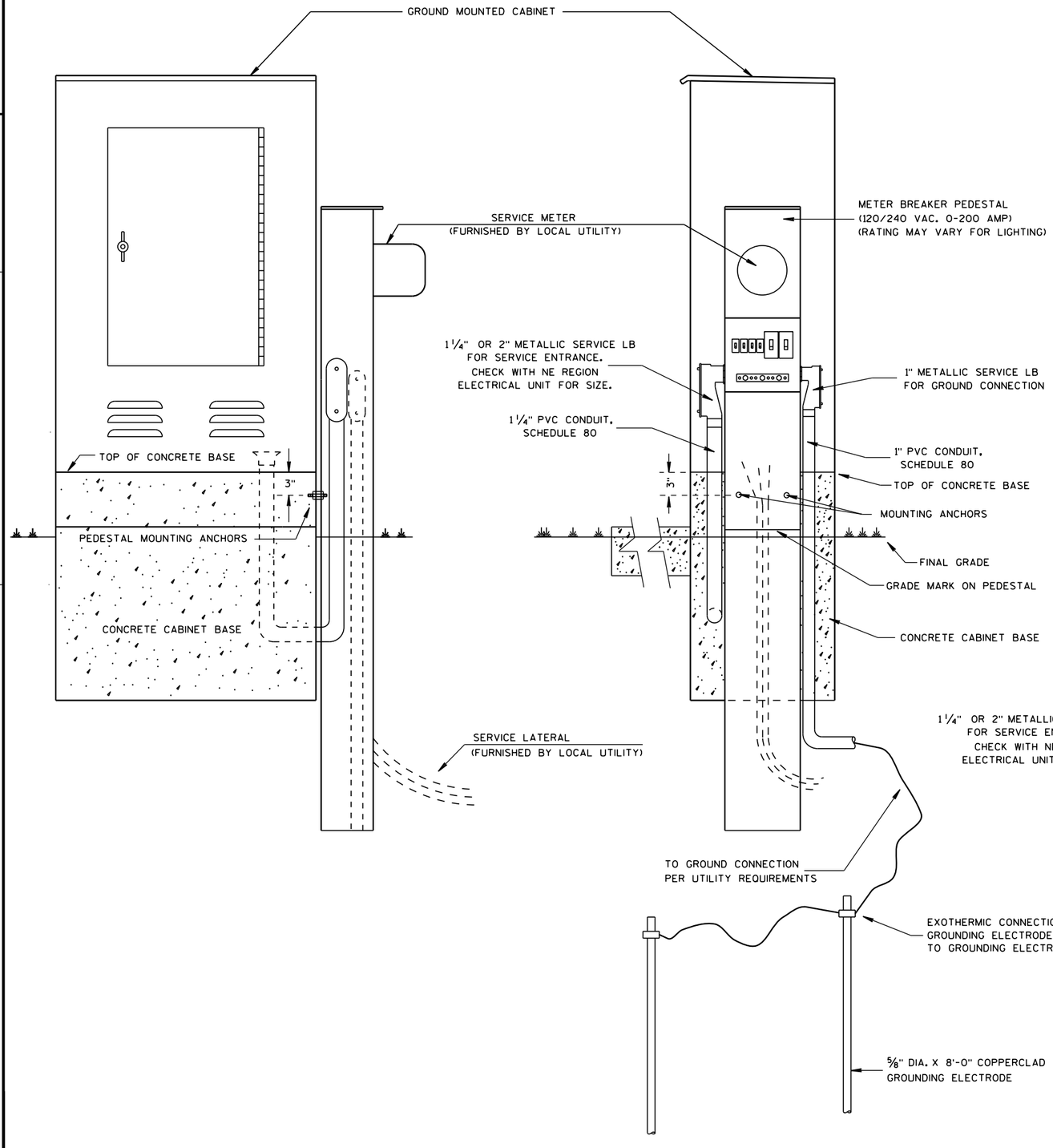
SECTION B-B



DETAIL FOR RELIEF TRENCHES

STH 32
STA 118+63 LT
STA 131+86 RT

HAPPY LANE
STA 61+38 LT & RT



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.

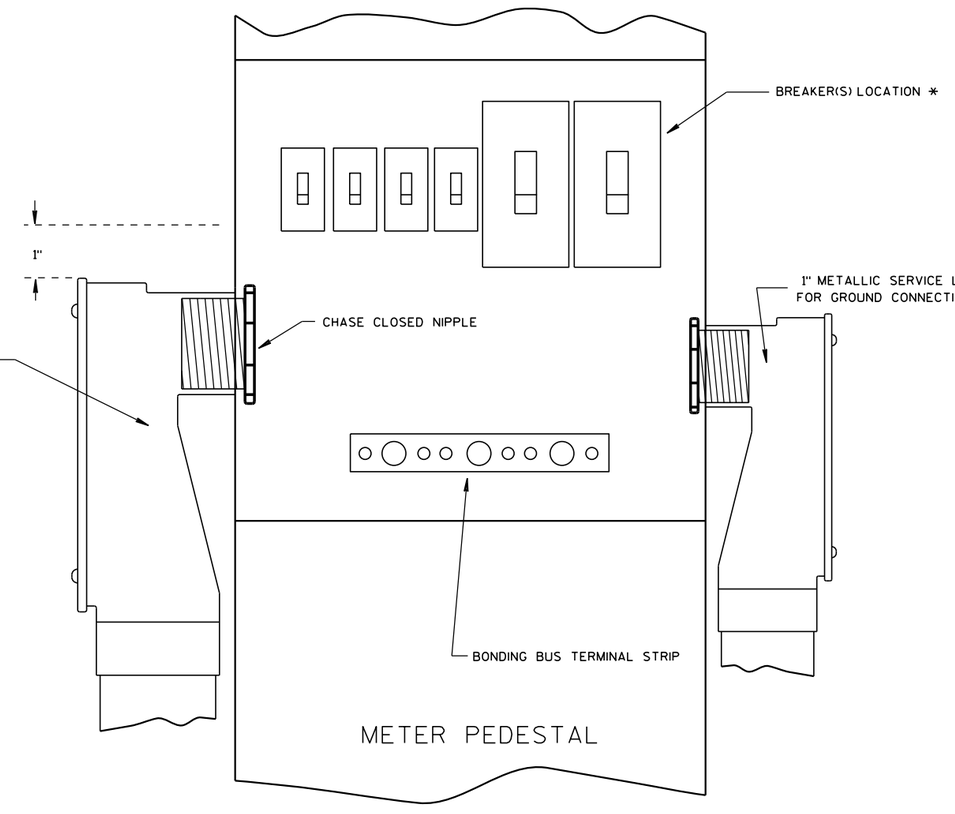
WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT OR SCHEDULE 80 PVC, NIPPLES AND/OR CONDULETS AS REQUIRED. CONDUIT LB SHALL BE OF METALLIC SERVICE ENTRANCE TYPE.

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 NEC.

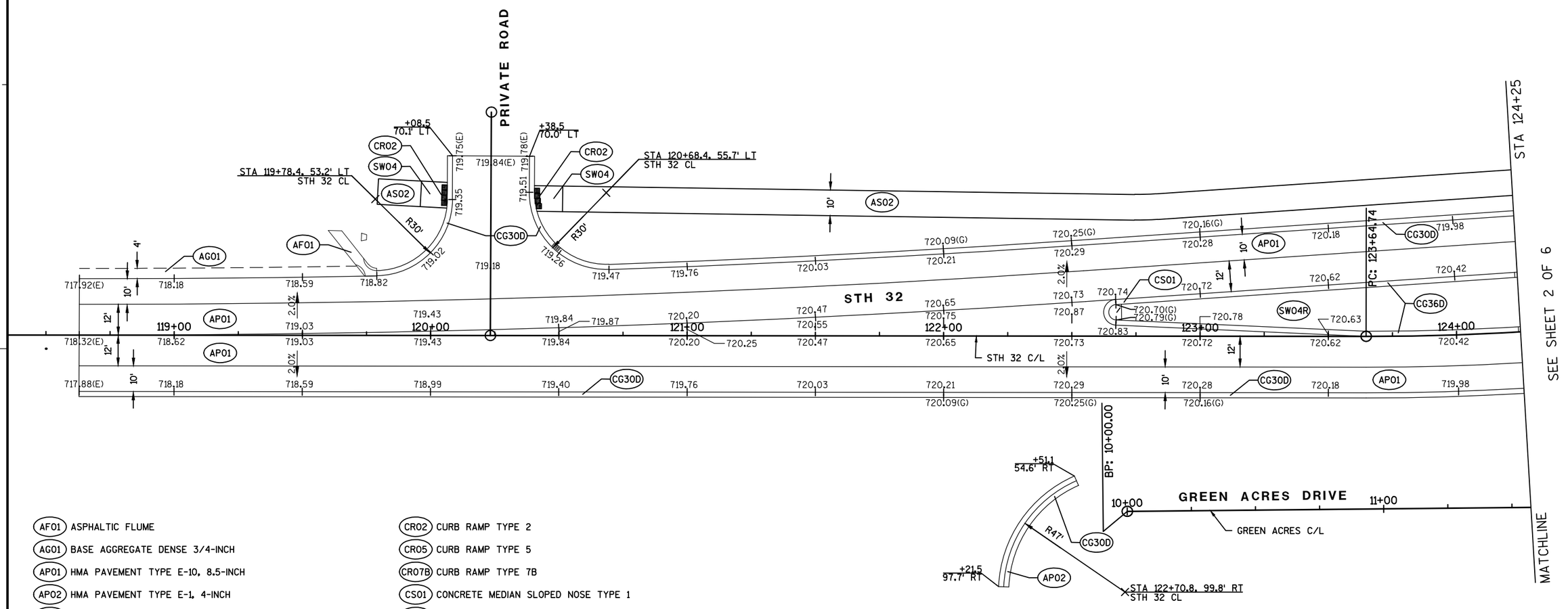
* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.



PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CONSTRUCTION DETAIL- NER METER PEDESTAL INSTALLATION	SHEET 16 E

NOTES:

1. ALL CURB & GUTER RADII ARE MEASURED TO THE CURB FLANGE.
2. SEE CURB ALIGNMENT PLAN FOR PATH AND CURB & GUTTER LAYOUT INFORMATION.
3. ELEVATIONS ARE SHOWN AT CURB FLANGE OR EDGE OF DRIVING LANE UNLESS OTHERWISE NOTED.



AF01	ASPHALTIC FLUME
AG01	BASE AGGREGATE DENSE 3/4-INCH
AP01	HMA PAVEMENT TYPE E-10, 8.5-INCH
AP02	HMA PAVEMENT TYPE E-1, 4-INCH
AP03	HMA PAVEMENT TYPE E-1, 2-INCH
AS01	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 4-INCH
AS02	ASPHALTIC SURFACE, 2-INCH
CG18A	CONCRETE CURB & GUTTER 18-INCH TYPE A (REVERSE SLOPE)
CG30D	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG36D	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG36T	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE T
CP01	CONCRETE CURB PEDESTRIAN

CR02	CURB RAMP TYPE 2
CR05	CURB RAMP TYPE 5
CR07B	CURB RAMP TYPE 7B
CS01	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CS02	CONCRETE MEDIAN SLOPED NOSE TYPE 2
DWY06	CONCRETE DRIVEWAY 6-INCH
SW04	CONCRETE SIDEWALK 4-INCH
SW04R	CONCRETE SIDEWALK 4-INCH (RED)
SW07R	CONCRETE SIDEWALK 7-INCH (RED)
TA12	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH (RED)
▩	CURB RAMP DETECTABLE WARNING FIELD YELLOW
(E)	EXISTING GRADE
(G)	GUTTER GRADE

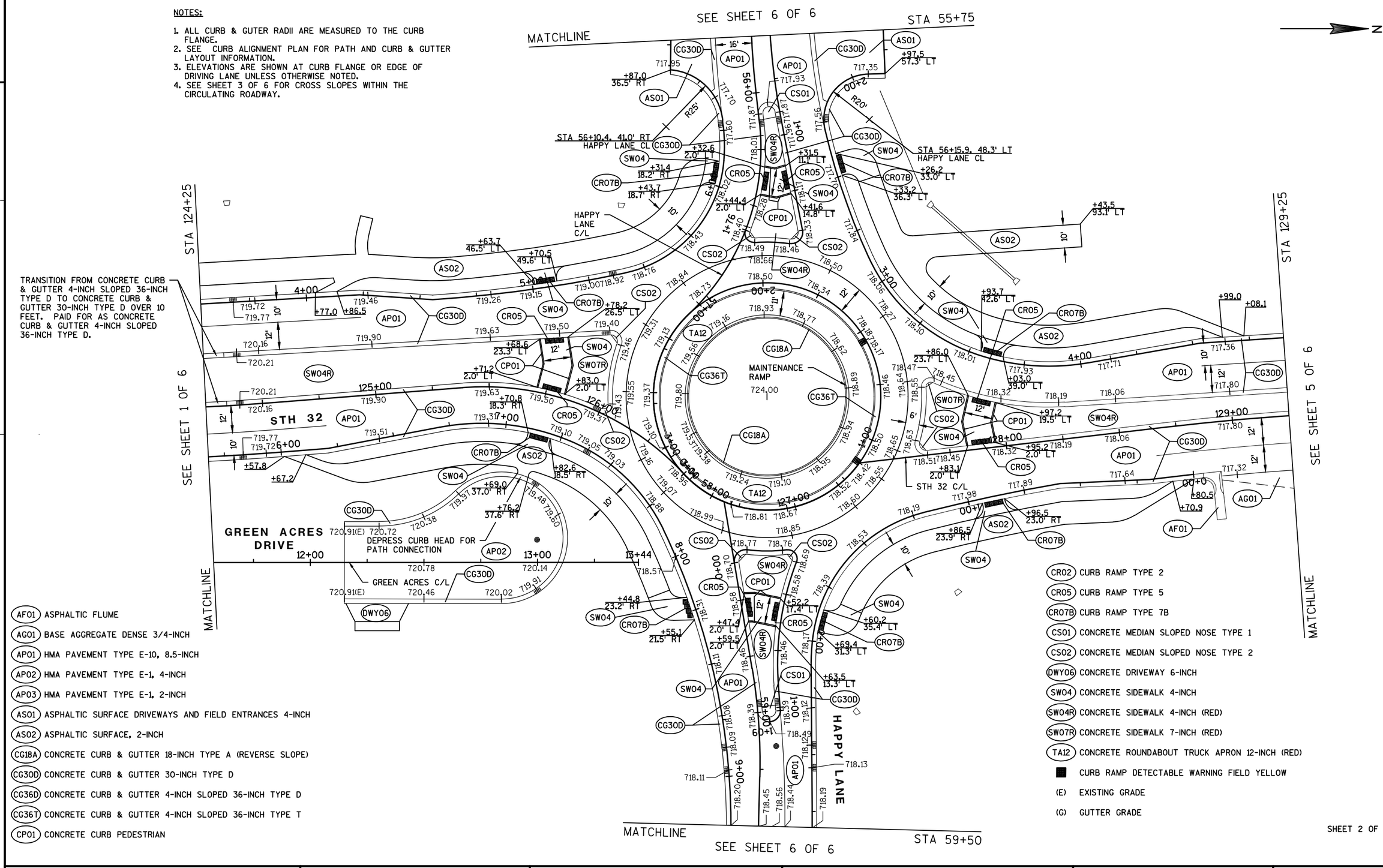
SHEET 1 OF 6

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PAVING DETAILS	SCALE, FEET 0 20 40	SHEET 17	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\2012\021101_ID.DWG PLOT DATE : 5/11/2015 4:28 PM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : 1" = 40'_XREF

NOTES:

1. ALL CURB & GUTER RADII ARE MEASURED TO THE CURB FLANGE.
2. SEE CURB ALIGNMENT PLAN FOR PATH AND CURB & GUTTER LAYOUT INFORMATION.
3. ELEVATIONS ARE SHOWN AT CURB FLANGE OR EDGE OF DRIVING LANE UNLESS OTHERWISE NOTED.
4. SEE SHEET 3 OF 6 FOR CROSS SLOPES WITHIN THE CIRCULATING ROADWAY.



(AF01) ASPHALTIC FLUME
(AG01) BASE AGGREGATE DENSE 3/4-INCH
(AP01) HMA PAVEMENT TYPE E-10, 8.5-INCH
(AP02) HMA PAVEMENT TYPE E-1, 4-INCH
(AP03) HMA PAVEMENT TYPE E-1, 2-INCH
(AS01) ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 4-INCH
(AS02) ASPHALTIC SURFACE, 2-INCH
(CG18A) CONCRETE CURB & GUTTER 18-INCH TYPE A (REVERSE SLOPE)
(CG30D) CONCRETE CURB & GUTTER 30-INCH TYPE D
(CG36D) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
(CG36T) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE T
(CP01) CONCRETE CURB PEDESTRIAN

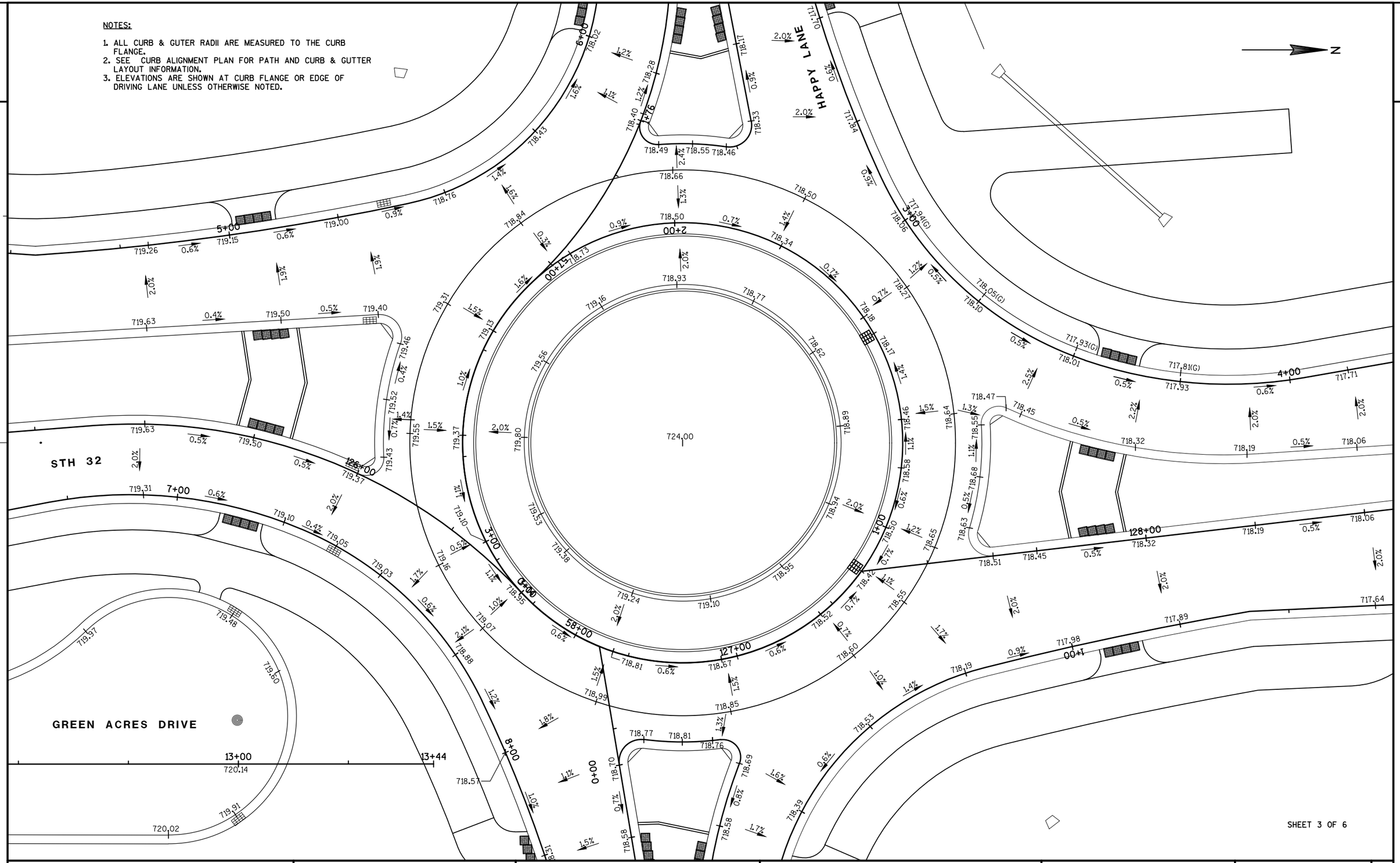
(CR02) CURB RAMP TYPE 2
(CR05) CURB RAMP TYPE 5
(CR07B) CURB RAMP TYPE 7B
(CS01) CONCRETE MEDIAN SLOPED NOSE TYPE 1
(CS02) CONCRETE MEDIAN SLOPED NOSE TYPE 2
(DWY06) CONCRETE DRIVEWAY 6-INCH
(SW04) CONCRETE SIDEWALK 4-INCH
(SW04R) CONCRETE SIDEWALK 4-INCH (RED)
(SW07R) CONCRETE SIDEWALK 7-INCH (RED)
(TA12) CONCRETE ROUNDABOUT TRUCK APRON 12-INCH (RED)
CURB RAMP DETECTABLE WARNING FIELD YELLOW
(E) EXISTING GRADE
(G) GUTTER GRADE

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PAVING DETAILS	SCALE, FEET 0 20 40	SHEET 18	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\2012\021102_ID.DWG PLOT DATE : 7/28/2015 11:05 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : 1" = 40'_XREF
WISDOT/CADDS SHEET 42

NOTES:

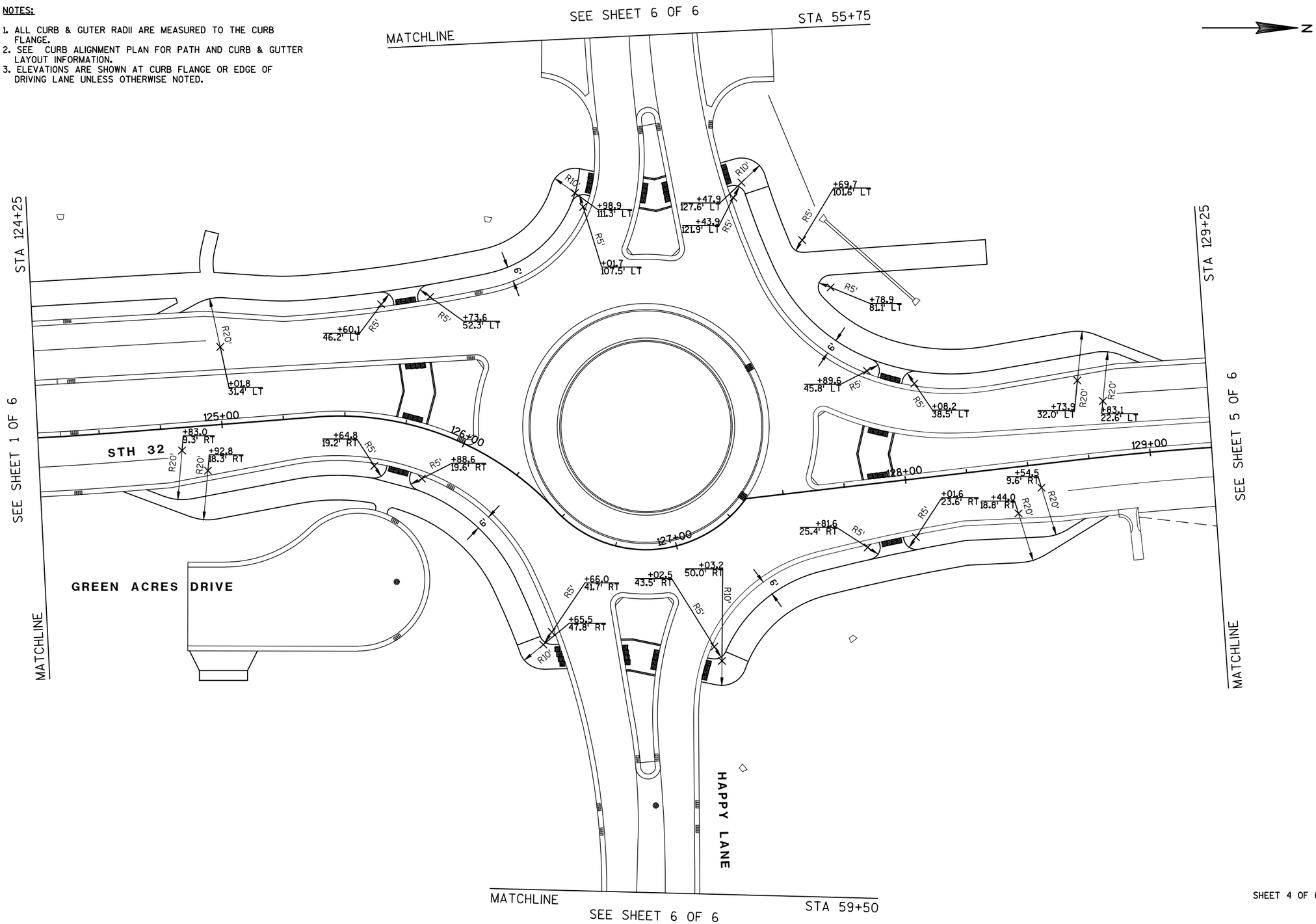
1. ALL CURB & GUTER RADII ARE MEASURED TO THE CURB FLANGE.
2. SEE CURB ALIGNMENT PLAN FOR PATH AND CURB & GUTTER LAYOUT INFORMATION.
3. ELEVATIONS ARE SHOWN AT CURB FLANGE OR EDGE OF DRIVING LANE UNLESS OTHERWISE NOTED.



PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PAVING DETAILS	SCALE, FEET 0 10 20	SHEET 19	E

NOTES:

1. ALL CURB & GUTER RADII ARE MEASURED TO THE CURB FLANGE.
2. SEE CURB ALIGNMENT PLAN FOR PATH AND CURB & GUTTER LAYOUT INFORMATION.
3. ELEVATIONS ARE SHOWN AT CURB FLANGE OR EDGE OF DRIVING LANE UNLESS OTHERWISE NOTED.



SHEET 4 OF 6

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PAVING DETAILS	SCALE, FEET 0 20 40	SHEET 20	E

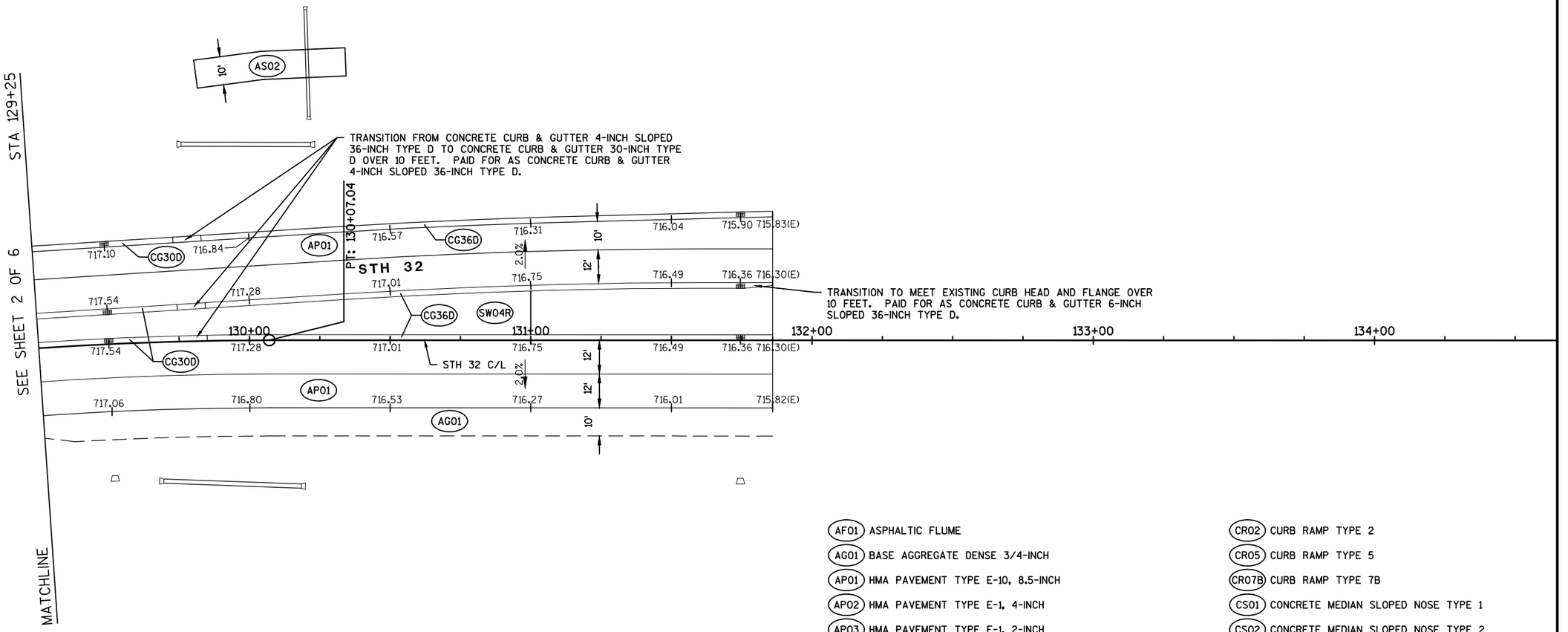
FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\2012\021104_ID.DWG PLOT DATE : 5/11/2015 4:27 PM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

NOTES:

1. ALL CURB & GUTER RADII ARE MEASURED TO THE CURB FLANGE.
2. SEE CURB ALIGNMENT PLAN FOR PATH AND CURB & GUTTER LAYOUT INFORMATION.
3. ELEVATIONS ARE SHOWN AT CURB FLANGE OR EDGE OF DRIVING LANE UNLESS OTHERWISE NOTED.

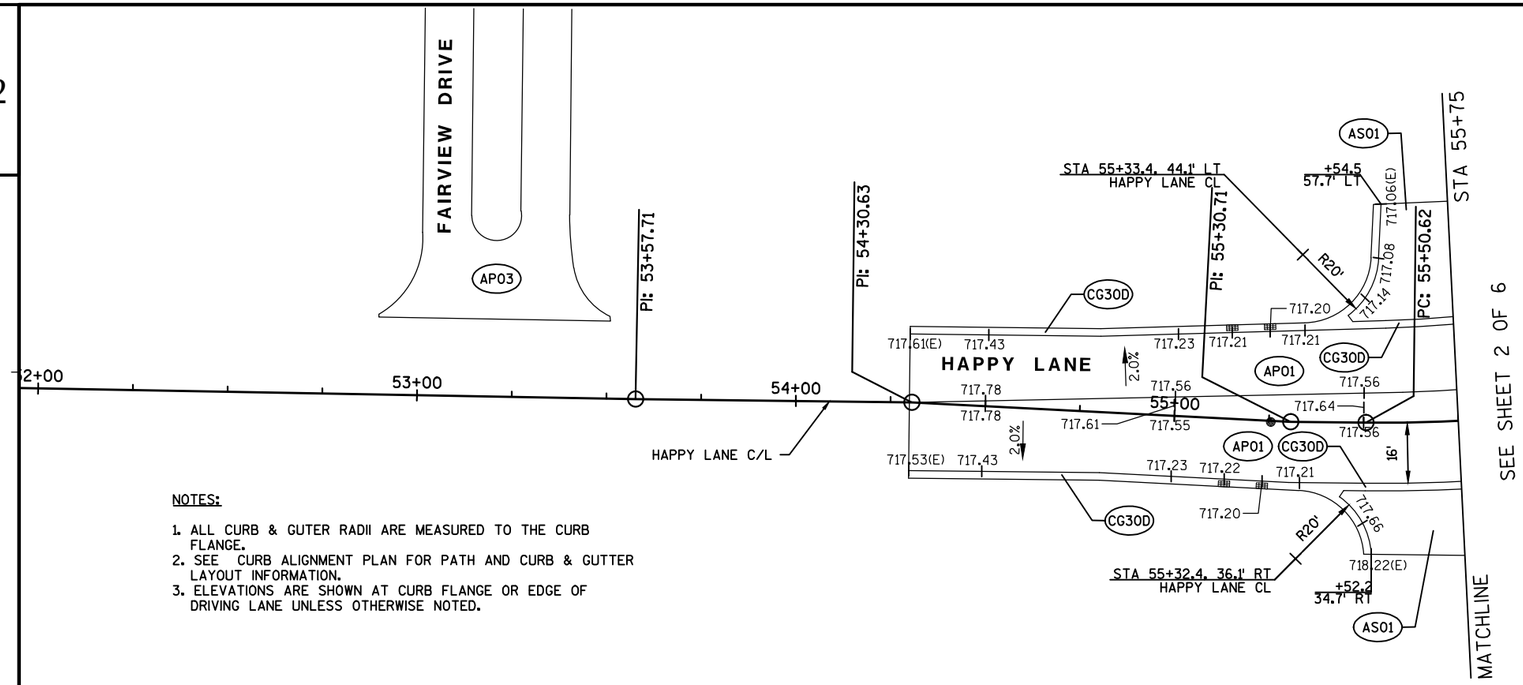
N



AF01	ASPHALTIC FLUME
AG01	BASE AGGREGATE DENSE 3/4-INCH
AP01	HMA PAVEMENT TYPE E-10, 8.5-INCH
AP02	HMA PAVEMENT TYPE E-1, 4-INCH
AP03	HMA PAVEMENT TYPE E-1, 2-INCH
AS01	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 4-INCH
AS02	ASPHALTIC SURFACE, 2-INCH
CG18A	CONCRETE CURB & GUTTER 18-INCH TYPE A (REVERSE SLOPE)
CG30D	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG36D	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG36T	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE T
CP01	CONCRETE CURB PEDESTRIAN
CR02	CURB RAMP TYPE 2
CR05	CURB RAMP TYPE 5
CR07B	CURB RAMP TYPE 7B
CS01	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CS02	CONCRETE MEDIAN SLOPED NOSE TYPE 2
DWY06	CONCRETE DRIVEWAY 6-INCH
SW04	CONCRETE SIDEWALK 4-INCH
SW04R	CONCRETE SIDEWALK 4-INCH (RED)
SW07R	CONCRETE SIDEWALK 7-INCH (RED)
TA12	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH (RED)
■	CURB RAMP DETECTABLE WARNING FIELD YELLOW
(E)	EXISTING GRADE
(G)	GUTTER GRADE

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PAVING DETAILS	SCALE, FEET 0 20 40	SHEET 21	E

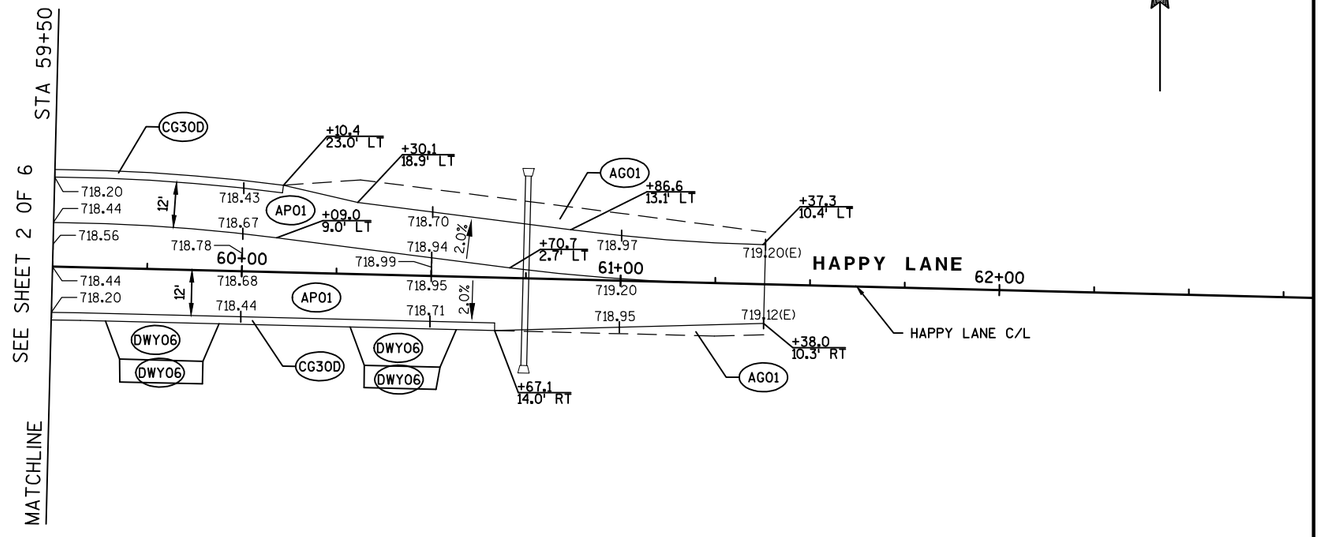
FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\2012\021105_ID.DWG PLOT DATE : 7/28/2015 11:06 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : 1" = 40'_XREF
WISDOT/CADDS SHEET 42



NOTES:

1. ALL CURB & GUTER RADII ARE MEASURED TO THE CURB FLANGE.
2. SEE CURB ALIGNMENT PLAN FOR PATH AND CURB & GUTTER LAYOUT INFORMATION.
3. ELEVATIONS ARE SHOWN AT CURB FLANGE OR EDGE OF DRIVING LANE UNLESS OTHERWISE NOTED.

- (AF01) ASPHALTIC FLUME
- (AG01) BASE AGGREGATE DENSE 3/4-INCH
- (AP01) HMA PAVEMENT TYPE E-10, 8.5-INCH
- (AP02) HMA PAVEMENT TYPE E-1, 4-INCH
- (AP03) HMA PAVEMENT TYPE E-1, 2-INCH
- (AS01) ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 4-INCH
- (AS02) ASPHALTIC SURFACE, 2-INCH
- (CG18A) CONCRETE CURB & GUTTER 18-INCH TYPE A (REVERSE SLOPE)
- (CG30D) CONCRETE CURB & GUTTER 30-INCH TYPE D
- (CG36D) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
- (CG36T) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE T
- (CP01) CONCRETE CURB PEDESTRIAN
- (CR02) CURB RAMP TYPE 2
- (CR05) CURB RAMP TYPE 5
- (CR07B) CURB RAMP TYPE 7B
- (CS01) CONCRETE MEDIAN SLOPED NOSE TYPE 1
- (CS02) CONCRETE MEDIAN SLOPED NOSE TYPE 2
- (DWY06) CONCRETE DRIVEWAY 6-INCH
- (SW04) CONCRETE SIDEWALK 4-INCH
- (SW04R) CONCRETE SIDEWALK 4-INCH (RED)
- (SW07R) CONCRETE SIDEWALK 7-INCH (RED)
- (TA12) CONCRETE ROUNDABOUT TRUCK APRON 12-INCH (RED)
- CURB RAMP DETECTABLE WARNING FIELD YELLOW
- (E) EXISTING GRADE
- (G) GUTTER GRADE



SHEET 6 OF 6

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PAVING DETAILS	SCALE, FEET 0 20 40	SHEET 22	E

NOTES:
PLACE INLET PROTECTION AS FOLLOWS:
LOW POINT CURB AND GUTTER INLETS: TYPE A PRIOR TO PAVEMENT AND TYPE C AFTER PAVING.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

SHEBOYGAN LODGING LLC

PRIVATE ROAD

BENCHMARKS

NO.	LOCATION	DESCRIPTION	ELEV
601	STA 122+15, 94' RT	BURY BOLTS ON FIRE HYDRANT	725.11

SHEBOYGAN FALLS PROPERTIES LLC

EXISTING PERMANENT EASEMENT

EXISTING 18" CMCP CULVERT TO REMAIN

TLE

SLOPE INTERCEPT

EXISTING PERMANENT EASEMENT

EXISTING R/W

PROPOSED R/W

STA 119+75, 38.3' LT
1-12" AECPRC

1

1A
STA 120+49, 34.8' LT
INLET 2X3-FT, H-S COVER

12" 18" CMCP

CAUTION

REMOVE SMALL PIPE CULVERT

STA 124+00

118+00 119+00 120+00 121+00 122+00 123+00 124+00

STH 32

STH 32 C/L

SEE SHEET 2 OF 8

MATCHLINE

TLE

EAKE

EXISTING R/W

WAGNER

SLOPE INTERCEPT

BM 601

PROPOSED TEMPORARY ACCESS ROAD

GREEN ACRES DRIVE

730
720
710
700

PRIVATE ROAD

1

1A
RIM 719.25

716.73

716.36

12" SSPRC CL IV
74.2' @ 0.50%

EXISTING PROFILE

FINISHED PROFILE

118 119 120 121 122 123 124

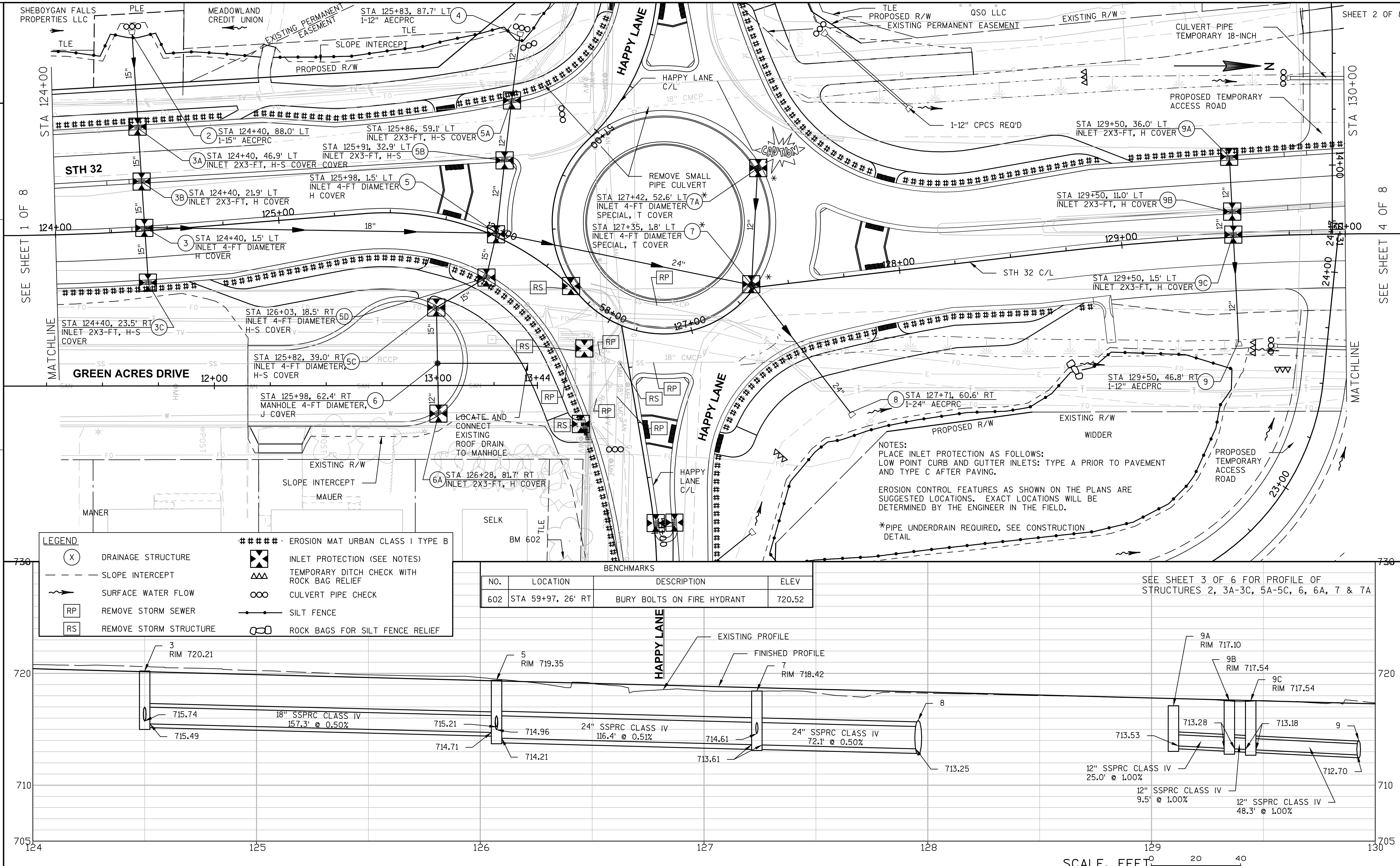
718.25
718.59 718.62
718.97 719.03
719.35 719.43
719.73 719.84
720.09 720.20
720.40 720.47
720.63 720.65
720.82 720.73
720.86 720.72
720.90 720.62
720.79 720.42

LEGEND

- DRAINAGE STRUCTURE
- SLOPE INTERCEPT
- SURFACE WATER FLOW
- RP REMOVE STORM SEWER
- RS REMOVE STORM STRUCTURE
- EROSION MAT URBAN CLASS I TYPE B
- INLET PROTECTION (SEE NOTES)
- TEMPORARY DITCH CHECK WITH ROCK BAG RELIEF
- CULVERT PIPE CHECK
- SILT FENCE
- ROCK BAGS FOR SILT FENCE RELIEF

SCALE, FEET 0 20 40

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	STORM SEWER/EROSION CONTROL - STH 32	SHEET 23	E



SHEBOYGAN FALLS PROPERTIES LLC
MEADOWLAND CREDIT UNION
QSO LLC
EXISTING PERMANENT EASEMENT
SLOPE INTERCEPT
PROPOSED R/W
EXISTING R/W
TLE
PLE
HAPPY LANE
HAPPY LANE C/L
CULVERT PIPE TEMPORARY 18-INCH
PROPOSED TEMPORARY ACCESS ROAD
1-12" CPCS REQ'D
STA 125+83, 87.7' LT 1-12" AECPRC (4)
STA 124+40, 88.0' LT 1-15" AECPRC (2)
STA 125+86, 59.1' LT INLET 2X3-FT, H-S COVER (5A)
STA 124+40, 46.9' LT INLET 2X3-FT, H-S COVER (3A)
STA 125+91, 32.9' LT INLET 2X3-FT, H-S COVER (5B)
STA 125+98, 1.5' LT INLET 4-FT DIAMETER H COVER (5)
STA 124+40, 21.9' LT INLET 2X3-FT, H COVER (3B)
STA 124+40, 1.5' LT INLET 4-FT DIAMETER H COVER (3)
REMOVE SMALL PIPE CULVERT
STA 127+42, 52.6' LT INLET 4-FT DIAMETER SPECIAL, T COVER (7A)*
STA 127+35, 1.8' LT INLET 4-FT DIAMETER SPECIAL, T COVER (7)*
STA 129+50, 36.0' LT INLET 2X3-FT, H COVER (9A)
STA 129+50, 11.0' LT INLET 2X3-FT, H COVER (9B)
STA 129+50, 1.5' LT INLET 2X3-FT, H COVER (9C)
STH 32
STH 32 C/L
STA 126+03, 18.5' RT INLET 4-FT DIAMETER H-S COVER (5D)
STA 124+40, 23.5' RT INLET 2X3-FT, H-S COVER (3C)
STA 125+82, 39.0' RT INLET 4-FT DIAMETER H-S COVER (5C)
STA 125+98, 62.4' RT MANHOLE 4-FT DIAMETER, J COVER (6)
LOCATE AND CONNECT EXISTING ROOF DRAIN TO MANHOLE
STA 126+28, 81.7' RT INLET 2X3-FT, H COVER (6A)
STA 127+71, 60.6' RT 1-24" AECPRC (8)
STA 129+50, 46.8' RT 1-12" AECPRC (9)
GREEN ACRES DRIVE
MATCHLINE
SEE SHEET 1 OF 8
SEE SHEET 4 OF 8
STA 124+00
STA 130+00
MAUER
MANER
SELK
WIDDER
BM 602
CAUTION
RS
RP
N
EXISTING PROFILE
FINISHED PROFILE
3 RIM 720.21
5 RIM 719.35
7 RIM 718.42
8
9A RIM 717.10
9B RIM 717.54
9C RIM 717.54
9
715.74
715.49
18" SSPRC CLASS IV 157.3' @ 0.50%
715.21
714.71
714.96
714.21
24" SSPRC CLASS IV 116.4' @ 0.51%
714.61
713.61
24" SSPRC CLASS IV 72.1' @ 0.50%
713.25
713.53
713.28
713.18
712.70
12" SSPRC CLASS IV 25.0' @ 1.00%
12" SSPRC CLASS IV 9.5' @ 1.00%
12" SSPRC CLASS IV 48.3' @ 1.00%
SEE SHEET 3 OF 6 FOR PROFILE OF STRUCTURES 2, 3A-3C, 5A-5C, 6, 6A, 7 & 7A
730
720
710
705
124
125
126
127
128
129
130
SCALE, FEET 0 20 40

LEGEND

Symbol	Description	Symbol	Description
(X)	DRAINAGE STRUCTURE	#####	EROSION MAT URBAN CLASS I TYPE B
— — —	SLOPE INTERCEPT	☒	INLET PROTECTION (SEE NOTES)
~>	SURFACE WATER FLOW	ΔΔΔ	TEMPORARY DITCH CHECK WITH ROCK BAG RELIEF
RP	REMOVE STORM SEWER	○○○	CULVERT PIPE CHECK
RS	REMOVE STORM STRUCTURE	•—•	SILT FENCE
			ROCK BAGS FOR SILT FENCE RELIEF

BENCHMARKS

NO.	LOCATION	DESCRIPTION	ELEV
602	STA 59+97, 26' RT	BURY BOLTS ON FIRE HYDRANT	720.52

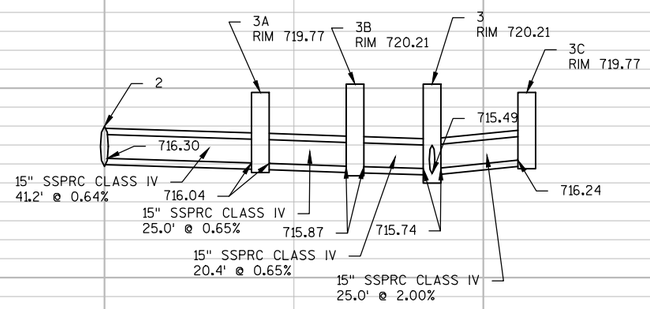
NOTES:

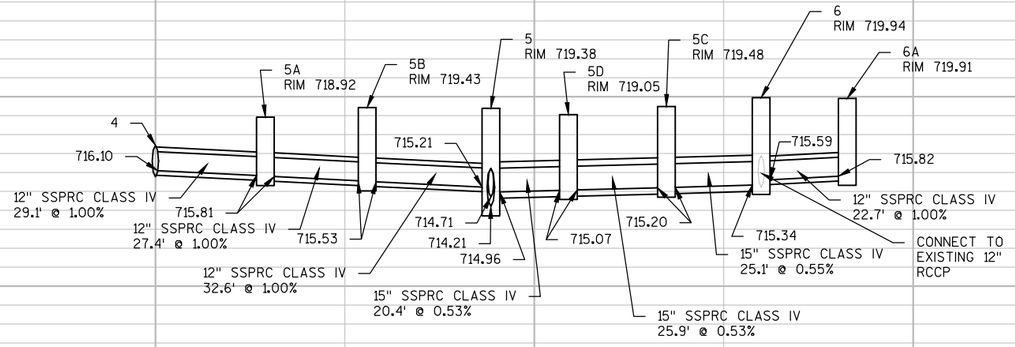
PLACE INLET PROTECTION AS FOLLOWS:
LOW POINT CURB AND GUTTER INLETS: TYPE A PRIOR TO PAVEMENT AND TYPE C AFTER PAVING.

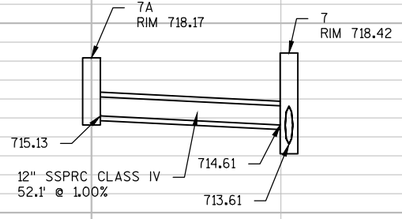
EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

*PIPE UNDERDRAIN REQUIRED, SEE CONSTRUCTION DETAIL

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	STORM SEWER/EROSION CONTROL - STH 32	SHEET 24	E







PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	STORM SEWER - STH 32	SCALE, FEET 0 20 40	SHEET 25	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\022502_SS.DWG PLOT DATE : 5/11/2015 4:22 PM PLOT BY : BECKENDORF, RANDY PLOT NAME :

ANCHORBANK FSB

TLE

EXISTING R/W

GH SHEB FALLS LLC

ANCHORBANK FSB

N

SLOPE INTERCEPT

CULVERT PIPE TEMPORARY
12-INCH

CULVERT PIPE TEMPORARY
18-INCH

STA 130+00

STH 32

10A STA 131+75, 45.1' LT
INLET 2X3-FT, H COVER

10B STA 131+75, 19.0' LT
INLET 2X3-FT, H COVER

10C STA 131+75, 1.5' LT
INLET 2X3-FT, H COVER

10 STA 131+75, 49.0' RT
1-12" AECPRC

12"

12"

130+00 131+00 132+00 133+00 134+00 135+00 136+00

STH 32 C/L

SEE SHEET 2 OF 8

SLOPE INTERCEPT

MATCHLINE

TLE

EXISTING R/W

WIDDER

NOTES:
PLACE INLET PROTECTION AS FOLLOWS:
LOW POINT CURB AND GUTTER INLETS: TYPE A PRIOR TO PAVEMENT AND TYPE C AFTER PAVING.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

LEGEND

- (X) DRAINAGE STRUCTURE
- SLOPE INTERCEPT
- SURFACE WATER FLOW
- RP REMOVE STORM SEWER
- RS REMOVE STORM STRUCTURE
- ##### EROSION MAT URBAN CLASS I TYPE B
- INLET PROTECTION (SEE NOTES)
- TEMPORARY DITCH CHECK WITH ROCK BAG RELIEF
- CULVERT PIPE CHECK
- SILT FENCE
- ROCK BAGS FOR SILT FENCE RELIEF

730
720
710
700

130 131 132 133 134 135 136

FINISHED PROFILE

EXISTING PROFILE

10A
RIM 715.90

10B
RIM 716.36

10C
RIM 716.36

10

712.44

712.18

712.01

711.50

12" SSPRC CLASS IV
26.1' @ 1.00%

12" SSPRC CLASS IV
17.5' @ 1.00%

12" SSPRC CLASS IV
50.5' @ 1.00%

SCALE, FEET 0 20 40

PROJECT NO:4540-23-71	HWY: STH 32	COUNTY:SHEBOYGAN	STORM SEWER/EROSION CONTROL - STH 32	SHEET 26	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\022503_SS.DWG PLOT DATE : 5/28/2015 4:00 PM PLOT BY : BECKENDORF, RANDY PLOT NAME :

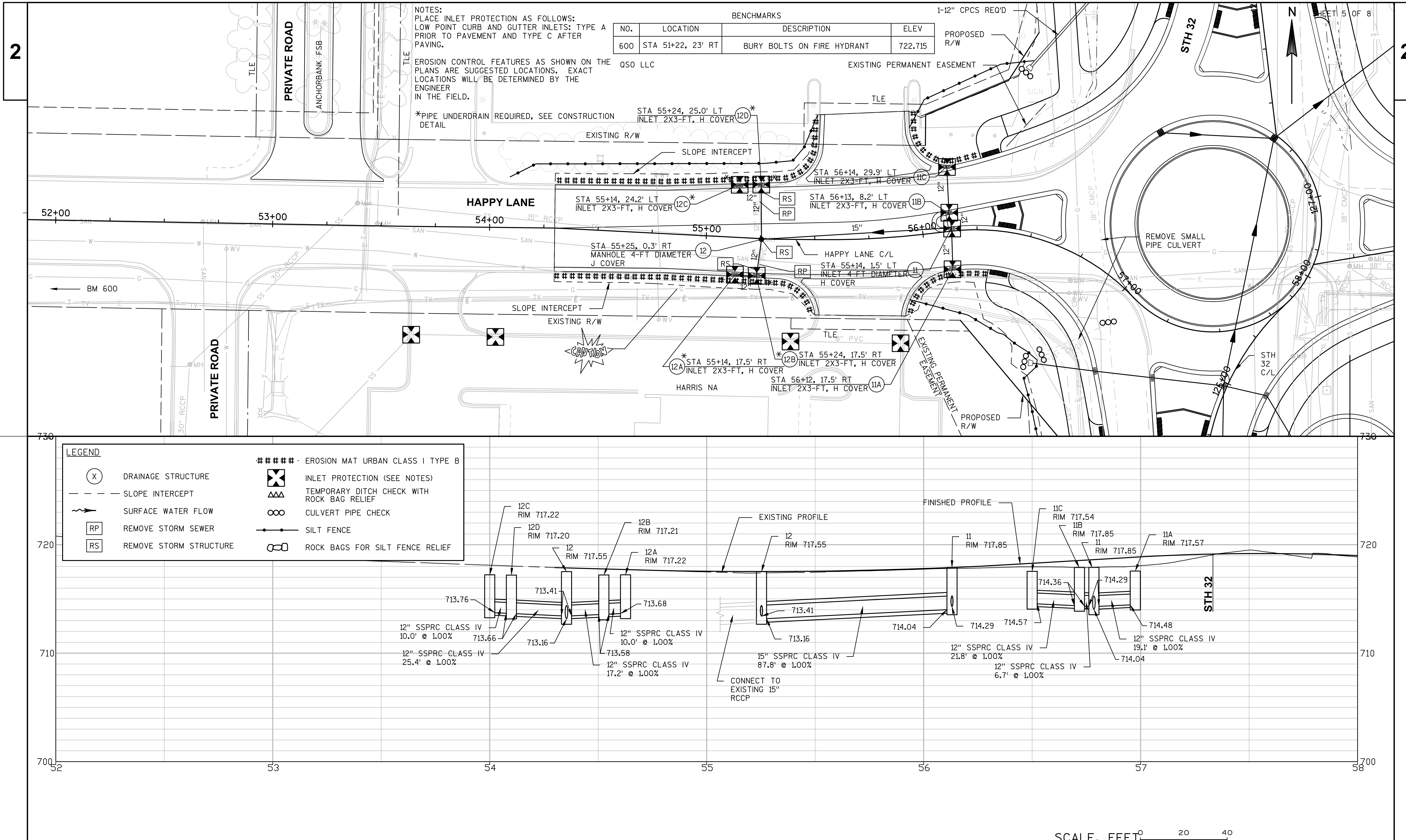
NOTES:
PLACE INLET PROTECTION AS FOLLOWS:
LOW POINT CURB AND GUTTER INLETS: TYPE A PRIOR TO PAVEMENT AND TYPE C AFTER PAVING.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

*PIPE UNDERDRAIN REQUIRED, SEE CONSTRUCTION DETAIL

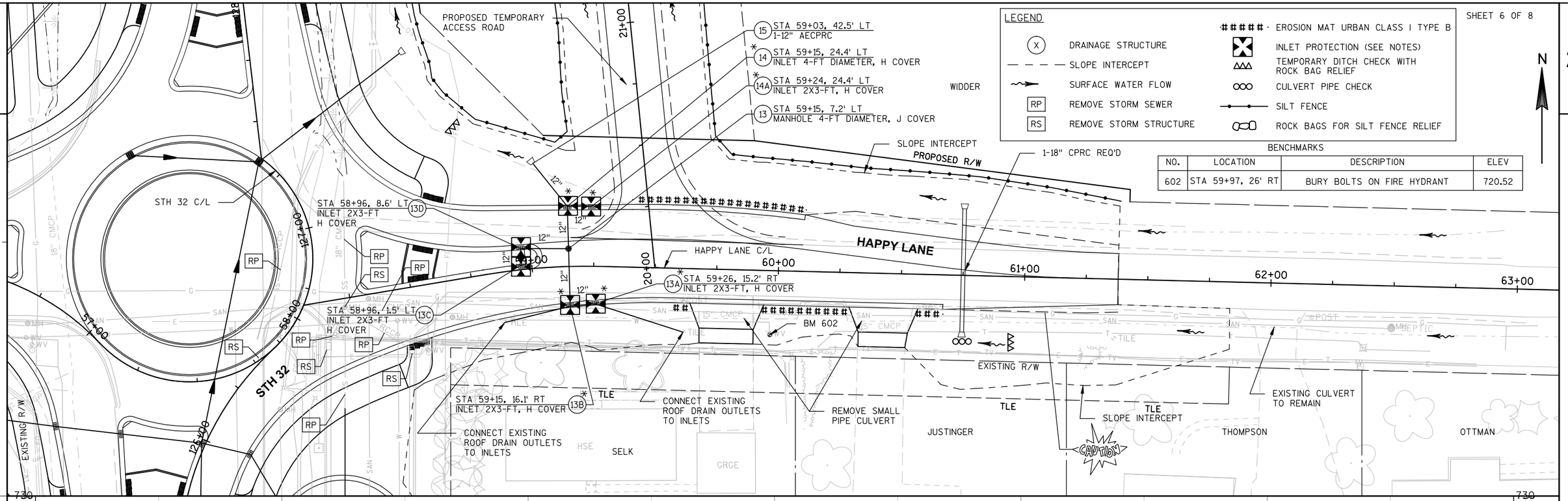
BENCHMARKS

NO.	LOCATION	DESCRIPTION	ELEV
600	STA 51+22, 23' RT	BURY BOLTS ON FIRE HYDRANT	722.715



2
PRIVATE ROAD
ANCHORBANK FSB
TLE
QSO LLC
1-12" CPCS REQ'D
PROPOSED R/W
EXISTING PERMANENT EASEMENT
STH 32
SHEET 5 OF 8
N
STA 55+24, 25.0' LT INLET 2X3-FT, H COVER 12D*
EXISTING R/W
SLOPE INTERCEPT
STA 56+14, 29.9' LT INLET 2X3-FT, H COVER 11C
STA 55+14, 24.2' LT INLET 2X3-FT, H COVER 12C*
STA 56+13, 8.2' LT INLET 2X3-FT, H COVER 11B
HAPPY LANE
52+00
53+00
54+00
55+00
56+00
RS
RP
STA 55+25, 0.3' RT MANHOLE 4-FT DIAMETER J COVER 12
HAPPY LANE C/L
STA 55+14, 1.5' LT INLET 4-FT DIAMETER H COVER 11
REMOVE SMALL PIPE CULVERT
BM 600
SLOPE INTERCEPT
EXISTING R/W
CAUTION
TLE
EXISTING PERMANENT EASEMENT
STA 55+14, 17.5' RT INLET 2X3-FT, H COVER 12A*
STA 55+24, 17.5' RT INLET 2X3-FT, H COVER 12B*
STA 56+12, 17.5' RT INLET 2X3-FT, H COVER 11A
HARRIS NA
PROPOSED R/W
STH 32 C/L
57+00
58+00
125+00
127+00
LEGEND
DRAINAGE STRUCTURE
SLOPE INTERCEPT
SURFACE WATER FLOW
RP REMOVE STORM SEWER
RS REMOVE STORM STRUCTURE
EROSION MAT URBAN CLASS I TYPE B
INLET PROTECTION (SEE NOTES)
TEMPORARY DITCH CHECK WITH ROCK BAG RELIEF
CULVERT PIPE CHECK
SILT FENCE
ROCK BAGS FOR SILT FENCE RELIEF
12C RIM 717.22
12D RIM 717.20
12 RIM 717.55
12B RIM 717.21
12A RIM 717.22
EXISTING PROFILE
12 RIM 717.55
FINISHED PROFILE
11 RIM 717.85
11C RIM 717.54
11B RIM 717.85
11 RIM 717.85
11A RIM 717.57
713.76
713.41
713.68
713.66
713.16
713.58
713.41
713.16
714.04
714.29
714.36
714.57
714.29
714.48
714.04
12" SSPRC CLASS IV 10.0' @ 1.00%
12" SSPRC CLASS IV 25.4' @ 1.00%
12" SSPRC CLASS IV 10.0' @ 1.00%
12" SSPRC CLASS IV 17.2' @ 1.00%
15" SSPRC CLASS IV 87.8' @ 1.00%
CONNECT TO EXISTING 15" RCCP
12" SSPRC CLASS IV 21.8' @ 1.00%
12" SSPRC CLASS IV 6.7' @ 1.00%
12" SSPRC CLASS IV 19.1' @ 1.00%
730
720
710
700
52
53
54
55
56
57
58
SCALE, FEET 0 20 40

PROJECT NO:4540-23-71	HWY:STH 32	COUNTY:SHEBOYGAN	STORM SEWER/EROSION CONTROL - HAPPY LANE	SHEET 27	E

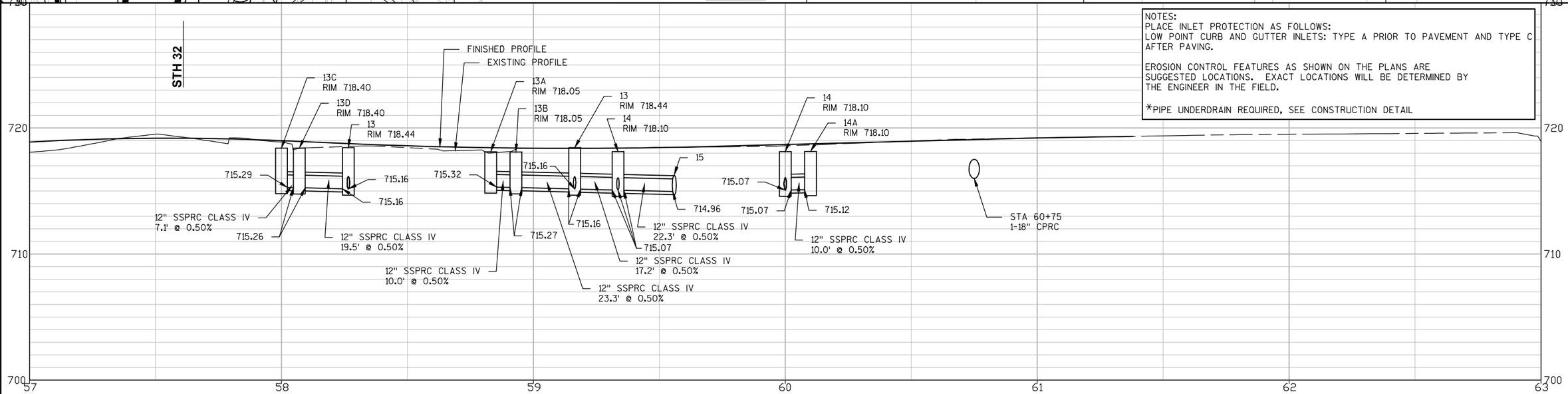


LEGEND

(X)	DRAINAGE STRUCTURE
— — —	SLOPE INTERCEPT
~~→	SURFACE WATER FLOW
RP	REMOVE STORM SEWER
RS	REMOVE STORM STRUCTURE
#####	EROSION MAT URBAN CLASS I TYPE B
	INLET PROTECTION (SEE NOTES)
	TEMPORARY DITCH CHECK WITH ROCK BAG RELIEF
	CULVERT PIPE CHECK
—•—	SILT FENCE
	ROCK BAGS FOR SILT FENCE RELIEF

BENCHMARKS

NO.	LOCATION	DESCRIPTION	ELEV
602	STA 59+97, 26' RT	BURY BOLTS ON FIRE HYDRANT	720.52



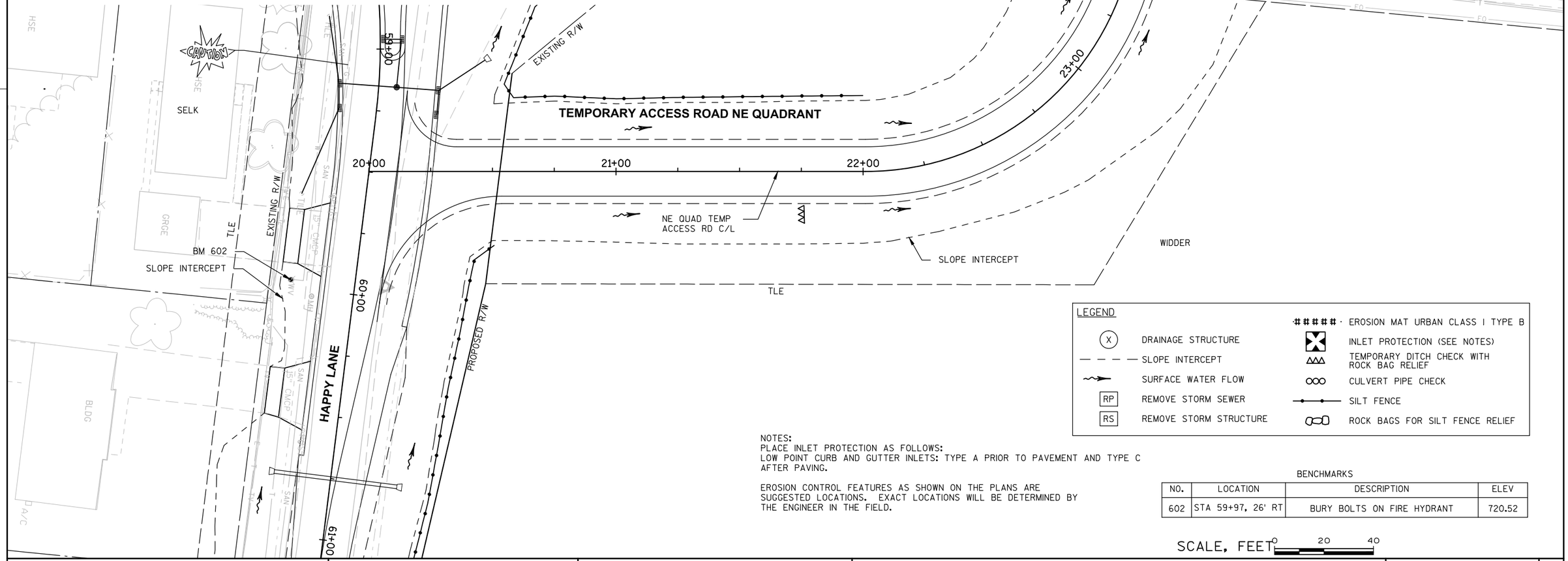
NOTES:
PLACE INLET PROTECTION AS FOLLOWS:
LOW POINT CURB AND GUTTER INLETS: TYPE A PRIOR TO PAVEMENT AND TYPE C AFTER PAVING.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

*PIPE UNDERDRAIN REQUIRED, SEE CONSTRUCTION DETAIL

SCALE, FEET 0 20 40

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	STORM SEWER/EROSION CONTROL - HAPPY LANE	SHEET 28	E



LEGEND

(X)	DRAINAGE STRUCTURE	#####	EROSION MAT URBAN CLASS I TYPE B
— — —	SLOPE INTERCEPT		INLET PROTECTION (SEE NOTES)
~→	SURFACE WATER FLOW	△△△	TEMPORARY DITCH CHECK WITH ROCK BAG RELIEF
RP	REMOVE STORM SEWER	ooo	CULVERT PIPE CHECK
RS	REMOVE STORM STRUCTURE	—•—	SILT FENCE
			ROCK BAGS FOR SILT FENCE RELIEF

NOTES:
PLACE INLET PROTECTION AS FOLLOWS:
LOW POINT CURB AND GUTTER INLETS: TYPE A PRIOR TO PAVEMENT AND TYPE C AFTER PAVING.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

BENCHMARKS

NO.	LOCATION	DESCRIPTION	ELEV
602	STA 59+97, 26' RT	BURY BOLTS ON FIRE HYDRANT	720.52

SCALE, FEET 0 20 40

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	EROSION CONTROL - TEMPORARY ACCESS ROAD NE QUADRANT	SHEET 29	E

LEGEND

- DRAINAGE STRUCTURE
- SLOPE INTERCEPT
- SURFACE WATER FLOW
- RP — REMOVE STORM SEWER
- RS — REMOVE STORM STRUCTURE
- EROSION MAT URBAN CLASS I TYPE B
- INLET PROTECTION (SEE NOTES)
- TEMPORARY DITCH CHECK WITH ROCK BAG RELIEF
- CULVERT PIPE CHECK
- SILT FENCE
- ROCK BAGS FOR SILT FENCE RELIEF

GH SHEB FALLS LLC

WETLAND BOUNDARY

FAIRVIEW DRIVE (PRIVATE ROAD)

ANCHORBANK FSB

TLE

SLOPE INTERCEPT

CULVERT PIPE TEMPORARY 12-INCH

CULVERT PIPE TEMPORARY 18-INCH

TEMPORARY ACCESS ROAD NW QUADRANT

STH 32

STH 32 C/L

10+00 11+00 12+00 13+00 14+00 131+00 129+00 24+00 24+31

NW QUAD TEMP ACCESS RD C/L

SLOPE INTERCEPT

DO NOT DISTURB FENCE, BUILDING OR PAVEMENT

NE QUAD TEMP ACCESS RD C/L

QSO LLC

CAUTION

EXISTING R/W

CANOPY

FILLER CAPS

SCALE, FEET 0 20 40

NOTES:
PLACE INLET PROTECTION AS FOLLOWS:
LOW POINT CURB AND GUTTER INLETS: TYPE A PRIOR TO PAVEMENT AND TYPE C AFTER PAVING.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	EROSION CONTROL - TEMPORARY ACCESS ROAD NW QUADRANT	SHEET 30	E

2

2

STH 32

HAPPY LN.

GREEN ACRES DR.

N

Sheboygan Falls
POPULATION 7472
12-3
403

402
NO PASSING ZONE
W14-3

401
W6-1

400
STOP
R1-1

SIGNING NOTES

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

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 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.

☐ SIGN-REMOVE EXISTING

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	SIGN REMOVALS	SHEET 31	E

2

SIGNING NOTES

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

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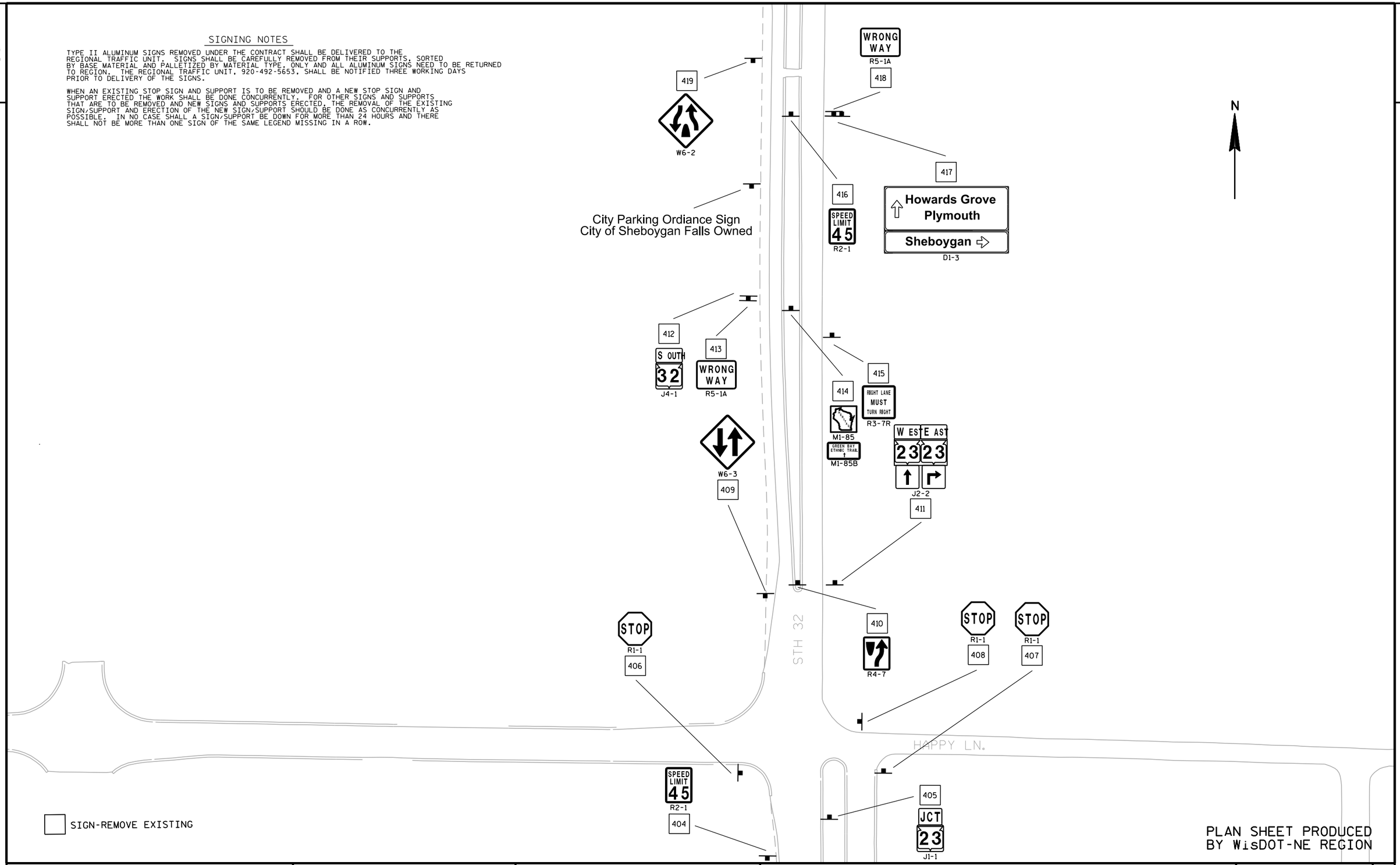


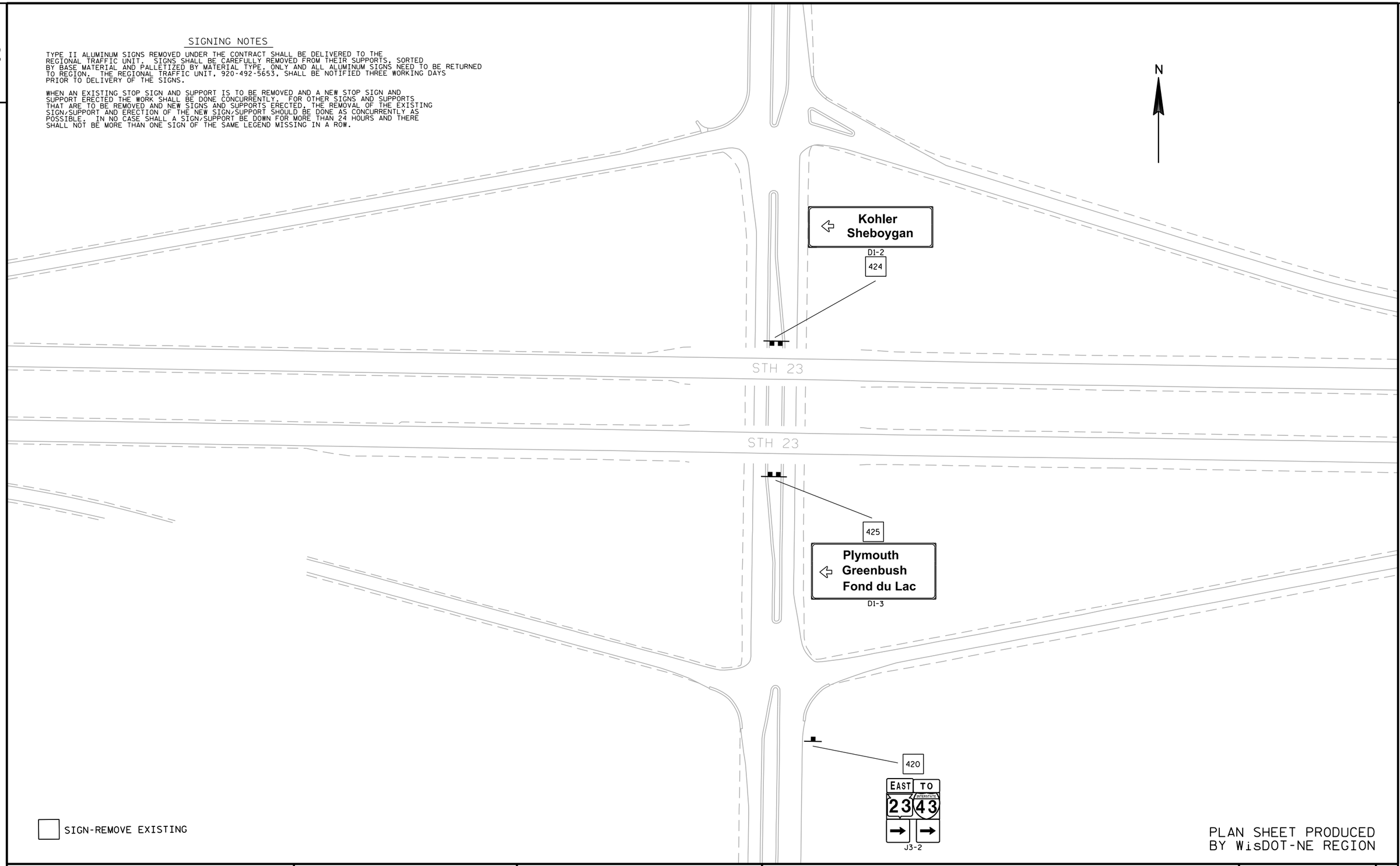
PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	SIGN REMOVALS	SHEET 32	E

2

SIGNING NOTES

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

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 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.



SIGN-REMOVE EXISTING

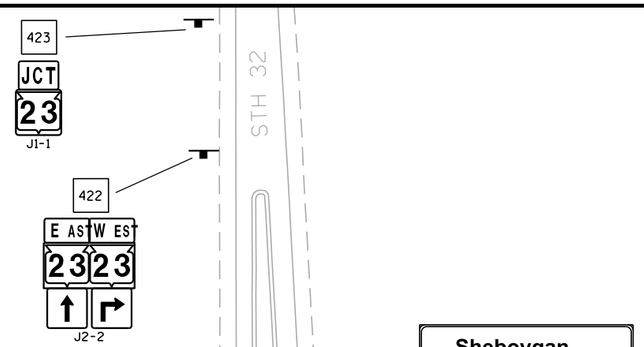
PLAN SHEET PRODUCED BY WisDOT-NE REGION

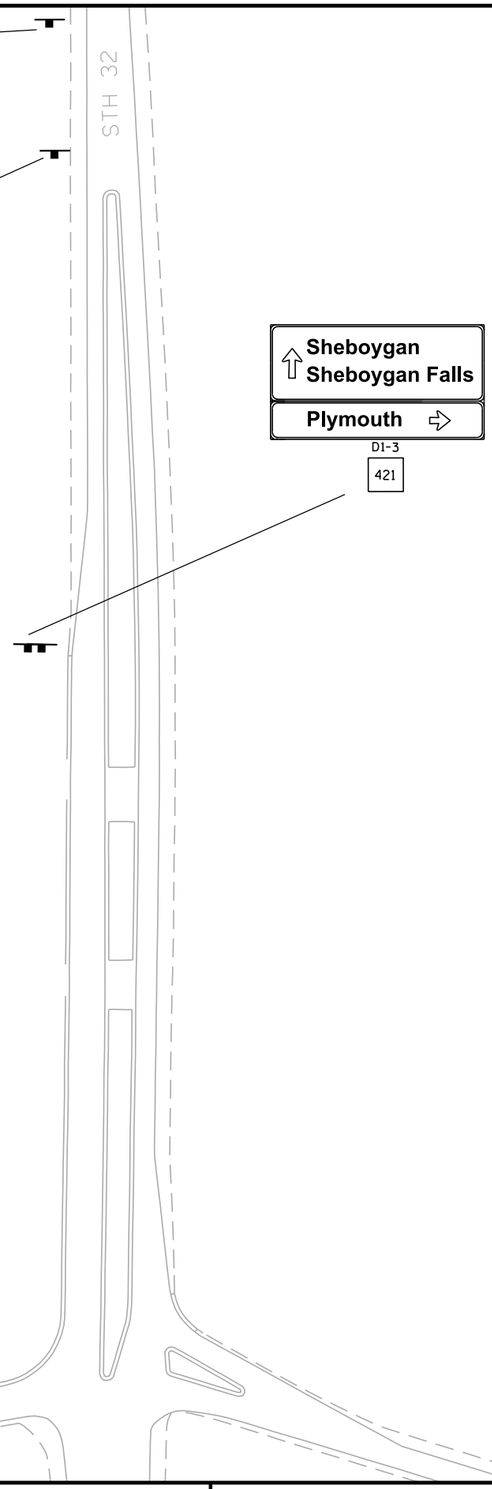
PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	SIGN REMOVALS	SHEET 33	E

SIGNING NOTES

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

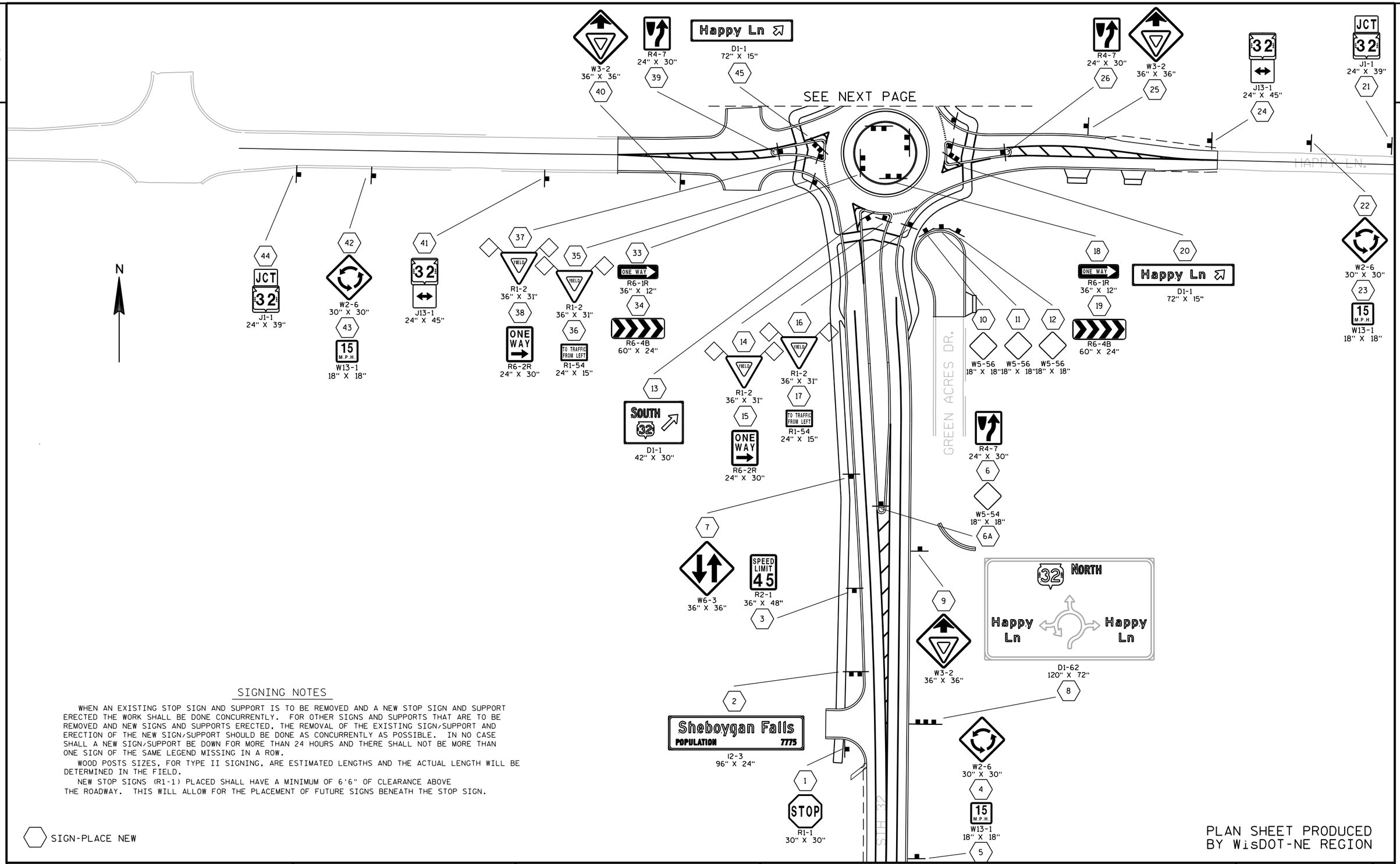
WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A 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.





SIGN-REMOVE EXISTING

PROJECT NO:4540-23-71	HWY:STH 32	COUNTY:SHEBOYGAN	SIGN REMOVALS	SHEET 34	E



SIGNING NOTES

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.

NEW STOP SIGNS (R1-1) PLACED 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.

⬡ SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET 35	E

SIGNING NOTES

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.

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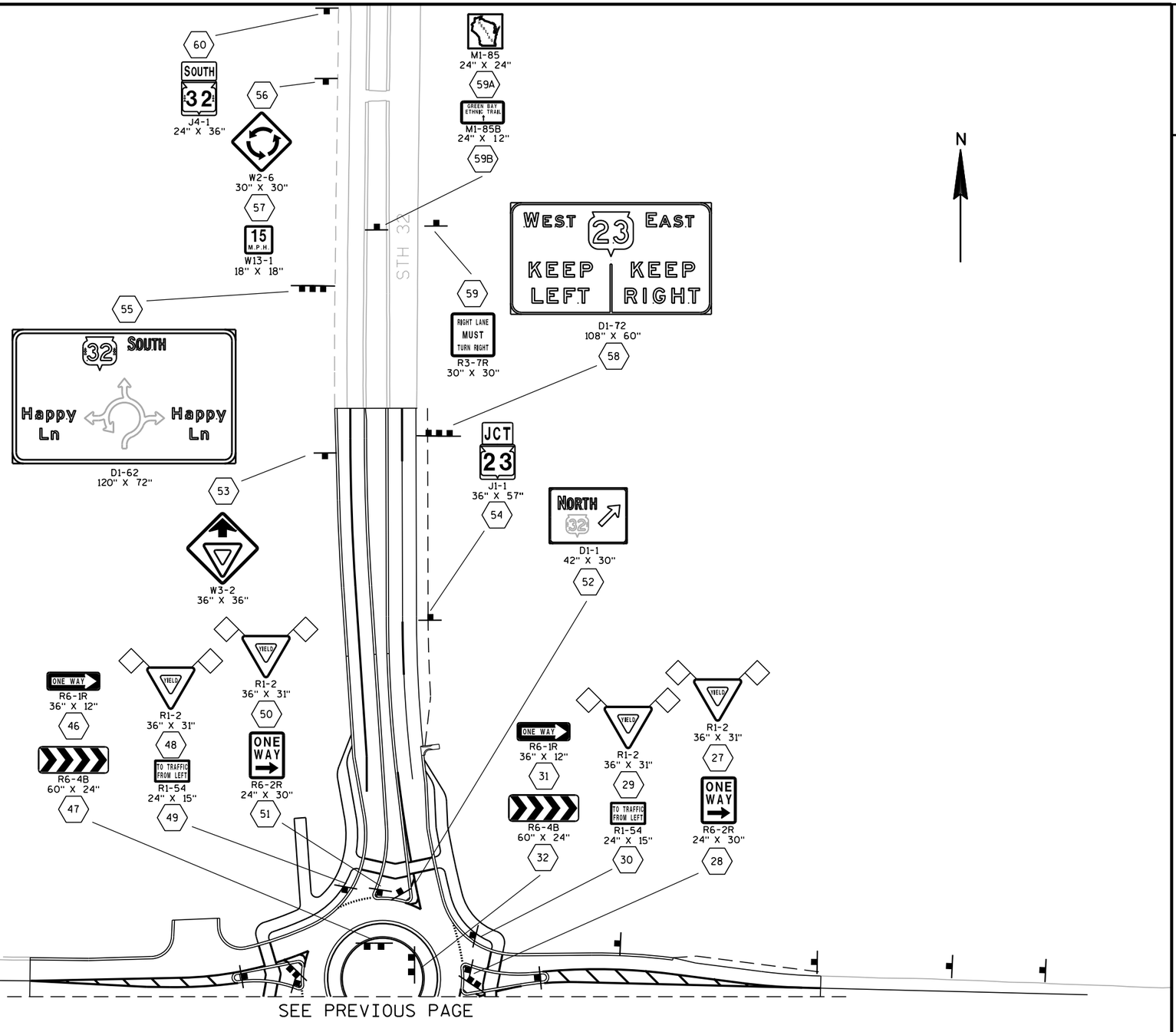

SEE PREVIOUS PAGE

SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET 36	E

2

SIGNING NOTES

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.

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.

N

STH 23

STH 23

64

23 WEST
Fond du Lac

D1-70
108" X 48"

65

23 EAST
Sheboygan

23 WEST
Fond du Lac

D1-71
96" X 90"

23 EAST
Sheboygan

D1-70
96" X 48"

63

62

23 WEST
Fond du Lac

23 EAST
Sheboygan

D1-71
96" X 90"

EAST TO
INTERSTATE
23 43

J2-2
72" X 84"

61

SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET 37	E

FILE NAME : N:\spo\traffic\SIGNING\Projects\4540-23-71 STH 32 - Happy Lane\023203_ps.dgn PLOT DATE : 29-JUN-2015 15:42 PLOT BY : dotj1f PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

SIGNING NOTES

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.

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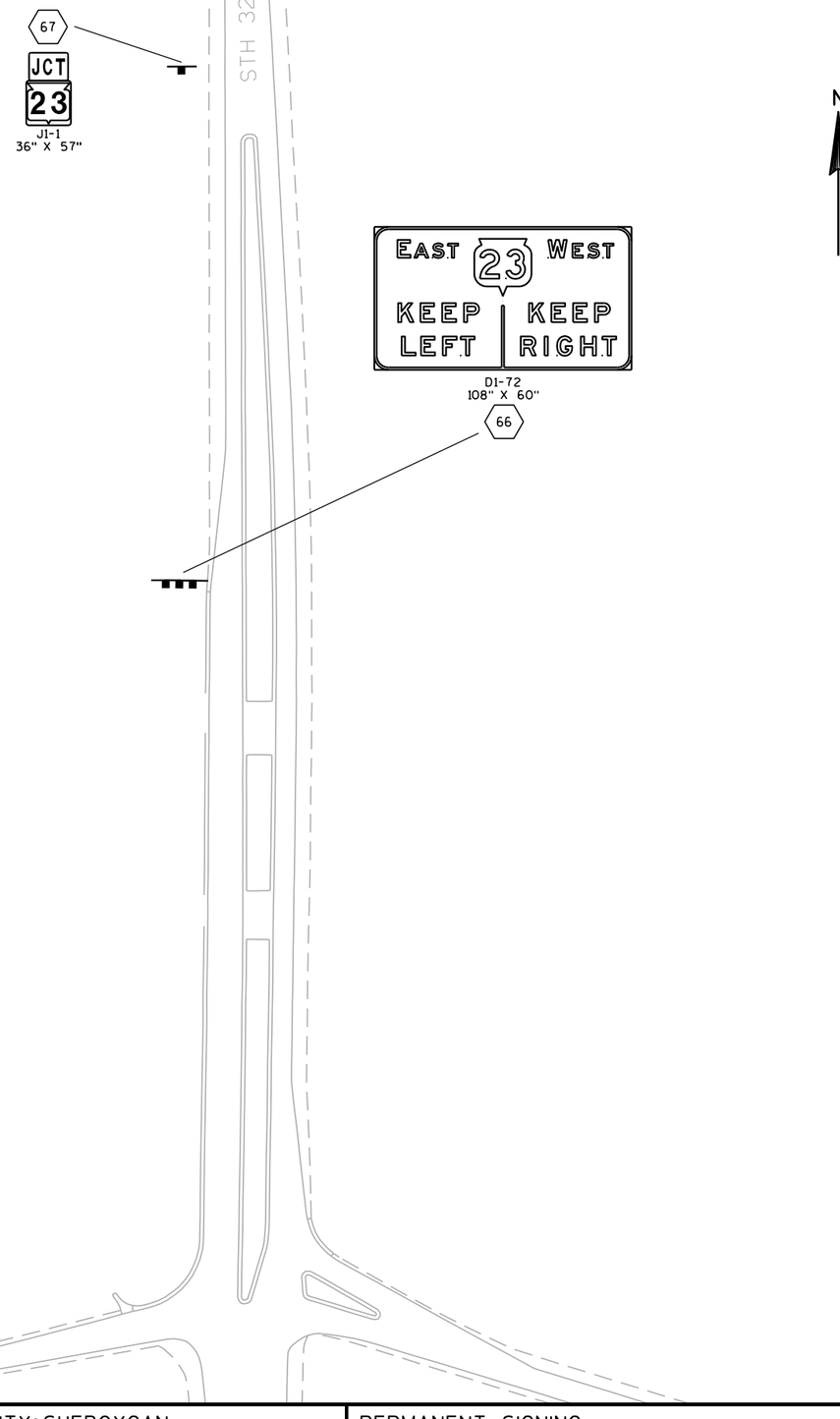


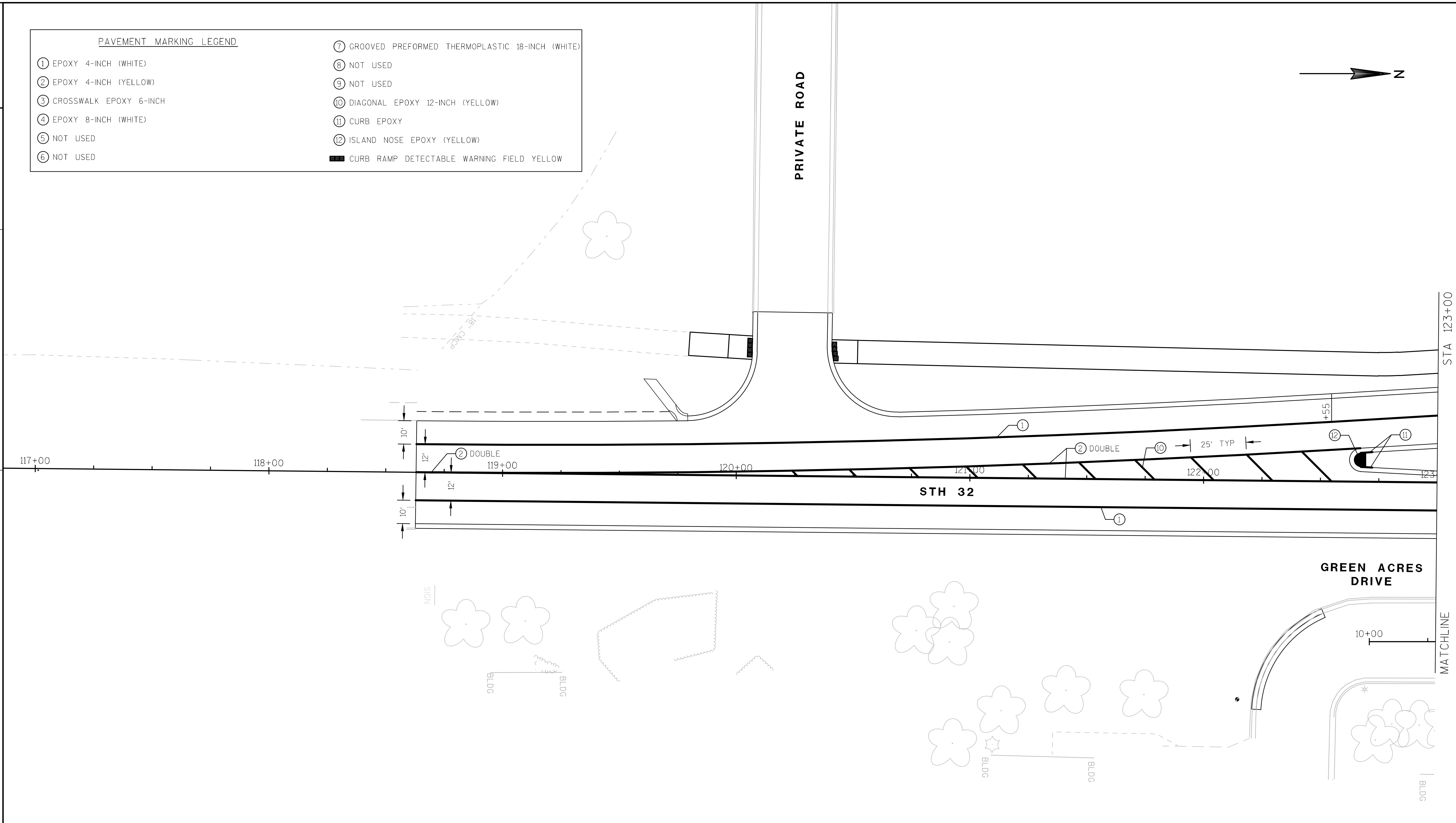
SIGN-PLACE NEW

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET 38	E

2

PAVEMENT MARKING LEGEND

(1) EPOXY 4-INCH (WHITE)	(7) GROOVED PREFORMED THERMOPLASTIC 18-INCH (WHITE)
(2) EPOXY 4-INCH (YELLOW)	(8) NOT USED
(3) CROSSWALK EPOXY 6-INCH	(9) NOT USED
(4) EPOXY 8-INCH (WHITE)	(10) DIAGONAL EPOXY 12-INCH (YELLOW)
(5) NOT USED	(11) CURB EPOXY
(6) NOT USED	(12) ISLAND NOSE EPOXY (YELLOW)
	CURB RAMP DETECTABLE WARNING FIELD YELLOW



SHEET 1 OF 4

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SCALE, FEET 0 20 40	SHEET 39	E

2

PAVEMENT MARKING LEGEND

1. EPOXY 4-INCH (WHITE)
2. EPOXY 4-INCH (YELLOW)
3. CROSSWALK EPOXY 6-INCH
4. EPOXY 8-INCH (WHITE)
5. NOT USED
6. NOT USED
7. GROOVED PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. NOT USED
9. NOT USED
10. DIAGONAL EPOXY 12-INCH (YELLOW)
11. CURB EPOXY
12. ISLAND NOSE EPOXY (YELLOW)

CURB RAMP DETECTABLE WARNING FIELD YELLOW

MATCHLINE

STA 55+50

STA 123+00

STA 129+25

STH 32

GREEN ACRES DRIVE

HAPPY LANE

MATCHLINE

STA 59+50

MATCHLINE

SHEET 2 OF 4

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SCALE, FEET 0 20 40	SHEET 40	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\024501_PM.DWG PLOT DATE : 5/19/2015 9:46 AM PLOT BY : BECKENDORF, RANDY PLOT NAME :

PAVEMENT MARKING LEGEND

1. EPOXY 4-INCH (WHITE)
2. EPOXY 4-INCH (YELLOW)
3. CROSSWALK EPOXY 6-INCH
4. EPOXY 8-INCH (WHITE)
5. NOT USED
6. NOT USED
7. GROOVED PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. NOT USED
9. NOT USED
10. DIAGONAL EPOXY 12-INCH (YELLOW)
11. CURB EPOXY
12. ISLAND NOSE EPOXY (YELLOW)

CURB RAMP DETECTABLE WARNING FIELD YELLOW

N

SIGN

SIGN

STA 129+25

+33

10'

+60

12'

130+00

131+00

132+00

133+00

134+00

135+00

+07

4 3' LINE 9' GAP

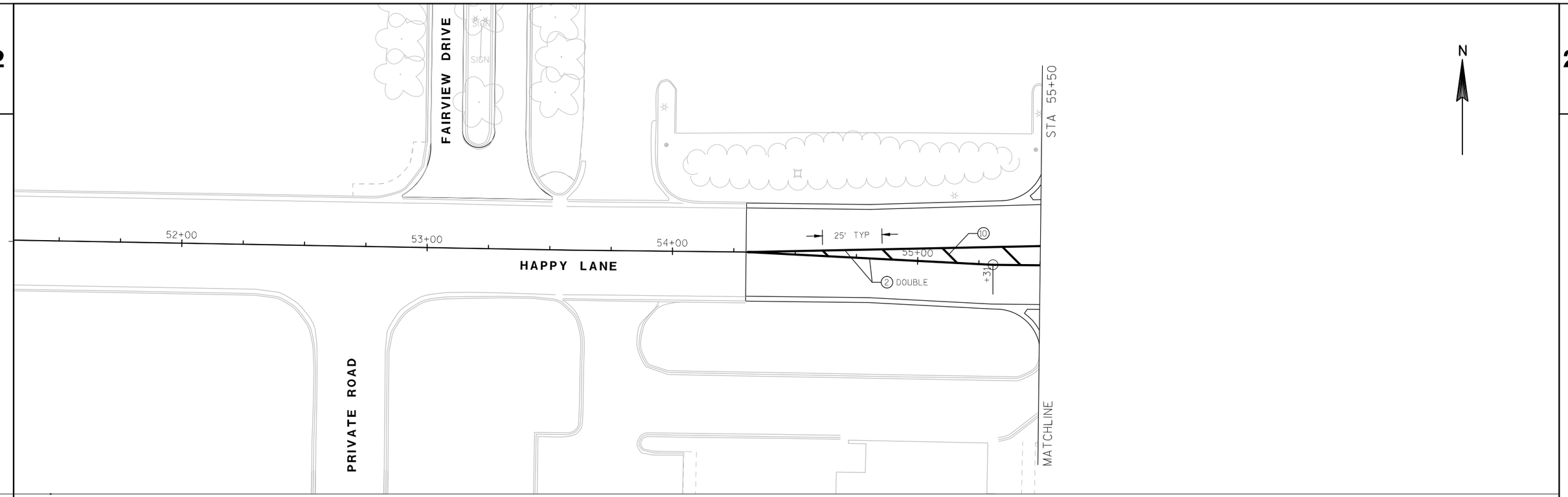
12'

STH 32

12'

MATCHLINE

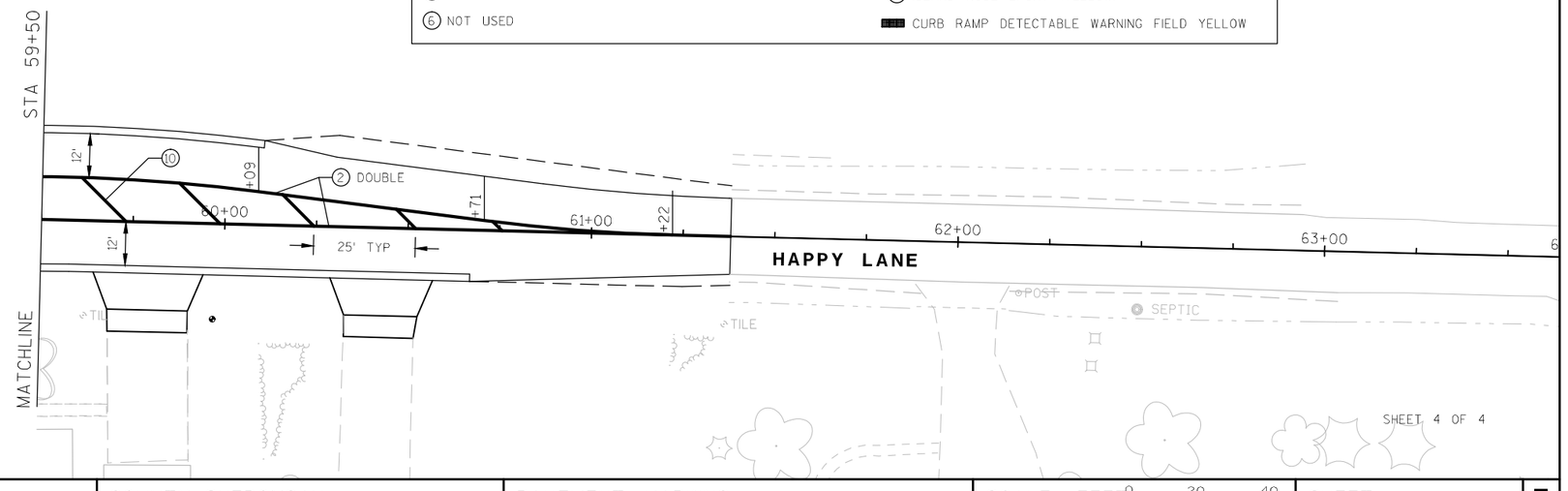
SHEET 3 OF 4



PAVEMENT MARKING LEGEND

1. EPOXY 4-INCH (WHITE)
2. EPOXY 4-INCH (YELLOW)
3. CROSSWALK EPOXY 6-INCH
4. EPOXY 8-INCH (WHITE)
5. NOT USED
6. NOT USED
7. GROOVED PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. NOT USED
9. NOT USED
10. DIAGONAL EPOXY 12-INCH (YELLOW)
11. CURB EPOXY
12. ISLAND NOSE EPOXY (YELLOW)

CURB RAMP DETECTABLE WARNING FIELD YELLOW



PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SCALE, FEET 0 20 40	SHEET 42	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\024502_PM.DWG PLOT DATE : 5/11/2015 4:35 PM PLOT BY : BECKENDORF, RANDY PLOT NAME :
WISDOT/CADDS SHEET 42

CONDUCTOR COLOR SCHEME

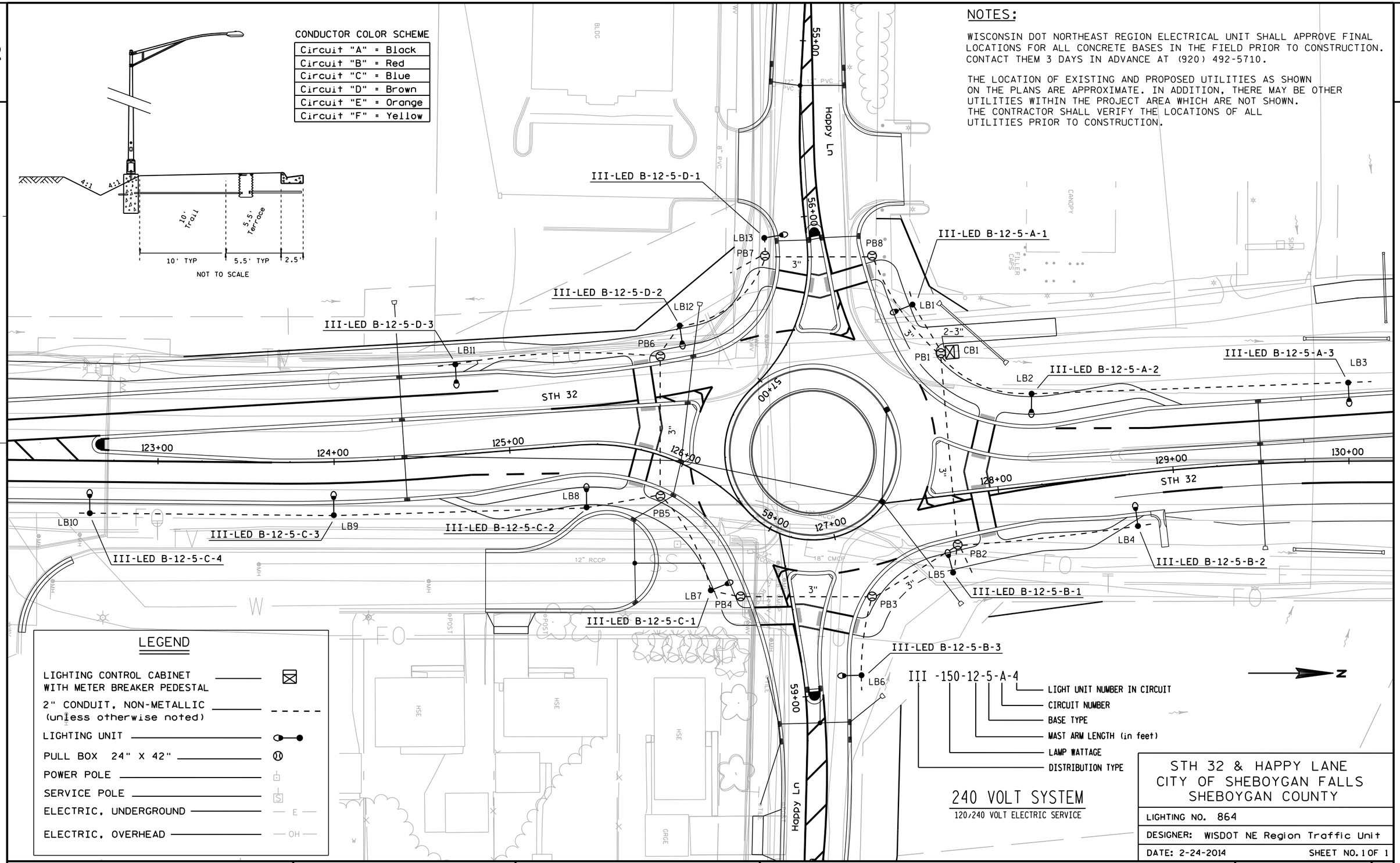
Circuit "A" = Black
Circuit "B" = Red
Circuit "C" = Blue
Circuit "D" = Brown
Circuit "E" = Orange
Circuit "F" = Yellow

NOTES:

WISCONSIN DOT NORTHEAST REGION ELECTRICAL UNIT SHALL APPROVE FINAL LOCATIONS FOR ALL CONCRETE BASES IN THE FIELD PRIOR TO CONSTRUCTION. CONTACT THEM 3 DAYS IN ADVANCE AT (920) 492-5710.

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.

2



LEGEND

- LIGHTING CONTROL CABINET WITH METER BREAKER PEDESTAL
- 2" CONDUIT, NON-METALLIC (unless otherwise noted)
- LIGHTING UNIT
- PULL BOX 24" X 42"
- POWER POLE
- SERVICE POLE
- ELECTRIC, UNDERGROUND — E —
- ELECTRIC, OVERHEAD — OH —

N

III -150-12-5-A-4

- LIGHT UNIT NUMBER IN CIRCUIT
- CIRCUIT NUMBER
- BASE TYPE
- MAST ARM LENGTH (in feet)
- LAMP WATTAGE
- DISTRIBUTION TYPE

240 VOLT SYSTEM

120/240 VOLT ELECTRIC SERVICE

STH 32 & HAPPY LANE
CITY OF SHEBOYGAN FALLS
SHEBOYGAN COUNTY

LIGHTING NO. 864

DESIGNER: WISDOT NE Region Traffic Unit

DATE: 2-24-2014 SHEET NO. 1 OF 1

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CONSTRUCTION DETAIL - ROUNDABOUT LIGHTING	SHEET 43	E

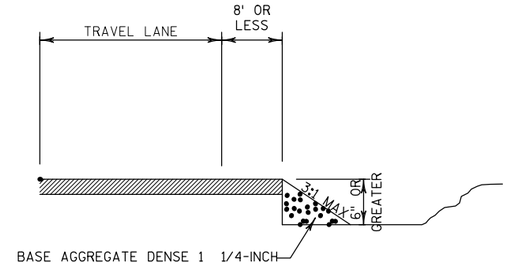
2

GENERAL NOTES FOR CONSTRUCTION STAGING AND TRAFFIC CONTROL

1. A FLAGGER MAY BE REQUIRED WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE "WORK/CLOSED" AREAS IF WARRANTED BY CONDITIONS AND/OR AS DIRECTED BY THE ENGINEER.
2. ADEQUATE TURNING PROVISIONS SHALL BE MAINTAINED FOR ALL VEHICLES, INCLUDING TRUCKS, AS DIRECTED BY THE ENGINEER.
3. IF A DROP OFF GREATER THAN 6 INCHES WILL OCCUR WITHIN 8 FEET OF AN OPEN TRAVEL LANE A 3:1 SLOPE OF FLATTER SHALL BE CONSTRUCTED USING BASE AGGREGATE DENSE 1 1/4-INCH.

NOTE:

PROVIDE 3:1 OR FLATTER SLOPE FOR ALL DROP OFFS GREATER THAN 6-INCHES, 8 FEET OR LESS FROM A TRAVEL LANE.



DROP OFFS DURING CONSTRUCTION

SHEET 1 OF 5

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	TRAFFIC CONTROL	SCALE, FEET 0 NTS	SHEET 44	E

2

TRAFFIC CONTROL LEGEND

POST MOUNTED TRAFFIC CONTROL SIGN

TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C WARNING LIGHT

TYPE III BARRICADE (8' WIDE) WITH TWO TYPE A WARNING LIGHTS WITH/WITHOUT SIGN

ASPHALTIC SURFACE TEMPORARY

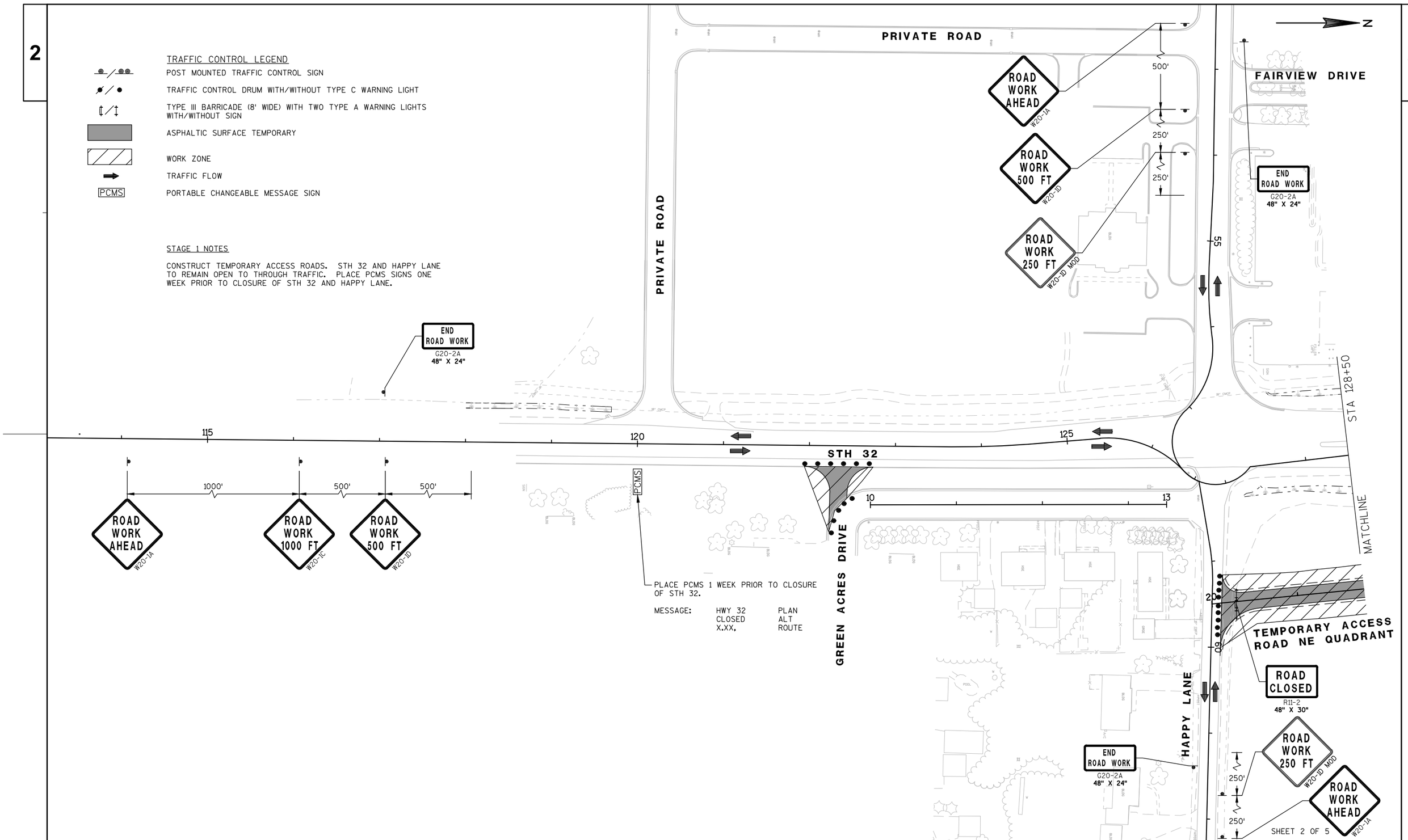
WORK ZONE

TRAFFIC FLOW

PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

STAGE 1 NOTES

CONSTRUCT TEMPORARY ACCESS ROADS. STH 32 AND HAPPY LANE TO REMAIN OPEN TO THROUGH TRAFFIC. PLACE PCMS SIGNS ONE WEEK PRIOR TO CLOSURE OF STH 32 AND HAPPY LANE.

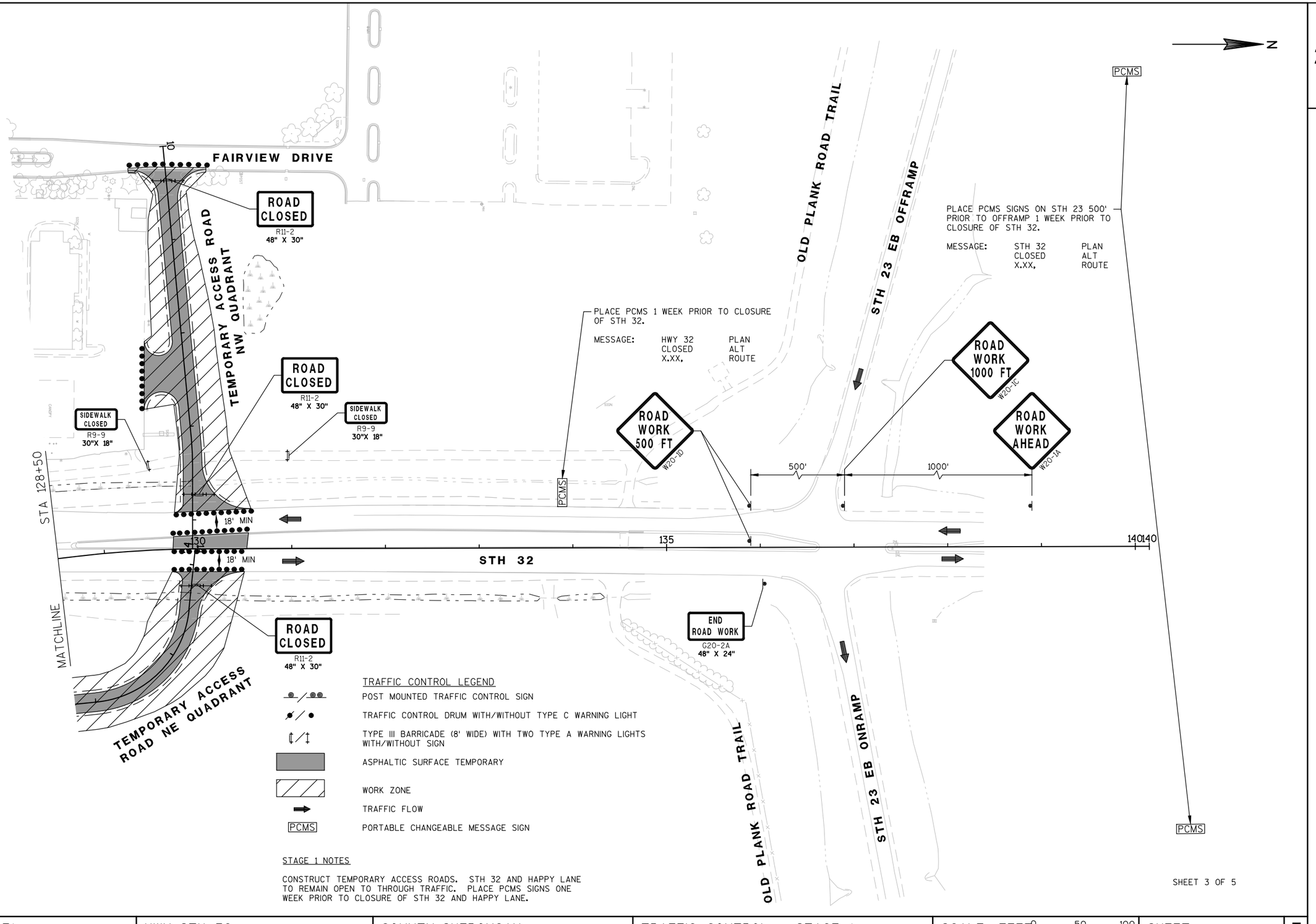


PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	TRAFFIC CONTROL - STAGE 1	SCALE, FEET 0 50 100	SHEET 45	E

SHEET 2 OF 5

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\025001_TC.DWG PLOT DATE : 6/11/2015 9:47 AM PLOT BY : BECKENDORF, RANDY PLOT NAME :

WISDOT/CADDS SHEET 42



TRAFFIC CONTROL LEGEND

- POST MOUNTED TRAFFIC CONTROL SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C WARNING LIGHT
- TYPE III BARRICADE (8' WIDE) WITH TWO TYPE A WARNING LIGHTS WITH/WITHOUT SIGN
- ASPHALTIC SURFACE TEMPORARY
- WORK ZONE
- TRAFFIC FLOW
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

STAGE 1 NOTES

CONSTRUCT TEMPORARY ACCESS ROADS. STH 32 AND HAPPY LANE TO REMAIN OPEN TO THROUGH TRAFFIC. PLACE PCMS SIGNS ONE WEEK PRIOR TO CLOSURE OF STH 32 AND HAPPY LANE.

SHEET 3 OF 5

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	TRAFFIC CONTROL - STAGE 1	SCALE, FEET 0 50 100	SHEET 46	E

2

TRAFFIC CONTROL LEGEND

POST MOUNTED TRAFFIC CONTROL SIGN

TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C WARNING LIGHT

TYPE III BARRICADE (8' WIDE) WITH TWO TYPE A WARNING LIGHTS WITH/WITHOUT SIGN

ASPHALTIC SURFACE TEMPORARY

WORK ZONE

TRAFFIC FLOW

PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

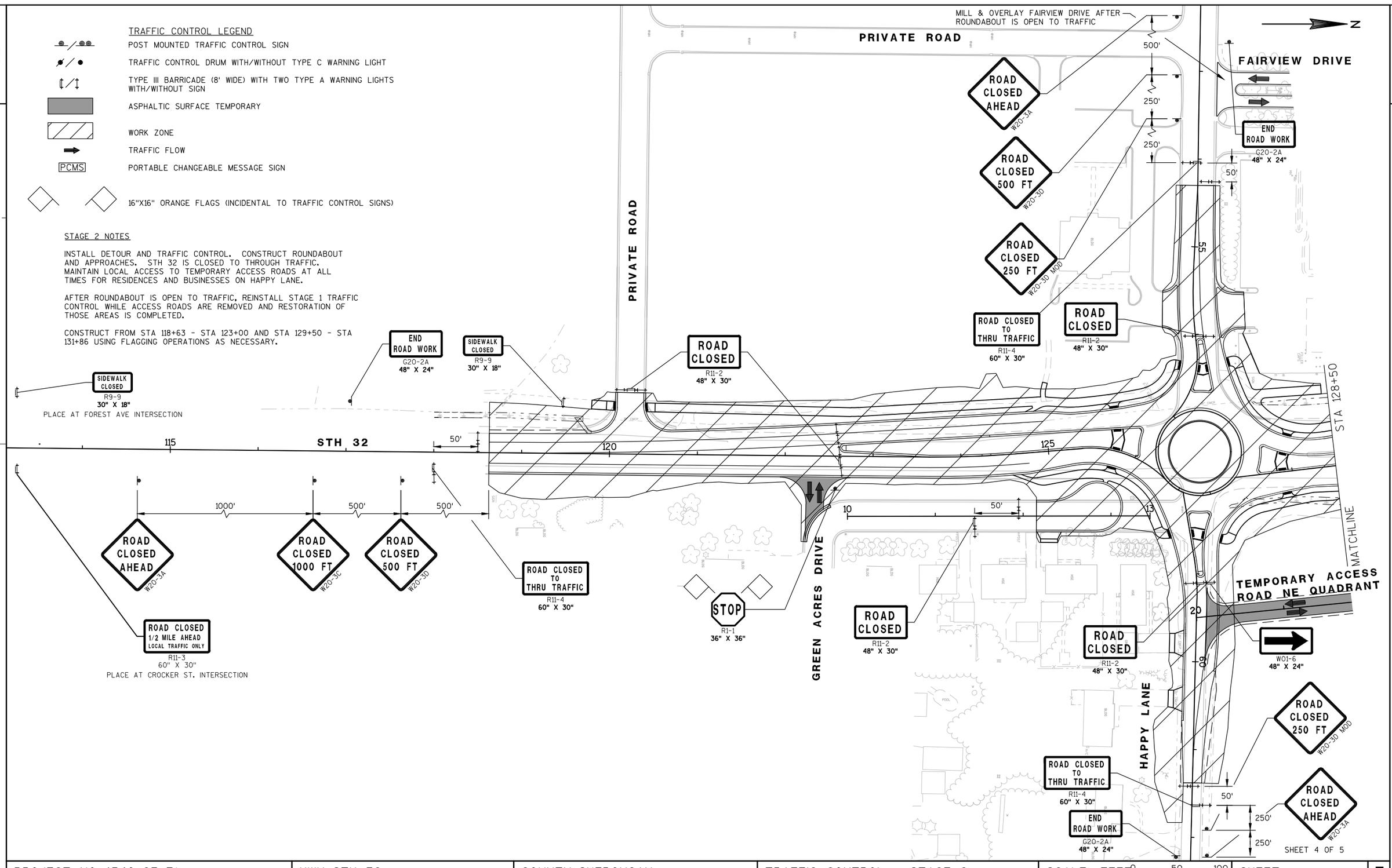
16"X16" ORANGE FLAGS (INCIDENTAL TO TRAFFIC CONTROL SIGNS)

STAGE 2 NOTES

INSTALL DETOUR AND TRAFFIC CONTROL. CONSTRUCT ROUNDABOUT AND APPROACHES. STH 32 IS CLOSED TO THROUGH TRAFFIC. MAINTAIN LOCAL ACCESS TO TEMPORARY ACCESS ROADS AT ALL TIMES FOR RESIDENCES AND BUSINESSES ON HAPPY LANE.

AFTER ROUNDABOUT IS OPEN TO TRAFFIC, REINSTALL STAGE 1 TRAFFIC CONTROL WHILE ACCESS ROADS ARE REMOVED AND RESTORATION OF THOSE AREAS IS COMPLETED.

CONSTRUCT FROM STA 118+63 - STA 123+00 AND STA 129+50 - STA 131+86 USING FLAGGING OPERATIONS AS NECESSARY.



PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	TRAFFIC CONTROL - STAGE 2	SCALE, FEET 0 50 100	SHEET 47	E

2

N

MILL & OVERLAY FAIRVIEW DRIVE AFTER ROUNDABOUT IS OPEN TO TRAFFIC

FAIRVIEW DRIVE

TEMPORARY ACCESS ROAD NW QUADRANT

OLD PLANK ROAD TRAIL

STH 23 EB OFFRAMP

ROAD CLOSED
R11-2
48" X 30"

STOP
R1-1
36" X 36"

SIDEWALK CLOSED
R9-9
30" X 18"

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"

ROAD CLOSED 1000 FT
W20-3C

ROAD CLOSED 500 FT
W20-3D

ROAD CLOSED AHEAD
W20-3A

500'

1000'

STA 128+50

50'

30

135

140140

STH 32

MATCHLINE

Access To Happy Ln
D1-2
48" X 24"

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"

Access To Happy Ln
D1-2
48" X 24"

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

TEMPORARY ACCESS ROAD NE QUADRANT

STOP
R1-1
36" X 36"

OLD PLANK ROAD TRAIL

STH 23 EB ONRAMP

TRAFFIC CONTROL LEGEND

POST MOUNTED TRAFFIC CONTROL SIGN

TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C WARNING LIGHT

TYPE III BARRICADE (8' WIDE) WITH TWO TYPE A WARNING LIGHTS WITH/WITHOUT SIGN

ASPHALTIC SURFACE TEMPORARY

WORK ZONE

TRAFFIC FLOW

PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

16"X16" ORANGE FLAGS (INCIDENTAL TO TRAFFIC CONTROL SIGNS)

STAGE 2 NOTES

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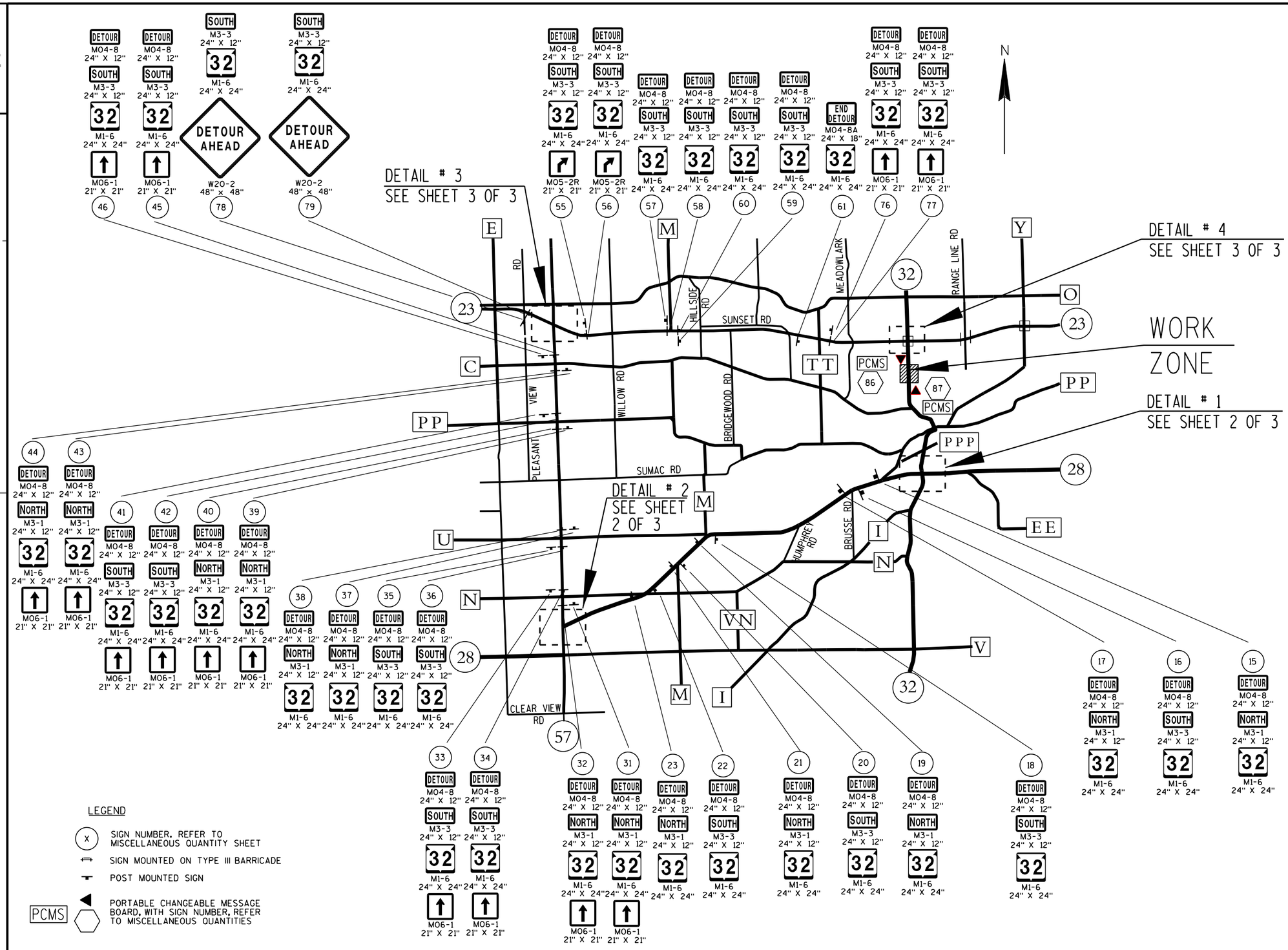
CONSTRUCT FROM STA 118+63 - STA 123+00 AND STA 129+50 - STA 131+86 USING FLAGGING OPERATIONS AS NECESSARY.

SHEET 5 OF 5

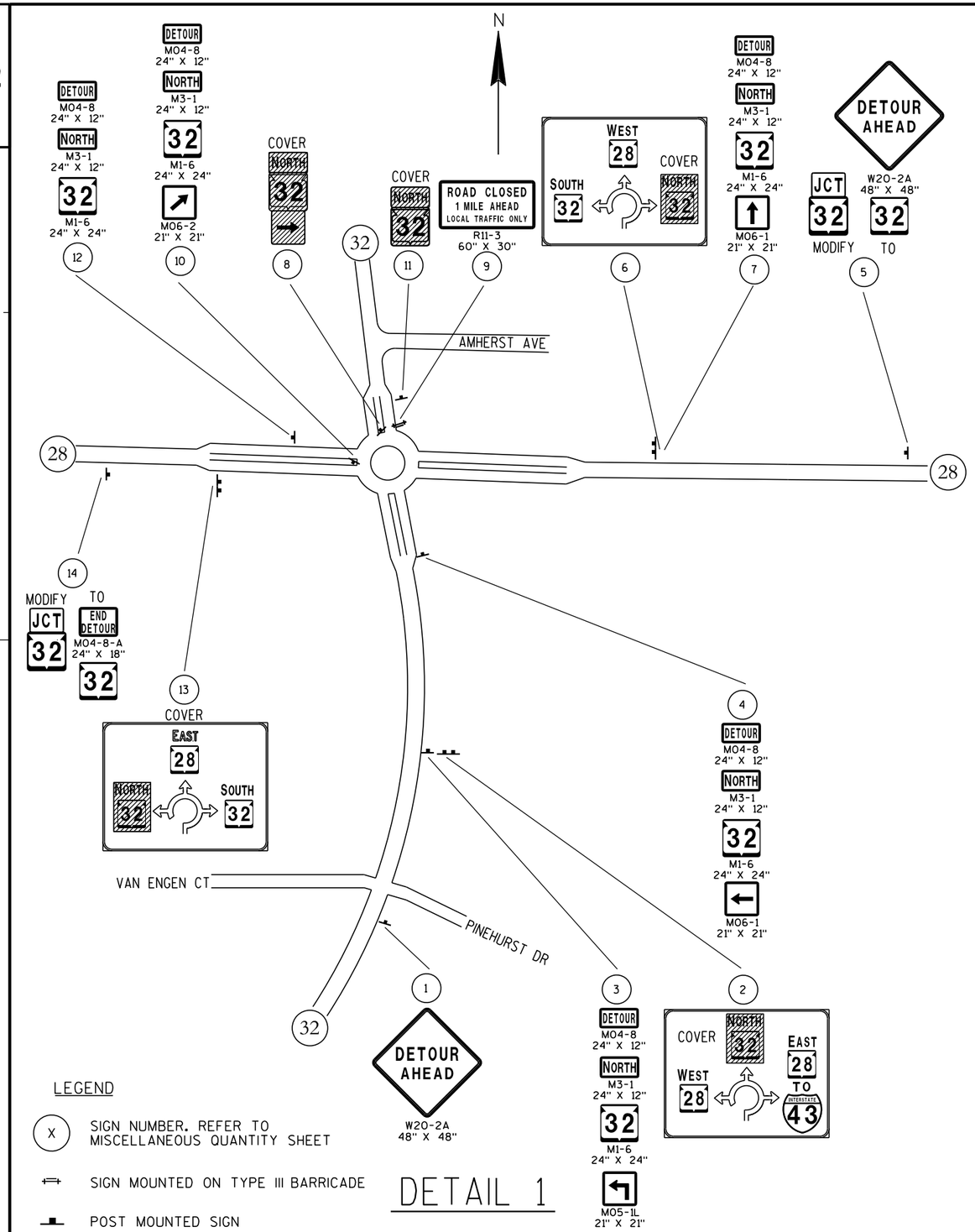
PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	TRAFFIC CONTROL - STAGE 2	SCALE, FEET 0 50 100	SHEET 48	E



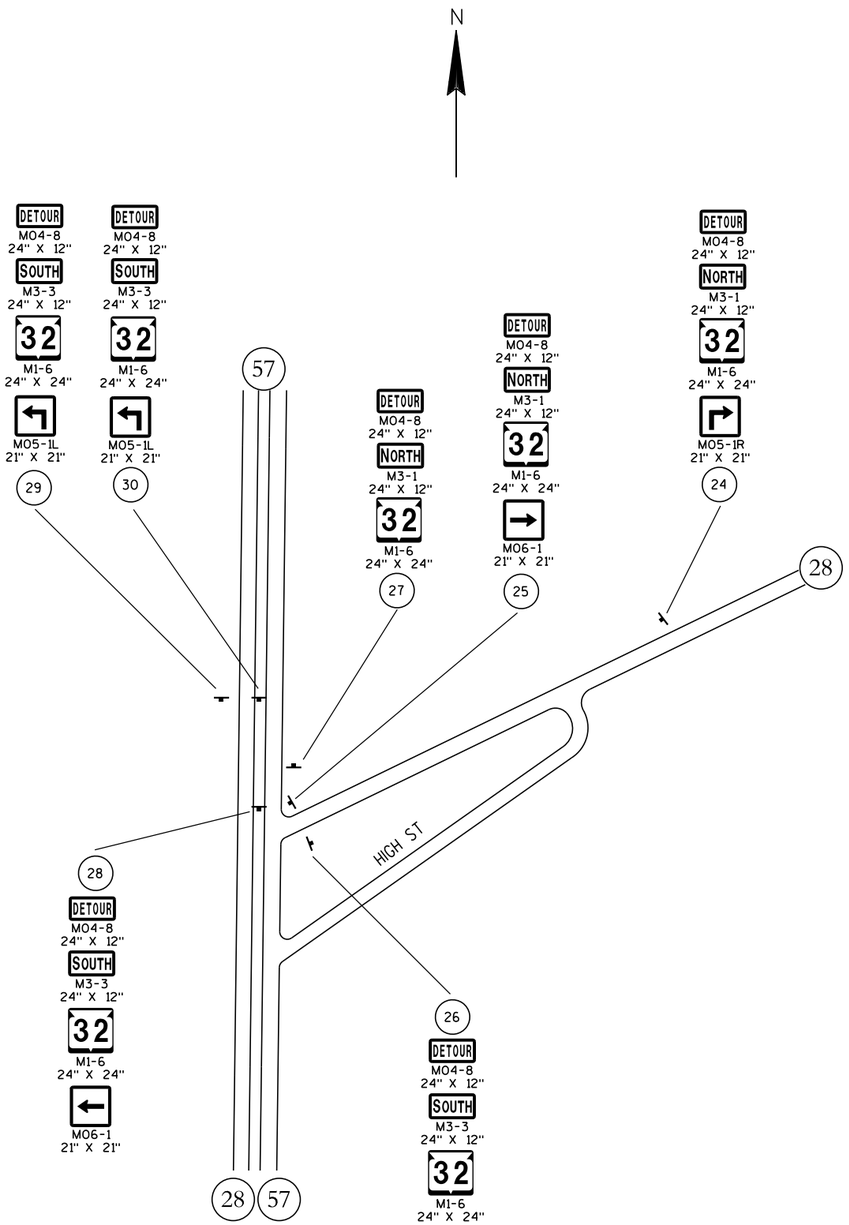
SHEET 1 OF 3
PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	DETOUR SIGNING DETAIL	SHEET 49	E

FILE NAME : N:\spo\traffic\A Work Zone\Detours\Sheboygan County\STH 32\Happy Lane RAB II\027001_dt.dgn PLOT DATE : 09-JUN-2015 08:29 PLOT BY : dotj1f PLOT NAME : PLOT SCALE : 200:1



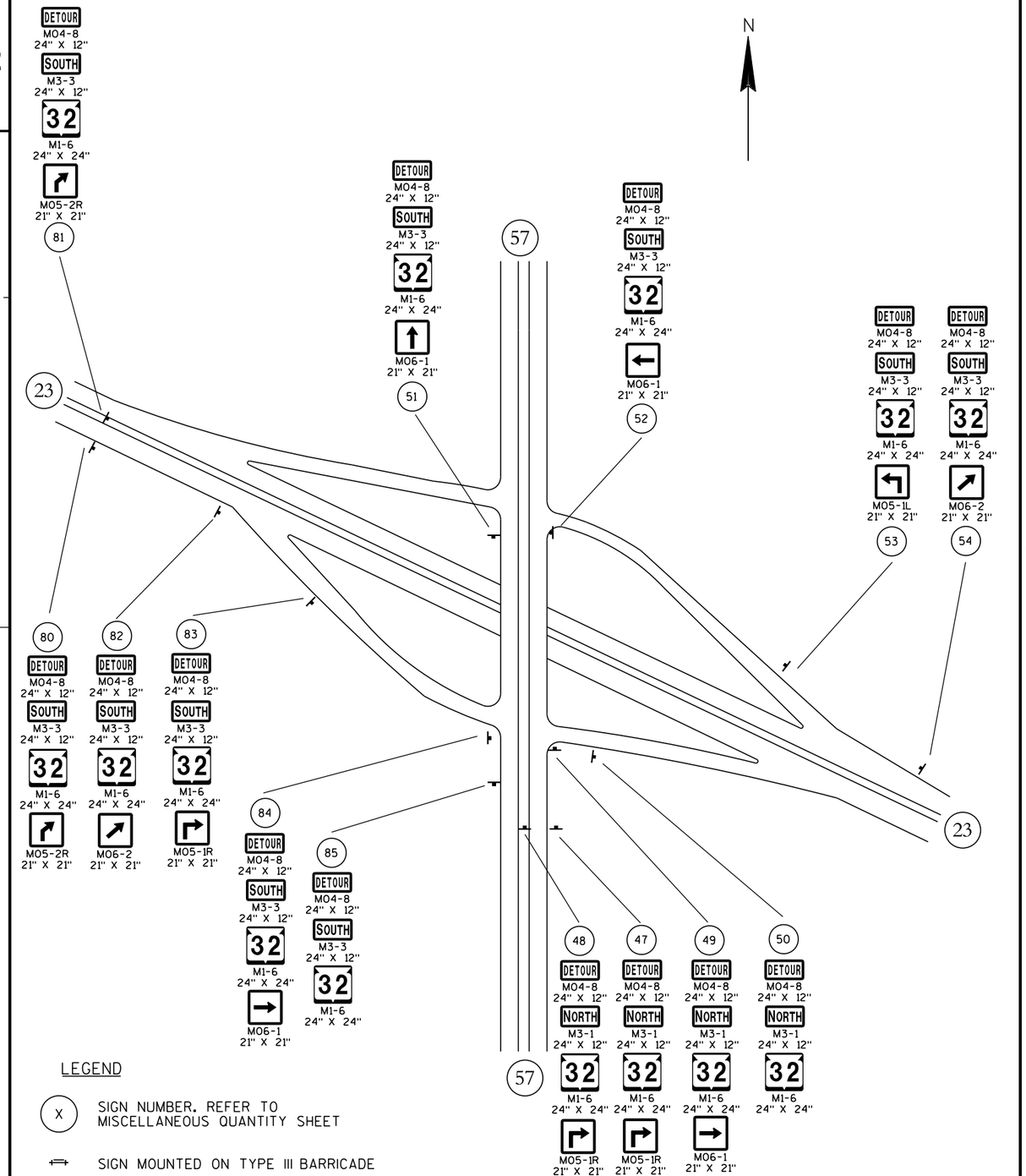
DETAIL 1



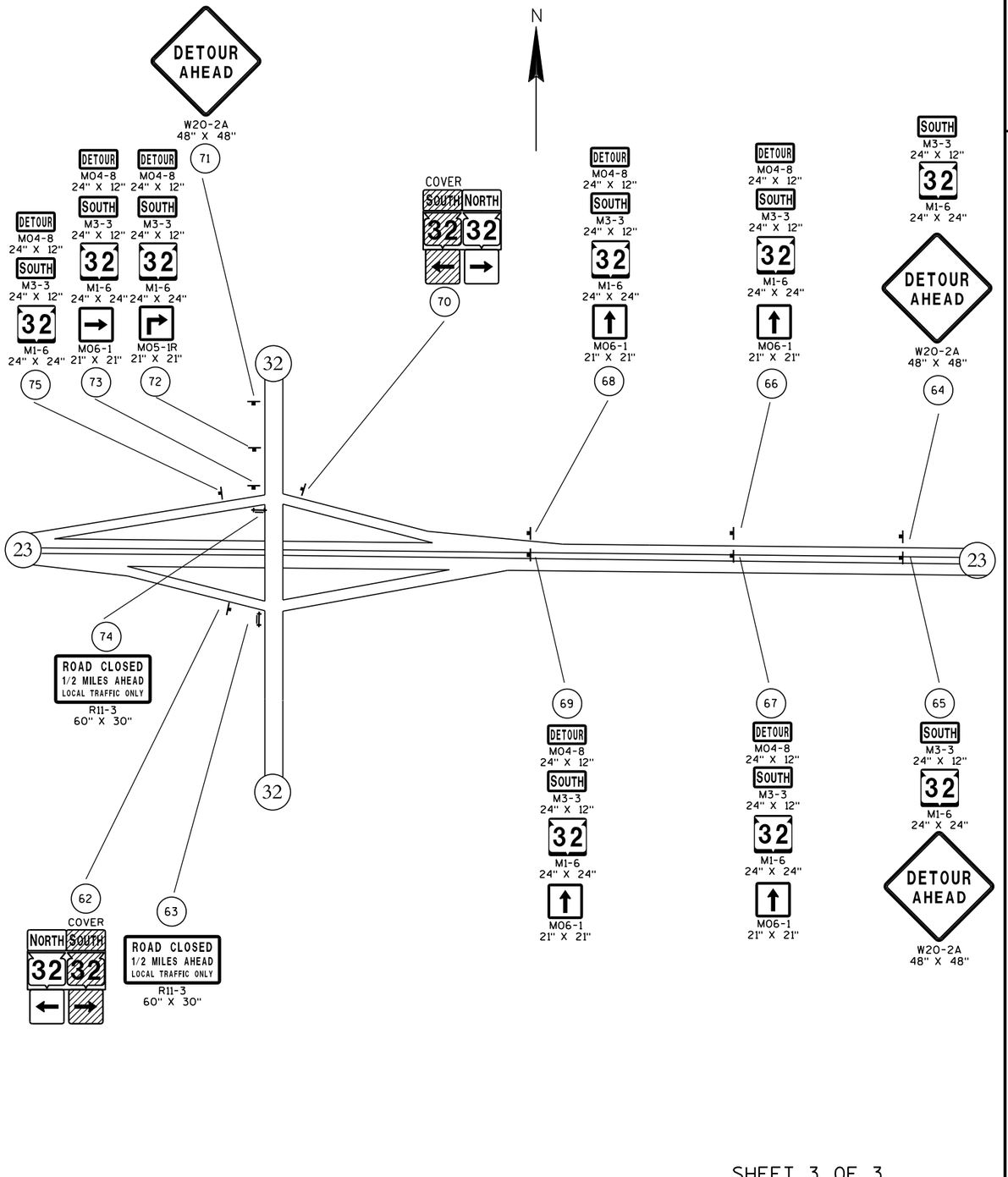
DETAIL 2

SHEET 2 OF 3
PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	DETOUR SIGNING DETAIL	SHEET 50	E



DETAIL 3



DETAIL 4

SHEET 3 OF 3
PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	DETOUR SIGNING DETAIL	SHEET 51	E

FILE NAME : N:\spo\traffic\A Work Zone\Detours\Sheboygan County\STH 32\Happy Lane RAB II\027003_dt.dgn PLOT DATE : 09-JUN-2015 08:04 PLOT BY : dotj1f PLOT NAME : PLOT SCALE : 200:1
WISDOT/CADDS SHEET 42

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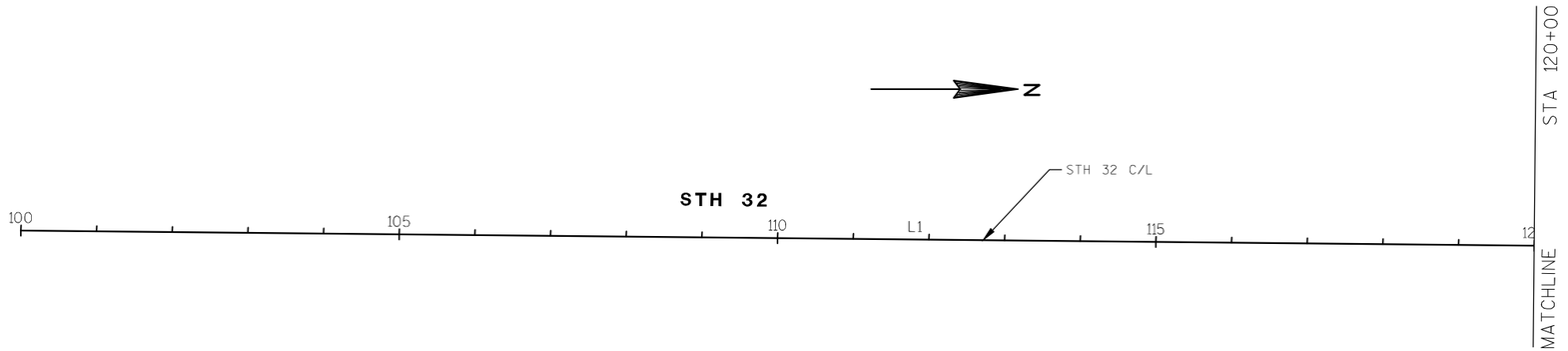

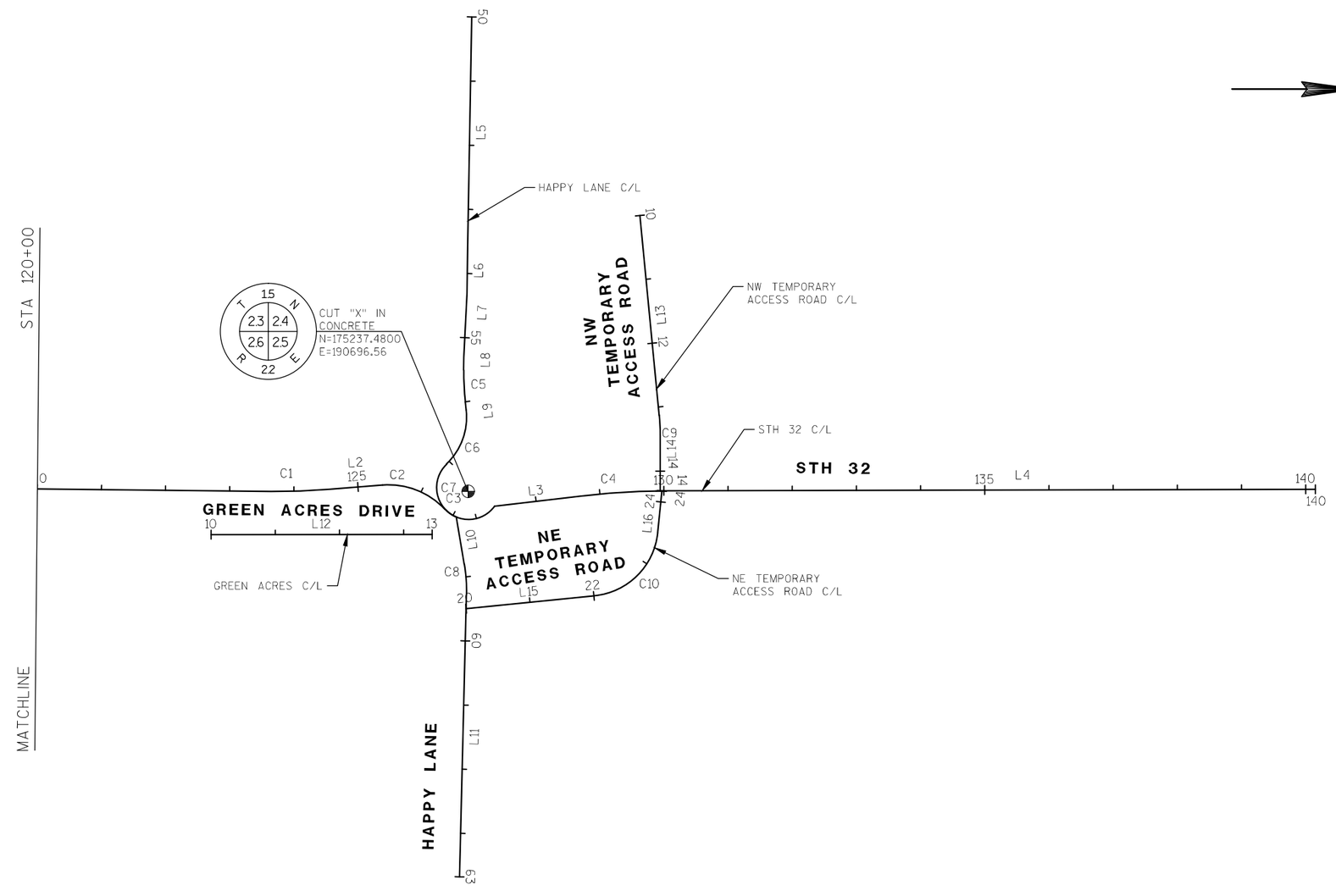

SHEET 1 OF 8

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 52	E

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STH 32 CL																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L1	100+00.00	123+64.74	172566.33 190672.98	174930.95 190696.51						2364.74'						N0°34'12.4"E
C1					124+09.52	174975.73 190696.96	5°07'42"	5°43'46"	44.78'	89.50'	1.00'	1000.00'	123+64.74	124+54.25	N0°34'12.4"E	N4°33'29.2"W
L2	124+54.25	125+38.23	175020.38 190693.40	175104.09 190686.72						83.98'						N4°33'29.2"W
C2					125+96.27	175161.95 190682.11	51°37'26"	47°44'47"	58.04'	108.12'	13.30'	120.00'	125+38.23	126+46.35	N4°33'29.2"W	N47°03'57.0"E
C3					127+07.42	175243.08 190769.32	101°23'09"	114°35'30"	61.07'	88.48'	28.93'	50.00'	126+46.35	127+34.82	N47°03'57.0"E	N54°19'11.8"W
L3	127+34.82	128+69.69	175278.70 190719.71	175412.64 190703.96						134.86'						N6°42'18.2"W
C4					129+38.44	175480.93 190695.94	6°33'29"	4°46'29"	68.75'	137.35'	1.97'	1200.00'	128+69.69	130+07.04	N6°42'18.2"W	N0°08'48.8"W
L4	130+07.04	140+14.99	175549.68 190695.76	176557.62 190693.18						1007.95'						N0°08'48.8"W

HAPPY LANE CL																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L5	50+00.00	53+57.71	175243.25 189957.20	175236.87 190314.86						357.71'						S88°58'38.9"E
L6	53+57.71	54+30.63	175236.87 190314.86	175236.03 190387.77						72.92'						S89°20'26.8"E
L7	54+30.63	55+30.71	175236.03 190387.77	175230.88 190487.72						100.08'						S87°03'00.6"E
L8	55+30.71	55+50.62	175230.88 190487.72	175230.65 190507.63						19.91'						S89°20'26.8"E
C5					55+75.48	175230.36 190532.48	7°06'45"	14°19'26"	24.86'	49.65'	0.77'	400.00'	55+50.62	56+00.27	S89°20'26.8"E	N83°32'48.1"E
L9	56+00.27	56+13.28	175233.16 190557.19	175234.62 190570.11						13.00'						N83°32'48.1"E
C6					56+63.32	175240.24 190619.84	53°10'19"	57°17'45"	50.05'	92.80'	11.82'	100.00'	56+13.28	57+06.08	N83°32'48.1"E	S43°16'52.7"E
C7					57+83.91	175147.15 190707.51	114°34'00"	114°35'30"	77.83'	99.98'	42.51'	50.00'	57+06.08	58+06.06	S43°16'52.7"E	N22°09'07.5"E
L10	58+06.06	58+80.44	175219.24 190736.86	175231.58 190810.20						74.38'						N80°26'40.3"E
C8					59+04.46	175235.57 190833.89	10°58'38"	22°55'06"	24.02'	47.90'	1.15'	250.00'	58+80.44	59+28.33	N80°26'40.3"E	S88°34'41.9"E
L11	59+28.33	63+67.85	175234.98 190857.91	175224.07 191297.29						439.51'						S88°34'41.9"E

GREEN ACRES CL																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L12	10+00.00	13+44.37	174837.19 190763.96	175181.56 190763.54						344.37'						N0°04'10.4"W

NW TEMPORARY ACCESS ROAD CL																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L13	10+00.00	13+13.01	175505.10 190266.53	175535.37 190578.07						313.01'						N84°27'00.8"E
C9					13+28.04	175536.83 190593.03	5°32'59"	18°28'57"	15.03'	30.03'	0.36'	310.00'	13+13.01	13+43.04	N84°27'00.8"E	N90°00'00.0"E
L14	13+43.04	14+30.85	175536.83 190608.05	175536.83 190695.86						87.81'						N90°00'00.0"E

NE TEMPORARY ACCESS ROAD CL																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L15	20+00.00	22+00.91	175234.44 190879.38	175434.35 190859.41						200.91'						N5°42'18.7"W
C10					22+90.64	175523.65 190850.49	78°24'49"	52°05'13"	89.74'	150.54'	31.96'	110.00'	22+00.91	23+51.45	N5°42'18.7"W	N84°07'08.0"W
L16	23+51.45	24+17.19	175532.84 190761.22	175539.58 190695.83						65.74'						N84°07'08.0"W

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N

CURB FLANGE-PRIVATE ROAD SW QUAD

CURB FLANGE-SW QUAD

CURB FLANGE-NW QUAD

CENTRAL ISLAND FLANGE

CURB FLANGE-SE QUAD

CURB FLANGE-GREEN ACRES DRIVE

CURB FLANGE-NE QUAD

STH 32

GREEN ACRES DRIVE

HAPPY LANE

SHEET 3 OF 8

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CURB ALIGNMENTS	SHEET 54	E

2

CURB FLANGE-NW QUAD																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L1	0+00.00	0+50.52	175254.04 190387.14	175253.46 190437.66						50.52'						S89°20'26.8"E
L2	0+50.52	1+04.41	175253.46 190437.66	175254.99 190491.52						53.89'						N88°22'07.0"E
C1					1+22.95	175255.52 190510.06	85°40'56"	286°28'44"	18.55'	29.91'	7.28'	20.00'	1+04.41	1+34.32	N88°22'07.0"E	N2°41'11.5"E
L3	1+34.32	1+48.62	175274.04 190510.93	175288.34 190511.60						14.31'						N2°41'11.5"E
L4	1+48.62	1+85.47	175288.34 190511.60	175289.87 190548.42						36.85'						N87°36'27.8"E
L5	1+85.47	1+92.85	175289.87 190548.42	175282.50 190548.59						7.38'						S1°18'54.0"E
C2					2+17.53	175257.82 190549.16	101°57'34"	286°28'44"	24.68'	35.59'	11.77'	20.00'	1+92.85	2+28.44	S1°18'54.0"E	N76°43'32.4"E
C3					2+58.31	175270.35 190602.25	11°22'17"	19°05'55"	29.87'	59.54'	1.48'	300.00'	2+28.44	2+87.99	N76°43'32.4"E	N65°21'15.1"E
C4					3+22.25	175297.10 190660.54	46°22'39"	71°37'11"	34.27'	64.76'	7.03'	80.00'	2+87.99	3+52.74	N65°21'15.1"E	N18°58'36.0"E
C5					3+78.58	175353.94 190680.09	28°58'30"	57°17'45"	25.84'	50.57'	3.28'	100.00'	3+52.74	4+03.31	N18°58'36.0"E	N9°59'53.8"W
L6	4+03.31	4+53.31	175379.38 190675.60	175428.62 190666.92						50.00'						N9°59'53.8"W
L7	4+53.31	5+99.59	175428.62 190666.92	175574.59 190657.27						146.28'						N3°47'02.2"W
C6					6+37.16	175612.07 190654.79	2°07'44"	2°50'01"	37.57'	75.13'	0.35'	2022.00'	5+99.59	6+74.72	N3°47'02.2"W	N1°39'18.4"W
L8	6+74.72	7+53.95	175649.63 190653.70	175728.82 190651.42						79.23'						N1°39'18.4"W

CURB FLANGE-NE QUAD																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L9	0+00.00	0+19.42	175425.74 190724.62	175406.45 190726.88						19.42'						S6°39'43.8"E
L10	0+19.42	0+58.92	175406.45 190726.88	175366.99 190728.73						39.51'						S2°40'56.7"E
C7					0+89.71	175336.65 190733.97	4°24'26"	7°09'43"	30.78'	61.54'	0.59'	800.00'	0+58.92	1+20.46	S9°48'58.2"E	S14°13'24.5"E
C8					1+32.22	175295.41 190744.43	20°31'00"	88°08'50"	11.76'	23.28'	1.06'	65.00'	1+20.46	1+43.74	S14°13'24.5"E	S34°44'24.1"E
C9					1+73.00	175261.70 190767.81	48°28'14"	88°08'50"	29.26'	54.99'	6.28'	65.00'	1+43.74	1+98.72	S34°44'24.1"E	S83°12'37.8"E
C10					2+05.10	175257.49 190803.19	7°17'47"	57°17'51"	6.38'	12.73'	0.20'	100.00'	1+98.72	2+11.46	S83°12'37.8"E	N89°29'35.0"E
L11	2+11.46	2+72.32	175257.54 190809.57	175258.08 190870.42						60.86'						N89°29'35.0"E
C11					3+07.39	175258.39 190905.49	7°50'14"	11°11'26"	35.07'	70.03'	1.20'	512.00'	2+72.32	3+42.35	N89°29'35.0"E	S82°40'11.4"E

CURB FLANGE-SE QUAD																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L12	0+00.00	5+06.29	174424.47 190713.47	174930.74 190718.51						506.29'						N0°34'12.4"E
C12					5+52.06	174976.50 190718.96	5°07'42"	5°36'22"	45.77'	91.47'	1.02'	1022.00'	5+06.29	5+97.77	N0°34'12.4"E	N4°33'29.2"W
L13	5+97.77	6+20.64	175022.12 190715.33	175044.93 190713.51						22.88'						N4°33'29.2"W
L14	6+20.64	6+70.64	175044.93 190713.51	175094.05 190704.16						50.00'						N10°46'25.2"W
C13					7+00.79	175123.66 190698.53	33°33'19"	57°17'45"	30.15'	58.57'	4.45'	100.00'	6+70.64	7+29.21	N10°46'25.2"W	N22°46'54.2"E
C14					7+59.49	175179.38 190721.93	41°27'40"	71°37'11"	30.28'	57.89'	5.54'	80.00'	7+29.21	7+87.10	N22°46'54.2"E	N64°14'33.9"E
C15					8+59.62	175224.05 190814.51	27°10'44"	19°05'55"	72.52'	142.31'	8.64'	300.00'	7+87.10	9+29.41	N64°14'33.9"E	S88°34'41.9"E
L15	9+29.41	10+38.73	175222.25 190887.01	175219.54 190996.29						109.32'						S88°34'41.9"E

CURB FLANGE-PRIVATE ROAD SW QUAD																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L16	0+00.00	0+34.14	174575.67 190605.80	174575.16 190639.94						34.14'						S89°08'35.2"E
C16					0+63.39	174574.73 190669.18	88°32'34"	190°59'09"	29.25'	46.36'	11.90'	30.00'	0+34.14	0+80.50	S89°08'35.2"E	S0°36'00.9"E

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CURB FLANGE-SW QUAD																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L23	-0+79.50	-0+48.35	174605.67 190606.24	174605.20 190637.38						31.15'						S89°08'35.2"E
C23					-0+17.09	174604.74 190668.64	92°22'14"	190°59'09"	31.27'	48.37'	13.33'	30.00'	-0+48.35	0+00.01	S89°08'35.2"E	N1°30'49.5"W
C22					0+92.34	174728.29 190665.38	1°51'47"	1°00'33"	92.33'	184.64'	0.75'	5678.00'	0+00.01	1+84.65	N1°30'49.5"W	N3°22'36.9"W
L17	1+84.65	4+23.41	174820.46 190659.94	175058.80 190645.88						238.76'						N3°22'36.9"W
L18	4+23.41	4+55.68	175058.80 190645.88	175091.00 190647.99						32.27'						N3°44'53.2"E
C17					4+98.46	175133.69 190645.12	8°09'23"	9°32'57"	42.78'	85.41'	1.52'	600.00'	4+55.68	5+41.10	N3°50'25.0"W	N11°59'48.3"W
C18					5+82.14	175215.68 190627.70	73°28'04"	104°10'27"	41.05'	70.52'	13.63'	55.00'	5+41.10	6+11.62	N11°59'48.3"W	N85°27'51.9"W
C19					6+19.31	175219.54 190579.11	10°59'20"	71°37'11"	7.70'	15.34'	0.37'	80.00'	6+11.62	6+26.96	N85°27'51.9"W	S83°32'48.1"W
L19	6+26.96	6+29.43	175218.67 190571.46	175218.39 190569.01						2.47'						S83°32'48.1"W
C20					6+50.06	175216.08 190548.52	79°02'37"	229°10'58"	20.62'	34.49'	7.41'	25.00'	6+29.43	6+63.92	S83°32'48.1"W	S4°30'11.4"W
L20	6+63.92	7+01.83	175195.51 190546.90	175195.95 190508.99						37.91'						N89°20'26.8"W
C21					7+19.73	175213.82 190507.92	83°38'55"	286°28'44"	17.90'	29.20'	6.84'	20.00'	7+01.83	7+31.03	N3°24'05.1"W	N87°03'00.6"W
L21	7+31.03	7+83.91	175214.74 190490.05	175217.46 190437.24						52.88'						N87°03'00.6"W
L22	7+83.91	8+34.79	175217.46 190437.24	175218.04 190386.37						50.88'						N89°20'26.8"W

CENTRAL ISLAND FLANGE																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
C24					-0+00.03	175201.47 190724.59	359°56'33"	114°35'23"	0.03'	314.11'	100.00'	50.00'	0+00.00	3+14.11	N47°03'53.2"E	N47°07'20.1"E

CURB FLANGE-GREEN ACRES DRIVE																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L26	0+00.00	0+15.24	175052.21 190747.70	175067.45 190747.71						15.24'						N0°03'33.3"E
C31					0+35.66	175087.86 190747.74	44°24'54"	114°35'30"	20.41'	38.76'	4.01'	50.00'	0+15.24	0+54.00	N0°03'32.5"E	N44°21'21.8"W
C32					-0+12.13	175055.17 190779.70	224°24'55"	212°12'24"	66.14'	105.75'	98.44'	27.00'	0+54.00	1+59.76	N44°21'21.8"W	S0°03'33.3"W
L27	1+59.76	2+28.89	175121.31 190779.77	175052.18 190779.70						69.13'						S0°03'33.3"W

SHEET 5 OF 8

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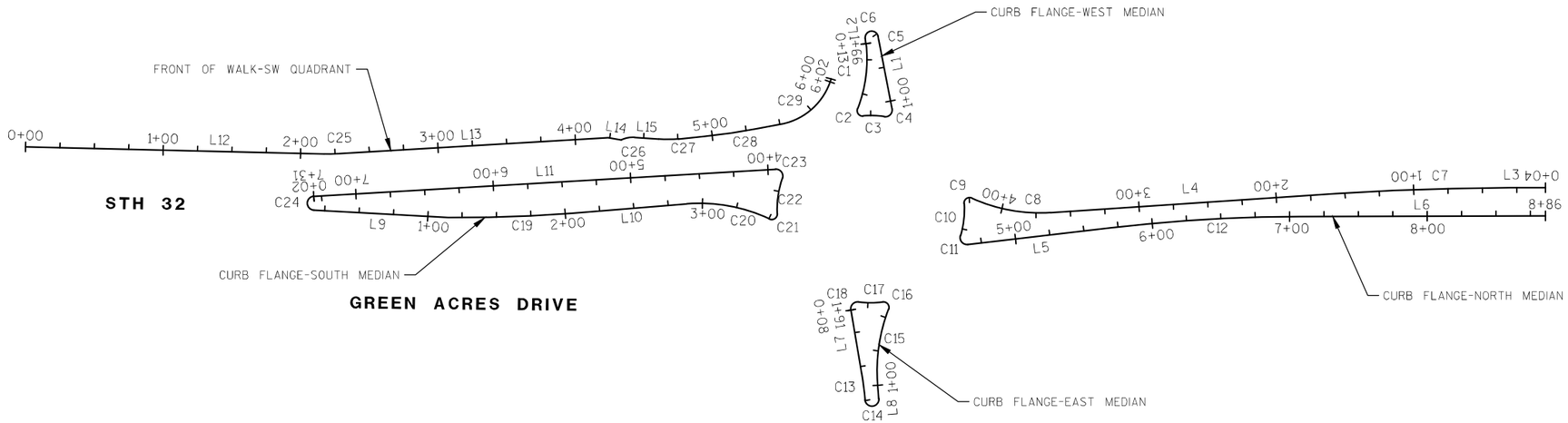

GREEN ACRES DRIVE

HAPPY LANE

SHEET 6 OF 8

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CURB ALIGNMENTS	SHEET 57	E

CURB FLANGE-WEST MEDIAN																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
C1					0+37.79	175237.37 190594.47	27°33'00"	57°17'45"	24.52'	48.08'	2.96'	100.00'	0+13.28	0+61.36	N83°32'48.1"E	S68°54'11.9"E
C2					0+67.73	175226.26 190623.28	115°43'24"	1432°23'40"	6.37'	8.08'	3.52'	4.00'	0+61.36	0+69.44	S68°54'11.9"E	N4°37'36.3"W
C3					0+77.17	175240.32 190622.14	12°58'47"	84°15'31"	7.74'	15.40'	0.44'	68.00'	0+69.44	0+84.84	N4°37'36.3"W	N8°21'10.4"E
C4					0+91.89	175254.94 190624.29	109°17'31"	1145°54'56"	7.05'	9.54'	3.64'	5.00'	0+84.84	0+94.38	N8°21'10.4"E	S79°03'38.9"W
L1	0+94.38	1+44.57	175253.60 190617.37	175244.08 190568.10						50.18'						S79°03'38.9"W
C5					1+46.20	175243.77 190566.50	0°37'25"	19°05'55"	1.63'	3.26'	0.00'	300.00'	1+44.57	1+47.83	S79°03'38.9"W	S79°41'03.6"W
C6					2+87.22	175218.52 190427.75	176°08'16"	1219°03'33"	139.39'	14.45'	134.77'	4.70'	1+47.83	1+62.28	S79°41'03.6"W	N83°32'48.1"E
L2	1+62.28	1+66.15	175234.18 190566.26	175234.62 190570.11						3.87'						N83°32'48.1"E

CURB FLANGE-NORTH MEDIAN																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L3	0+04.18	0+29.86	175728.58 190674.80	175702.90 190674.87						25.68'						S0°08'48.8"E
C7					0+93.36	175639.40 190675.03	3°38'13"	2°51'53"	63.50'	126.96'	1.01'	2000.00'	0+29.86	1+56.82	S0°08'48.8"E	S3°47'02.2"E
L4	1+56.82	3+64.32	175576.04 190679.22	175368.99 190692.91						207.50'						S3°47'02.2"E
C8					3+94.38	175338.99 190694.90	28°07'40"	47°44'47"	30.06'	58.91'	3.71'	120.00'	3+64.32	4+23.23	S3°47'02.2"E	S24°20'38.1"W
C9					4+29.87	175305.56 190679.77	117°50'39"	1432°23'40"	6.64'	8.23'	3.75'	4.00'	4+23.23	4+31.46	S24°20'38.1"W	N86°29'58.8"E
C10					4+43.42	175306.69 190698.33	19°57'02"	84°15'31"	11.96'	23.68'	1.04'	68.00'	4+31.46	4+55.14	N86°29'58.8"E	S73°32'58.7"E
C11					4+62.71	175301.16 190717.07	113°09'19"	1145°54'56"	7.58'	9.87'	4.08'	5.00'	4+55.14	4+65.01	S73°32'58.7"E	N6°42'18.2"W
L5	4+65.01	5+69.69	175308.69 190716.18	175412.64 190703.96						104.67'						N6°42'18.2"W
C12					6+38.44	175480.93 190695.94	6°33'29"	4°46'29"	68.75'	137.35'	1.97'	1200.00'	5+69.69	7+07.04	N6°42'18.2"W	N0°08'48.8"W
L6	7+07.04	8+86.00	175549.68 190695.76	175728.64 190695.30						178.96'						N0°08'48.8"W

CURB FLANGE-EAST MEDIAN																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L7	0+08.35	0+55.44	175223.77 190763.77	175231.58 190810.20						47.09'						N80°26'40.3"E
C13					0+64.97	175233.17 190819.60	4°21'59"	22°55'06"	9.53'	19.05'	0.18'	250.00'	0+55.44	0+74.49	N80°26'40.3"E	N84°48'38.9"E
C14					7+60.25	175296.05 191512.04	179°09'52"	1145°54'56"	685.76'	15.64'	680.78'	5.00'	0+74.49	0+90.12	N84°48'38.9"E	S85°38'46.6"W
L8	0+90.12	1+00.92	175243.99 190828.26	175243.17 190817.50						10.80'						S85°38'48.3"W
C15					1+28.94	175241.05 190789.56	25°16'11"	45°50'12"	28.02'	55.13'	3.10'	125.00'	1+00.92	1+56.05	S85°38'48.3"W	N69°05'00.9"W
C16					1+62.75	175253.44 190757.13	118°16'36"	1432°23'40"	6.69'	8.26'	3.80'	4.00'	1+56.05	1+64.31	N69°05'00.9"W	S7°21'36.9"E
C17					1+73.11	175238.07 190759.11	14°45'08"	84°15'31"	8.80'	17.51'	0.57'	68.00'	1+64.31	1+81.82	S7°21'36.9"E	S7°23'31.4"W
C18					1+88.57	175222.65 190757.11	106°56'51"	1145°54'56"	6.75'	9.33'	3.40'	5.00'	1+81.82	1+91.15	S7°23'31.4"W	N80°26'40.3"E

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CURB FLANGE-SOUTH MEDIAN																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
C24					8+18.82	174745.36 190686.41	173°30'29"	1145°54'56"	88.16'	15.14'	83.31'	5.00'	0+01.90	0+17.04	S3°22'36.9"E	N3°06'53.7"E
L9	0+17.04	1+14.74	174833.40 190691.20	174930.95 190696.51						97.70'						N3°06'53.7"E
C19					1+59.52	174975.73 190696.96	5°07'42"	5°43'46"	44.78'	89.50'	1.00'	1000.00'	1+14.74	2+04.25	N0°34'12.4"E	N4°33'29.2"W
L10	2+04.25	2+88.50	175020.38 190693.40	175104.36 190686.70						84.25'						N4°33'28.5"W
C20					3+20.09	175135.86 190684.26	29°30'06"	47°44'47"	31.60'	61.79'	4.09'	120.00'	2+88.50	3+50.29	N4°25'44.2"W	N25°04'22.2"E
C21					3+56.92	175170.49 190700.46	117°50'39"	1432°23'40"	6.64'	8.23'	3.75'	4.00'	3+50.29	3+58.51	N25°04'22.2"E	S87°13'42.9"W
C22					3+71.78	175169.53 190680.58	22°04'44"	84°15'31"	13.27'	26.20'	1.28'	68.00'	3+58.51	3+84.72	S87°13'42.9"W	N70°41'33.5"W
C23					3+92.23	175176.40 190660.98	112°41'03"	1145°54'56"	7.51'	9.83'	4.02'	5.00'	3+84.72	3+94.55	N70°41'33.5"W	S3°22'36.9"E
L11	3+94.55	7+30.66	175168.90 190661.42	174833.37 190681.22						336.11'						S3°22'36.9"E

FRONT OF WALK-SW QUADRANT																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L12	0+00.00	2+17.17	174623.86 190645.20	174840.98 190650.34						217.17'						N1°21'23.8"E
C25					2+21.72	174845.52 190650.45	4°44'01"	52°05'13"	4.55'	9.09'	0.09'	110.00'	2+17.17	2+26.26	N1°21'23.8"E	N3°22'36.9"W
L13	2+26.26	4+23.82	174850.06 190650.18	175047.27 190638.54						197.55'						N3°22'36.9"W
L14	4+23.82	4+33.69	175047.27 190638.54	175057.03 190640.09						9.88'						N9°00'23.9"E
C26					4+38.68	175061.57 190638.04	27°59'45"	286°28'44"	4.99'	9.77'	0.61'	20.00'	4+33.69	4+43.47	N24°14'51.4"W	N3°44'53.2"E
L15	4+43.47	4+60.98	175066.55 190638.37	175084.02 190639.51						17.51'						N3°44'53.2"E
C27					4+68.31	175091.33 190639.99	8°22'53"	57°17'45"	7.33'	14.63'	0.27'	100.00'	4+60.98	4+75.61	N3°44'53.2"E	N4°37'59.5"W
C28					5+13.70	175136.61 190636.32	7°21'49"	9°40'42"	38.09'	76.08'	1.22'	592.00'	4+75.61	5+51.69	N4°37'59.5"W	N11°59'48.3"W
C29					5+79.70	175201.26 190622.58	61°34'53"	121°54'21"	28.01'	50.52'	7.71'	47.00'	5+51.69	6+02.21	N11°59'48.3"W	N73°34'41.1"W

DATE 17NOV15 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	4540-23-71 QUANTITY
0010	201.0120	Clearing	ID	8.000	8.000
0020	201.0220	Grubbing	ID	8.000	8.000
0030	203.0100	Removing Small Pipe Culverts	EACH	5.000	5.000
0040	204.0100	Removing Pavement	SY	6,550.000	6,550.000
0050	204.0120	Removing Asphaltic Surface Milling	SY	960.000	960.000
0060	204.0150	Removing Curb & Gutter	LF	1,355.000	1,355.000
0070	204.0210	Removing Manholes	EACH	2.000	2.000
0080	204.0220	Removing Inlets	EACH	5.000	5.000
0090	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	270.000	270.000
0100	204.0245	Removing Storm Sewer (size) 02. 18-Inch	LF	95.000	95.000
0110	205.0100	Excavation Common	CY	14,372.000	14,372.000
0120	208.0100	Borrow	CY	187.000	187.000
0130	208.1100	Select Borrow	CY	2,242.000	2,242.000
0140	213.0100	Finishing Roadway (project) 01. 4540-23-71	EACH	1.000	1.000
0150	305.0110	Base Aggregate Dense 3/4-Inch	TON	370.000	370.000
0160	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	10,555.000	10,555.000
0170	311.0110	Breaker Run	TON	9,380.000	9,380.000
0180	405.0100	Coloring Concrete Red	CY	250.000	250.000
0190	416.0160	Concrete Driveway 6-Inch	SY	130.000	130.000
0200	416.0512	Concrete Roundabout Truck Apron 12-Inch	SY	320.000	320.000
0210	416.0610	Drilled Tie Bars	EACH	34.000	34.000
0220	455.0120	Asphaltic Material PG64-28	TON	262.000	262.000
0230	455.0605	Tack Coat	GAL	1,370.000	1,370.000
0240	460.1101	HMA Pavement Type E-1	TON	220.000	220.000
0250	460.1110	HMA Pavement Type E-10	TON	4,485.000	4,485.000
0260	460.2000	Incentive Density HMA Pavement	DOL	3,040.000	3,040.000
0270	465.0105	Asphaltic Surface	TON	200.000	200.000
0280	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	64.000	64.000
0290	465.0125	Asphaltic Surface Temporary	TON	565.000	565.000
0300	465.0315	Asphaltic Flumes	SY	27.000	27.000
0310	520.2012	Culvert Pipe Temporary 12-Inch	LF	80.000	80.000
0320	520.2018	Culvert Pipe Temporary 18-Inch	LF	96.000	96.000
0330	521.0112	Culvert Pipe Corrugated Steel 12-Inch	LF	50.000	50.000
0340	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	2.000	2.000
0350	522.0318	Culvert Pipe Reinforced Concrete Class IV 18-Inch	LF	50.000	50.000
0360	522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	5.000	5.000
0370	522.1015	Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	EACH	1.000	1.000
0380	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	2.000	2.000
0390	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	1.000	1.000
0400	601.0405	Concrete Curb & Gutter 18-Inch Type A	LF	305.000	305.000
0410	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	4,350.000	4,350.000
0420	601.0553	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	LF	985.000	985.000
0430	601.0582	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type T	LF	300.000	300.000
0440	601.0600	Concrete Curb Pedestrian	LF	143.000	143.000
0450	602.0405	Concrete Sidewalk 4-Inch	SF	10,340.000	10,340.000

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DATE 17NOV15 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	4540-23-71 QUANTITY
0460	602.0420	Concrete Sidewalk 7-Inch	SF	1,010.000	1,010.000
0470	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	288.000	288.000
0480	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	634.600	634.600
0490	608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	LF	270.800	270.800
0500	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	157.300	157.300
0510	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	188.500	188.500
0520	611.0530	Manhole Covers Type J	EACH	2.000	2.000
0530	611.0624	Inlet Covers Type H	EACH	24.000	24.000
0540	611.0639	Inlet Covers Type H-S	EACH	7.000	7.000
0550	611.0652	Inlet Covers Type T	EACH	2.000	2.000
0560	611.2004	Manholes 4-FT Diameter	EACH	3.000	3.000
0570	611.3004	Inlets 4-FT Diameter	EACH	6.000	6.000
0580	611.3230	Inlets 2x3-FT	EACH	25.000	25.000
0590	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	160.000	160.000
0600	612.0700	Drain Tile Exploration	LF	375.000	375.000
0610	619.1000	Mobilization	EACH	1.000	1.000
0620	620.0300	Concrete Median Sloped Nose	SF	102.000	102.000
0630	623.0200	Dust Control Surface Treatment	SY	27,000.000	27,000.000
0640	624.0100	Water	MGAL	200.000	200.000
0650	625.0100	Topsoil	SY	18,100.000	18,100.000
0660	627.0200	Mulching	SY	20,500.000	20,500.000
0670	628.1104	Erosion Bales	EACH	100.000	100.000
0680	628.1504	Silt Fence	LF	2,200.000	2,200.000
0690	628.1520	Silt Fence Maintenance	LF	1,100.000	1,100.000
0700	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0710	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0720	628.2008	Erosion Mat Urban Class I Type B	SY	4,080.000	4,080.000
0730	628.7005	Inlet Protection Type A	EACH	22.000	22.000
0740	628.7015	Inlet Protection Type C	EACH	50.000	50.000
0750	628.7504	Temporary Ditch Checks	LF	490.000	490.000
0760	628.7555	Culvert Pipe Checks	EACH	75.000	75.000
0770	628.7560	Tracking Pads	EACH	3.000	3.000
0780	628.7570	Rock Bags	EACH	140.000	140.000
0790	629.0210	Fertilizer Type B	CWT	16.000	16.000
0800	630.0140	Seeding Mixture No. 40	LB	310.000	310.000
0810	630.0200	Seeding Temporary	LB	210.000	210.000
0820	630.0300	Seeding Borrow Pit	LB	70.000	70.000
0830	633.5200	Markers Culvert End	EACH	9.000	9.000
0840	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	22.000	22.000
0850	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	6.000	6.000
0860	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	33.000	33.000
0870	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	6.000	6.000
0880	635.0200	Sign Supports Structural Steel HS	LB	1,144.000	1,144.000
0890	636.0100	Sign Supports Concrete Masonry	CY	2.000	2.000
0900	636.0500	Sign Supports Steel Reinforcement	LB	136.000	136.000
0910	637.2210	Signs Type II Reflective H	SF	708.470	708.470
0920	637.2230	Signs Type II Reflective F	SF	88.000	88.000
0930	638.2602	Removing Signs Type II	EACH	24.000	24.000
0940	638.3000	Removing Small Sign Supports	EACH	29.000	29.000
0950	642.5201	Field Office Type C	EACH	1.000	1.000

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DATE 17NOV15 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	4540-23-71 QUANTITY
0960	643.0100	Traffic Control (project) 01. 4540-23-71	EACH	1.000	1.000
0970	643.0300	Traffic Control Drums	DAY	3,000.000	3,000.000
0980	643.0420	Traffic Control Barricades Type III	DAY	3,525.000	3,525.000
0990	643.0705	Traffic Control Warning Lights Type A	DAY	7,050.000	7,050.000
1000	643.0900	Traffic Control Signs	DAY	2,660.000	2,660.000
1010	643.0920	Traffic Control Covering Signs Type II	EACH	7.000	7.000
1020	643.1000	Traffic Control Signs Fixed Message	SF	16.000	16.000
1030	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000
1040	643.2000	Traffic Control Detour (project) 01. 4540-23-71	EACH	1.000	1.000
1050	643.3000	Traffic Control Detour Signs	DAY	15,720.000	15,720.000
1060	646.0106	Pavement Marking Epoxy 4-Inch	LF	4,470.000	4,470.000
1070	646.0126	Pavement Marking Epoxy 8-Inch	LF	75.000	75.000
1080	647.0456	Pavement Marking Curb Epoxy	LF	30.000	30.000
1090	647.0606	Pavement Marking Island Nose Epoxy	EACH	3.000	3.000
1100	647.0726	Pavement Marking Diagonal Epoxy 12-Inch	LF	245.000	245.000
1110	647.0766	Pavement Marking Crosswalk Epoxy 6-Inch	LF	300.000	300.000
1120	650.4000	Construction Staking Storm Sewer	EACH	38.000	38.000
1130	650.4500	Construction Staking Subgrade	LF	3,788.000	3,788.000
1140	650.5000	Construction Staking Base	LF	3,788.000	3,788.000
1150	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	5,940.000	5,940.000
1160	650.6000	Construction Staking Pipe Culverts	EACH	2.000	2.000
1170	650.8500	Construction Staking Electrical Installations (project) 01. 4540-23-71	LS	1.000	1.000
1180	650.9910	Construction Staking Supplemental Control (project) 01. 4540-23-71	LS	1.000	1.000
1190	650.9920	Construction Staking Slope Stakes	LF	2,678.000	2,678.000
1200	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,110.000	1,110.000
1210	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	470.000	470.000
1220	653.0140	Pull Boxes Steel 24x42-Inch	EACH	8.000	8.000
1230	654.0105	Concrete Bases Type 5	EACH	13.000	13.000
1240	654.0230	Concrete Control Cabinet Bases Type L30	EACH	1.000	1.000
1250	655.0610	Electrical Wire Lighting 12 AWG	LF	1,950.000	1,950.000
1260	655.0615	Electrical Wire Lighting 10 AWG	LF	7,030.000	7,030.000
1270	656.0200	Electrical Service Meter Breaker Pedestal (location) 01. Sth 32 & Happy Lane	LS	1.000	1.000
1280	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	13.000	13.000
1290	657.0322	Poles Type 5-Aluminum	EACH	13.000	13.000
1300	657.0710	Luminaire Arms Truss Type 4 1/2-Inch Clamp 12-FT	EACH	13.000	13.000
1310	659.1120	Luminaires Utility LED B	EACH	13.000	13.000
1320	659.2130	Lighting Control Cabinets 120/240 30-Inch	EACH	1.000	1.000
1330	690.0150	Sawing Asphalt	LF	409.000	409.000
1340	690.0250	Sawing Concrete	LF	188.000	188.000
1350	SPV.0060	Special 01. Inlets 4-Ft Diameter Special	EACH	2.000	2.000
1360	SPV.0085	Special 01. Low Maintenance Seed Mix	LB	10.000	10.000
1370	SPV.0090	Special 01. Pavement Marking Grooved Preformed Thermoplastic 18-Inch	LF	64.000	64.000

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DATE 17NOV15 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	4540-23-71 QUANTITY
1380	SPV.0090	Special 02. Mini Storm Sewer Lateral 4-Inch	LF	110.000	110.000

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CLEARING AND GRUBBING

LOCATION	201.0120 CLEARING ID	201.0220 GRUBBING ID
TEMPORARY ROAD (NW)		
10+29 RT	4	4
10+36 LT	4	4
TOTALS	8	8

REMOVING ASPHALTIC SURFACE MILLING

LOCATION	204.0120 SY
FAIRVIEW DRIVE	960
TOTALS	960

REMOVING INLETS

LOCATION	204.0220 EACH
HAPPY LANE	
55+23 LT	1
55+25 RT	1
57+78 RT	1
57+97 RT	1
58+47 RT	1
TOTAL	5

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REMOVING SMALL PIPE CULVERTS

LOCATION	DESCRIPTION	203.0100 EACH
STH 32		
120+40 LT	18"X138' CPCS	1
125+90 LT	18"X20' CPCS	1
126+27 LT	18"X101' CPCS	1
HAPPY LANE		
59+79 RT	15"X24' CPCS	1
60+43 RT	15"X24' CPCS	1
TOTAL		5

REMOVING CURB & GUTTER

LOCATION	204.0150 LF
STH 32	
119+71 - 120+75 LT	120
HAPPY LANE	
54+30 - 56+62 LT	390
54+30 - 57+24 RT	350
GREEN ACRES DRIVE	
12+15 - 13+80 LT/RT	350
TEMPORARY ROAD	
10+25 NW	85
122+22 - 122+51 RT (GREEN ACRES DRIVE)	60
TOTAL	1,355

REMOVING STORM SEWER

LOCATION	204.0245.01 12-INCH LF	204.0245.02 18-INCH LF
HAPPY LANE		
55+25 LT/RT	40	---
58+22 RT	50	---
58+26 LT	---	55
58+40 RT	---	40
58+48 LT	95	---
GREEN ACRES DRIVE		
13+00 - 13+85 LT	85	---
TOTALS	270	95

REMOVING PAVEMENT

LOCATION	204.0100 SY
STH 32	
118+63 - 127+00	4,000
127+00 - 131+86	2,550
TOTAL	6,550

REMOVING MANHOLES

LOCATION	204.0210 EACH
HAPPY LANE	
55+25 RT	1
58+22 RT	1
TOTAL	2

ALL ITEMS CATEGORY 0010 UNLESS NOTED

3

EARTHWORK SUMMARY

Division	From / To Station	Location	A ITEM #205.0100 Common Excavation (1) (CY) Cut (2) (CY)	B ITEM #205.0100 Common Excavation (1) (CY) EBS Excavation (3)(4) (CY)	C * Salvaged / Unusable Pavement Material (5) (CY)	D * Available Material (6) (CY)	E ITEM #208.1100 Expanded EBS Backfill = Select Borrow (7) (CY) Factor 1.15	F * Unexpanded Fill (CY)	G * Expanded Fill (8) (CY) Factor 1.27	H * Mass Ordinate + / - (9) (CY)	I * Waste (CY)	J ITEM #208.0100 Borrow (CY)
Division 1												
Temporary Access Roads Construction	20+50 - 23+66	NE Temporary Access Road	231	0	0	231	0	665	845	-614		
	10+50 - 13+61	NW Temporary Access Road	473	0	0	473	0	36	46	427		
Division 1 Subtotal			704	0	0	704	0	702	891	-187	0	187
Division 2												
Mainline/Roundabout Construction	118+63 - 131+86	STH 32	8,236	595	1,672	6,564	684	2,953	3,751	2,814		
	54+30 - 61+38	Happy Lane	1,748	112	144	1,604	129	210	267	1,337		
	12+15 - 13+00	Green Acres Drive	206	0	33	173	0	8	10	163		
Division 2 Subtotal			10,191	707	1,849	8,342	813	3,171	4,028	4,314	4,314	0
Division 3												
Temporary Access Roads Removal	20+50 - 23+66	NE Temporary Access Road	1,146	0	79	1,067	0	224	285	782		
	10+50 - 13+61	NW Temporary Access Road	382	0	91	291	0	271	344	-54		
Division 3 Subtotal			1,527	0	170	1,357	0	495	629	729	729	0
Undistributed (EBS)			0	1,242	0	0	1,429	0	0	0		
Grand Total			12,423	1,949	2,019	10,404	2,242	4,368	5,547	4,856	5,043	187
Total Common Exc				14,372								

*Not a bid item. Column shown for information only.

1) Common Excavation is the sum of the Cut (A) and EBS Excavation (B) columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material (C) is included in Cut (A).
3) EBS Excavation (E) to be backfilled with Select Borrow material.
4) EBS Excavation material (B) shall be removed from the site and shall not be used as fill material. EBS Excavation material is not included in the mass ordinate.
5) Salvaged/Unusable Pavement Material (C) is included in the Cut (A). This assumes the existing pavement structure is salvaged or wasted by the contractor. The existing pavement structure is not shown on the cross sections.
6) Available Material (D) = Cut (A) - Salvaged/Unusable Pavement Material (C)
7) Expanded EBS Backfill (E) - This is to be filled with Select Borrow material. EBS Backfill Factor = 1.15. Item number 208.1100
8) Expanded Fill (G) = Unexpanded Fill (F) * Expanded Fill Factor (1.27)
9) The Mass Ordinate (H) = Available Material (D) - Expanded Fill (G). + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

ALL ITEMS CATEGORY 0010 UNLESS NOTED

3

BASE COURSE ITEMS

LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON
STH 32		
118+63 - 126+00	40	3,100
126+00 - 127+60	---	950
127+60 - 131+86	215	1,800
HAPPY LANE		
54+30 - 56+65	---	720
58+28 - 61+38	105	760
GREEN ACRES DRIVE		
12+15 - 13+15	10	215
TEMPORARY ROADS		
20+25 - 23+93 (NE)	---	1,290
10+24 - 13+91 (NW)	---	1,390
121+94 - 122+74 RT	---	220
MEDIAN CROSSING (130+00)	---	110
TOTALS	370	10,555

BREAKER RUN

LOCATION	311.0110 TON
STH 32	
118+63 - 126+00	3,750
126+00 - 127+60	930
127+60 - 131+86	2,400
HAPPY LANE	
54+30 - 56+65	1,100
58+28 - 61+38	1,200
TOTALS	9,380

COLORING CONCRETE RED

LOCATION	405.0100 CY
STH 32	
122+62 - 126+00 (SPLITTER ISLAND)*	75
126+00 - 127+60 (TRUCK APRON)	110
127+60 - 131+00 (SPLITTER ISLAND)*	50
HAPPY LANE	
56+05 - 56+65 (SPLITTER ISLAND)*	7
58+28 - 59+04 (SPLITTER ISLAND)*	8
TOTAL	250

*NO RED COLORING AT CURB RAMP CUT-THROUGHS

CONCRETE DRIVEWAY 6-INCH

LOCATION	416.0160 SY
HAPPY LANE	
59+79 RT	50
60+43 RT	45
GREEN ACRES DRIVE	
12+30 RT	35
TOTAL	130

DRILLED TIE BARS

LOCATION	* 416.0610 EACH
STH 32	
118+63 - 122+51	10
131+86	4
HAPPY LANE	
54+30 - 56+00	12
GREEN ACRES DRIVE	
12+15	4
FAIRVIEW DRIVE	
NORTH	2
SOUTH	2
TOTALS	34

*USE 2 TIES FOR CONNECTIONS TO EXISTING CURB & GUTTER

CONCRETE ROUNDABOUT TRUCK APRON 12-INCH

LOCATION	416.0512 SY
STH 32	
126+00 - 127+60	320
TOTAL	320

HMA PAVEMENT ITEMS

LOCATION	455.0120 ASPHALTIC MATERIAL PG64-28 TON	455.0605 TACK COAT GAL	460.1101 HMA PAVEMENT TYPE E-1 TON	460.1110 HMA PAVEMENT TYPE E-10 TON	465.0105 ASPHALTIC SURFACE TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON
STH 32						
118+63 - 126+00	109	560	---	1,970	110	---
126+00 - 127+60	21	100	---	365	---	---
127+60 - 131+86	58	300	---	1,050	55	---
HAPPY LANE						
54+30 - 56+65	29	150	---	525	15	---
58+28 - 61+38	32	160	---	575	20	---
GREEN ACRES DRIVE						
12+15 - 13+15	6	30	100	---	---	---
TEMPORARY ROADS						
121+94 - 122+74 RT	---	---	---	---	---	40
MEDIAN CROSSING (130+00)	---	---	---	---	---	35
20+25 - 23+93 (NE)	---	---	---	---	---	230
10+24 - 13+91 (NW)	---	---	---	---	---	260
FAIRVIEW DRIVE	7	70	120	---	---	---
TOTALS	262	1,370	220	4,485	200	565

ALL ITEMS CATEGORY 0010 UNLESS NOTED

3

ASPHALTIC SURFACE
DRIVEWAYS AND FIELD ENTRANCES

LOCATION	465.0120 TON
HAPPY LANE	
55+75 LT	26
55+75 RT	38
TOTALS	64

ASPHALTIC FLUMES

LOCATION	465.0315 SY
STH 32	
119+77 LT	13
128+89 RT	14
TOTAL	27

CROSS CULVERTS

INLET STATION	INLET OFFSET	INLET ELEV	DISCH STATION	DISCH OFFSET	DISCH ELEV	SLOPE %	521.0112 CULVERT PIPE CORRUGATED STEEL 12-INCH LF	521.1012 AEW FOR CULVERT PIPE STEEL 12-INCH EA	* MINIMUM THICKNESS FOR STEEL PIPE INCHES	522.0318 CULVERT PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF	522.1018 AEW FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	** 650.6000 CONST STAKING PIPE CULVERTS EACH
STH 32												
127+79.8	108' LT	715.30	128+12.0	72' LT	714.70	1.20%	50	2	0.064	---	---	1
HAPPY LANE												
60+75.0	23' RT	715.90	60+75.0	27' LT	715.70	0.40%	---	---	---	50	2	1
TOTALS							50	2	---	50	2	2

*NON-BID ITEM (FOR INFORMATION ONLY)
**ADDITIONAL STAKING ITEMS SHOWN ELSEWHERE

3

CULVERT PIPE TEMPORARY

LOCATION	520.2012 12-INCH LF	520.2018 18-INCH LF
STH 32		
130+25 LT	38	---
TEMPORARY ROADS		
12+00 RT (NW)	42	---
13+62 RT (NW)	---	46
23+66 RT (NE)	---	50
TOTALS	80	96

CONCRETE CURB & GUTTER

LOCATION	601.0405 18-INCH TYPE A LF	601.0411 30-INCH TYPE D LF	601.0553 4-INCH SLOPED 36-INCH TYPE D LF	601.0582 4-INCH SLOPED 36-INCH TYPE T LF	* 650.5500 CONST STAKING CURB GUTTER AND C&G LF
STH 32					
118+63 - 126+00	---	1,815	345	---	2,160
126+00 - 127+60	220	---	---	300	520
127+60 - 131+86	---	830	640	---	1,470
HAPPY LANE					
54+30 - 57+07	---	765	---	---	765
58+28 - 61+38	---	640	---	---	640
GREEN ACRES DRIVE					
12+15 - 13+15	---	240	---	---	240
TEMPORARY ROADS					
10+25 NW	85	---	---	---	85
122+22 - 122+51 RT (GREEN ACRES DRIVE)	---	60	---	---	60
TOTALS	305	4,350	985	300	5,940

* ADDITIONAL STAKING ITEMS SHOWN ELSEWHERE

CONCRETE SIDEWALK

LOCATION	601.0600 CONCRETE CURB PEDESTRIAN LF	602.0405 CONCRETE SIDEWALK 4-INCH SF	602.0420 CONCRETE SIDEWALK 7-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF
STH 32				
118+63 - 125+77	48	5,260	---	96
125+77 - 126+00	---	---	540	---
127+60 - 127+87	---	---	470	---
127+87 - 131+00	42	3,660	---	64
HAPPY LANE				
56+05 - 56+05	24	610	---	64
58+28 - 59+04	29	810	---	64
TOTALS	143	10,340	1,010	288

ALL ITEMS CATEGORY 0010 UNLESS NOTED

STORM SEWER STRUCTURES			611.2004	611.3004	611.3230	SPV.0060.01	611.0530	611.0624	611.0639	611.0652			
STRUCTURE NUMBER	STATION	OFFSET	MH 4-FT DIAMETER EACH	INLETS 4-FT DIAMETER EACH	INLETS 2X3-FT EACH	INLETS 4-FT DIAMETER SPECIAL EACH	MANHOLE COVERS TYPE J EACH	INLET COVERS TYPE H EACH	INLET COVERS TYPE H-S EACH	INLET COVERS TYPE T EACH	RIM OR FLANGE ELEV	STR DEPTH FEET	COMMENTS
1A	120+49	34.8' LT	---	---	1	---	---	---	1	---	719.25	1.7	
1	119+75	38.3' LT	---	---	---	---	---	---	---	---			
2	124+40	88.0' LT	---	---	---	---	---	---	---	---			
3A	124+40	46.9' LT	---	---	1	---	---	---	1	---	719.77	2.9	
3B	124+40	21.9' LT	---	---	1	---	---	1	---	---	720.21	3.5	
3C	124+40	23.5' RT	---	---	1	---	---	---	1	---	719.77	2.7	
3	124+40	1.5' LT	---	1	---	---	---	1	---	---	720.21	3.9	FLAT TOP WITH 2'X3' RECTANGULAR OPENING REQUIRED FOR INLET COVER
4	125+83	87.7' LT	---	---	---	---	---	---	---	---			
5A	125+86	59.1' LT	---	---	1	---	---	---	1	---	718.92	2.3	
5B	125+91	32.9' LT	---	---	1	---	---	---	1	---	719.43	3.1	
5C	125+82	39.0' RT	---	1	---	---	---	---	1	---	719.48	3.4	FLAT TOP WITH 2'X3' RECTANGULAR OPENING REQUIRED FOR INLET COVER
5D	126+03	18.5' RT	---	1	---	---	---	---	1	---	719.05	3.2	FLAT TOP WITH 2'X3' RECTANGULAR OPENING REQUIRED FOR INLET COVER
5	125+98	1.5' LT	---	1	---	---	---	1	---	---	719.35	4.3	FLAT TOP WITH 2'X3' RECTANGULAR OPENING REQUIRED FOR INLET COVER
6A	126+28	81.7' RT	---	---	1	---	---	1	---	---	719.91	3.3	
6	125+98	62.4' RT	1	---	---	---	1	---	---	---	719.94	3.5	CONNECT TO EXISTING ROOF DRAIN
7A	127+42	52.6' LT	---	---	---	1	---	---	---	1	718.17	2.1	FLAT TOP WITH 2'X2.5' RECTANGULAR OPENING REQUIRED FOR INLET COVER
7	127+35	1.8' LT	---	---	---	1	---	---	---	1	718.42	3.9	
8	127+71	60.6' RT	---	---	---	---	---	---	---	---			
9A	129+50	36.0' LT	---	---	1	---	---	1	---	---	717.10	2.7	
9B	129+50	11.0' LT	---	---	1	---	---	1	---	---	717.54	3.4	
9C	129+50	1.5' LT	---	---	1	---	---	1	---	---	717.54	3.5	
9	129+50	46.8' RT	---	---	---	---	---	---	---	---			
10A	131+75	45.1' LT	---	---	1	---	---	1	---	---	715.90	2.6	
10B	131+75	19.0' LT	---	---	1	---	---	1	---	---	716.36	3.3	
10C	131+75	1.5' LT	---	---	1	---	---	1	---	---	716.36	3.5	
10	131+75	49.0' RT	---	---	---	---	---	---	---	---			
11A	56+12	17.5' RT	---	---	1	---	---	1	---	---	717.57	2.3	
11B	56+13	8.2' LT	---	---	1	---	---	1	---	---	717.85	2.7	
11C	56+14	29.9' LT	---	---	1	---	---	1	---	---	717.54	2.1	
11	55+14	1.5' LT	---	1	---	---	---	1	---	---	717.85	3.0	FLAT TOP WITH 2'X3' RECTANGULAR OPENING REQUIRED FOR INLET COVER
12A	55+14	17.5' RT	---	---	1	---	---	1	---	---	717.22	2.7	
12B	55+24	17.5' RT	---	---	1	---	---	1	---	---	717.21	2.8	
12C	55+14	24.2' LT	---	---	1	---	---	1	---	---	717.22	2.6	
12D	55+24	25.0' LT	---	---	1	---	---	1	---	---	717.20	2.7	
12	55+25	0.3' RT	1	---	---	---	1	---	---	---			CONNECT TO EXISTING 15" RCCP, INVERT EL=713.16
13A	59+26	15.2' RT	---	---	1	---	---	1	---	---	718.05	1.9	CONNECT TO EXISTING ROOF DRAIN
13B	59+15	16.1' RT	---	---	1	---	---	1	---	---	718.05	1.9	CONNECT TO EXISTING ROOF DRAIN
13C	58+96	1.5' LT	---	---	1	---	---	1	---	---	718.40	2.3	
13D	58+96	8.6' LT	---	---	1	---	---	1	---	---	718.40	2.3	
13	59+15	7.2' LT	1	---	---	---	1	---	---	---	718.44	2.2	
14A	59+24	24.4' LT	---	---	1	---	---	1	---	---	718.10	2.1	
14	59+15	24.4' LT	---	1	---	---	---	1	---	---	718.10	2.2	FLAT TOP WITH 2'X3' RECTANGULAR OPENING REQUIRED FOR INLET COVER
15	59+03	42.5' LT	---	---	---	---	---	---	---	---			
TOTALS			3	6	25	2	2	24	7	2			

1. RIM ELEVATIONS ARE GIVEN AT THE FLANGE LINE FOR INLET GRATES OR THE CENTER OF THE STRUCTURE FOR MANHOLES.
2. STATIONS AND OFFSETS ARE TO THE CENTER OF STRUCTURES OR TO THE END OF PIPE WHERE THERE IS AN ENDWALL.
3. PIPE LENGTHS ARE MEASURED TO THE CENTER OF STRUCTURES.
4. STR DEPTH = RIM ELEV - INV - CASTING HEIGHT - ADJUSTMENT
   CASTING HEIGHT = 9" FOR TYPE J COVERS; 7" FOR TYPE T COVERS; AND 6" FOR TYPE H AND H-S COVERS
   ADJUSTMENT = 4" TYPICAL

ALL ITEMS CATEGORY 0010 UNLESS NOTED

STORM SEWER PIPES

FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE (FT/FT)	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12" (LF)	608.0415 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15" (LF)	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18" (LF)	608.0424 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24" (LF)	612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH (LF)	522.1012 AEW FOR CULVERT PIPE REIN. CONC. 12" EACH	522.1015 AEW FOR CULVERT PIPE REIN. CONC. 15" EACH	522.1024 AEW FOR CULVERT PIPE REIN. CONC. 24" EACH	COMMENTS
1A	1	716.73	716.36	0.0050	74.2	---	---	---	---	---	---	---	
1	OUTLET	716.36			---	---	---	---	---	1	---	---	

2	3A	716.30	716.04	0.0064	---	41.2	---	---	---	---	1	---	
3A	3B	716.04	715.87	0.0065	---	25.0	---	---	---	---	---	---	
3B	3	715.87	715.74	0.0065	---	20.4	---	---	---	---	---	---	
3C	3	716.24	715.74	0.0200	---	25.0	---	---	---	---	---	---	
3	5	715.49	714.71	0.0050	---	---	157.3	---	---	---	---	---	FLAT TOP WITH 2'X3' RECTANGULAR OPENING REQUIRED FOR INLET COVER
4	5A	716.10	715.81	0.0100	29.1	---	---	---	---	1	---	---	
5A	5B	715.81	715.53	0.0100	27.4	---	---	---	---	---	---	---	
5B	5	715.53	715.21	0.0100	32.6	---	---	---	---	---	---	---	
5C	5D	715.20	715.07	0.0053	---	25.9	---	---	---	---	---	---	FLAT TOP WITH 2'X3' RECTANGULAR OPENING REQUIRED FOR INLET COVER
5D	5	715.07	714.96	0.0053	---	20.4	---	---	---	---	---	---	FLAT TOP WITH 2'X3' RECTANGULAR OPENING REQUIRED FOR INLET COVER
5	7	714.21	713.61	0.0051	---	---	---	116.4	---	---	---	---	FLAT TOP WITH 2'X3' RECTANGULAR OPENING REQUIRED FOR INLET COVER
6A	6	715.82	715.59	0.0100	22.7	---	---	---	---	---	---	---	
6	5C	715.34	715.20	0.0055	---	25.1	---	---	---	---	---	---	CONNECT TO EXISTING ROOF DRAIN
7A	7	715.13	714.61	0.0100	52.1	---	---	---	20	---	---	---	FLAT TOP WITH 2'X2.5' RECTANGULAR OPENING REQUIRED FOR INLET COVER
7	8	713.61	713.25	0.0050	---	---	---	72.1	20	---	---	---	
8	OUTLET	713.25			---	---	---	---	---	---	---	1	
9A	9B	713.53	713.28	0.0100	25.0	---	---	---	---	---	---	---	
9B	9C	713.28	713.18	0.0100	9.5	---	---	---	---	---	---	---	
9C	9	713.18	712.70	0.0100	48.3	---	---	---	---	---	---	---	
9	OUTLET	712.70			---	---	---	---	---	1	---	---	
10A	10B	712.44	712.18	0.0100	26.1	---	---	---	---	---	---	---	
10B	10C	712.18	712.01	0.0100	17.5	---	---	---	---	---	---	---	
10C	10	712.01	711.50	0.0100	50.5	---	---	---	---	---	---	---	
10	OUTLET	711.50			---	---	---	---	---	1	---	---	
11A	11	714.48	714.29	0.0100	19.1	---	---	---	---	---	---	---	
11B	11	714.36	714.29	0.0100	6.7	---	---	---	---	---	---	---	
11C	11B	714.57	714.36	0.0100	21.8	---	---	---	---	---	---	---	
11	12	714.04	713.16	0.0100	---	87.8	---	---	---	---	---	---	FLAT TOP WITH 2'X3' RECTANGULAR OPENING REQUIRED FOR INLET COVER
12A	12B	713.68	713.58	0.0100	10.0	---	---	---	15	---	---	---	
12B	12	713.58	713.41	0.0100	17.2	---	---	---	15	---	---	---	
12C	12D	713.76	713.66	0.0100	10.0	---	---	---	15	---	---	---	
12D	12	713.66	713.41	0.0100	25.4	---	---	---	15	---	---	---	
12	EXISTING PIPE	713.16			---	---	---	---	---	---	---	---	CONNECT TO EXISTING 15" RCCP, INVERT EL=713.16
13A	13B	715.32	715.27	0.0050	10.0	---	---	---	15	---	---	---	CONNECT TO EXISTING ROOF DRAIN
13B	13	715.27	715.16	0.0050	23.3	---	---	---	15	---	---	---	CONNECT TO EXISTING ROOF DRAIN
13C	13D	715.29	715.26	0.0050	7.1	---	---	---	---	---	---	---	
13D	13	715.26	715.16	0.0050	19.5	---	---	---	---	---	---	---	
13	14	715.16	715.07	0.0050	17.2	---	---	---	---	---	---	---	
14A	14	715.12	715.07	0.0050	10.0	---	---	---	15	---	---	---	
14	15	715.07	714.96	0.0050	22.3	---	---	---	15	---	---	---	FLAT TOP WITH 2'X3' RECTANGULAR OPENING REQUIRED FOR INLET COVER
15	OUTLET	714.96			---	---	---	---	---	1	---	---	
TOTALS					634.6	270.8	157.3	188.5	160	5	1	1	

1. RIM ELEVATIONS ARE GIVEN AT THE FLANGE LINE FOR INLET GRATES OR THE CENTER OF THE STRUCTURE FOR MANHOLES.
2. STATIONS AND OFFSETS ARE TO THE CENTER OF STRUCTURES OR TO THE END OF PIPE WHERE THERE IS AN ENDWALL.
3. PIPE LENGTHS ARE MEASURED TO THE CENTER OF STRUCTURES.
4. STR DEPTH = RIM ELEV - INV - CASTING HEIGHT - ADJUSTMENT
   CASTING HEIGHT = 9" FOR TYPE J COVERS; 7" FOR TYPE T COVERS; AND 6" FOR TYPE H AND H-S COVERS
   ADJUSTMENT = 4" TYPICAL

ALL ITEMS CATEGORY 0010 UNLESS NOTED

3

DRAIN TILE EXPLORATION

LOCATION	612.0700 LF
GREEN ACRES DRIVE	
13+00 - 13+50*	50
TEMPORARY ROAD (NE)	
20+25 - 23+50	325
TOTALS	375

*USE TO LOCATE ROOF DRAIN CONNECTED TO EXISTING STORM SEWER

CONCRETE MEDIAN SLOPED NOSE

LOCATION	620.0300 TYPE 1 SF	TYPE 2 SF
STH 32		
122+67 - 126+00	24	6
127+60 - 127+69	27	6
HAPPY LANE		
56+09 - 56+63	27	6
58+35 - 58+99	---	6
TOTAL	102	

DUST CONTROL SURFACE TREATMENT

LOCATION	623.0200 SY
UNDISTRIBUTED	27,000
TOTAL	27,000

NOTE: TO BE PLACED AS DIRECTED BY THE ENGINEER FOR DUST CONTROL.

WATER

LOCATION	624.0100 MGAL
BASE AGGREGATE PLACEMENT	160
DUST CONTROL	40
TOTAL	200

RESTORATION ITEMS

LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB	630.0300 SEEDING BORROW PIT LB	SPV.0085.01 LOW MAINTENANCE SEED MIX LB
STH 32							
118+63 - 124+00	2,900	2,700	2.9	60	35	---	---
124+00 - 130+00	3,800	4,700	3.9	70	45	---	10
130+00 - 131+86	1,600	1,800	1.6	30	20	---	---
HAPPY LANE							
54+30 - 56+75	500	500	0.5	10	10	---	---
58+00 - 61+38	1,500	1,900	1.5	30	20	---	---
GREEN ACRES DRIVE							
12+15 - 13+15	300	400	0.2	10	5	---	---
			0.0				
TEMPORARY ACCESS ROAD CONSTRUCTION							
NE QUADRANT	1,300	1,900	1.2	---	45	---	---
NW QUADRANT	900	1,300	0.8	---	30	---	---
TEMPORARY ACCESS ROAD REMOVAL							
NE QUADRANT	2,800	2,800	1.9	50	---	---	---
NW QUADRANT	2,500	2,500	1.7	50	---	---	---
BORROW / WASTE SITE	---	---	---	---	---	70	---
TOTALS	18,100	20,500	16	310	210	70	10

EROSION CONTROL ITEMS

LOCATION	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EACH	628.1910 MOBILIZATIONS EMERGENCY EACH	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH
STH 32											
118+63 - 124+00	---	260	130	---	---	1,350	1	2	30	5	5
124+00 - 130+00	---	410	205	---	---	850	6	18	60	25	25
130+00 - 131+86	---	130	65	---	---	500	---	3	90	---	30
HAPPY LANE											
54+30 - 56+75	---	230	115	---	---	230	7	12	---	5	---
58+00 - 61+38	---	230	115	---	---	250	6	6	60	5	5
TEMPORARY ACCESS ROADS											
NE QUADRANT	---	150	75	---	---	---	---	---	90	5	15
NW QUADRANT	---	290	145	---	---	---	---	2	60	15	10
UNDISTRIBUTED	100	500	250	5	3	900	2	7	100	15	50
TOTALS	100	2,200	1,100	5	3	4,080	22	50	490	75	140

ALL ITEMS CATEGORY 0010 UNLESS NOTED

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TRACKING PADS

LOCATION	628.7560 EACH
BORROW PIT OR WASTE SITE ACCESSES	3
TOTAL	3

MARKERS CULVERT END

LOCATION	633.5200 EACH
STH 32	
119+75 LT	1
124+40 LT	1
125+83 LT	1
127+71 RT	1
129+50 RT	1
131+75 RT	1
HAPPY LANE	
59+03 LT	1
60+75 LT/RT	2
TOTALS	9

3

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.	634.0612 POSTS WOOD 4x6x12 EACH	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	634.0618 POSTS WOOD 4x6x18 EACH	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS LB	636.0100 SIGN SUPPORTS CONCRETE MASONRY CY	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT LB	TYPE/SIZE OF STEEL	REMARKS
1	FAIRVIEW RD	R1-1	30" X 30"	5.18			1							
2	STH 32 SB	I2-3	96" X 24"	16.00				2						SEE SIGN DETAIL SHEET
3	"	R2-1	36" X 48"	12.00				1						
4	STH 32 NB	W2-6	30" X 30"		6.25			1						
5	"	W13-1	18" X 18"		2.25									15 MPH, MOUNT BELOW SIGN #4
6	"	R4-7	24" X 30"	5.00			1							
6A	"	W5-54	18" X 18"		2.25									MOUNT BELOW SIGN #6
7	STH 32 SB	W6-3	36" X 36"		9.00			1						
8	STH 32 NB	D1-62	120" X 72"	60.00					3					SEE SIGN DETAIL SHEET
9	"	W3-2	36" X 36"		9.00			1						
10	GREEN ACRES DR	W5-56	18" X 18"		2.25	1								
11	"	W5-56	18" X 18"		2.25	1								
12	"	W5-56	18" X 18"		2.25	1								
13	STH 32 ROUNDABOUT	D1-1	42" X 30"	8.75			1							SOUTH STH 32, SEE SIGN DETAIL SHEET
14	"	R1-2	36" X 31"	3.88				1						
15	"	R6-2R	24" X 30"	5.00										MOUNT BELOW SIGN #14
16	"	R1-2	36" X 31"	3.88				1						
17	"	R1-54	24" X 15"	2.50										MOUNT BELOW SIGN #16
18	"	R6-1R	36" X 12"	3.00		2								
19	"	R6-4B	60" X 24"	10.00										MOUNT BELOW SIGN #18
20	"	D1-1	72" X 15"	7.50		2								SEE SIGN DETAIL SHEET
21	HAPPY LANE	J1-1	24" X 39"	6.50			1							JCT STH 32
22	"	W2-6	30" X 30"		6.25			1						
23	"	W13-1	18" X 18"		2.25									15 MPH, MOUNT BELOW SIGN #22
24	"	J13-1	24" X 45"	7.50				1						STH 32, SEE PLAN SHEET
25	"	W3-2	36" X 36"		9.00									
26	"	R4-7	24" X 30"	5.00		1								
27	STH 32 ROUNDABOUT	R1-2	36" X 31"	3.88				1						
28	"	R6-2R	24" X 30"	5.00										MOUNT BELOW SIGN #27
29	"	R1-2	36" X 31"	3.88				1						
30	"	R1-54	24" X 15"	2.50										MOUNT BELOW SIGN #29
31	"	R6-1R	36" X 12"	3.00		2								
32	"	R6-4B	60" X 24"	10.00										MOUNT BELOW SIGN #31
	PAGE SUBTOTALS			189.95	53.00	10	4	12	3	0	0	0		

ALL ITEMS CATEGORY 0010 UNLESS NOTED

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.	634.0612 POSTS WOOD 4x6x12 EACH	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	634.0618 POSTS WOOD 4x6x18 EACH	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS LB	636.0100 SIGN SUPPORTS CONCRETE MASONRY CY	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT LB	TYPE/SIZE OF STEEL	REMARKS
33	STH 32 ROUNDABOUT	R6-1R	36" X 12"	3.00		2								
34	"	R6-4B	60" X 24"	10.00										MOUNT BELOW SIGN #33
35	"	R1-2	36" X 31"	3.88				1						
36	"	R1-54	24" X 15"	2.50										MOUNT BELOW SIGN #35
37	"	R1-2	36" X 31"	3.88				1						
38	"	R6-2R	24" X 30"	5.00										MOUNT BELOW SIGN #37
39	"	R4-7	24" X 30"	5.00		1								
40	HAPPY LANE	W3-2	36" X 36"		9.00			1						
41	"	J13-1	24" X 45"	7.50				1						STH 32, SEE PLAN SHEET
42	"	W2-6	30" X 30"		6.25			1						
43	"	W13-1	18" X 18"		2.25									15 MPH, MOUNT BELOW SIGN #42
44	"	J1-1	24" X 39"	6.50			1							JCT STH 32
45	STH 32 ROUNDABOUT	D1-1	72" X 15"	7.50		2								SEE SIGN DETAIL SHEET
46	"	R6-1R	36" X 12"	3.00		2								
47	"	R6-4B	60" X 24"	10.00										MOUNT BELOW SIGN #46
48	"	R1-2	36" X 31"	3.88				1						
49	"	R1-54	24" X 15"	2.50										MOUNT BELOW SIGN #48
50	"	R1-2	36" X 31"	3.88				1						
51	"	R6-2R	24" X 30"	5.00										MOUNT BELOW SIGN #50
52	"	D1-1	42" X 30"	8.75				1						SEE SIGN DETAIL SHEET
53	STH 32 SB	W3-2	36" X 36"		9.00			1						
54	STH 32 NB	J1-1	36" X 57"	14.25				1						JCT STH 23
55	STH 32 SB	D1-62	120" X 72"	60.00					3					SEE SIGN DETAIL SHEET
56	"	W2-6	30" X 30"		6.25			1						
57	"	W13-1	18" X 18"		2.25									15 MPH, MOUNT BELOW SIGN #56
58	STH 32 NB	D1-72	108" X 60"	45.00				3						SEE SIGN DETAIL SHEET
59	"	R3-7R	30" X 30"	6.25		1								
59A	"	M1-85	24" X 24"	4.00			1							
59B	"	M1-85B	24" X 12"	2.00										
60	STH 32 SB	J4-1	24" X 36"	6.00				1						SOUTH STH 32
61	STH 32 NB	J2-2	72" X 84"	42.00				2						EAST STH 23, TO I-43, SEE PLAN SHEET
62	STH 32 / STH 23 EB ON-RAMP	D1-71	96" X 90"	60.00		2				560	1.2	68	2-TYPE A	MOUNT SIGN AS SHOWN IN STANDARD PLATE A5-8, SEE SIGN DETAIL SHEET
63	"	D1-70	96" X 48"	32.00										MOUNT ON BACKSIDE OF SIDE #62, SEE SIGN DETAIL SHEET
64	STH 32 / STH 23 WB ON-RAMP	D1-70	108" X 48"	36.00		2				584	1.2	68	2-TYPE A	MOUNT SIGN AS SHOWN IN STANDARD PLATE A5-8, SEE SIGN DETAIL SHEET
65	"	D1-71	96" X 90"	60.00										MOUNT ON BACKSIDE OF SIDE #64, SEE SIGN DETAIL SHEET
66	STH 32 SB	D1-72	108" X 60"	45.00				3						SEE SIGN DETAIL SHEET
67	"	J1-1	36" X 57"	14.25				1						JCT STH 23
	PAGE SUBTOTALS			518.52	35.00	12	2	21	3	1,144	2	136		
	PROJECT TOTALS			**708.47**	**88.00**	**22**	**6**	**33**	**6**	**1,144**	**2**	**136**		

ALL ITEMS CATEGORY 0010 UNLESS NOTED

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REMOVING, TYPE II SIGNS AND REMOVING SMALL SIGN SUPPORTS

SIGN	LOCATION	SIGN CODE	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
400	FAIRVIEW DR	R1-1	1	1	
401	STH 32	W6-1	1	1	
402	"	W14-3	1	1	
403	"	I2-3	1	2	SHEBOYGAN FALLS
404	"	R2-1	1	1	45 MPH
405	"	J1-1	1	1	JCT STH 23
406	HAPPY LANE	R1-1	1	1	
407	GREEN ACRES RD	R1-1	1	1	
408	HAPPY LANE	R1-1	1	1	
409	STH 32	W6-3	1	1	
410	"	R4-7	1	1	
411	"	J2-2	1	1	WEST STH 23, EAST STH 23
412	"	J4-1	1	1	SOUTH STH 32
413	"	R5-1A	---	---	PART OF REMOVAL FOR SIGN #412
414	"	M1-85	1	1	ALSO REMOVE M1-85B
415	"	R3-7R	1	1	
416	"	R2-1	1	1	45 MPH
417	"	D1-3	1	2	
418	"	R5-1A	---	---	PART OF REMOVAL FOR SIGN #417
419	"	W6-2	1	1	
420	"	J3-2	1	1	EAST STH 23, TO I-43
421	"	D1-3	1	2	
422	"	J2-2	1	1	EAST STH 23, WEST STH 23
423	"	J1-1	1	1	JCT STH 23
424	"	D1-2	1	2	
425	"	D1-3	1	2	
	PROJECT TOTALS		**24**	**29**	

ALL ITEMS CATEGORY 0010 UNLESS NOTED

TRAFFIC CONTROL ITEMS

LOCATION	* DAYS PER STAGE	* APPROXIMATE NUMBER OF DRUMS EACH	643.0300 DRUMS DAYS	* APPROXIMATE NUMBER OF BARRICADES EACH	643.0420 BARRICADES TYPE III DAYS	* APPROXIMATE NUMBER OF WARNING LIGHTS TYPE A EACH	643.0705 WARNING LIGHTS TYPE A DAYS	* APPROXIMATE NUMBER OF SIGNS EACH	643.0900 SIGNS DAYS	* NUMBER OF SIGNS FIXED MESSAGE EACH	643.1000 SIGNS FIXED MESSAGE SF	* NUMBER OF PCMS SIGNS EACH	643.1050 SIGNS PCMS DAYS
STAGE 1	15	80	1,200	15	225	30	450	25	380	---	---	4	28
STAGE 2	60	30	1,800	55	3,300	110	6,600	38	2,280	2	16	---	---
TOTALS			3,000		3,525		7,050		2,660		16		28

* NON-BID ITEM (FOR INFORMATION ONLY)

PAVEMENT MARKING

LOCATION	646.0106 EPOXY 4-INCH (WHITE) LF	646.0106 EPOXY 4-INCH (YELLOW) LF	646.0126 EPOXY 8-INCH (WHITE) LF	647.0456 CURB EPOXY (YELLOW) LF	647.0606 ISLAND NOSE EPOXY (YELLOW) EACH	647.0726 DIAGONAL EPOXY 12-INCH (YELLOW) LF	647.0766 CROSSWALK EPOXY 6-INCH (WHITE) LF	SPV.0090.01 GROOVED PREFORMED THERMOPLASTIC 18-INCH (WHITE) LF
STH 32								
118+63 - 126+00	1,250	1,400	---	10	1	100	76	---
126+00 - 127+60	---	---	---	---	---	---	---	32
127+60 - 131+86	270	---	75	---	---	---	78	---
HAPPY LANE								
54+30 - 56+65	---	700	---	10	1	55	73	16
58+28 - 61+38	---	850	---	10	1	90	73	16
SUBTOTALS	1,520	2,950	75	30	3	245	300	64
TOTALS	4,470		75	30	3	245	300	64

ALL ITEMS CATEGORY 0010 UNLESS NOTED

TRAFFIC CONTROL DETOUR SIGNS AND COVERING SIGNS

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 60 DAYS	643.3000 DETOUR SIGNS DAYS	NUMBER OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
1	300' S OF PINEHURST DR INTERSECTION ON STH 32	W-20-2-A	48"x48"	1	60	60			
2	J4-1 (NORTH 32) ON NB R-A-B DIAGRAMATIC						1	1	NORTH 32
3	RT OF R-A-B DIAGRAMATIC	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 5-1-L	21"x21"	1	60	60			
4	ACROSS FROM KEEP RIGHT SIGN-SOUTH APPROACH TO SPLITTER ISLAND-RT SIDE	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			LEFT
5	MODIFY J1-1 (JCT 32)	W-20-2-A	48"x48"	1	60	60			
	"	M 1-6	EXISTING						
6	J4-1 (NORTH 32) ON STH 28 WB R-A-B DIAGRAMATIC						1	1	NORTH 32
7	ABOVE STH 28 WB R-A-B DIAGRAMATIC	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
8	J3-1 (N-32-RT) (NORTH SPLITTER ISLAND)						1	1	NORTH-32-RT
9	ACROSS FROM SIGN # 8 RIGHT SHOULDER	R-11-3	60"x30"	1	60	60			1 MILE
10	ABOVE J3-1 (W-28-RT) WEST SPLITTER ISLAND	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-2	21"x21"	1	60	60			RIGHT
11	J4-1 (N-32) NORTH OF RAB ON STH 32						1	1	NORTH 32
12	LT OF J4-1 (W-28) @ WEST STH OF 28 & STH 32 INTERSECTION	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
13	J4-1 (NORTH 32) ON STH 28 EB R-A-B DIAGRAMATIC						1	1	NORTH 32
14	MODIFY J1-1 (JCT 32)	MO 4-8-A	24"x18"	1	60	60			
	"	M 1-6	EXISTING						
15	LT OF J4-1 (W-28) @ CTH PPP & STH 32 INTERSECTION WB	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
16	200' E OF HUMPHREY RD INTERSECTION ON STH 28	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
17	200' W OF HUMPHREY RD INTERSECTION ON STH 28	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
18	LT OF J4-1 (E-28) @ CTH M (NORTH LEG) INTERSECTION ON STH 28	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	PAGE SUBTOTALS			35		2,100		5	

ALL ITEMS CATEGORY 0010 UNLESS NOTED

TRAFFIC CONTROL DETOUR SIGNS AND COVERING SIGNS

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 60 DAYS	643.3000 DETOUR SIGNS DAYS	NUMBER OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
19	LT OF J4-1 (W-28) @ CTH M (NORTH LEG) INTERSECTION ON STH 28	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
20	200' E OF CTH M (SOUTH LEG) INTERSECTION ON STH 28	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
21	200' W OF CTH M (SOUTH LEG) INTERSECTION ON STH 28	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
22	LT OF J4-1 (E-28) @ CTH N INTERSECTION ON STH 28	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
23	LT OF J4-1 (W-28) @ CTH N INTERSECTION ON STH 28	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
24	ABOVE J2-3 (S-57-AH LT; W-28-AH RT; N-57-AH RT)	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 5-1-R	21"x21"	1	60	60			
25	RT OF J3-1 (N-57-RT) @ STH 28 & STH 57 INTERSECTION	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			RIGHT
26	LT OF J4-1 (E-28) @ STH 57 INTERSECTION ON STH 28	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
27	LT OF J4-1 (N-57) @ STH 28 INTERSECTION ON STH 57 NB	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
28	RT OF J3-1 (E-28-RT) @ STH 57 (MEDIAN SIDE)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			LEFT
29	RT OF J2-2 (W-28-AH; S-57-AH)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 5-1-L	21"x21"	1	60	60			
30	ACROSS FROM SIGN # 29 (MEDIAN SIDE)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 5-1-L	21"x21"	1	60	60			
31	LT OF J13-1 (N-DBL ARROW) @ CTH N & STH 57 INTERSECTION NB	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
	PAGE SUBTOTALS			45		2,700		0	

ALL ITEMS CATEGORY 0010 UNLESS NOTED

TRAFFIC CONTROL DETOUR SIGNS AND COVERING SIGNS

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 60 DAYS	643.3000 DETOUR SIGNS DAYS	NUMBER OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
32	ACROSS FROM SIGN # 31 (MEDIAN SIDE)	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
33	LT OF J13-1 (N-DBL ARROW) @ CTH N & STH 57 INTERSECTION SB	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
34	ACROSS FROM SIGN # 33 (MEDIAN SIDE)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
35	LT OF J4-1 (S-57) @ CTH U & STH 57 INTERSECTION SB	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	MO 6-1	21"x21"	1	60	60			AHEAD
36	ACROSS FROM SIGN # 35 (MEDIAN SIDE)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
37	LT OF J4-1 (N-57) @ CTH U & STH 57 INTERSECTION NB	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
38	ACROSS FROM SIGN # 37 (MEDIAN SIDE)	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
39	ACROSS FROM SIGN # 40 (RT SIDE)	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
40	RT OF J13-1 (W-PP-LT) MEDIAN SIDE	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
41	250' N OF RT TURN DOWN-LT SIGN @ CTH PP ON STH 57	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
42	ACROSS FROM SIGN # 41 (MEDIAN SIDE)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
	PAGE SUBTOTALS			40		2,400		0	

3

ALL ITEMS CATEGORY 0010 UNLESS NOTED

TRAFFIC CONTROL DETOUR SIGNS AND COVERING SIGNS

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 60 DAYS	643.3000 DETOUR SIGNS DAYS	NUMBER OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
43	LT OF J3-2 (N-57-AH; TO-23-AH)	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
44	ACROSS FROM SIGN # 43 (MEDIAN SIDE)	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
45	300' N OF CTH C INTERSECTION ON STH 57 SB	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
46	ACROSS FROM SIGN # 45 (MEDIAN SIDE)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
47	LT OF J2-1 (E-23-AH RT)	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 5-1-R	21"x21"	1	60	60			
48	ACROSS FROM SIGN # 47 (MEDIAN SIDE)	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 5-1-R	21"x21"	1	60	60			
49	LT OF J3-1 (E-23-RT)	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			RIGHT
50	250' E OF STH 57 & SE RAMP INTERSECTION @ STH 23	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
51	LT OF J2-3 (E-23-AH LT; TO-43-AH RT; S-57-AH)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
52	LT OF J3-1 (S-57-LT) ON NE RAMP @ STH 23	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			LEFT
53	LT OF SIGNAL AH AHEAD SIGN ON NE RAMP @ STH 23	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 5-1-L	21"x21"	1	60	60			
54	LT OF TYPE 1 (57; KIEL/PLYMOUTH; TILT RT)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-2	21"x21"	1	60	60			RIGHT
	PAGE SUBTOTALS			47		2,820		0	

ALL ITEMS CATEGORY 0010 UNLESS NOTED

TRAFFIC CONTROL DETOUR SIGNS AND COVERING SIGNS

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 60 DAYS	643.3000 DETOUR SIGNS DAYS	NUMBER OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
55	1500' E OF TYPE 1 (57; KIEL/PLYMOUTH; TILT RT)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 5-2-R	21"x21"	1	60	60			
56	ACROSS FROM SIGN # 55 (MEDIAN SIDE)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 5-2-R	21"x21"	1	60	60			
57	LT OF J4-1 (W-23) @ CTH M ON STH 23	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
58	ACROSS FROM SIGN # 57 (MEDIAN SIDE)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
59	LT OF J4-2 (E-23; TO-43) @ CTH M ON STH 23	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
60	ACROSS FROM SIGN # 59 (MEDIAN SIDE)	MO 4-8	24"x12"	1	60	60			
	"	M 3-1	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
61	LT OF J1-1 (JCT TT) ON STH 23 EB	MO 4-8-A	24"x18"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
62	J3-2 (N-32-LT; S-32-RT)						1	1	SOUTH-32-RIGHT
63	SW QUAD OF STH 32 & SW RAMP INTERSECTION	R-11-3	60"x30"	1	60	60			1/2 MILE
64	LT OF BLUE SERVICE SIGN (FOOD/LODGING)	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	W-20-2-A	48"x48"	1	60	60			
65	ACROSS FROM SIGN # 64 (MEDIAN SIDE)	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	W-20-2-A	48"x48"	1	60	60			
66	LT OF BLUE SERVICE SIGN (GAS/FUEL)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
67	ACROSS FROM SIGN # 66 (MEDIAN SIDE)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
68	LT OF TYPE 1 (32; HOWARDS GROVE/SHEBOYGAN FALL; TILT RT)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
69	ACROSS FROM SIGN # 68 (MEDIAN SIDE)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
	PAGE SUBTOTALS			45		2,700		1	

ALL ITEMS CATEGORY 0010 UNLESS NOTED

TRAFFIC CONTROL DETOUR SIGNS AND COVERING SIGNS

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 60 DAYS	643.3000 DETOUR SIGNS DAYS	NUMBER OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
70	J3-2 (S-32-LT; N-32-RT)						1	1	SOUTH-32-LEFT
71	250' N OF DIVIDED ROADWAY AHEAD SIGN ON STH 32	W-20-2-A	48"x48"	1	60	60			
72	ABOVE J2-2 (E-23-AH; W-23-AH RT)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 5-1-R	21"x21"	1	60	60			
73	RT OF J3-1 (W-23-RT)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			RIGHT
74	SW QUAD OF STH 32 & NW RAMP INTERSECTION	R-11-3	60"x30"	1	60	60			1/2 MILE
75	250' W OF NW RAMP & STH 32 INTERSECTION ON NW RAMP	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
76	RT OF J13-1 (TT- DBL ARROW)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
77	ACROSS FROM SIGN # 76 (MEDIAN SIDE)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			AHEAD
78	2000' E OF SIGN # 82 ON STH 23 EB	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	W-20-2-A	48"x48"	1	60	60			
79	ACROSS FROM SIGN # 78 (MEDIAN SIDE)	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	W-20-2-A	48"x48"	1	60	60			
80	1000' E OF SIGN # 82 ON STH 23 EB	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 5-2-R	21"x21"	1	60	60			
81	ACROSS FROM SIGN # 80 (MEDIAN SIDE)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 5-2-R	21"x21"	1	60	60			
	PAGE SUBTOTALS			35		2,100		1	

ALL ITEMS CATEGORY 0010 UNLESS NOTED

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TRAFFIC CONTROL DETOUR SIGNS AND COVERING SIGNS

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 60 DAYS	643.3000 DETOUR SIGNS DAYS	NUMBER OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
82	LT OF TYPE 1 (57; KIEL/PLYMOUTH; TILT RT)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-2	21"x21"	1	60	60			RIGHT
83	LT OF SIGNAL AH AHEAD SIGN ON STH 23 SW RAMP @ STH 57	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 5-1-R	21"x21"	1	60	60			
84	LT OF J3-2 (N-57-LT; S-57-LT)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
	"	MO 6-1	21"x21"	1	60	60			RIGHT
85	LT OF J4-1 (S-57)	MO 4-8	24"x12"	1	60	60			
	"	M 3-3	24"x12"	1	60	60			
	"	M 1-6	24"x24"	1	60	60			32
86	TO BE DETERMINED IN FIELD - PRIOR TO CONSTRUCTION			1					
87	TO BE DETERMINED IN FIELD - PRIOR TO CONSTRUCTION			1					
	PAGE SUBTOTALS			17		900		0	
	PROJECT TOTALS			**264**		**15,720**		**7**	

ALL ITEMS CATEGORY 0010 UNLESS NOTED

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Conduit Rigid Nonmetallic Schedule 40

LOCATION		652.0225	652.0235
STH 32 & Happy Ln		2-Inch	3-Inch
FROM	TO	LF	LF
CB1	PB1		5
CB1	PB1		5
PB1	LB2	60	
LB2	LB3	180	
PB1	PB2		110
PB2	LB4	100	
PB2	Drain	20	
PB2	LB5	20	
PB2	PB3		60
PB3	LB6	50	
PB3	PB4		80
PB4	LB7	20	
LB7	PB5	60	
PB5	LB8	40	
LB8	LB9	150	
LB9	LB10	140	
PB5	PB6		80
PB6	LB11	120	
PB6	LB12	20	
LB12	PB7	70	
PB7	Drain	20	
PB7	LB13	10	
PB7	PB8		60
PB8	PB1		70
PB1	LB1	30	
	TOTAL	1,110	470

Concrete Bases

		654.0230
	654.0105	Control
	Type 5	Cabinet
		Type L30
LOCATION	EACH	EACH
STH 32 & Happy Ln	13	1

Pull Boxes Steel

	*	
	653.0140	
	24x42-Inch	
LOCATION	EACH	NOTES
PB1	1	NO DRAIN PIPE REQUIRED
PB2	1	DRAIN TO DITCH EAST OF PULL BOX*
PB3	1	DRAIN TO DITCH TO NORTHEAST OF PULL BOX*
PB4	1	NO DRAIN PIPE REQUIRED
PB5	1	DRAIN TO INLET 5D
PB6	1	NO DRAIN PIPE REQUIRED
PB7	1	DRAIN TO INLET 11A
PB8	1	NO DRAIN PIPE REQUIRED
TOTAL	8	

*6" ABOVE DITCH BOTTOM, MIN

Electrical Wire Lighting

			10AWG	12AWG	
LOCATION			*		655.0610
STH 32 & Happy Ln			655.0615	655.0610	Equipment
			Ungrounded	Ungrounded	Grounding
(240 VOLT SYSTEM)			Conductor	Conductor	Conductor
			(see Circuit Color)	**(Black)/(Red)**	**(Green)**
Circuit	FROM	TO	LF	LF	LF
A	CB1	LB1	120		
(Black)	LB1	Luminaire		100	50
	CB1	LB2	200		
	LB2	Luminaire		100	50
	LB2	LB3	400		
	LB3	Luminaire		100	50
B	CB1	LB5	360		
(Red)	LB5	Luminaire		100	50
	LB5	LB4	300		
	LB4	Luminaire		100	50
	LB5	LB6	340		
	LB6	Luminaire		100	50
C	CB1	LB7	680		
(Blue)	LB7	Luminaire		100	50
	LB7	LB8	260		
	LB8	Luminaire		100	50
	LB8	LB9	340		
	LB9	Luminaire		100	50
	LB9	LB10	320		
	LB10	Luminaire		100	50
D	CB1	LB13	400		
(Brown)	LB13	Luminaire		100	50
	LB13	LB12	220		
	LB12	Luminaire		100	50
	LB12	LB11	320		
	LB11	Luminaire		100	50
		SUB-TOTALS	4,260	1,300	650
		TOTAL	4,260	1,950	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE. GRAND TOTAL = 7,030

Electrical Wire Lighting 10AWG

		*
LOCATION		655.0615
STH 32 & Happy Ln		Equipment
		Grounding
(240 VOLT SYSTEM)		Conductor
		(Green)
FROM	TO	LF
CB1	LB1	60
CB1	PB1	20
CB1	LB2	100
LB2	LB3	200
LB2	LB5	230
LB5	PB2	40
LB5	LB4	150
LB5	LB6	170
LB6	PB3	70
LB6	LB7	190
LB7	PB4	40
LB7	LB8	130
LB8	PB5	60
LB8	LB9	170
LB9	LB10	160
LB9	LB12	340
LB12	PB6	40
LB12	LB11	160
LB12	LB13	110
LB13	PB7	30
LB13	CB1	200
LB13	PB8	100
	TOTAL	2,770

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.
GRAND TOTAL = 7,030

3

ALL ITEMS CATEGORY 0010 UNLESS NOTED

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Electric Service

	656.0200 Meter Breaker Pedestal	659.2130 Lighting Control Cabinet 120/240 30-Inch
LOCATION	LS	EACH
STH 32 & Happy Ln	1	1

Lighting Summary

	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	657.0322 Poles Type 5 (Aluminum)	657.0710 Luminaire Arms Truss Type 4 1/2-Inch Clamp 12-FT	659.1120 Luminaires Utility LED-B
LOCATION	EACH	EACH	EACH	EACH
STH 32 & Happy Ln	13	13	13	13

SAWING ASPHALT

LOCATION	690.0150 LF
STH 32	
119+80 LT	10
120+08 - 120+38 LT	30
125+00 LT	5
128+43 LT	10
129+83 LT	10
130+34 LT	10
131+86 LT	10
HAPPY LANE	
54+30 LT/RT	36
55+52 - 55+87 RT	38
55+54 - 55+97 LT	38
56+05 - 56+36 LT	49
61+38 LT/RT	21
GREEN ACRES DRIVE	
12+15 LT/RT	32
FAIRVIEW DRIVE	110
TOTAL	409

SAWING CONCRETE

LOCATION	690.0250 LF
STH 32	
118+63 LT/RT	47
120+08 - 120+38 LT (C&G)	5
131+86 LT/RT	44
HAPPY LANE	
54+30 LT/RT (C&G)	5
55+52 - 55+87 RT (C&G)	5
55+54 - 55+97 LT (C&G)	5
59+79 RT (DRIVEWAY)	22
60+43 RT (DRIVEWAY)	20
GREEN ACRES DRIVE	
122+22 - 122+51 RT (C&G)	5
12+15 LT/RT (C&G)	5
12+30 RT (DRIVEWAY)	20
FAIRVIEW DR (C&G)	5
TOTAL	188

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CONST STAKING STORM SEWER SYSTEM

LOCATION	* 650.4000 CONST STAKING STORM SEWER SYSTEM EACH
MANHOLE 4 FT DIAMETER	3
INLET 4 FT DIAMETER	6
INLET 2X3 FT	25
INLET 4 FT DIAMETER SPECIAL	2
AEW FOR CULVERT PIPE REIN. CONC. 15"	1
AEW FOR CULVERT PIPE REIN. CONC. 24"	1
TOTALS	38

* ADDITIONAL STAKING ITEMS SHOWN ELSEWHERE

CONSTRUCTION STAKING*

LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.9920 SLOPE STAKES LF
STH 32			
118+63 - 122+62	399	399	399
109+06 - 113+56	1,848	1,848	924
HAPPY LANE			
54+30 - 56+05	175	175	175
56+05 - 56+65	120	120	60
58+28 - 59+04	152	152	76
59+04 - 61+38	234	234	234
GREEN ACRES DRIVE			
12+15 - 13+15	100	100	50
TEMPORARY ACCESS ROADS			
NE QUAD, 20+11 - 23+93	382	382	382
NW QUAD, 10+24 - 14+02	378	378	378
TOTALS	3,788	3,788	2,678

* ADDITIONAL STAKING ITEMS SHOWN ELSEWHERE

MINI STORM SEWER LATERAL 4-INCH

LOCATION	* SPV.0090.02 LF
HAPPY LANE	
58+85 - 59+15 RT	30
59+26 - 59+62 RT	40
GREEN ACRES DRIVE	
13+00 - 13+40 LT	40
TOTAL	110

*CONNECTION TO EXISTING PIPE AND MANHOLE OR INLET IS INCIDENTAL TO THIS ITEM

ALL ITEMS CATEGORY 0010 UNLESS NOTED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

TRANSPORTATION PROJECT PLAT TITLE SHEET

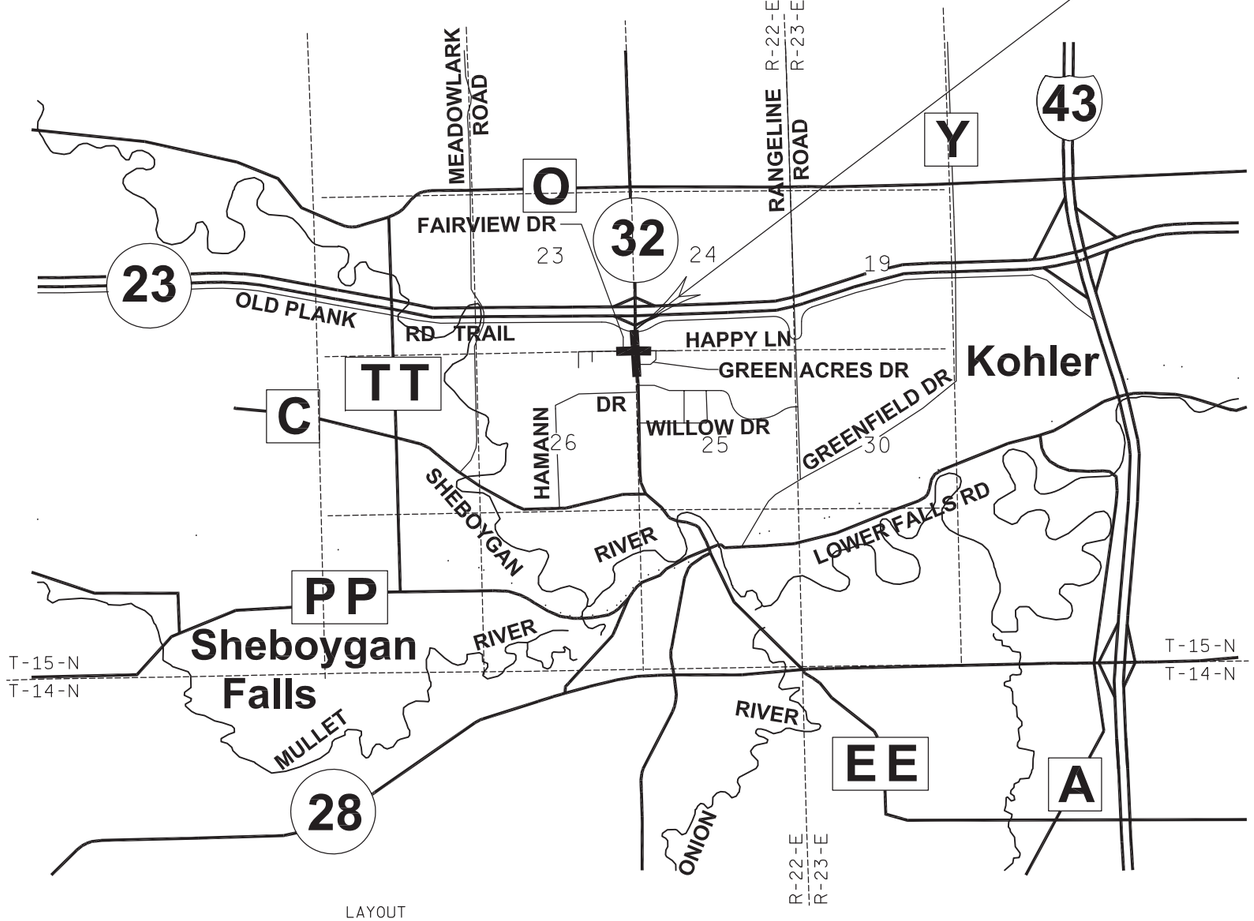
PROJECT NO. 4540-23-21

CITY OF SHEBOYGAN FALLS

STH 32 & HAPPY LANE INTERSECTION

STH 32
SHEBOYGAN COUNTY

PROJECT LOCATION



LAYOUT

NO SCALE

TOTAL NET LENGTH OF CENTERLINE = 0.251 MI.

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	RECORDED AS	(100')
ACCESS RIGHTS	AR	REFERENCE LINE	R/L
ACRES	AC.	RELEASE OF RIGHTS	ROR
AND OTHERS	ET.AL.	REMAINING	REM.
BUILDING	BLD.	RIGHT-OF-WAY	R/W
CENTERLINE	C/L	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	STATION	STA.
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.
EASEMENT	EASE.	**CURVE DATA**	
GARAGE	G.	LONG CHORD	LCH
HIGHWAY EASEMENT	H.E.	LONG CHORD BEARING	LCB
HOUSE	H.	RADIUS	R
LAND CONTRACT	LC	DEGREE OF CURVE	D
MONUMENT	MON.	CENTRAL ANGLE OR DELTA	DELTA
PAGE	P.	LENGTH OF CURVE	L
PERMANENT LIMITED EASEMENT	PLE	TANGENT	TAN
PROPERTY LINE	PL		

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	⌀ (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	○ ●(SET)	PROPERTY LINE	
R/W STANDARD	△ ▲(SET)	LOT & TIE LINES	
SIGN	SIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT	◎	CORPORATE LIMITS	
SECTION CORNER SYMBOL		RESTRICTED ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		RESTRICTED ACCESS (BY ACQUISITION)	
TEMPORARY LIMITED EASEMENT	TEMPORARY	NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT	PERMANENT	SECTION LINE	
R/W BOUNDARY POINT	RWB20	QUARTER LINE	
PARCEL NUMBER	02	SIXTEENTH LINE	
UTILITY PARCEL NUMBER	32	EXISTING CENTERLINE	
SIGN NUMBER (OFF PREMISE)	21-1	PROPOSED REFERENCE LINE	
BUILDING		PARALLEL OFFSET	

CONVENTIONAL UTILITY SYMBOLS

WATER	W		NON COMPENSABLE	COMPENSABLE
GAS	G	POWER POLE		
TELEPHONE	T	TELEPHONE POLE		
OVERHEAD	OH	TELEPHONE PEDESTAL		
TRANSMISSION LINES ELECTRIC	E	ELECTRIC TOWER		
CABLE TELEVISION	TV			
FIBER OPTIC	FO			
SANITARY SEWER	SAN			
STORM SEWER	SS			

NOTES:

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, SHEBOYGAN COUNTY ZONE, NAD83 (1997) ADJUSTMENT. THE COORDINATES SHOWN ARE GROUND COORDINATES AND ARE TO BE USED AS GROUND VALUES ON THIS PLAT.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISDOT NE REGION.

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

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, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: EXISTING HIGHWAY RIGHT-OF-WAY FOR STH 32 ESTABLISHED FROM PREVIOUS PROJECT 4540-06-21 AND EXISTING HIGHWAY RIGHT-OF-WAY ALONG HAPPY LANE ESTABLISHED FROM PREVIOUS PROJECTS 4540-06-21. EXISTING HIGHWAY RIGHT-OF-WAY FOR GREEN ACRES DRIVE ESTABLISHED FROM SURVEY MONUMENTATION.

ACCESS RESTRICTED BY PROJECT: ID 4540-6-21, ID 1445-1-23

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION CONTACT THE PLANNING DEPARTMENT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN GREEN BAY.

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

A **PERMANENT LIMITED EASEMENT** (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE 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. BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHT TO MAKE OR CONSTRUCT IMPROVEMENT ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

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

ORIGINAL PLAT PREPARED BY
R.A. Smith National
Beyond Surveying and Engineering
16745 W. Bluemound Road, Brookfield WI 53005
262-781-6100 Fax 262-781-6466
www.rasmithnational.com

TPP PROJECT NUMBER 4540-23-21 - 4.01
SHEET 2 OF 2

FILE NAME : S:\5165164\PLAT\FP040101_RT.DWG
APPRAISAL PLAT DATE: 9-19-2012

PLOT DATE : 7-13-2012

TRANSPORTATION PROJECT PLAT NO: 4540-23-21 - 4.01 AMENDMENT NO.1

AMENDS TPP SHEET 4540-23-21-4.01 RECORDED IN SHEBOYGAN COUNTY AS DOCUMENT NO.1953134 BY REVISING THE OWNER NAMES OF PARCELS 1 & 4.

THAT PART OF TRACT 1 CSM V.8, P.146 AND LOT 1 OF CSM V.21, P.222, AND THE NORTHEAST 1/4 OF THE NORTHEAST 1/4, SECTION 26, ALL IN THE CITY OF SHEBOYGAN FALLS, ALL IN TOWNSHIP 15 NORTH, RANGE 22 EAST, SHEBOYGAN COUNTY, WISCONSIN.

RELOCATION ORDER STH 32 - STH 32 & HAPPY LANE INTERSECTION

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 TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3) AND 84.09, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION

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.

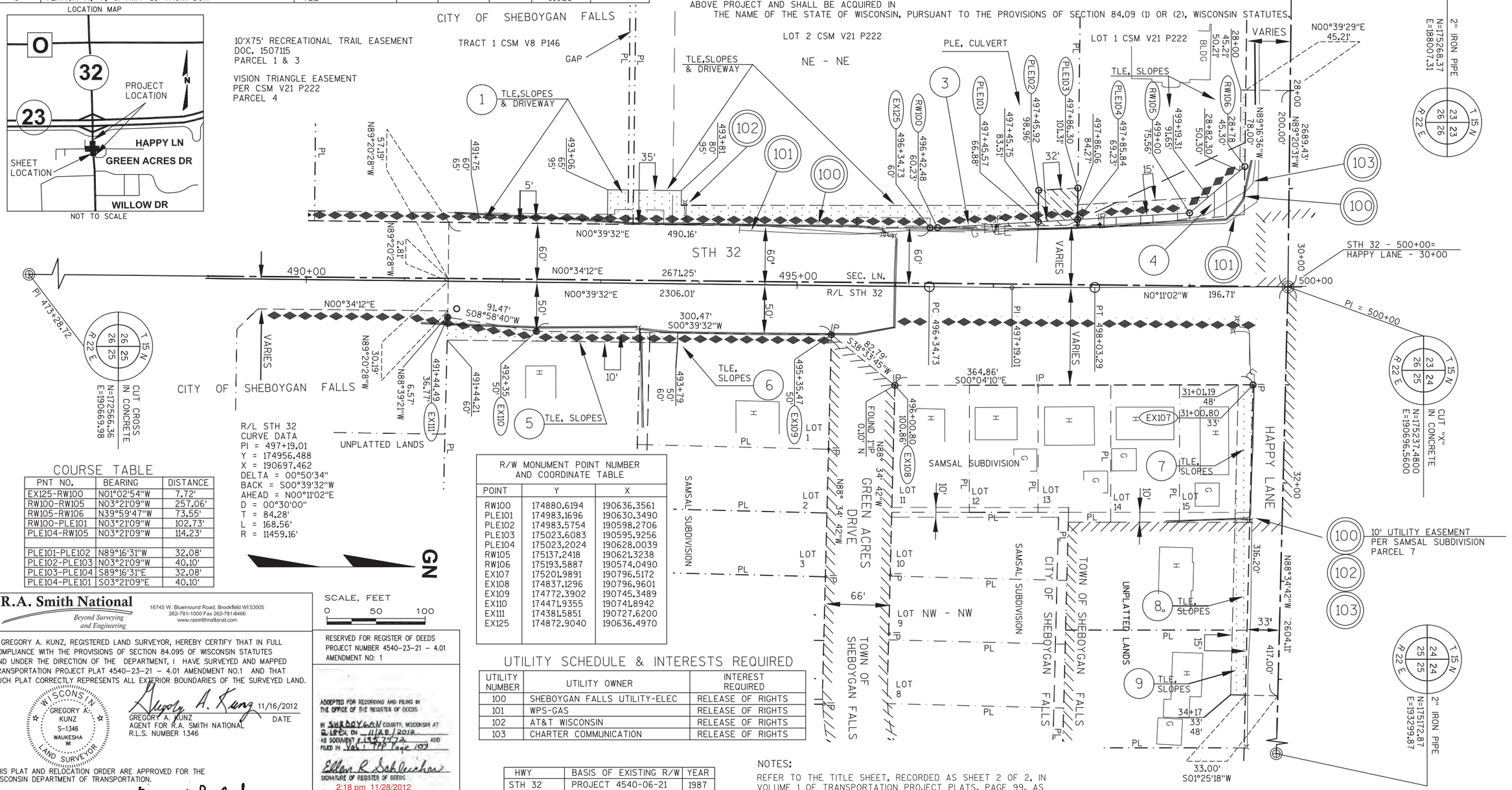
SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND AND INTERESTS TO DOT.

PARCEL NUMBER	OWNER	INTEREST REQUIRED	AREAS ACRES REQUIRED NEW	EXISTING	TOTAL	TLE ACRES	PLE ACRES
1	WOOD COUNTRY PROPERTIES, LLC	TLE	-	-	-	0.032	-
3	SHEBOYGAN FALLS PROPERTIES, LLC	FEE, PLE, TLE	0.009	-	0.009	0.214	0.029
4	WISCONSIN STATE BANK & HARRIS N.A.	FEE, TLE	0.056	-	0.056	0.052	-
5	THOMAS O. E. & DEBRA L. EAKE	TLE	-	-	-	0.059	-
6	DAVID C. W. & MARY A. WAGNER	TLE	-	-	-	0.009	-
7	GERALD E. S. & JUDITH A. SELK, REVOCABLE TRUST	TLE	-	-	-	0.048	-
8	NATHAN L. J. & LORI L. JUSTINGER	TLE	-	-	-	0.038	-
9	VERNON A, T, & AMY S. THOMPSON	TLE	-	-	-	0.023	-

LOCATION MAP

NOT TO SCALE



COURSE TABLE

PNT NO.	BEARING	DISTANCE
EX125-RW100	N01°02'54"W	7.72'
RW100-RW105	N03°21'09"W	257.06'
RW105-RW106	N39°59'47"W	73.55'
RW100-PLE101	N03°21'09"W	102.73'
PLE104-RW105	N03°21'09"W	114.23'
PLE101-PLE102	N89°16'31"W	32.08'
PLE102-PLE103	N03°21'09"W	40.10'
PLE103-PLE104	S89°16'31"E	32.08'
PLE104-PLE101	S03°21'09"E	40.10'

R/W MONUMENT POINT NUMBER AND COORDINATE TABLE

POINT	Y	X
RW100	174880.6194	190636.3561
PLE101	174983.1696	190630.3490
PLE102	174983.5754	190598.2706
PLE103	175023.6083	190595.9256
PLE104	175023.2024	190628.0039
RW105	175137.2418	190621.3238
RW106	175193.5887	190574.0490
EX107	175201.9891	190796.5172
EX108	174837.1296	190796.9601
EX109	174772.3902	190745.3489
EX110	174471.9355	190741.8942
EX111	174381.5851	190727.6200
EX125	174872.9040	190636.4970

UTILITY SCHEDULE & INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER	INTEREST REQUIRED
100	SHEBOYGAN FALLS UTILITY-ELEC	RELEASE OF RIGHTS
101	WPS-GAS	RELEASE OF RIGHTS
102	AT&T WISCONSIN	RELEASE OF RIGHTS
103	CHARTER COMMUNICATION	RELEASE OF RIGHTS

HWY	BASIS OF EXISTING R/W	YEAR
STH 32	PROJECT 4540-06-21	1987
HAPPY LANE	PROJECT 4540-06-21	1987

NOTES:

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2, IN VOLUME 1 OF TRANSPORTATION PROJECT PLATS, PAGE 99, AS DOCUMENT NO. 1953134 FOR ADDITIONAL INFORMATION.

R.A. Smith National
Beyond Surveying and Engineering
16745 W. Bluemound Road, Brookfield WI 53005
262-781-1000 Fax 262-781-8466
www.rasmithnational.com

I, GREGORY A. KUNZ, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 4540-23-21 - 4.01 AMENDMENT NO.1 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN GREGORY A. KUNZ S-1346 WAUKESHA WI LAND SURVEYOR

Gregory A. Kunz 11/16/2012
GREGORY A. KUNZ DATE
AGENT FOR R.A. SMITH NATIONAL
R.L.S. NUMBER 1346

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

NORMAN H. PAWELCZYK — Norman H. Pawelczyk — 11/16/2012
PRINT NAME — SIGNATURE — DATE:

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4540-23-21 - 4.01
AMENDMENT NO: 1

ACCEPTED FOR RECORDING AND FILING IN THE OFFICE OF THE REGISTER OF DEEDS
IN SHEBOYGAN COUNTY, WISCONSIN AT 2:18 P.M. ON 11/28/2012
AS DOCUMENT # 1957472 AND FILED IN Vol 1 TPP Page 103
Ellen R. Schleicher
SIGNATURE OF REGISTER OF DEEDS
2:18 pm 11/28/2012
1957472
Vol 1 TPP Page 103

FILE NAME : S:\5165164\PLAT\FP100P00.DWG
APPRAISAL PLAT DATE: NOVEMBER 16, 2012
PLOT DATE : 7-13-2012

TRANSPORTATION PROJECT PLAT NO: 4540-23-21 - 4.02 AMENDMENT NO.1

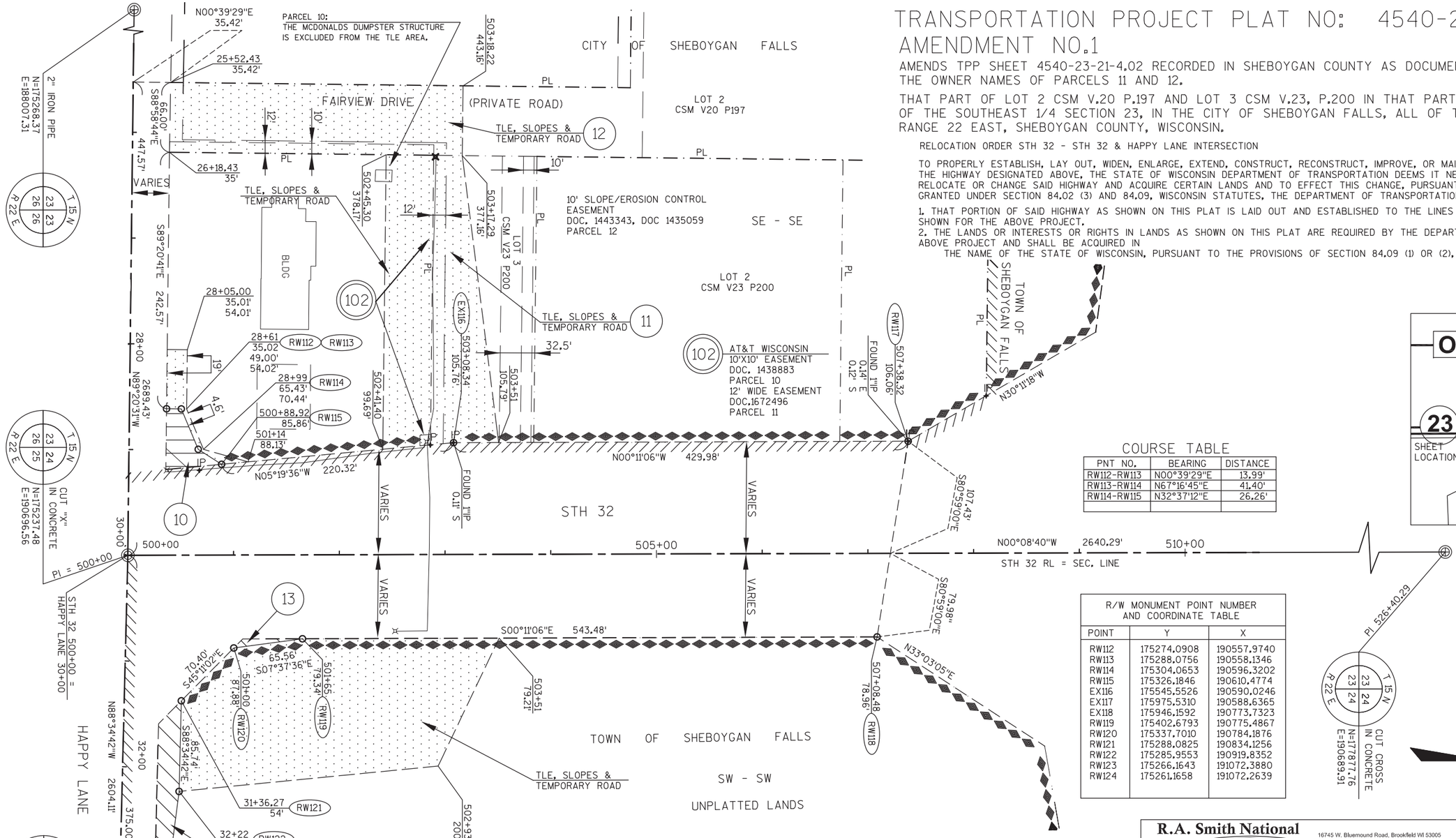
AMENDS TPP SHEET 4540-23-21-4.02 RECORDED IN SHEBOYGAN COUNTY AS DOCUMENT 1953708 BY REVISING THE OWNER NAMES OF PARCELS 11 AND 12.

THAT PART OF LOT 2 CSM V.20 P.197 AND LOT 3 CSM V.23, P.200 IN THAT PART OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 SECTION 23, IN THE CITY OF SHEBOYGAN FALLS, ALL OF TOWNSHIP 15 NORTH, RANGE 22 EAST, SHEBOYGAN COUNTY, WISCONSIN.

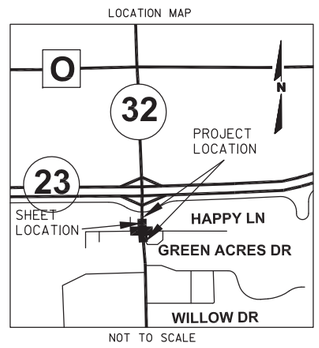
RELOCATION ORDER STH 32 - STH 32 & HAPPY LANE INTERSECTION

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 TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3) AND 84.09, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION

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.



LOCATION MAP



NOT TO SCALE

COURSE TABLE

PNT NO.	BEARING	DISTANCE
RW112-RW113	N00°39'29"E	13.99'
RW113-RW114	N67°16'45"E	41.40'
RW114-RW115	N32°37'12"E	26.26'

R/W MONUMENT POINT NUMBER AND COORDINATE TABLE

POINT	Y	X
RW112	175274.0908	190557.9740
RW113	175288.0756	190558.1346
RW114	175304.0653	190596.3202
RW115	175326.1846	190610.4774
EX116	175545.5526	190590.0246
EX117	175975.5310	190588.6365
EX118	175946.1592	190773.7323
RW119	175402.6793	190775.4867
RW120	175337.7010	190784.1876
RW121	175288.0825	190834.1256
RW122	175285.9553	190919.8352
RW123	175266.1643	191072.3880
RW124	175261.1658	191072.2639

SCALE, FEET

0 50 100

HWY	BASIS OF EXISTING R/W	YEAR
STH 32	PROJECT 4540-06-21	1987
HAPPY LANE	PROJECT 4540-06-21	1987

UTILITY SCHEDULE & INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER	INTEREST REQUIRED
102	AT&T WISCONSIN	RELEASE OF RIGHTS

NOTES:

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2, IN VOLUME 1 OF TRANSPORTATION PROJECT PLATS, PAGE 99, AS DOCUMENT NO. 1953134 FOR ADDITIONAL INFORMATION.

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND AND INTERESTS TO DOT.

PARCEL NUMBER	OWNER	INTEREST REQUIRED	AREAS ACRES REQUIRED NEW	EXISTING	TOTAL	TLE ACRES	PLE ACRES
10	QSO, LLC	FEE, TLE	0.036	-	0.036	0.319	-
11	RONALD J. BURROWS, SR.	TLE	-	-	-	0.286	-
12	RONALD J. BURROWS, SR.	TLE	-	-	-	0.419	-
13	JOHN C. W. & MARY JO WIDDER	FEE, TLE	0.087	-	0.087	0.775	-

R.A. Smith National
Beyond Surveying and Engineering

16745 W. Bluemound Road, Brookfield WI 53005
262-781-1000 Fax 262-781-8466
www.rasmithnatlonal.com

I, GREGORY A. KUNZ, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 4540-23-21 – 4.02 AMENDMENT NO.1 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN GREGORY A. KUNZ S-1346 WAUKESHA WI LAND SURVEYOR

GREGORY A. KUNZ 11/16/2012
GREGORY A. KUNZ DATE
AGENT FOR R.A. SMITH NATIONAL
R.L.S. NUMBER 1346

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

NORMAN H. PAWELCZYK — 11/16/2012
PRINT NAME — SIGNATURE — DATE

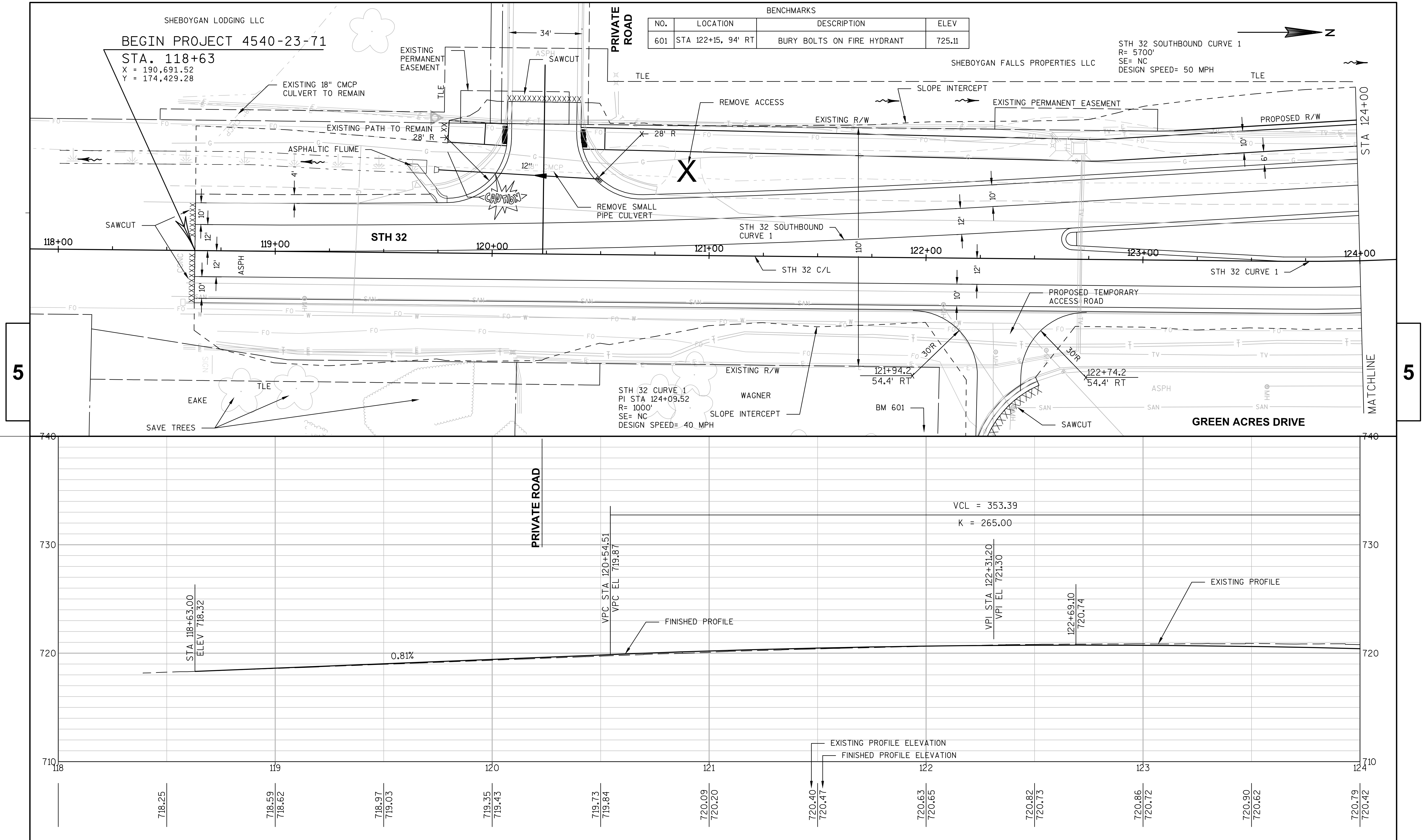
RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4540-23-21 – 4.02
AMENDMENT NO: 1

ACCEPTED FOR RECORDING AND FILING IN THE OFFICE OF THE REGISTER OF DEEDS
IN SHEBOYGAN COUNTY, WISCONSIN AT 2:18 P.M. ON 11/28/2012
AS DOCUMENT 1957473 AND FILED IN Vol 1 TPP Page 86
Eileen R. Schlaefer
SIGNATURE OF REGISTER OF DEEDS
2:18 pm 11/28/2012
1957473
Vol 1 TPP Page 86

FILE NAME : S:\5165164\PLAT\FP100P00.DWG
APPRAISAL PLAT DATE: NOVEMBER 16, 2012
PLOT DATE : 7-13-2012

BENCHMARKS

NO.	LOCATION	DESCRIPTION	ELEV
601	STA 122+15, 94' RT	BURY BOLTS ON FIRE HYDRANT	725.11

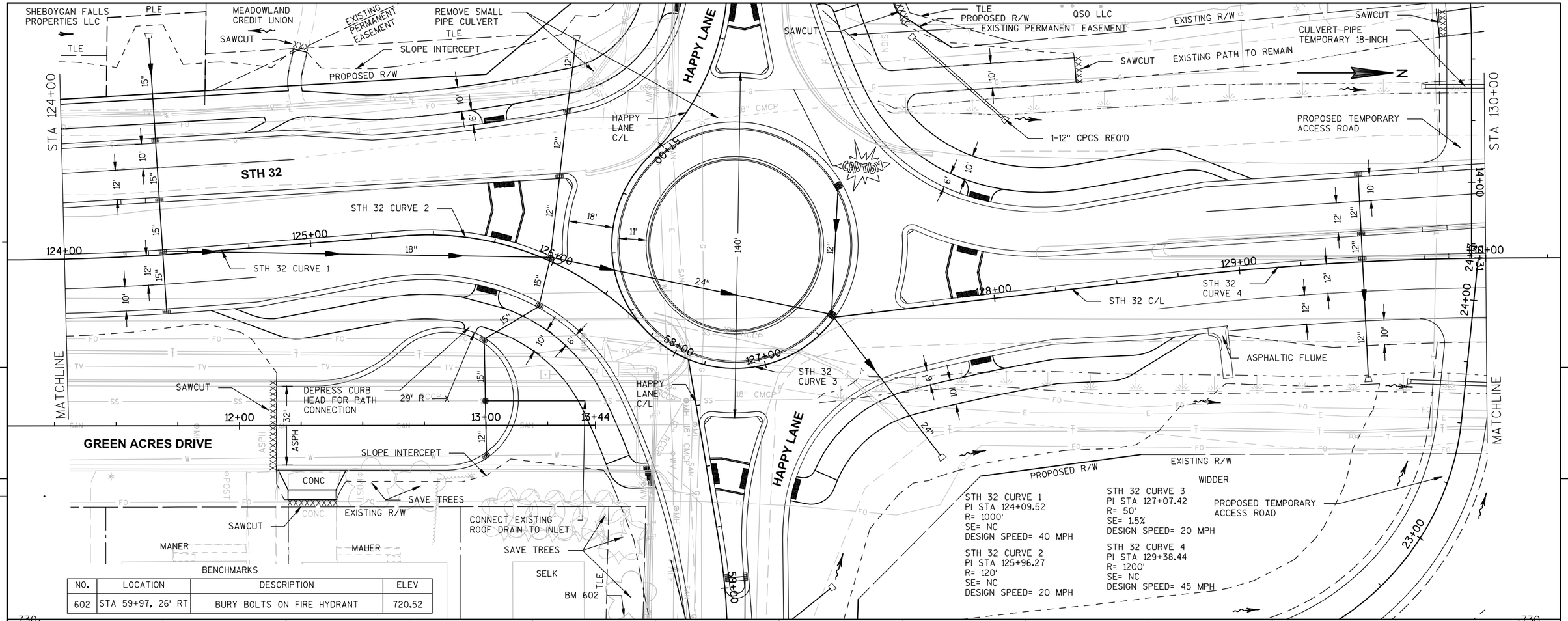


SHEBOYGAN LODGING LLC
BEGIN PROJECT 4540-23-71
STA. 118+63
X = 190,691.52
Y = 174,429.28
EXISTING 18" CMCP CULVERT TO REMAIN
EXISTING PERMANENT EASEMENT
34'
SAWCUT
PRIVATE ROAD
SHEBOYGAN FALLS PROPERTIES LLC
STH 32 SOUTHBOUND CURVE 1
R= 5700'
SE= NC
DESIGN SPEED= 50 MPH
TLE
SLOPE INTERCEPT
REMOVE ACCESS
EXISTING PERMANENT EASEMENT
EXISTING R/W
PROPOSED R/W
EXISTING PATH TO REMAIN
28' R
ASPHALTIC FLUME
12" CMCP
REMOVE SMALL PIPE CULVERT
CAUTION
STH 32
STH 32 SOUTHBOUND CURVE 1
STH 32 C/L
STH 32 CURVE 1
118+00
119+00
120+00
121+00
122+00
123+00
124+00
STA 124+00
ASPH
PROPOSED TEMPORARY ACCESS ROAD
30'R
121+94.2
54.4' RT
122+74.2
54.4' RT
EXISTING R/W
STH 32 CURVE 1
PI STA 124+09.52
R= 1000'
SE= NC
DESIGN SPEED= 40 MPH
WAGNER
SLOPE INTERCEPT
BM 601
SAWCUT
GREEN ACRES DRIVE
MATCHLINE
EAKE
SAVE TREES
5
PRIVATE ROAD
VCL = 353.39
K = 265.00
STA 118+63.00
ELEV 718.32
VPC STA 120+54.51
VPC EL 719.87
VPI STA 122+31.20
VPI EL 721.30
122+69.10
720.74
FINISHED PROFILE
EXISTING PROFILE
0.81%
EXISTING PROFILE ELEVATION
FINISHED PROFILE ELEVATION
740
730
720
710
118
119
120
121
122
123
124
718.25
718.59
718.62
718.97
719.03
719.35
719.43
719.73
719.84
720.09
720.20
720.40
720.47
720.63
720.65
720.82
720.73
720.86
720.72
720.90
720.62
720.79
720.42

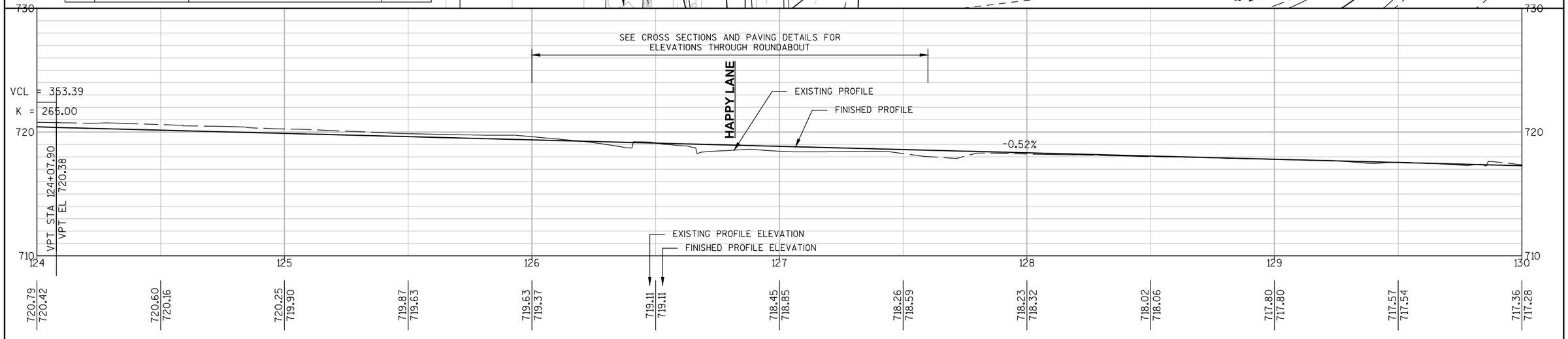
PROJECT NO:4540-23-71	HWY:STH 32	COUNTY:SHEBOYGAN	PLAN & PROFILE - STH 32	SHEET 87	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\050101_PP.DWG PLOT DATE : 5/11/2015 4:47 PM PLOT BY : BECKENDORF, RANDY PLOT NAME :

WISDOT/CADDS SHEET 44



NO.	LOCATION	DESCRIPTION	ELEV
602	STA 59+97, 26' RT	BURY BOLTS ON FIRE HYDRANT	720.52

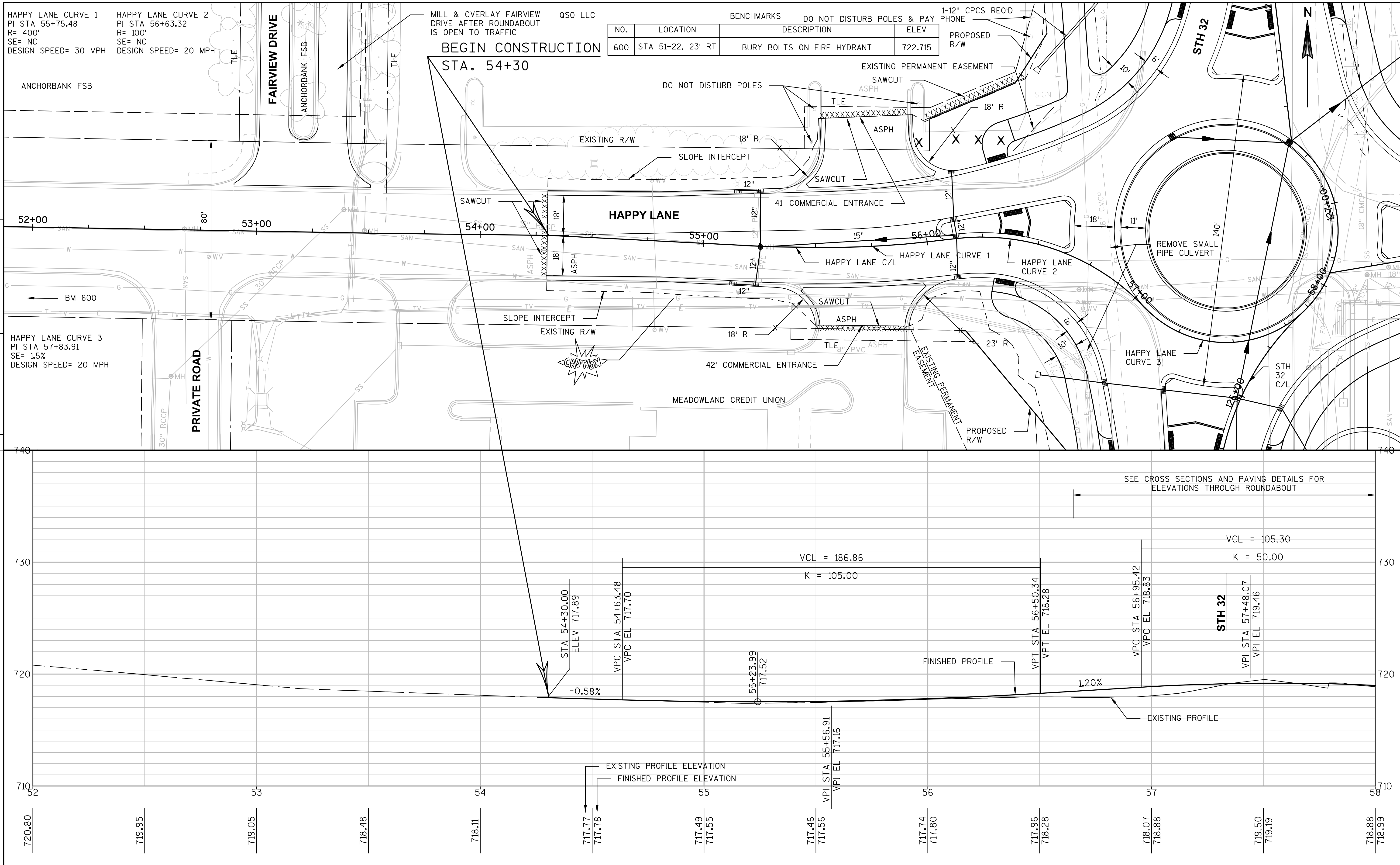


PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PLAN & PROFILE - STH 32	SHEET 88	E

ANCHORBANK FSB
TLE
SAWCUT
EXISTING R/W
GH SHEB FALLS LLC
ANCHORBANK FSB
EXISTING PATH TO REMAIN
SLOPE INTERCEPT
CULVERT PIPE TEMPORARY 12-INCH
CULVERT PIPE TEMPORARY 18-INCH
STA 130+00
STH 32
STH 32 SOUTHBOUND CURVE 2
R= 2000'
SE= NC
DESIGN SPEED= 45 MPH
N
10'
12'
12"
ASPH
CONC
SAWCUT
185'
130+00
131+00
132+00
133+00
134+00
135+00
136+00
STH 32 C/L
SLOPE INTERCEPT
MATCHLINE
END PROJECT 4540-23-71
STA. 131+86
TLE
EXISTING R/W
WIDDER
740
730
720
710
STA 131+86.00
ELEV 716.30
EXISTING PROFILE
FINISHED PROFILE
-0.52%
EXISTING PROFILE ELEVATION
FINISHED PROFILE ELEVATION
130
131
132
133
134
135
136
717.36
717.28
716.91
717.01
716.75
716.75
716.35
716.49
716.23
715.91
715.58
715.37
715.06
714.92
715.09
715.08

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PLAN & PROFILE - STH 32	SHEET 89	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\050103_PP.DWG
PLOT DATE : 5/11/2015 4:47 PM
PLOT BY : BECKENDORF, RANDY
PLOT NAME :



HAPPY LANE CURVE 1
PI STA 55+75.48
R= 400'
SE= NC
DESIGN SPEED= 30 MPH
HAPPY LANE CURVE 2
PI STA 56+63.32
R= 100'
SE= NC
DESIGN SPEED= 20 MPH
MILL & OVERLAY FAIRVIEW DRIVE AFTER ROUNDABOUT IS OPEN TO TRAFFIC
QSO LLC
BEGIN CONSTRUCTION
STA. 54+30
DO NOT DISTURB POLES & PAY PHONE
1-12" CPCS REQ'D
PROPOSED R/W
EXISTING PERMANENT EASEMENT
SAWCUT
DO NOT DISTURB POLES
TLE
ASPH
18' R
ANCHORBANK FSB
FAIRVIEW DRIVE
EXISTING R/W
SLOPE INTERCEPT
41' COMMERCIAL ENTRANCE
HAPPY LANE
52+00
53+00
54+00
55+00
56+00
80'
HAPPY LANE C/L
HAPPY LANE CURVE 1
HAPPY LANE CURVE 2
REMOVE SMALL PIPE CULVERT
STH 32
N
57+00
58+00
127+00
125+00
140'
BM 600
HAPPY LANE CURVE 3
PI STA 57+83.91
SE= 1.5%
DESIGN SPEED= 20 MPH
PRIVATE ROAD
CAUTION
42' COMMERCIAL ENTRANCE
23' R
MEADOWLAND CREDIT UNION
HAPPY LANE CURVE 3
STH 32 C/L
5
5
SEE CROSS SECTIONS AND PAVING DETAILS FOR ELEVATIONS THROUGH ROUNDABOUT
VCL = 186.86
K = 105.00
VCL = 105.30
K = 50.00
STA 54+30.00
ELEV 717.89
VPC STA 54+63.48
VPC EL 717.70
55+23.99
717.52
VPI STA 55+56.91
VPI EL 717.16
VPT STA 56+50.34
VPT EL 718.28
VPC STA 56+95.42
VPC EL 718.83
STH 32
VPI STA 57+48.07
VPI EL 719.46
-0.58%
1.20%
FINISHED PROFILE
EXISTING PROFILE
EXISTING PROFILE ELEVATION
FINISHED PROFILE ELEVATION
740
730
720
710
52
53
54
55
56
57
58
720.80
719.95
719.05
718.48
718.11
717.77 717.78
717.49 717.55
717.46 717.56
717.74 717.80
717.96 718.28
718.07 718.88
719.50 719.19
718.88 718.99

BENCHMARKS

NO.	LOCATION	DESCRIPTION	ELEV
600	STA 51+22, 23' RT	BURY BOLTS ON FIRE HYDRANT	722.715

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PLAN & PROFILE - HAPPY LANE	SHEET 90	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\050104_PP.DWG PLOT DATE : 5/11/2015 4:47 PM PLOT BY : BECKENDORF, RANDY PLOT NAME :

WISDOT/CADDS SHEET 44

HAPPY LANE CURVE 4
PI STA 59+04.46
R= 250'
SE= NC
DESIGN SPEED= 25 MPH

WESTBOUND CURVE 1
R= 500'
SE= NC
DESIGN SPEED= 30 MPH

WESTBOUND CURVE 2
R= 500'
SE= NC
DESIGN SPEED= 30 MPH

WIDDER

BENCHMARKS

NO.	LOCATION	DESCRIPTION	ELEV
602	STA 59+97, 26' RT	BURY BOLTS ON FIRE HYDRANT	720.52

N

PROPOSED TEMPORARY ACCESS ROAD

SLOPE INTERCEPT

PROPOSED R/W

1-18" CPRC REQ'D WESTBOUND CURVE 2

WESTBOUND CURVE 1

END CONSTRUCTION
STA. 61+38

STH 32 C/L

HAPPY LANE C/L

HAPPY LANE

HAPPY LANE CURVE 4

SAWCUT

ASPH

CONC

BM 602

EXISTING R/W

TLE

SAVE TREES

SAWCUT

22' PRIVATE ENTRANCE

CONNECT EXISTING ROOF DRAIN OUTLETS TO INLETS

REMOVE SMALL PIPE CULVERT

SAWCUT

20' PRIVATE ENTRANCE

JUSTINGER

SLOPE INTERCEPT

EXISTING CULVERT TO REMAIN

THOMPSON

OTTMAN

SELK

CAUTION

SEE CROSS SECTIONS AND PAVING DETAILS FOR ELEVATIONS THROUGH ROUNDABOUT

VCL = 105.30
K = 50.00

VCL = 150.27
K = 105.00

VCL = 28.92
K = 150.00

VPI STA 57+48.07
VPI EL 719.46
STH 32

VPT STA 58+00.72
VPT EL 718.99

VPC STA 58+20.28
VPC EL 718.81

VPI STA 58+95.42
VPI EL 718.13

59+15.06
718.38

VPT STA 59+70.56
VPT EL 718.53

VPC STA 60+80.64
VPC EL 719.11

VPI STA 60+95.10
VPI EL 719.19

VPT STA 61+09.56
VPT EL 719.23

STA 61+38.00
ELEV 719.33

FINISHED PROFILE

EXISTING PROFILE

-0.90%

0.53%

0.34%

STA 60+75
1-18" CPRC

EXISTING PROFILE ELEVATION

FINISHED PROFILE ELEVATION

718.07	719.50	718.88	718.44	718.39	718.45	718.58	718.96	719.20	719.37	719.50	719.56	718.91
718.88	719.19	718.99	718.58	718.39	718.44	718.68	718.95	719.20				

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PLAN & PROFILE - HAPPY LANE	SHEET 91	E

SHEBOYGAN FALLS PROPERTIES LLC

EXISTING R/W PROPOSED R/W

STH 32

122+00 123+00 124+00 125+00 126+00

STH 32 C/L

SLOPE INTERCEPT

121+94.2
54.4' RT

30'R

122+74.2
54.4' RT

30'R

SAWCUT

BM 601

10+00 11+00 GREEN ACRES DRIVE 12+00 13+00 13+44

GREEN ACRES DRIVE C/L

33'

EXISTING R/W

SAWCUT

16'

16'

ASPH

CONC

SAWCUT

19.5' PRIVATE ENTRANCE

29' R

15"

12"

SAVE TREES

LOCATE AND CONNECT EXISTING ROOF DRAIN TO MANHOLE

END CONSTRUCTION
STA. 13+20
SELK

BEGIN CONSTRUCTION
STA. 12+15

MANER

MAUER

WAGNER

BLDG

HSE

TLE

CAUTION

N

00+15

58+00

127+00

HAPPY LANE C/L

HAPPY LANE

59+00

PROPOSED R/W

WIDDER

18" CMCP

BENCHMARKS

NO.	LOCATION	DESCRIPTION	ELEV
601	STA 122+15, 94' RT	BURY BOLTS ON FIRE HYDRANT	725.11

730
720
710

EXISTING PROFILE

STA 12+15.00
ELEV 721.23

FINISHED PROFILE

STA 13+12.00
ELEV 719.98

-1.29%

EXISTING PROFILE ELEVATION

FINISHED PROFILE ELEVATION

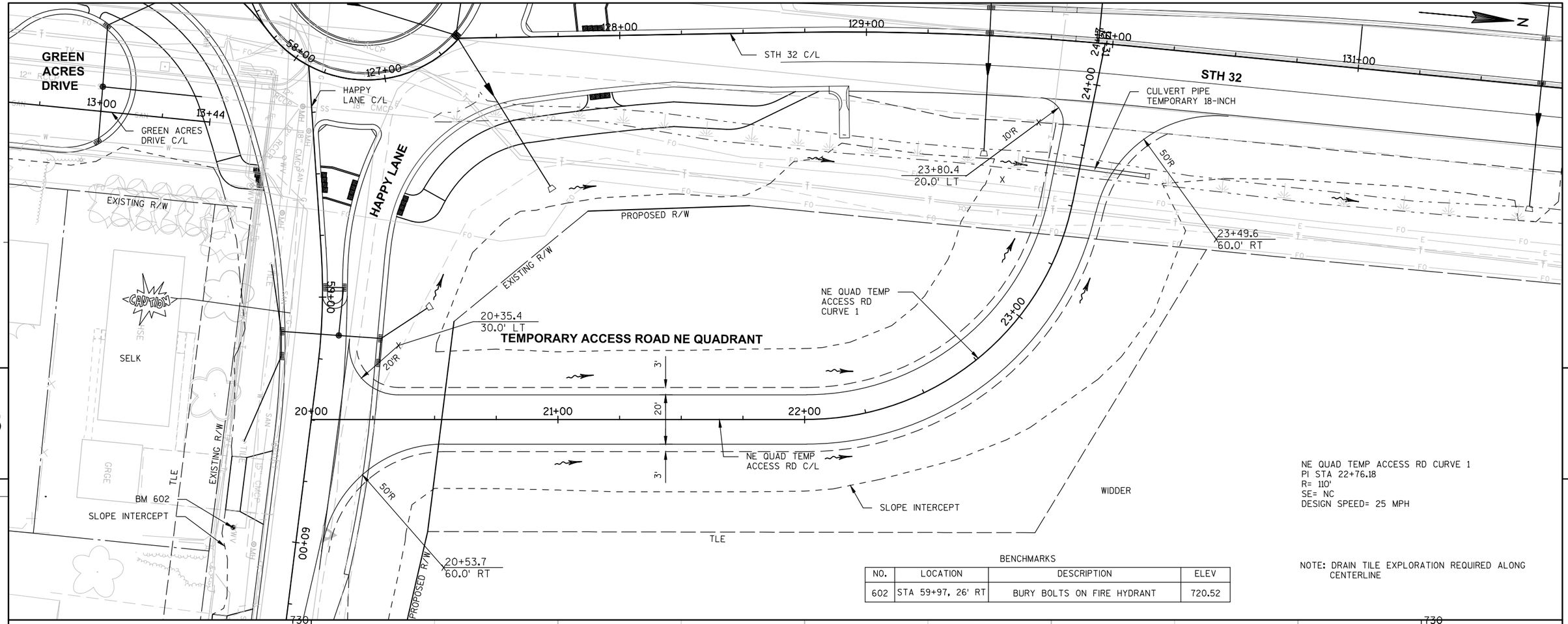
9 10 11 12 13 14

723.04 722.62 722.27 721.87 721.38 720.80 720.78 720.03 720.14

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PLAN & PROFILE - GREEN ACRES DRIVE	SHEET 92	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\050106_PP.DWG PLOT DATE : 5/11/2015 4:47 PM PLOT BY : BECKENDORF, RANDY PLOT NAME :

WISDOT/CADDS SHEET 44

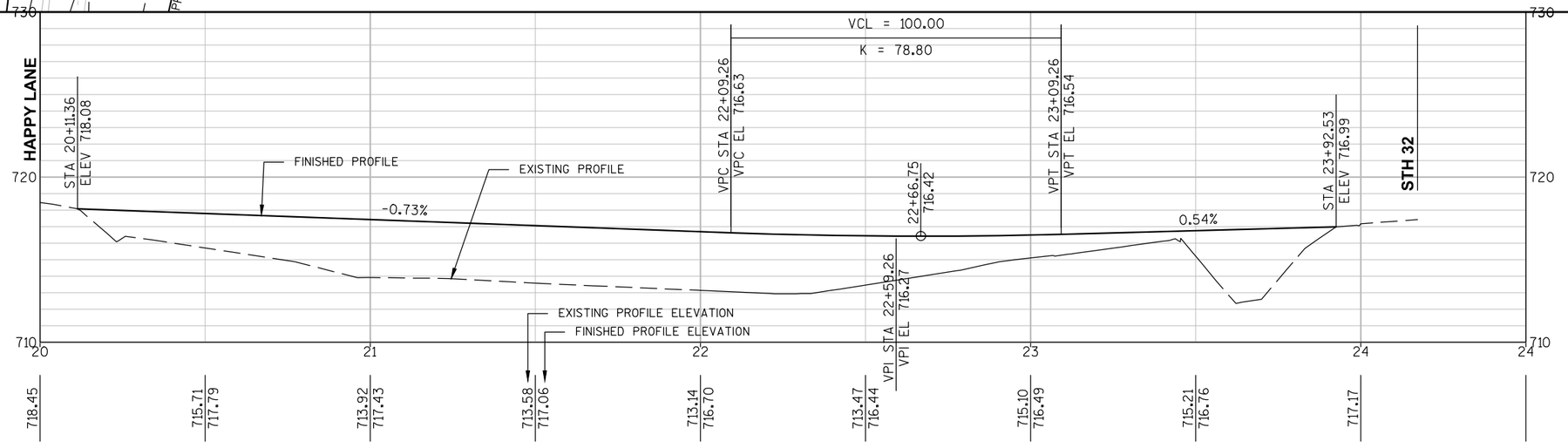


NE QUAD TEMP ACCESS RD CURVE 1
PI STA 22+76.18
R= 110'
SE= NC
DESIGN SPEED= 25 MPH

BENCHMARKS

NO.	LOCATION	DESCRIPTION	ELEV
602	STA 59+97, 26' RT	BURY BOLTS ON FIRE HYDRANT	720.52

NOTE: DRAIN TILE EXPLORATION REQUIRED ALONG CENTERLINE



PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PLAN & PROFILE - TEMPORARY ACCESS ROAD NE QUADRANT	SHEET 93	E

GH SHEB FALLS LLC

WETLAND BOUNDARY

FAIRVIEW DRIVE (PRIVATE ROAD)

POST

REPLACE CONCRETE CURB & GUTTER 18-INCH TYPE D AFTER ROUNDABOUT IS OPEN TO TRAFFIC

SAWCUT

ANCHORBANK FSB

TLE

30' R

SLOPE INTERCEPT

13+38.8
60.0' LT

SAWCUT

50'R

STH 32

STH 32 C/L

CULVERT PIPE TEMPORARY 12-INCH

CULVERT PIPE TEMPORARY 12-INCH

CULVERT PIPE TEMPORARY 18-INCH

TEMPORARY ACCESS ROAD NW QUADRANT

ANCHORBANK FSB

ASPH

3'

20'

10+00 11+00 12+00 13+00 14+00 24+00

MILL & OVERLAY FAIRVEIW DRIVE AFTER ROUNDABOUT IS OPEN TO TRAFFIC

NW QUAD TEMP ACCESS RD C/L

12+06.9 15'R
25.0' RT

19'R

12+79.1
28.5' RT

13+82.0
20.0' RT

10'R

NW QUAD TEMP ACCESS RD CURVE 1

SAWCUT

30' R

DO NOT DISTURB FENCE, BUILDING OR PAVEMENT

SLOPE INTERCEPT

TLE

QSO LLC

CAUTION

SIGN

NW QUAD TEMP ACCESS RD CURVE 1
PI STA 13+28.04
R= 310'
SE= NC
DESIGN SPEED= 25 MPH

EXISTING R/W

131+00

129+00

NE QUAD TEMP ACCESS RD C/L

N

5

5

730
720
710

FAIRVIEW DRIVE

STA 10+24.19
ELEV 717.92

FINISHED PROFILE

0.50%

VCL = 100.00
K = 92.69

VPC STA 11+16.48
VPC EL 718.38

11+62.82
718.50

VPI STA 11+66.48
VPI EL 718.63

VPT STA 12+16.48
VPT EL 718.34

EXISTING PROFILE

-0.58%

STA 14+01.64
ELEV 717.27

STH 32

EXISTING PROFILE ELEVATION

FINISHED PROFILE ELEVATION

10 11 12 13 14

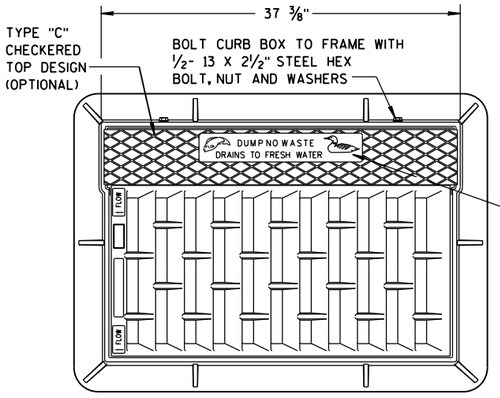
717.88 / 717.88
716.46 / 718.05
717.58 / 718.30
717.40 / 718.49
716.94 / 718.42
717.07 / 718.15
717.18 / 717.86
715.80 / 717.57
717.18 / 717.28

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PLAN & PROFILE - TEMPORARY ACCESS ROAD NW QUADRANT	SHEET 94	E

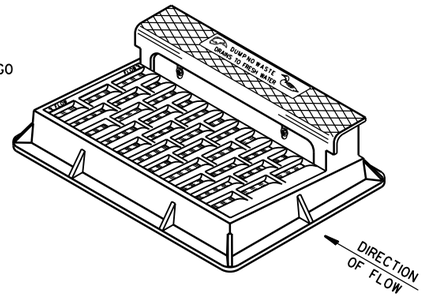
Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
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
08C06-01	INLETS 3-FT AND 4-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-18	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-16A	CURB RAMPS TYPES 1 AND 1-A
08D05-16B	CURB RAMPS TYPES 2 AND 3
08D05-16C	CURB RAMPS TYPES 4A AND 4A1
08D05-16D	CURB RAMPS TYPE 4B AND 4B1
08D05-16E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-09	CONDUIT
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C14-02	CONCRETE CONTROL CABINET BASE, TYPE L
09D04-01	LIGHTING CONTROL CABINET
09E01-14D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-05	NON-FREEWAY LIGHTING UNIT POLE WIRING
11B02-02	CONCRETE MEDIAN NOSE
14B29-01	SAFETY EDGE
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-02	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C18-03	MEDIAN ISLAND MARKING
15C26-02	END-OF-ROADWAY SIGNING
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D29-03	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D38-01A	TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS
15D38-01B	ATTACHMENT OF SIGNS TO POSTS

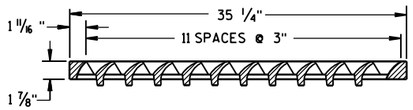
6

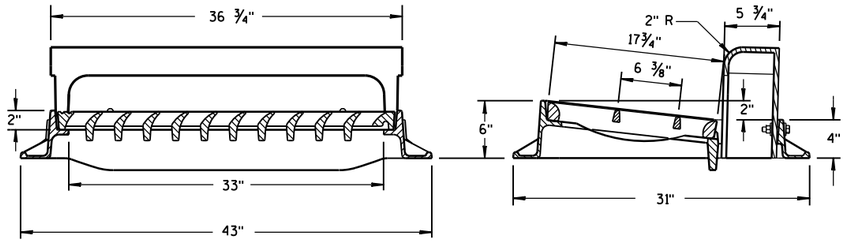


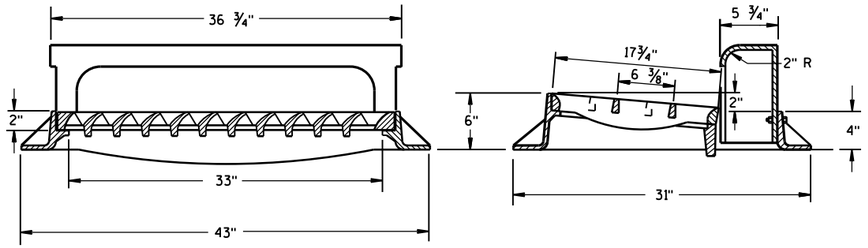
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

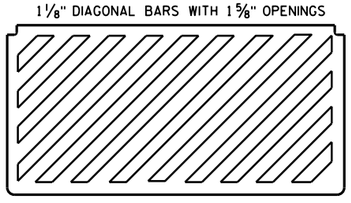






TYPE "H"

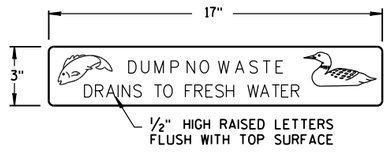
NOTE: EITHER CASTING IS ACCEPTABLE



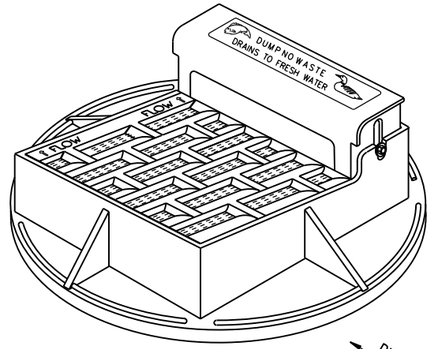
SPECIAL GRATE FOR TYPE "H" COVER

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

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

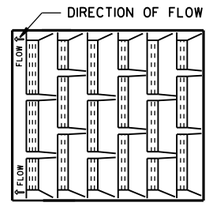
NOTE:
GRATE IS REVERSIBLE.

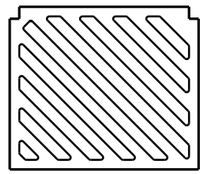
GENERAL NOTES

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.

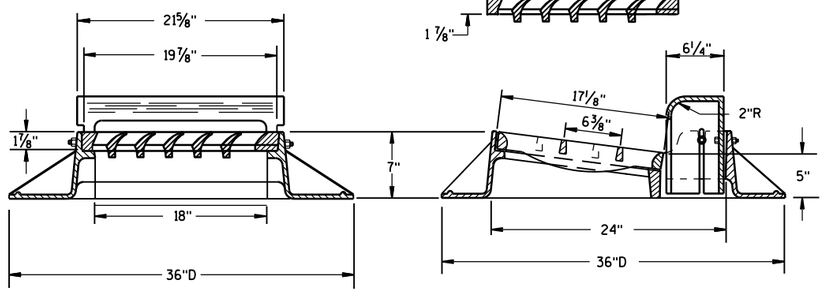




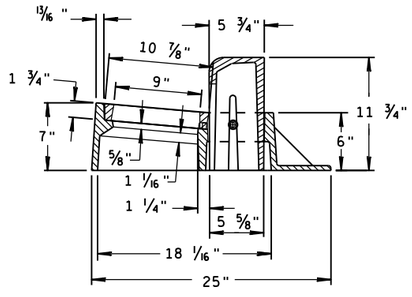
SPECIAL GRATE FOR TYPE "A" COVER

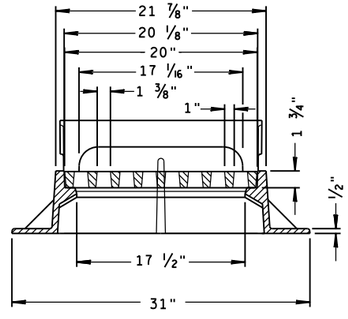
(MEASURES 19 3/4" X 17" X 1 7/8")

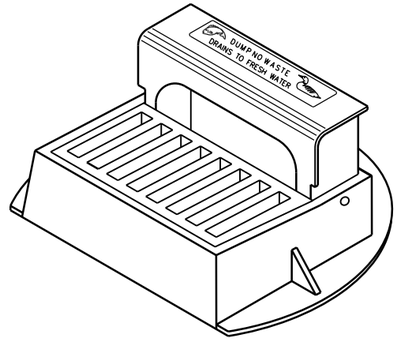
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"







TYPE "Z"

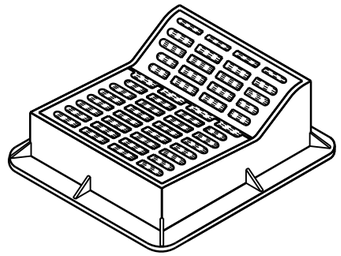
INLET COVERS
TYPE A, H, A-S, H-S & Z

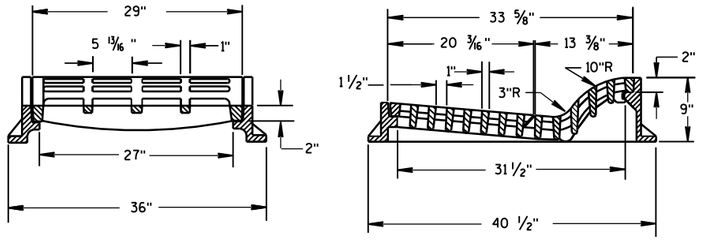
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

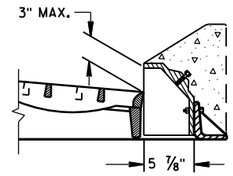
S.D.D. 8 A 5-19a





TYPE "F"

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

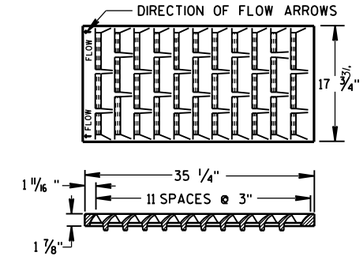
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

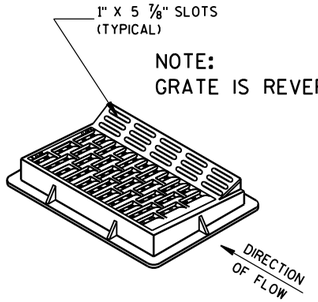
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

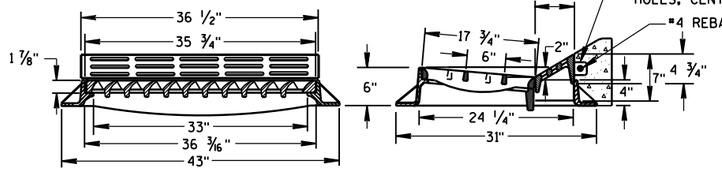
GENERAL NOTES

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

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



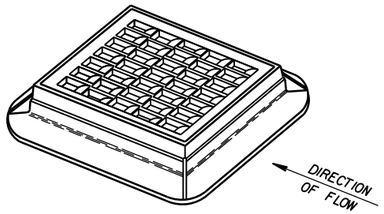


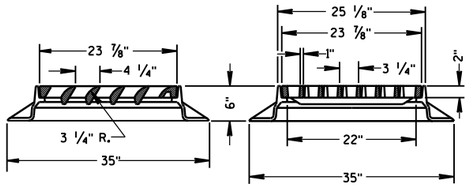


TYPE "HM"

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

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





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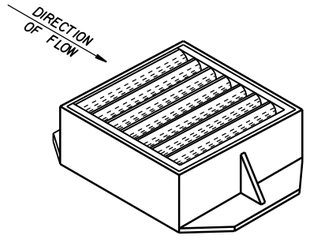

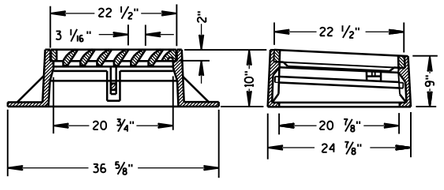

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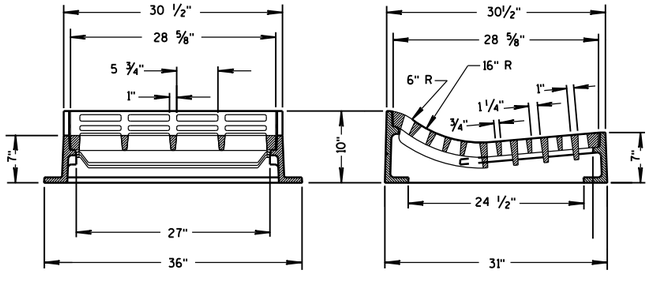
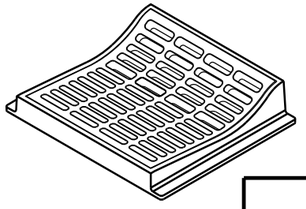




TYPE "T"

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

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

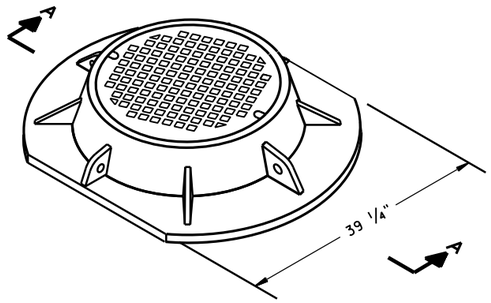
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

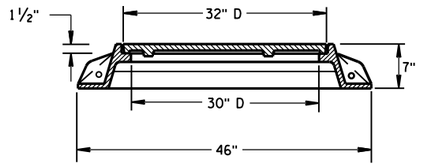
APPROVED
11/27/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

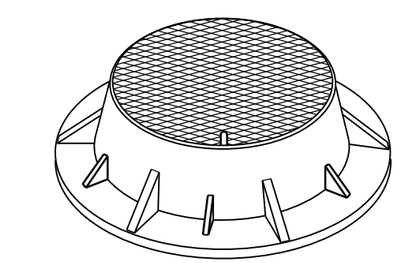
FHWA

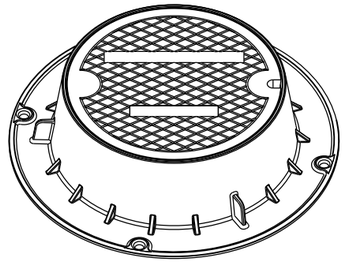
6
S.D.D. 8 A 5-19c

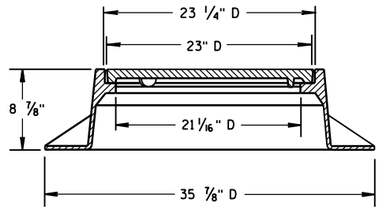


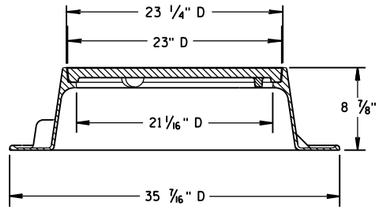


SECTION A-A
TYPE "K"









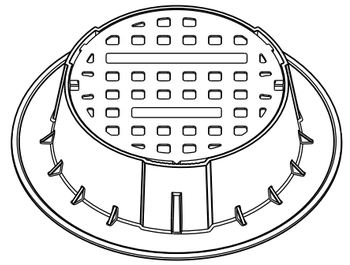
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

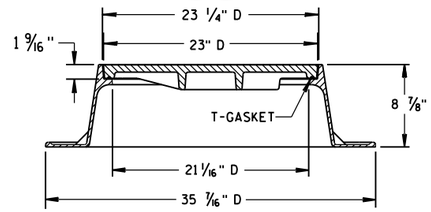
GENERAL NOTES

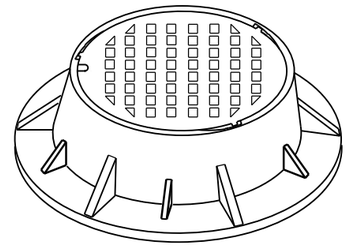
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

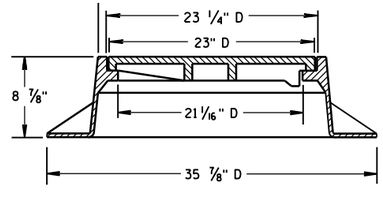
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

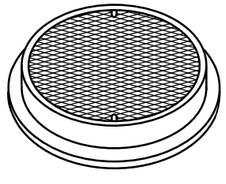


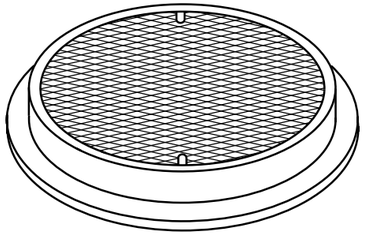


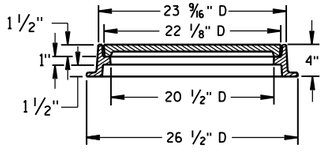




TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE







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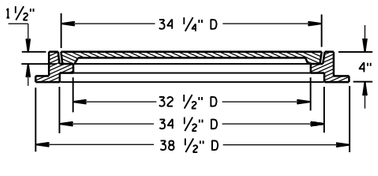
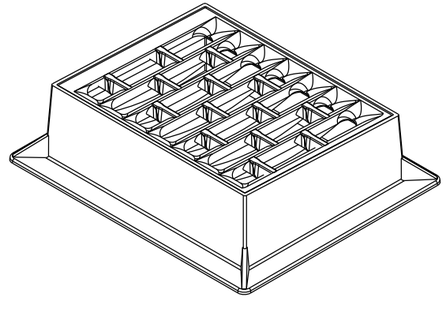
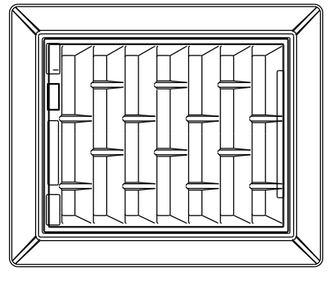
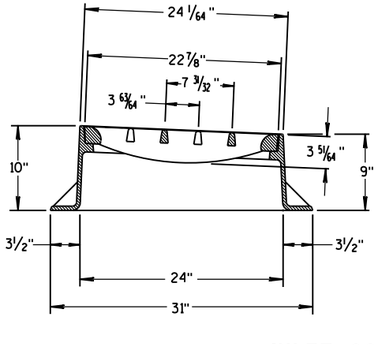
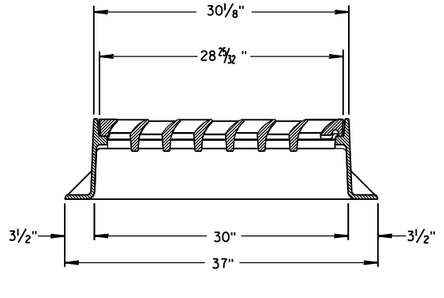


TYPE "M"









INLET COVER TYPE "BW"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

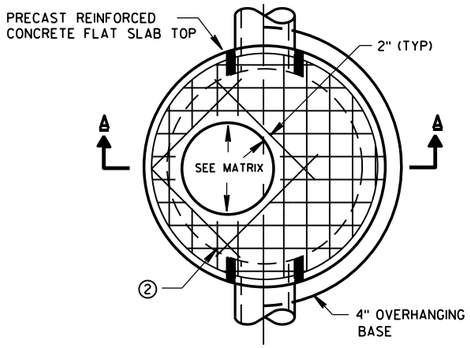
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

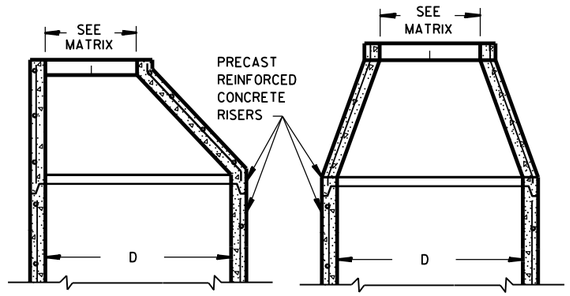
S.D.D. 8 A 5-19d

6

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

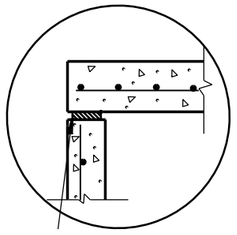


PLAN VIEW CIRCULAR OPENING

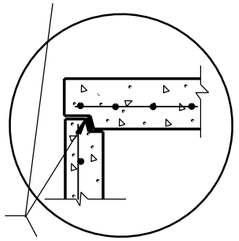


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

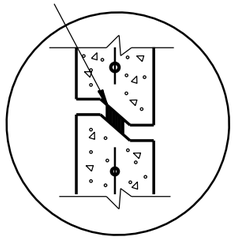


TOP WITH PLAIN END JOINT



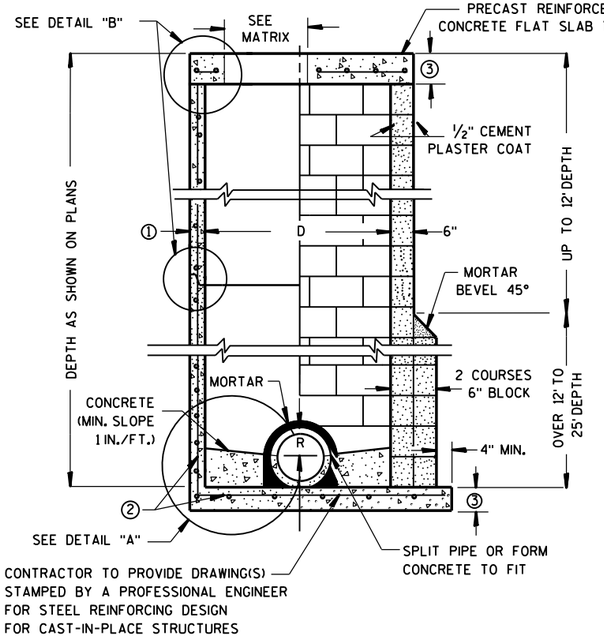
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



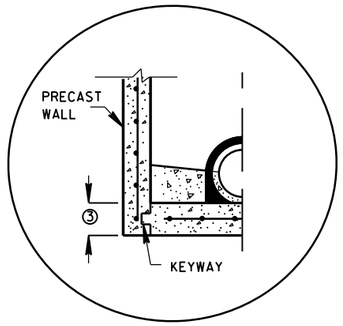
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

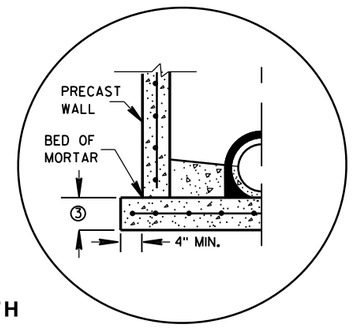


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

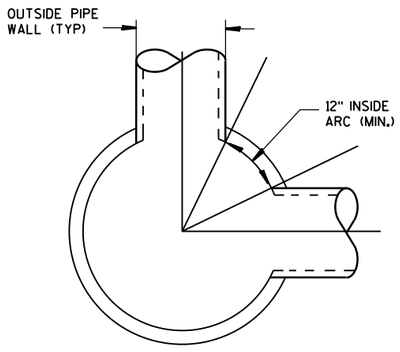


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

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

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

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

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

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

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

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

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

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

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

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

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

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

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

MANHOLE COVER OPENING MATRIX

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

PIPE MATRIX

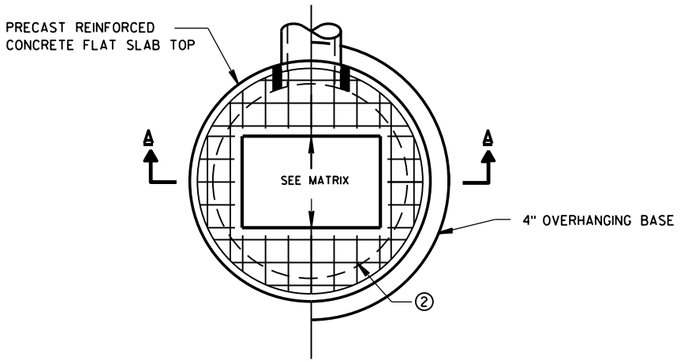
MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

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

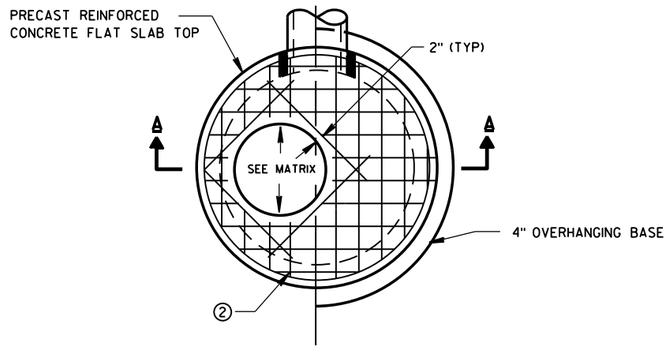
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

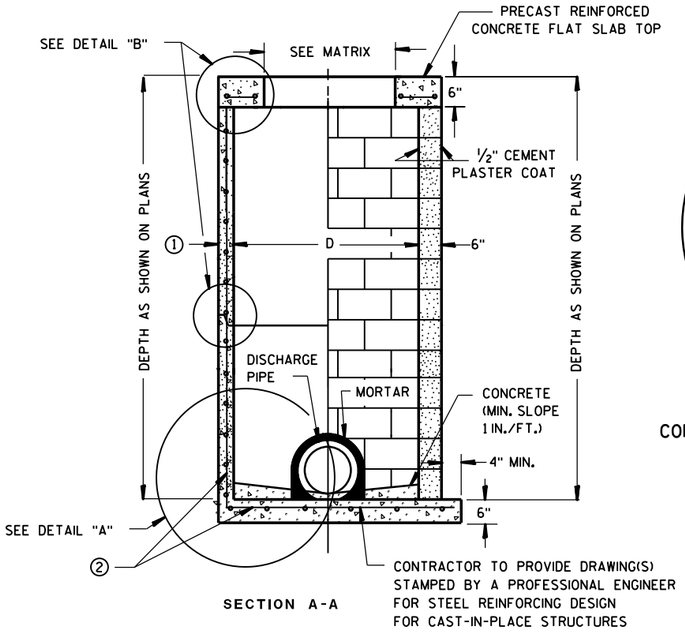
6
S.D.D. 8 B 9-1



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

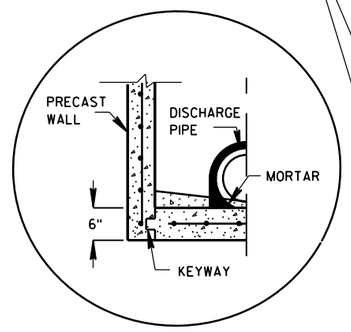


SECTION A-A

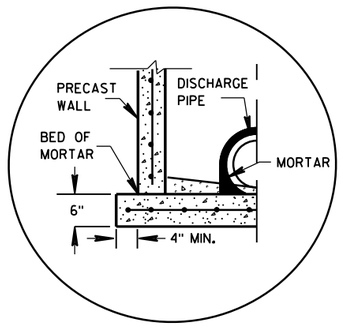
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

CIRCULAR INLETS W/ FLAT TOP

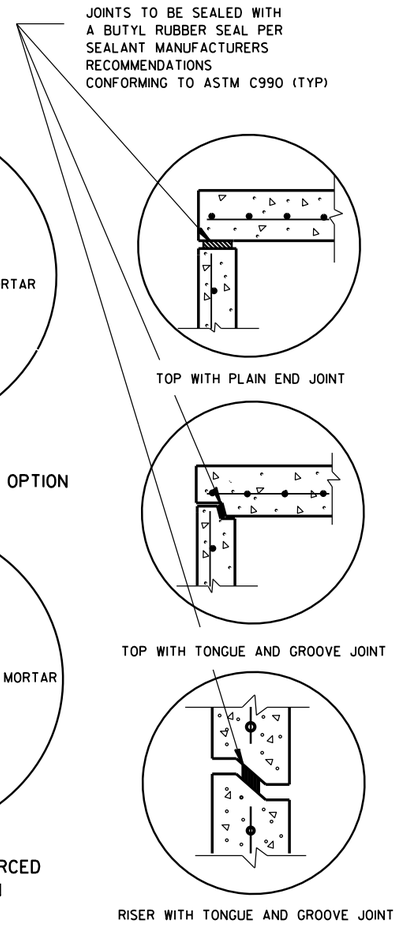


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "B"

GENERAL NOTES

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DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

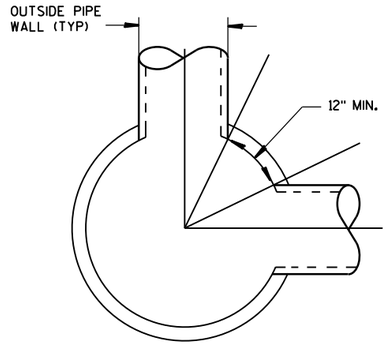
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

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

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

INLETS 3-FT AND 4-FT DIAMETER

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6/5/2012 — DATE
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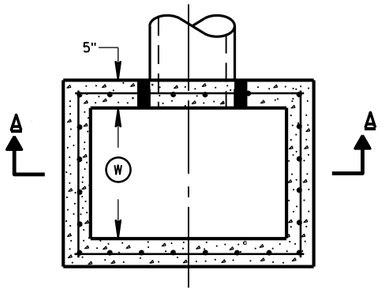
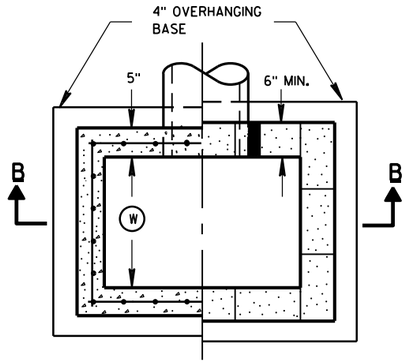
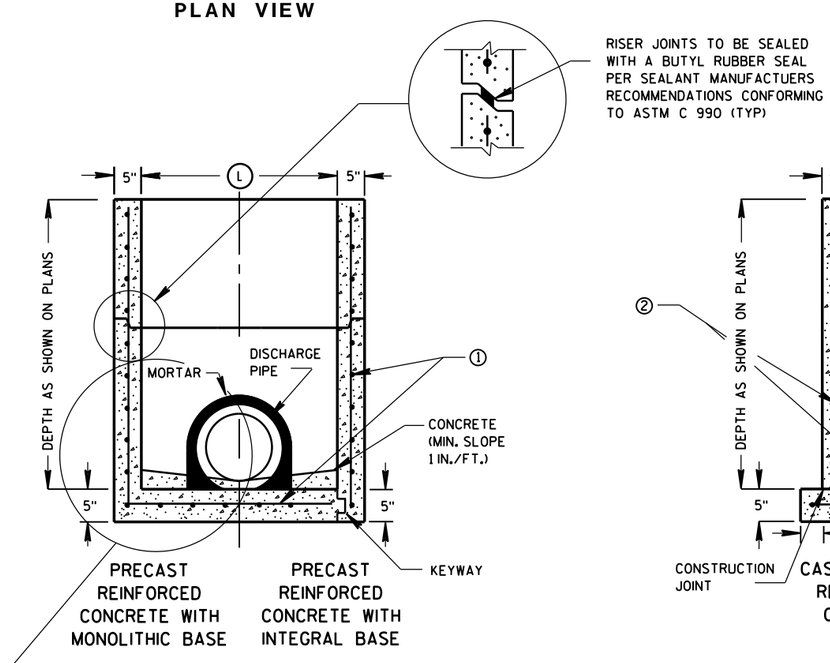


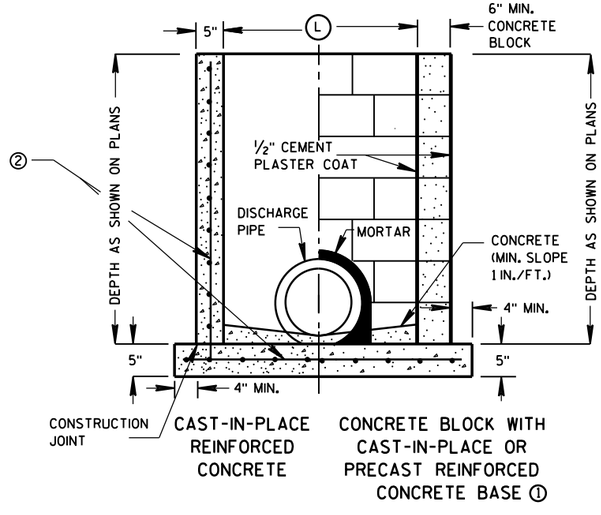
PLAN VIEW



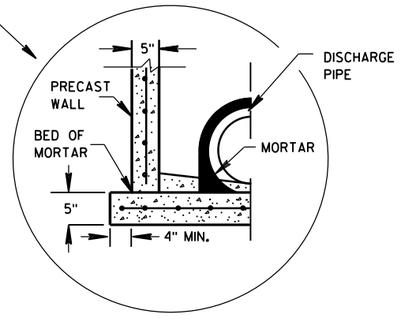
PLAN VIEW



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.

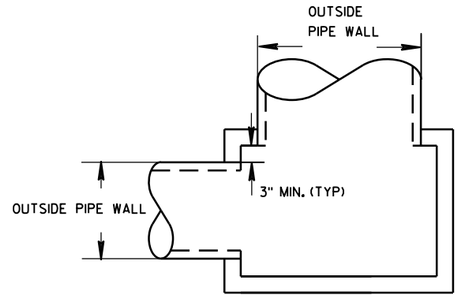
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

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

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

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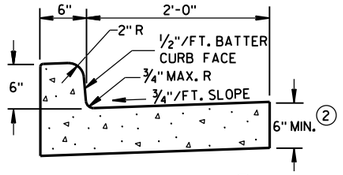
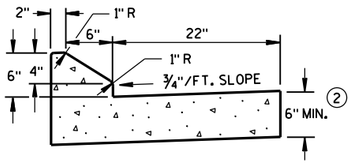
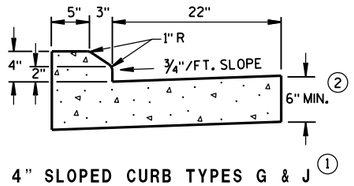


TYPES A & D ①

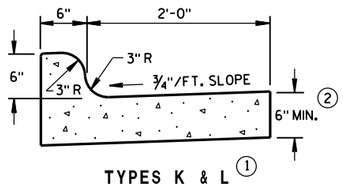


6" SLOPED CURB TYPES G & J ①

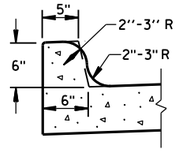


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

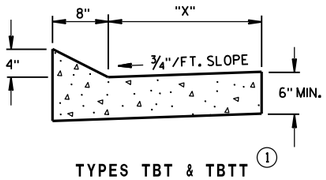


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

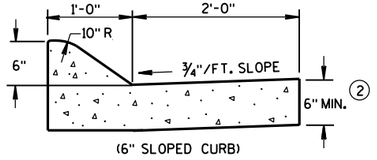
CONCRETE CURB & GUTTER 30"



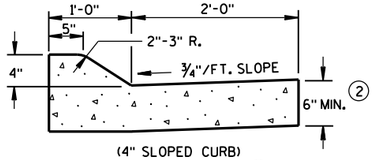
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

TBT & TBTT	"X"
30"	22"
36"	28"

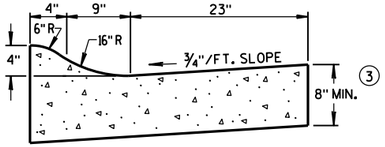


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ① ④

CONCRETE CURB & GUTTER 36"

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.

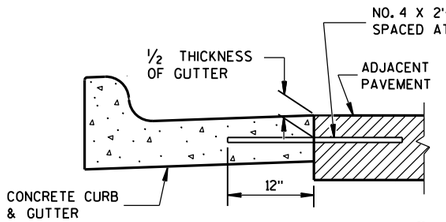
① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

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.

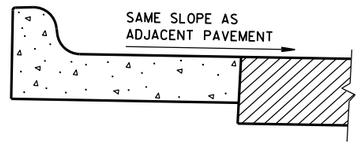
③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

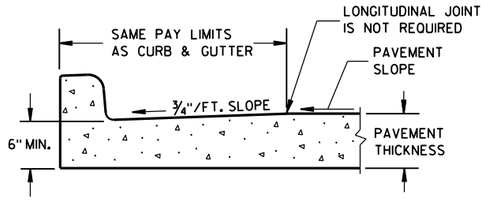
⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



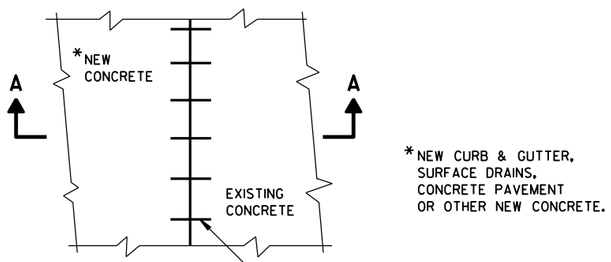
TYPICAL TIE BAR LOCATION ①



REVERSE SLOPE GUTTER ⑤
(TYPICAL FOR ALL CURB & GUTTER TYPES)

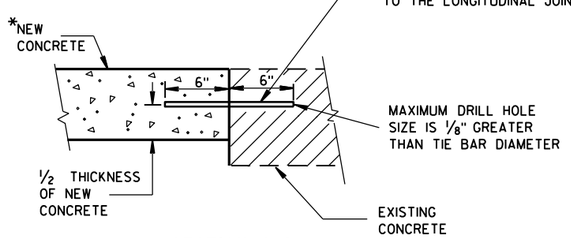


PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



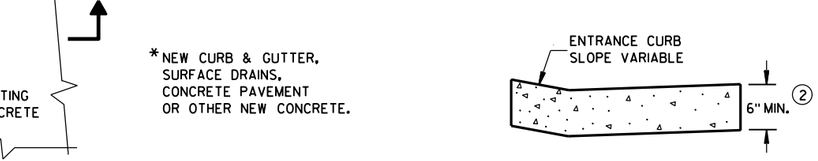
PLAN VIEW

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

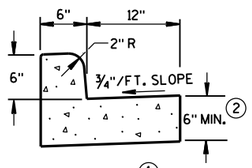


SECTION A-A

TIE BARS DRILLED
INTO EXISTING PAVEMENT

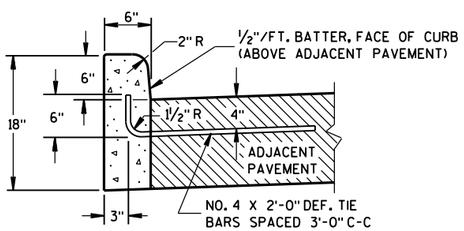


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

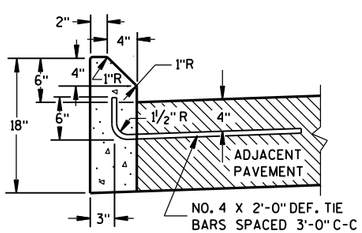


① TYPES A & D

CONCRETE CURB & GUTTER 18"

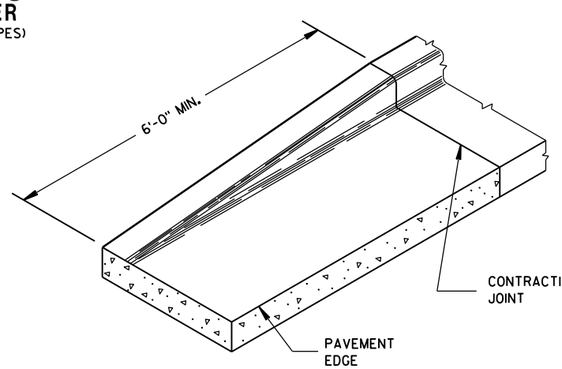


① TYPES A & D



① TYPES G & J

CONCRETE CURB



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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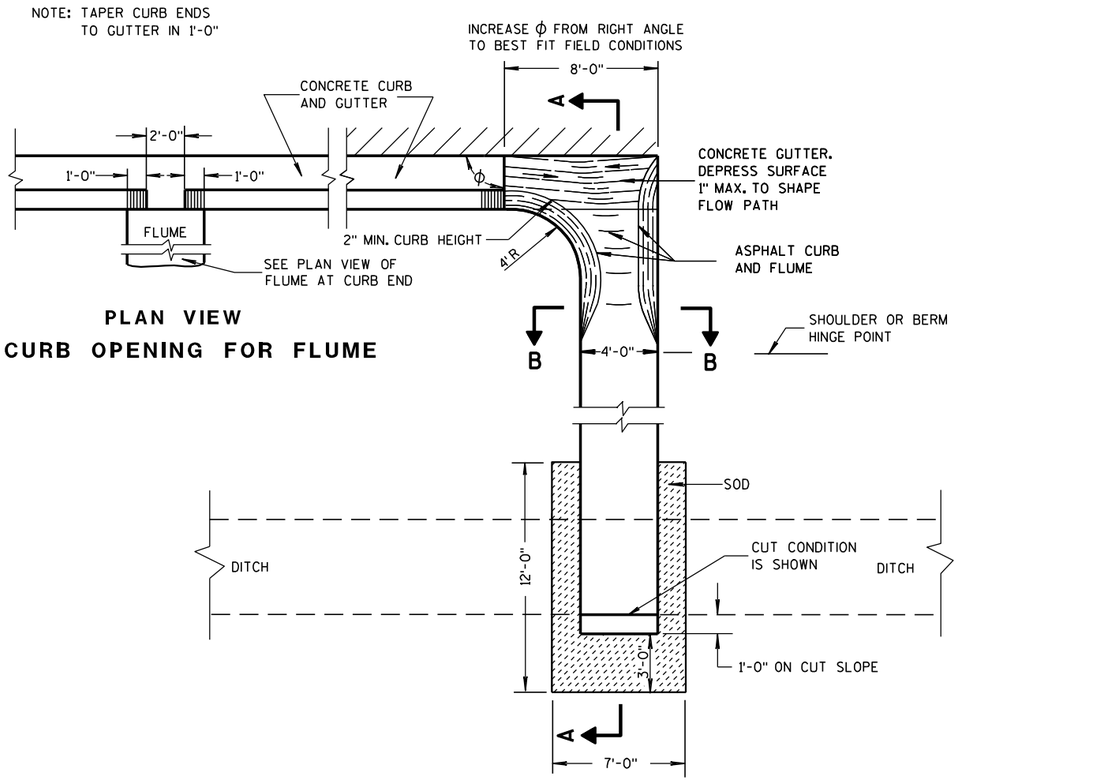
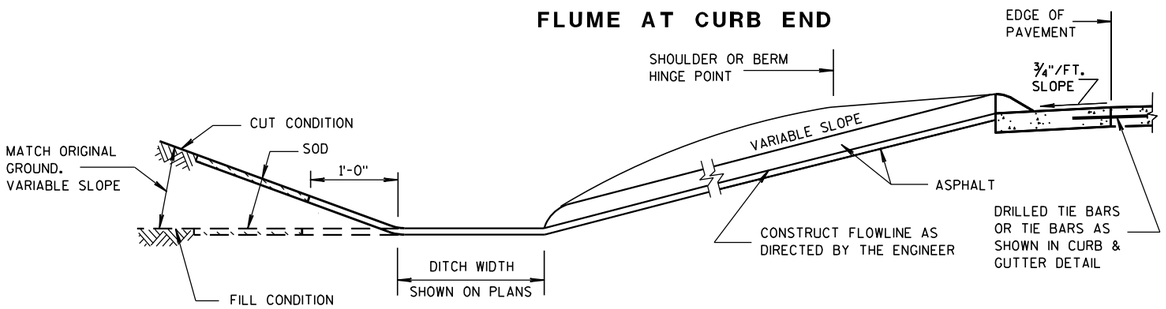
ASPHALTIC FLUME

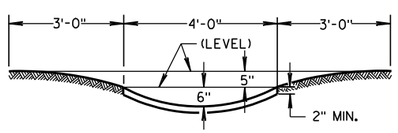


PLAN VIEW
CURB OPENING FOR FLUME

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.

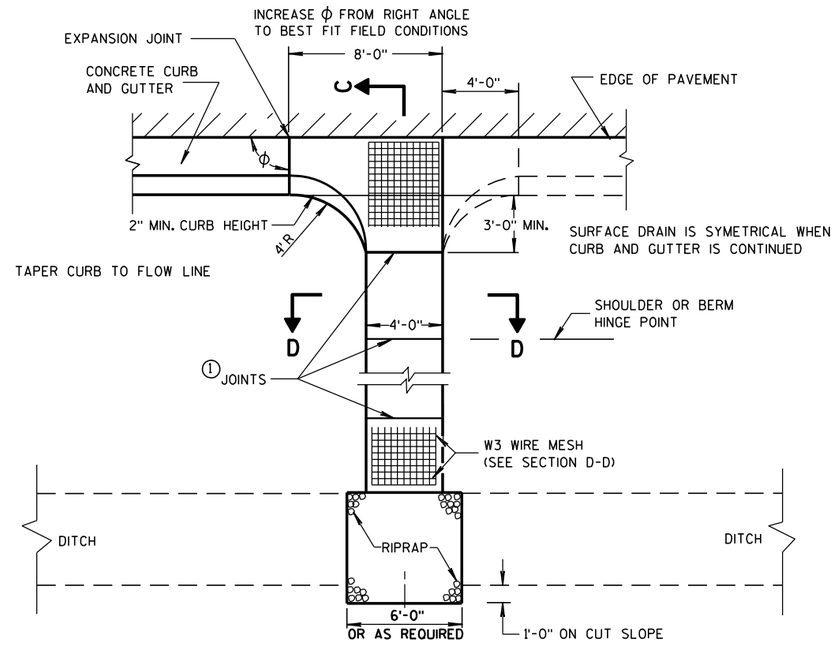
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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.

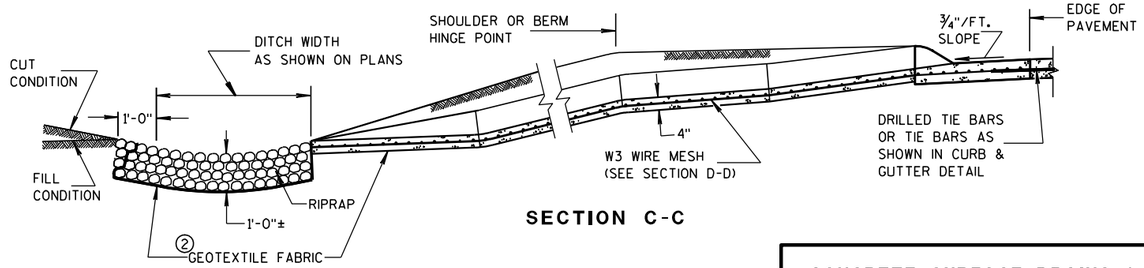
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

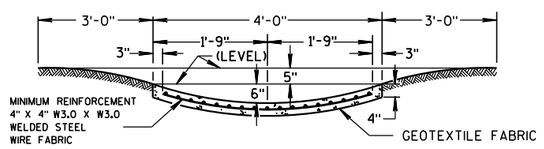
③ CONCRETE SURFACE DRAIN



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. Zogg
ROADWAY STANDARDS ENGINEER
MENT
FHWA

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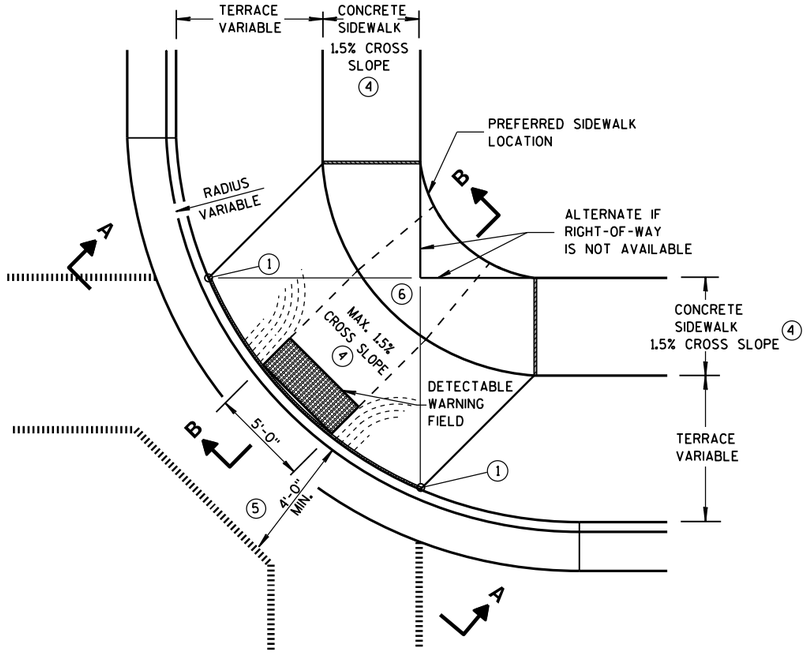
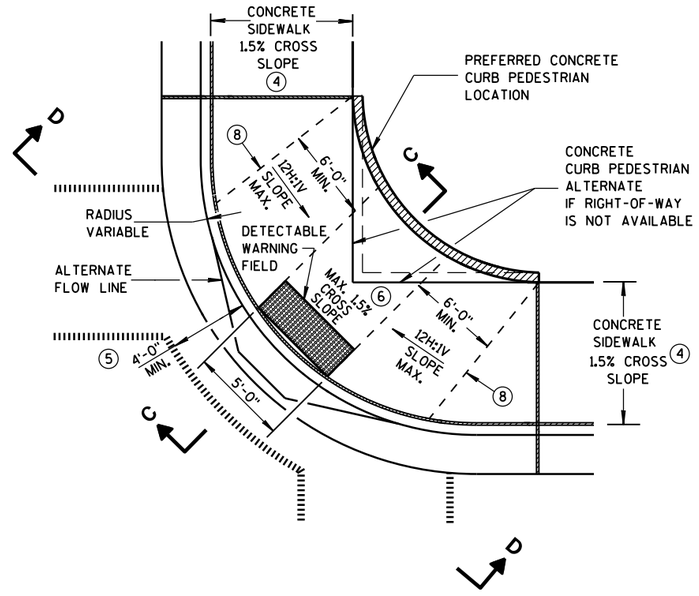
S.D.D. 8 D 4-5



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.

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%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

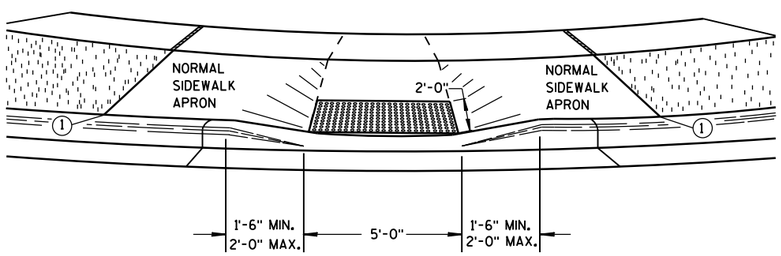
(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

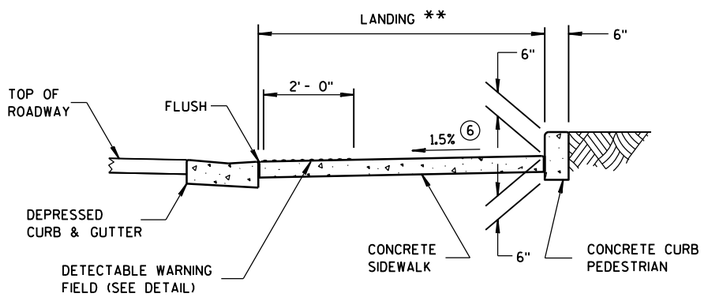
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.



VIEW A-A

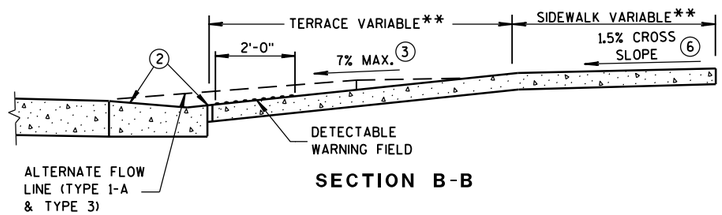
** WIDTH SHOWN ELSEWHERE IN THE PLANS



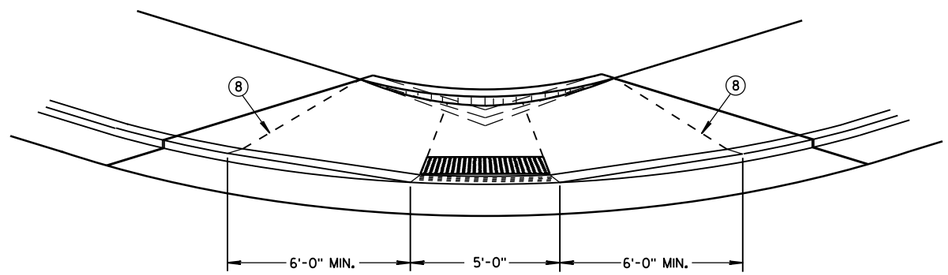
SECTION C-C

LEGEND

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



SECTION B-B



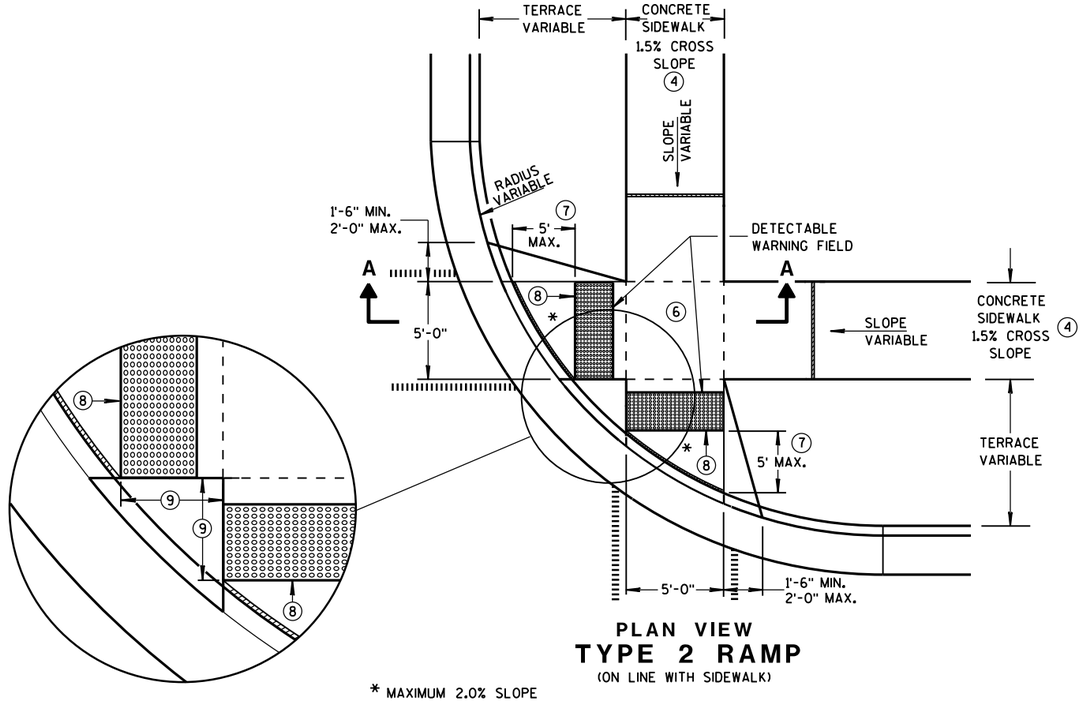
VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 8 D 5-16a

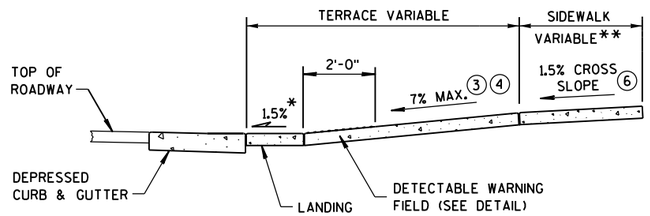


PLAN VIEW

TYPE 2 RAMP

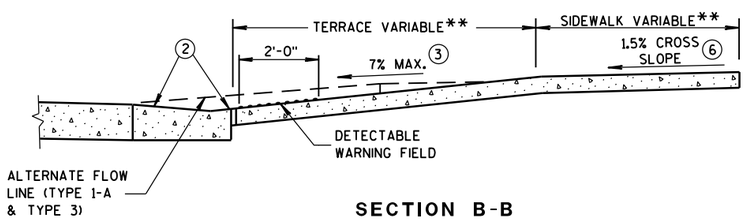
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK



SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



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.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

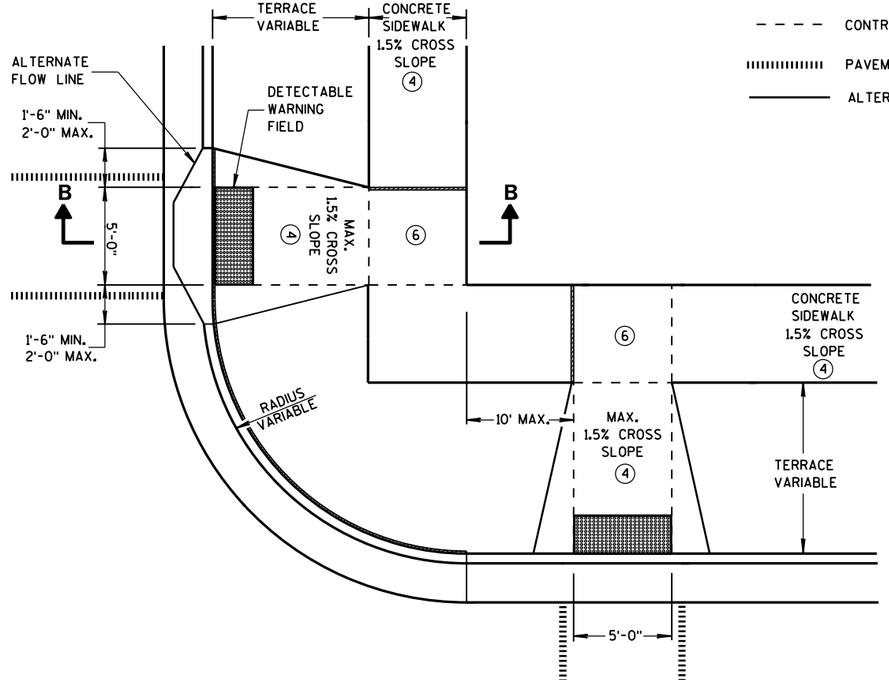
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(9) WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. 2" MINIMUM CURB HEIGHT.

LEGEND

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



PLAN VIEW

TYPE 3 RAMP

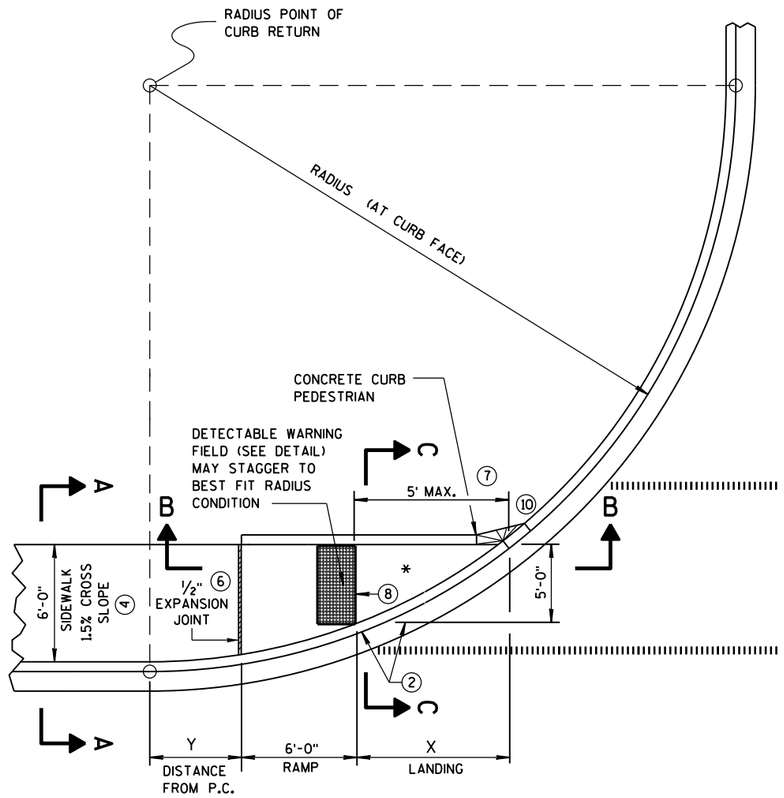
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 5-16b

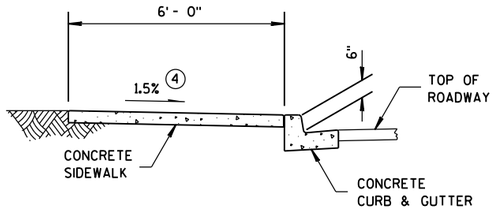


CURB RAMP TYPE 4A

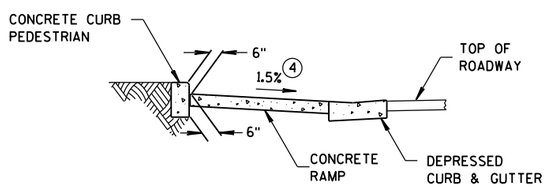
PLAN VIEW

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"

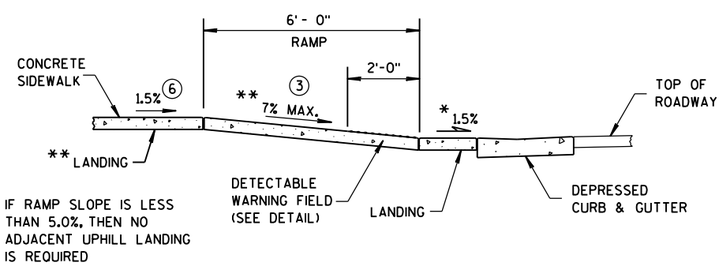
INTERMEDIATE RADII CAN BE INTERPOLATED



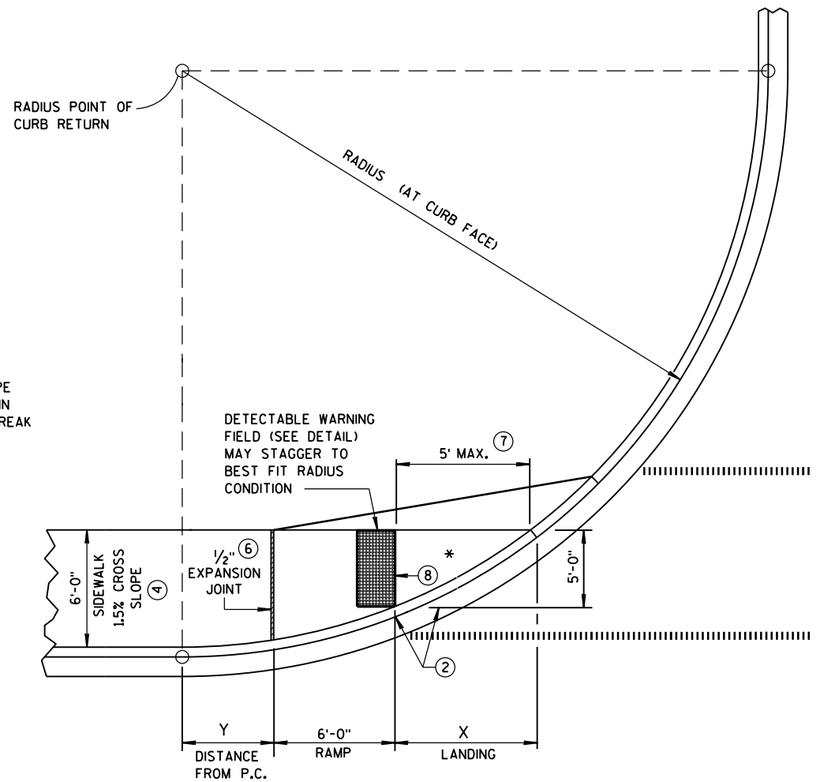
SECTION A-A FOR TYPE 4A



SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A



CURB RAMP TYPE 4A1

PLAN VIEW

GENERAL NOTES

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

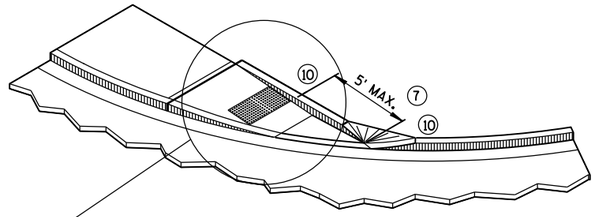
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

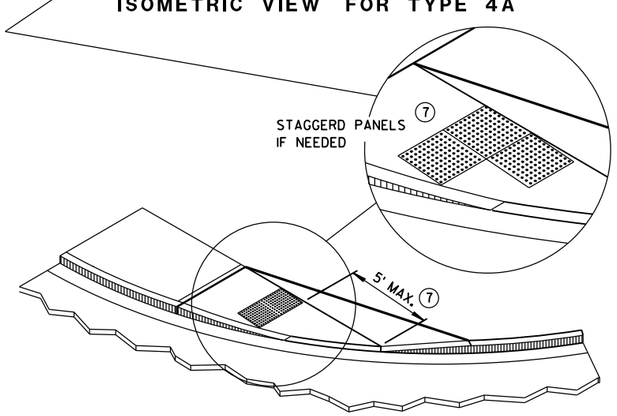
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

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



ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

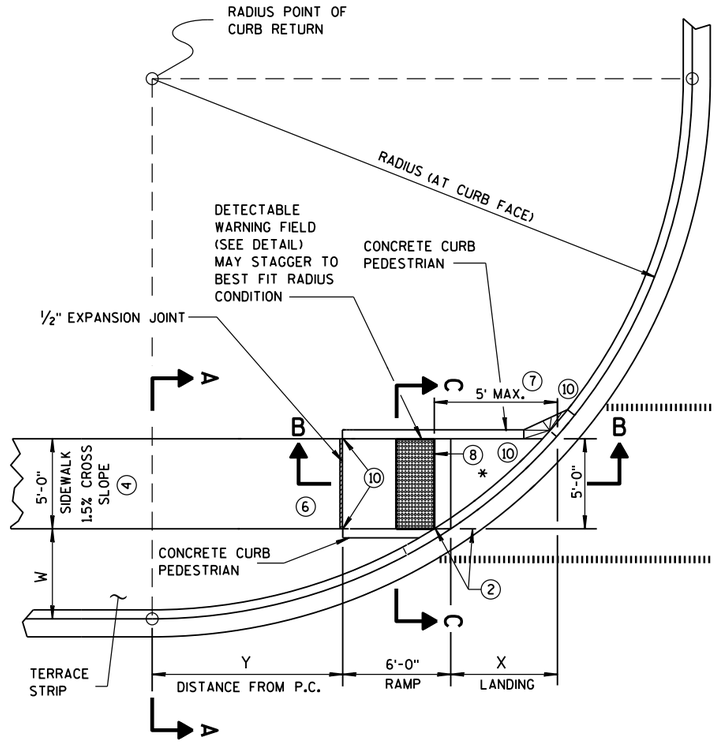
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

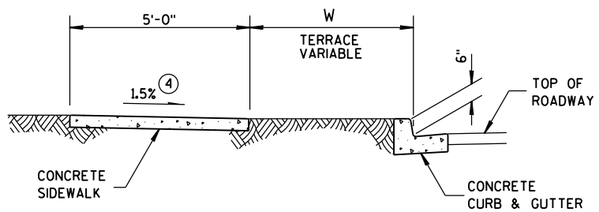
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

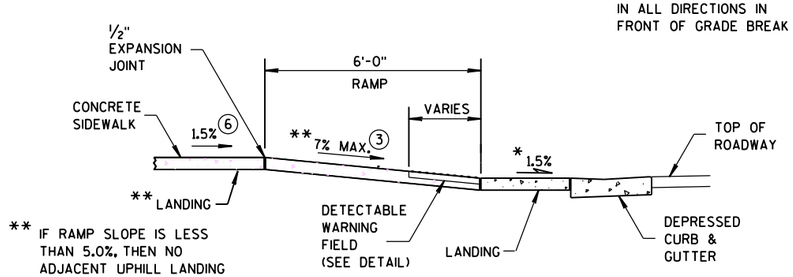
S.D.D. 8 D 5-16c



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

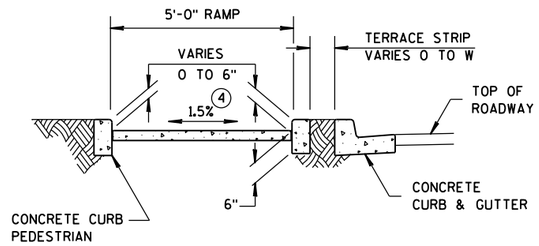
SECTION B-B FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)



SECTION C-C FOR TYPE 4B

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

GENERAL NOTES

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

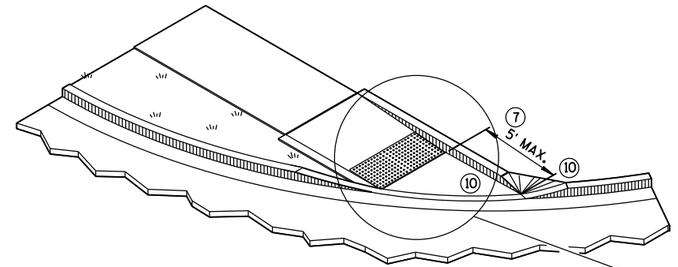
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

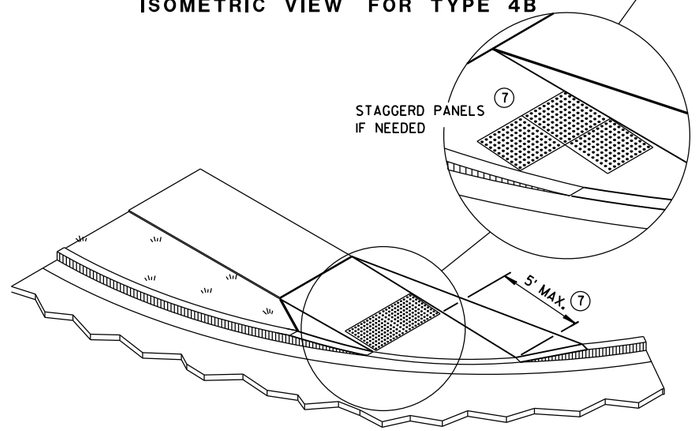
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

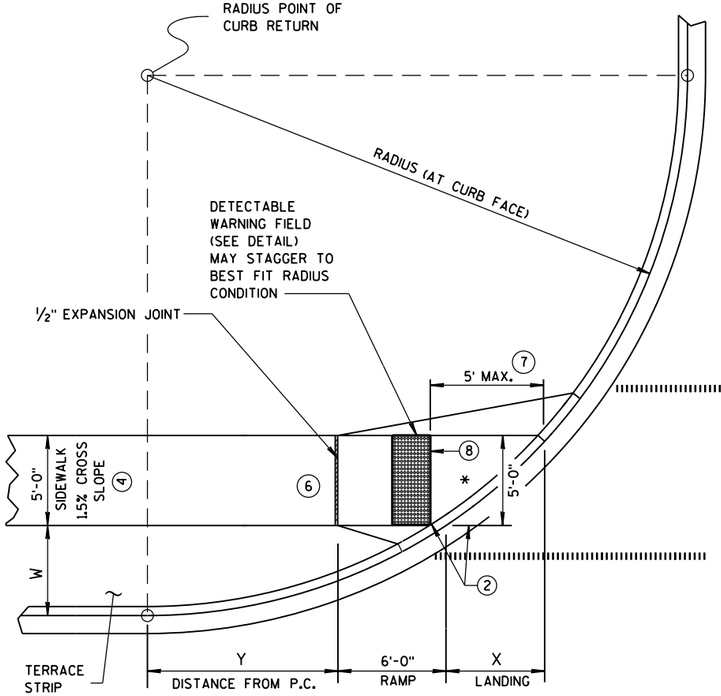
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1



CURB RAMP TYPE 4B1
PLAN VIEW

CURB RAMPS TYPE 4B AND 4B1

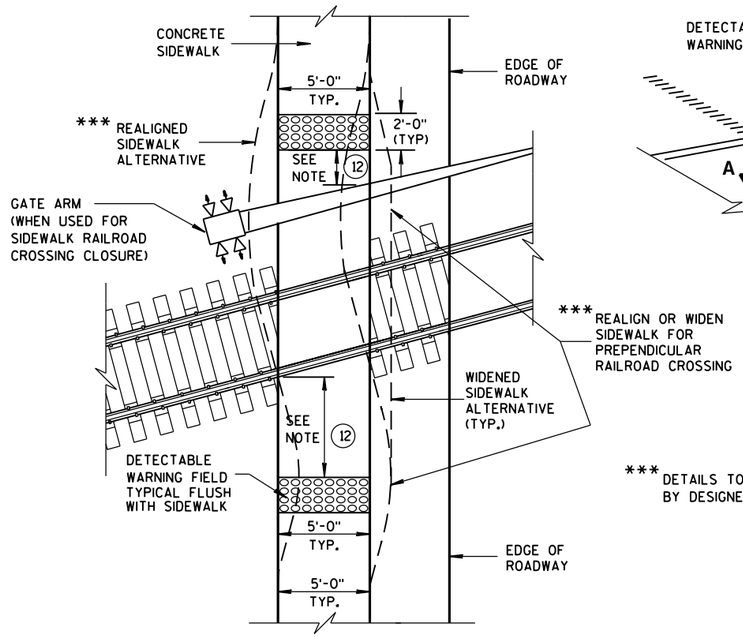
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 8 D 5-16d

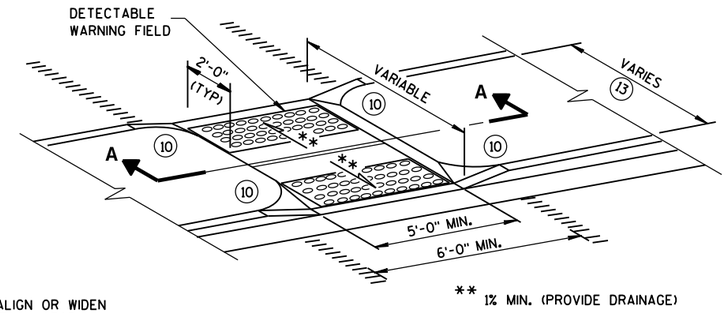
6

S.D.D. 8 D 5-16d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING

*** DETAILS TO BE DETERMINED BY DESIGNER



** 1% MIN. (PROVIDE DRAINAGE)

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.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

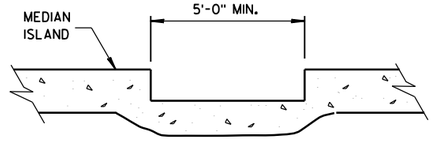
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

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

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

(12) 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.

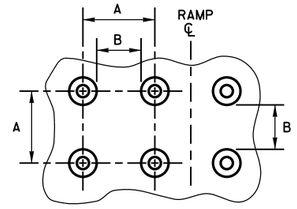
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



SECTION A-A

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

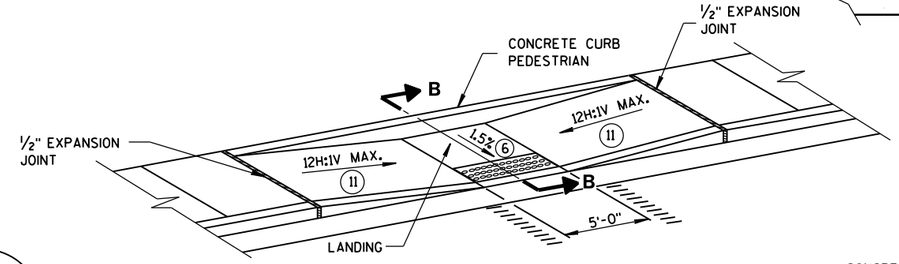
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



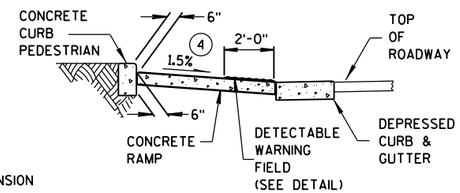
PLAN VIEW

ELEVATION VIEW

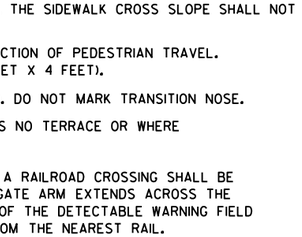
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



MID-BLOCK CROSSING
TYPE 7A



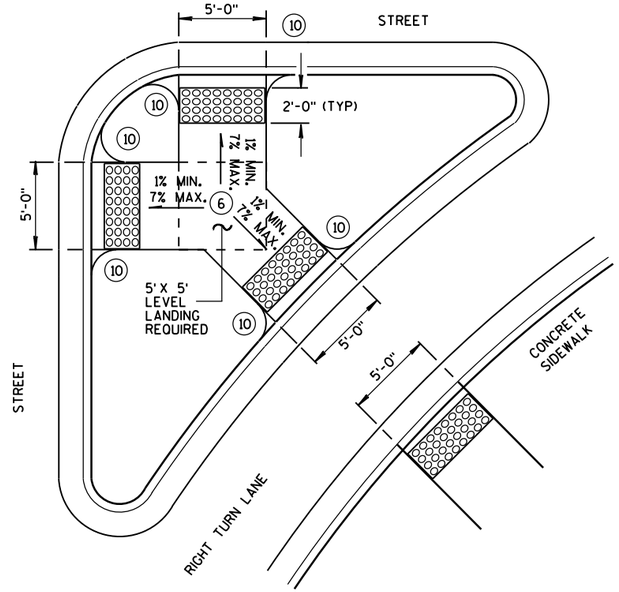
SECTION B-B



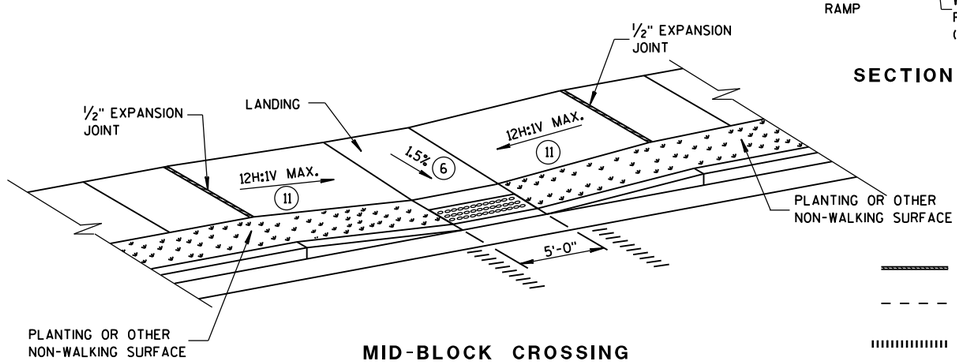
PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



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

- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

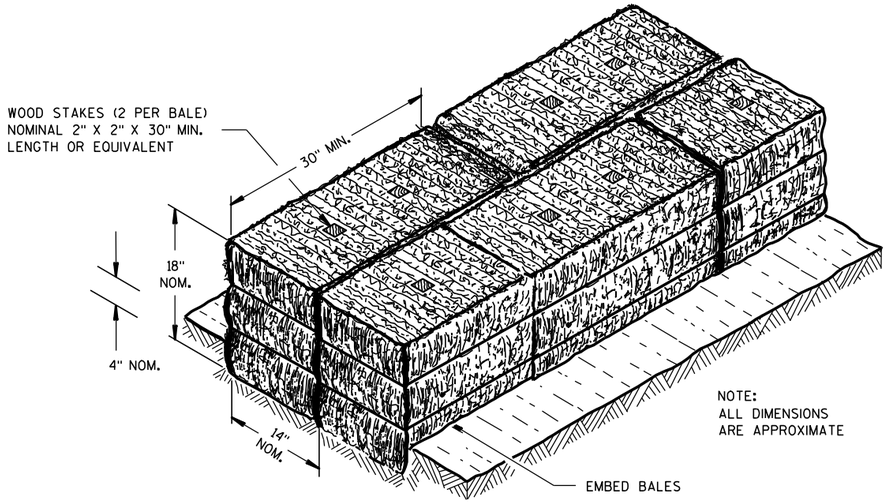
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

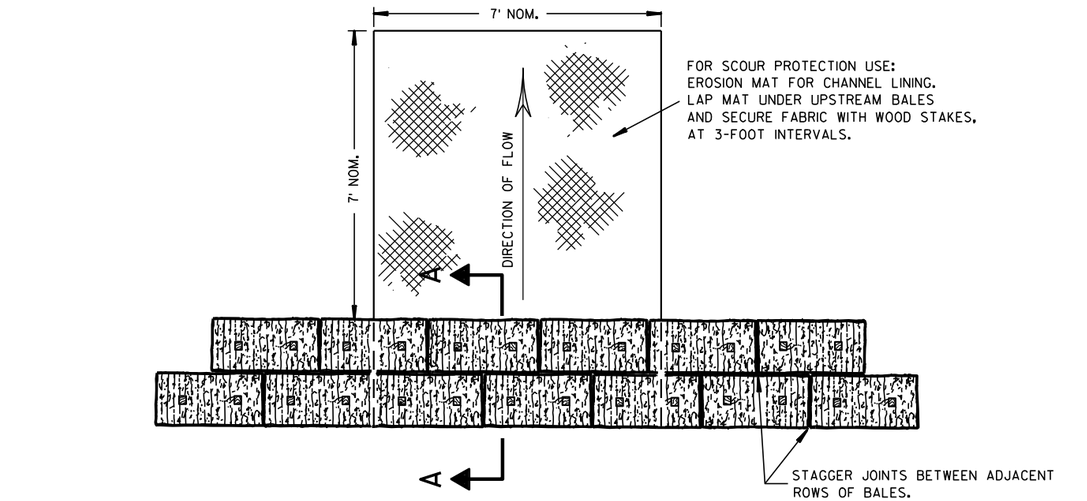
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

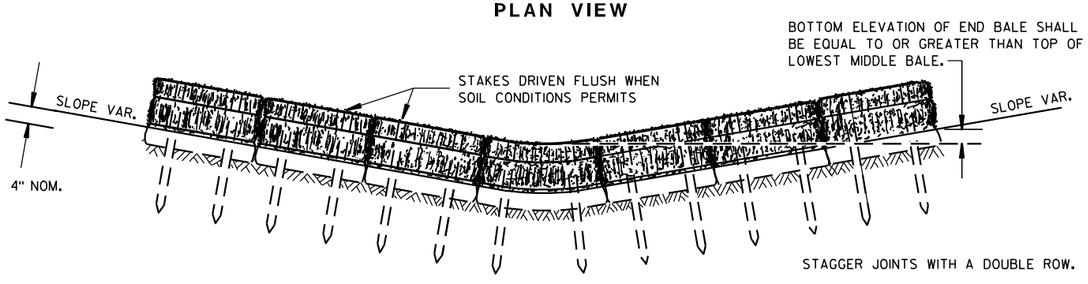
S.D.D. 8 D 5-16e



SECTION A-A



PLAN VIEW



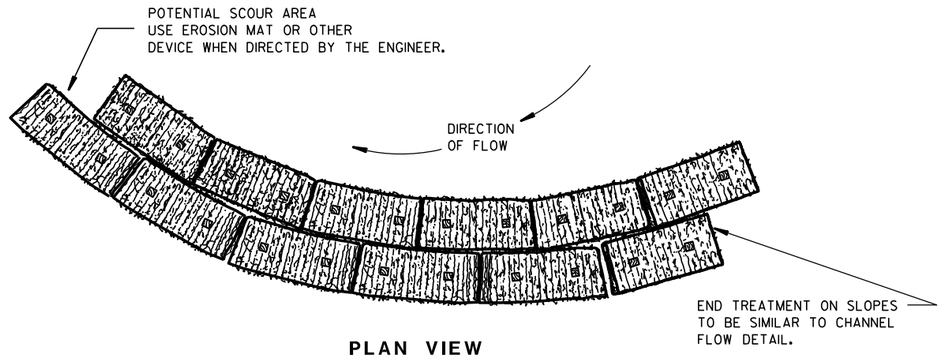
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

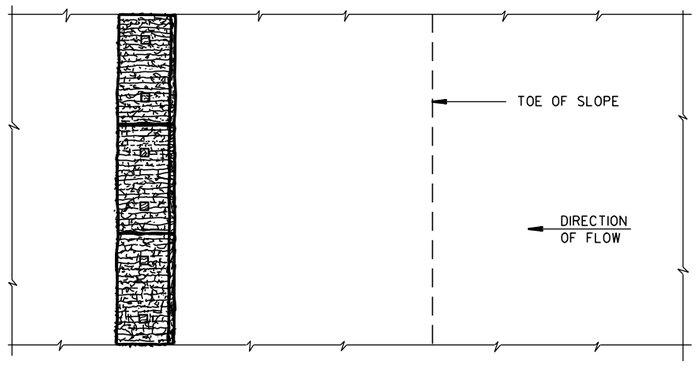
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

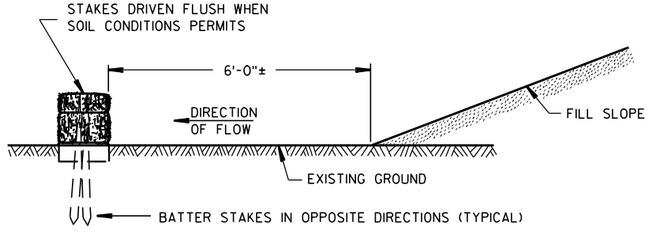


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

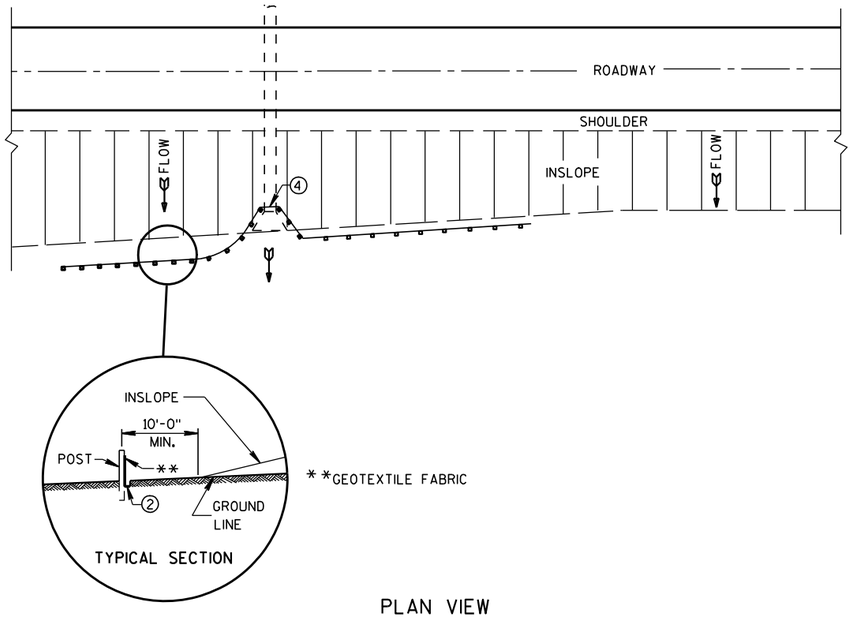
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

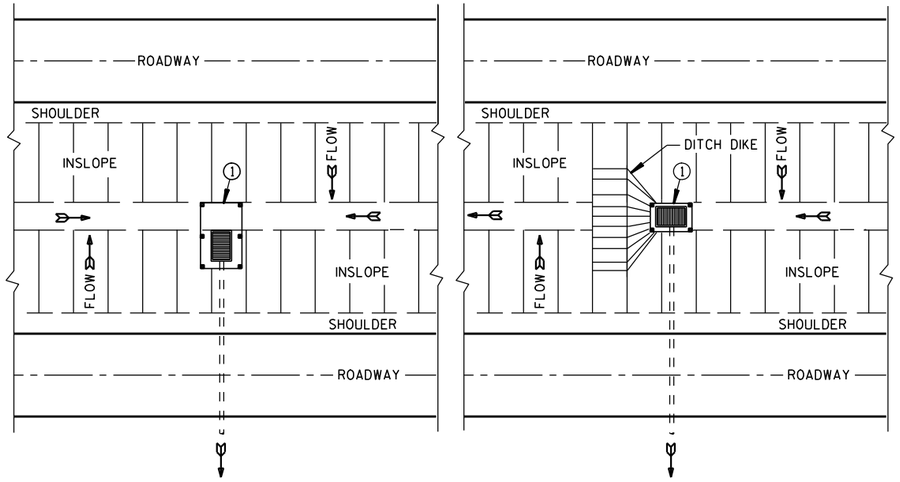
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



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.

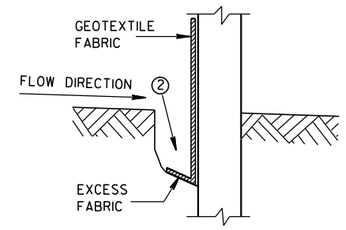
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

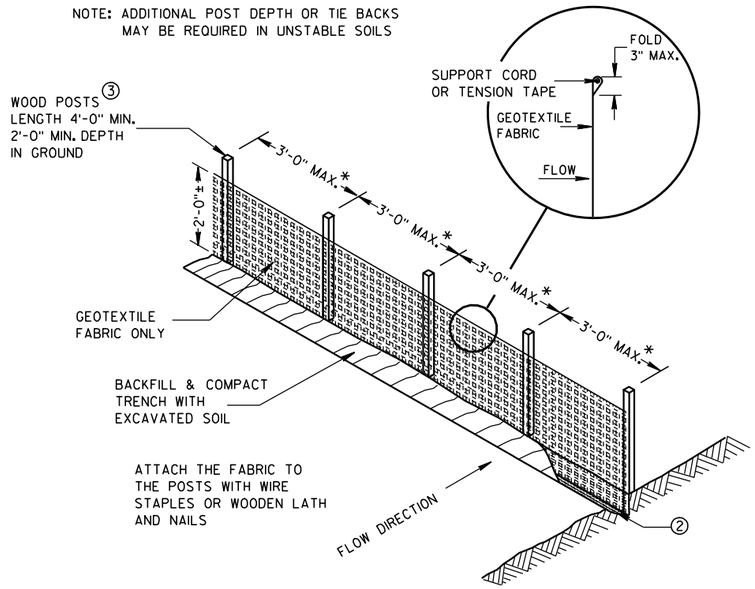
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

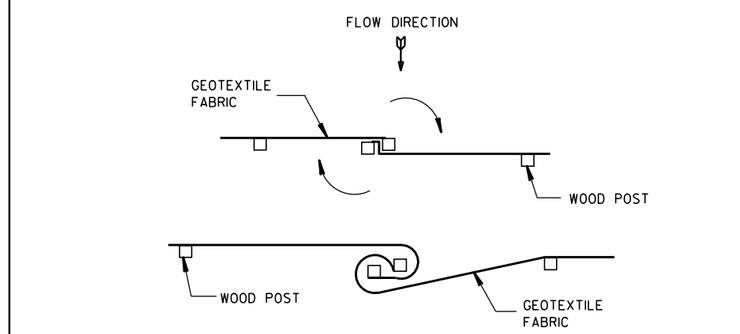
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



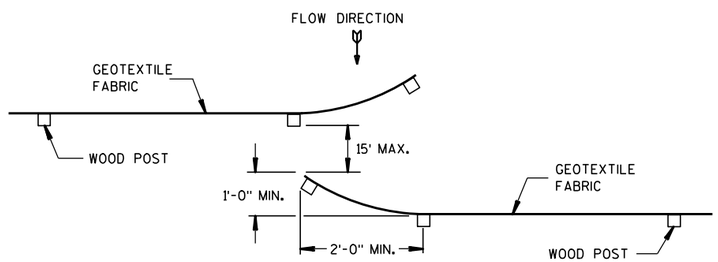
TRENCH DETAIL



SILT FENCE

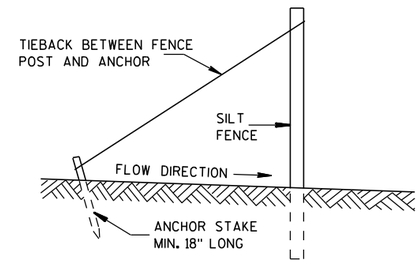


TWIST METHOD



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

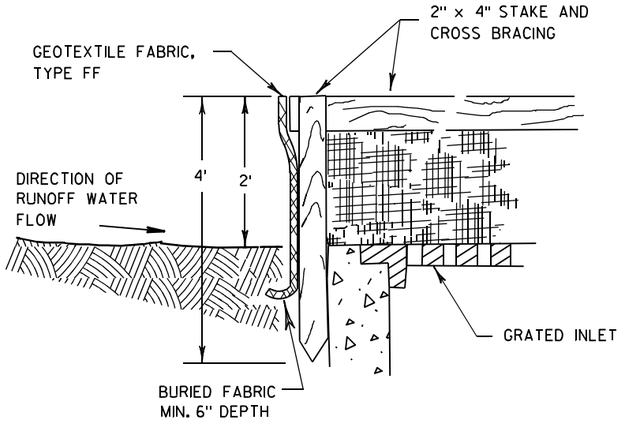
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

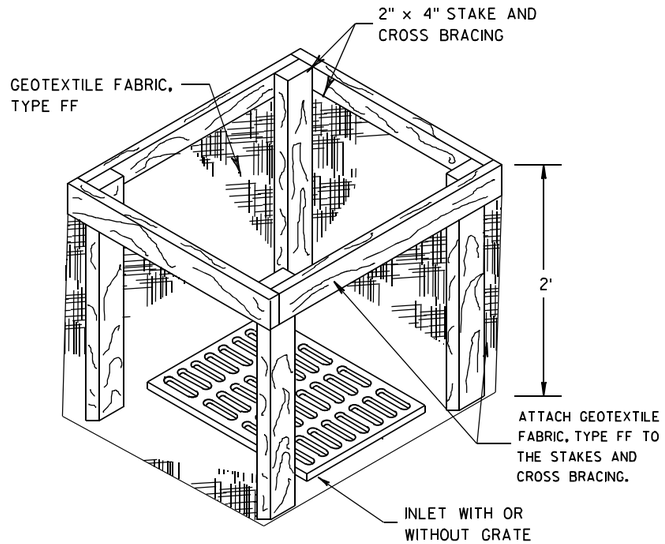
6

S.D.D. 8 E 9-6

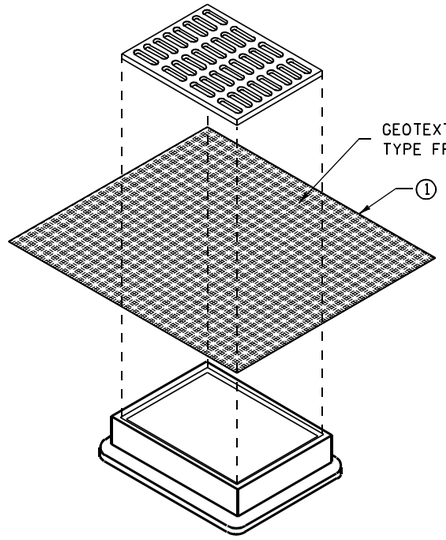
6

S.D.D. 8 E 9-6



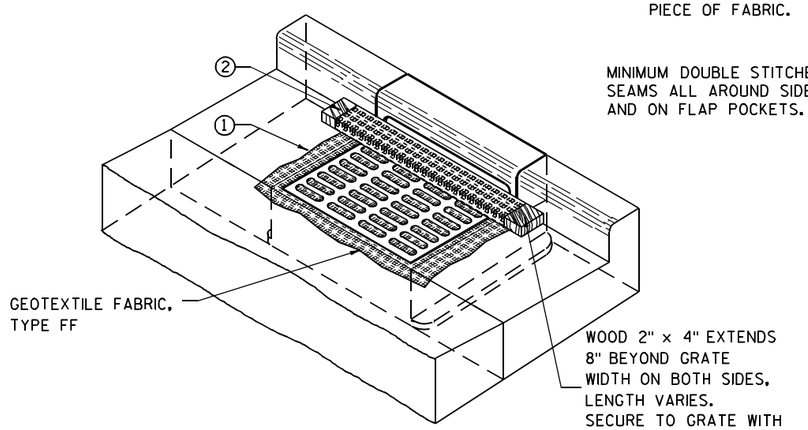


INLET PROTECTION, TYPE A

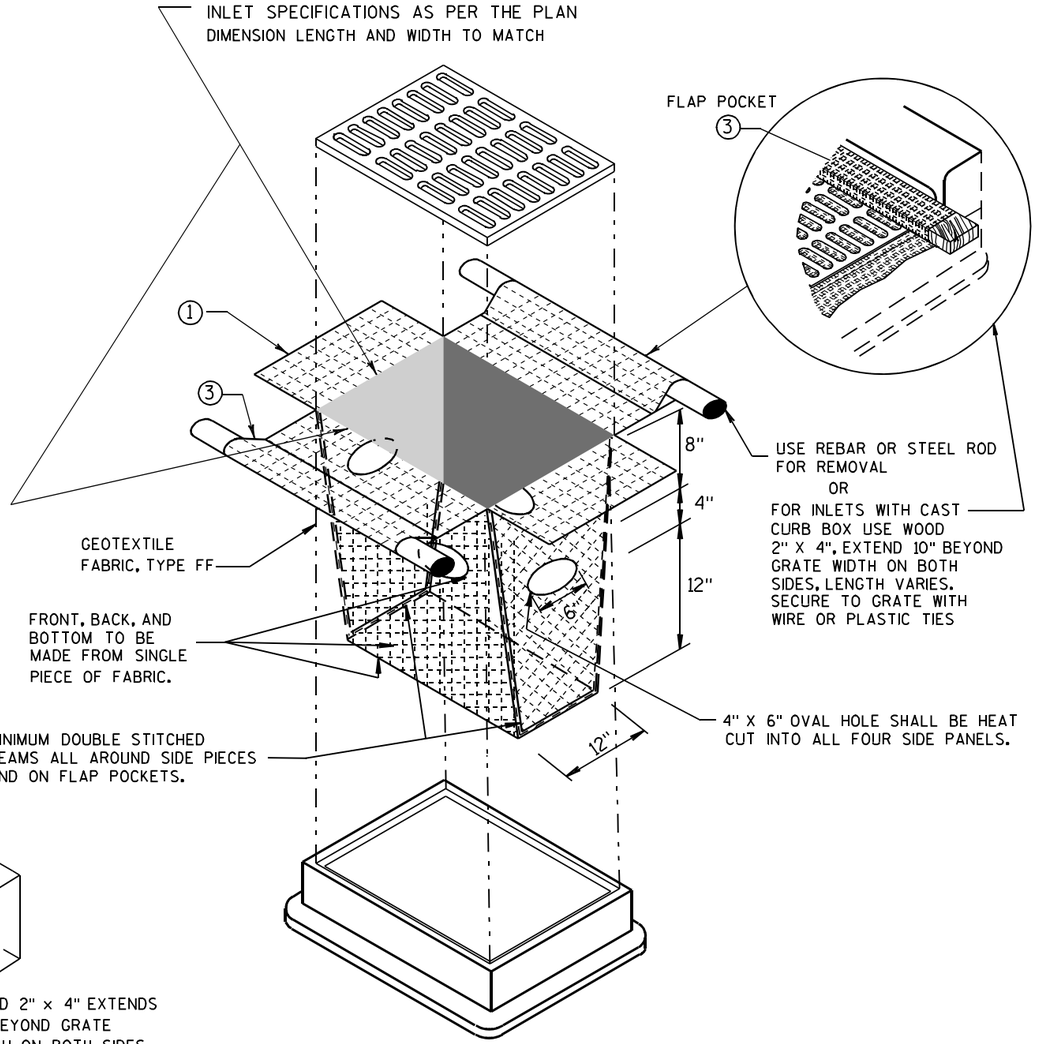


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

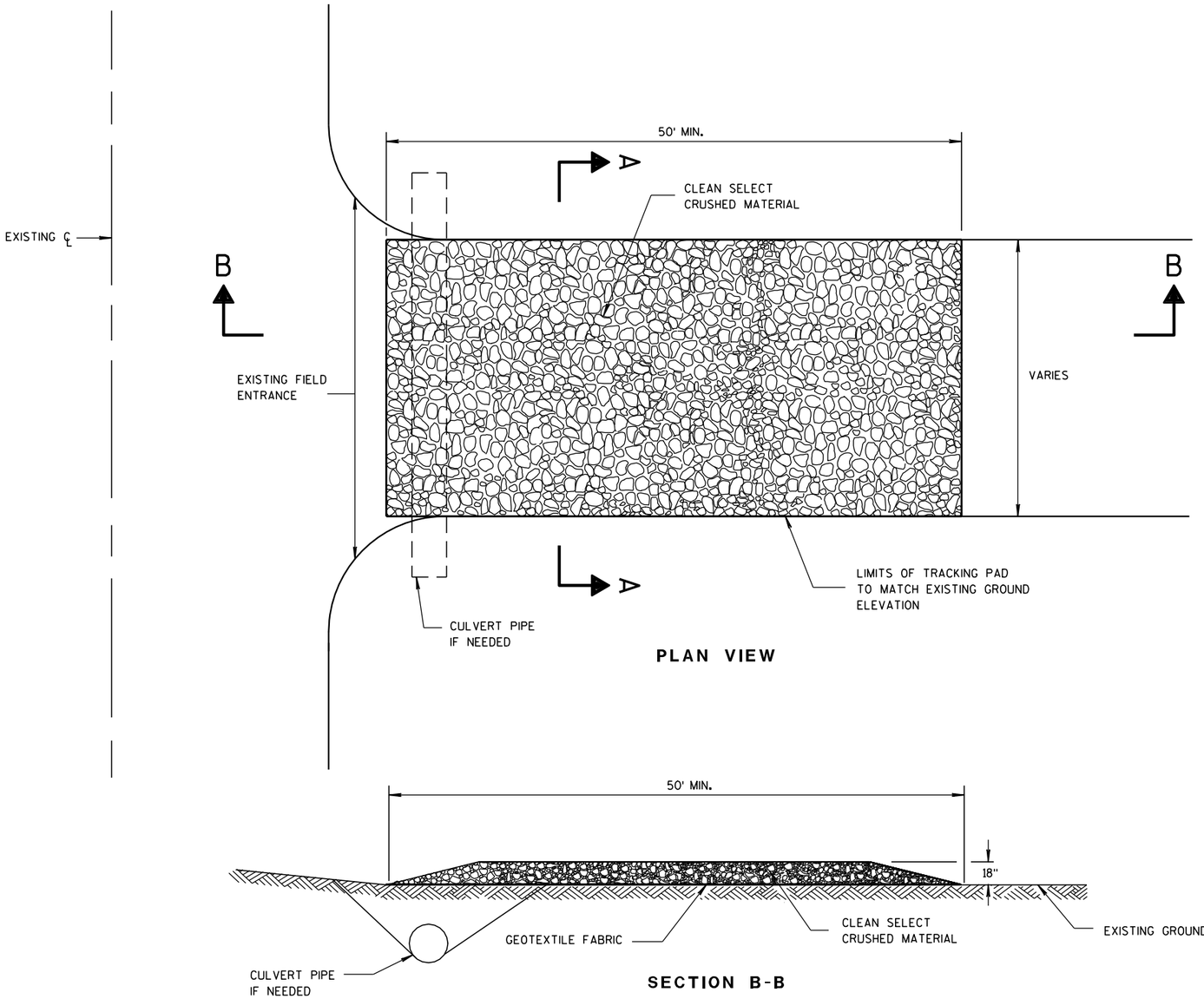
10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 8 E 10-2



PLAN VIEW

SECTION B-B

GENERAL NOTES

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

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

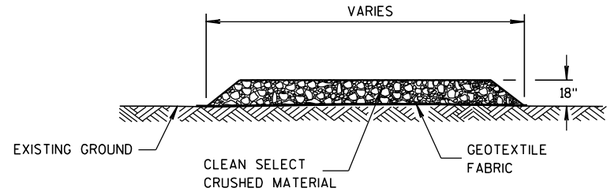
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A-A

TRACKING PAD

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS ENGINEER
ENT
FHWA

6

S.D.D. 8 E 14-1

6

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

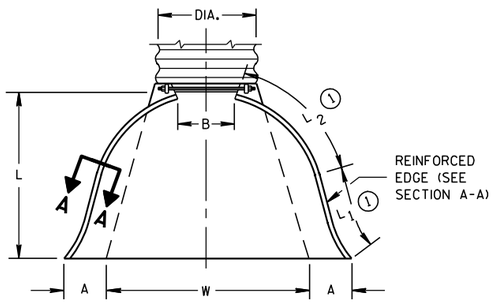
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

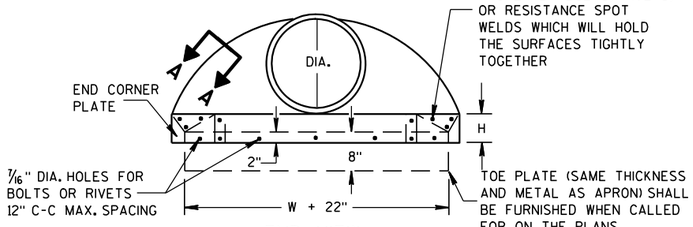
REINFORCED CONCRETE APRON ENDWALLS

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

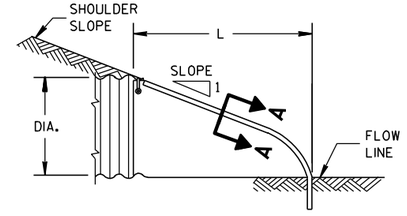
* MINIMUM
** MAXIMUM



PLAN VIEW

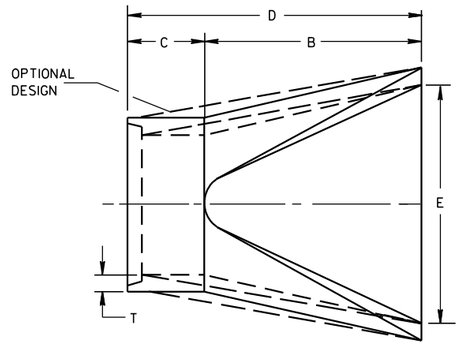


END VIEW

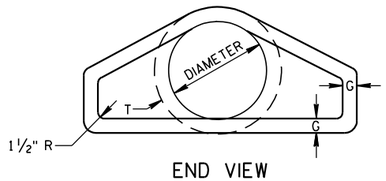


SIDE ELEVATION

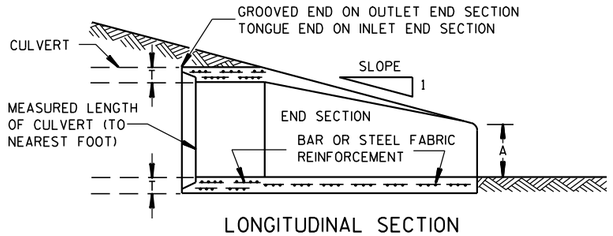
METAL ENDWALLS



PLAN

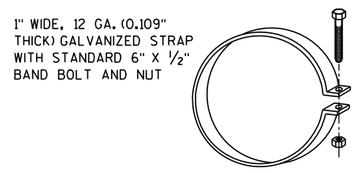


END VIEW



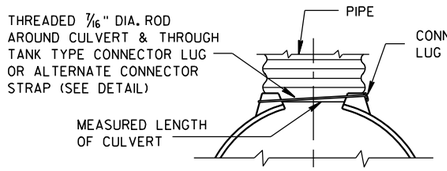
LONGITUDINAL SECTION

CONCRETE ENDWALLS

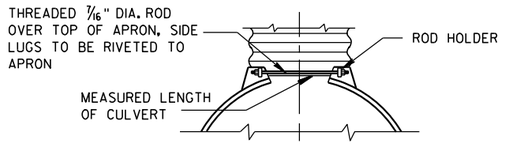


ALTERNATE FOR TYPE 1 CONNECTION

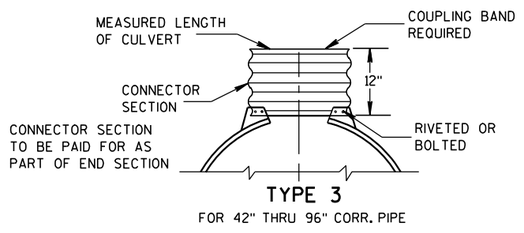
END SECTION CONNECTOR STRAP



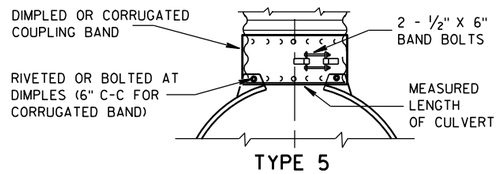
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

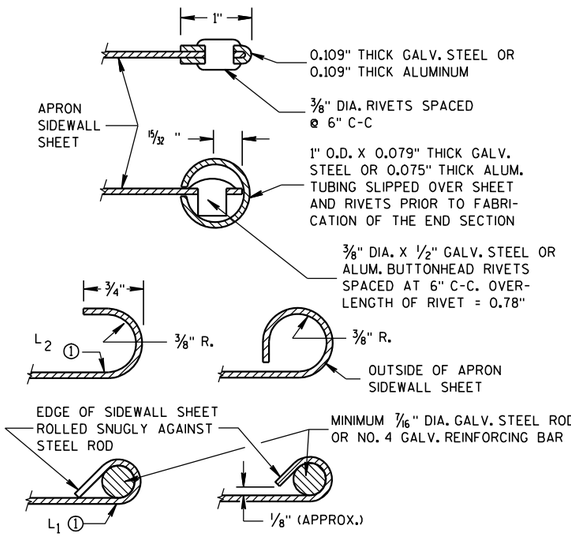
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

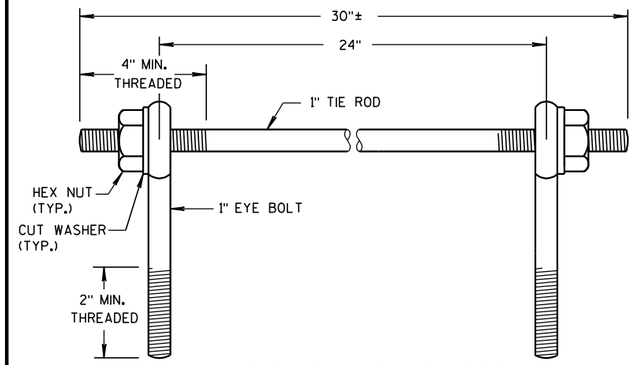
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

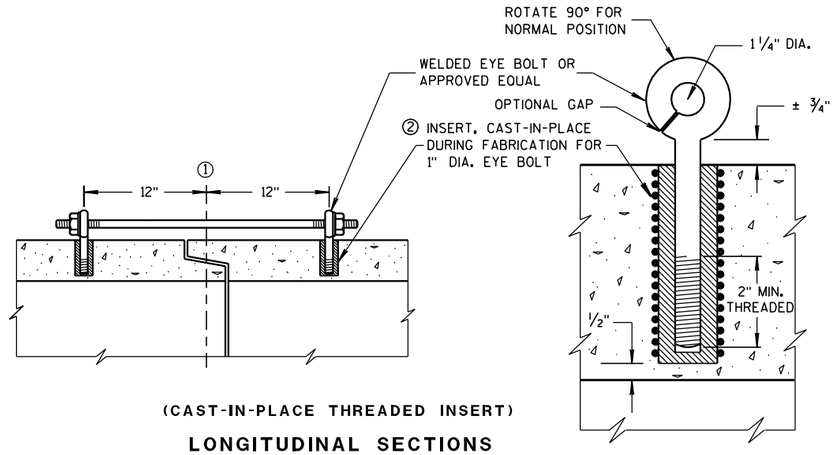
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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.

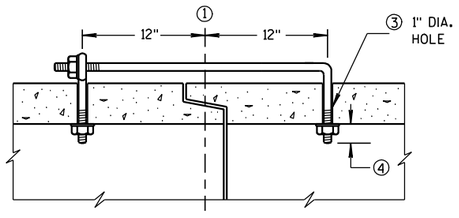
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

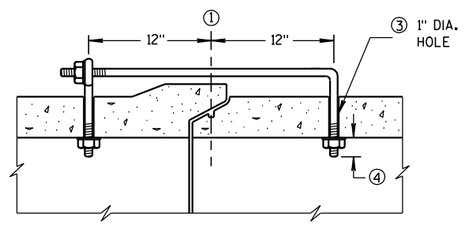
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

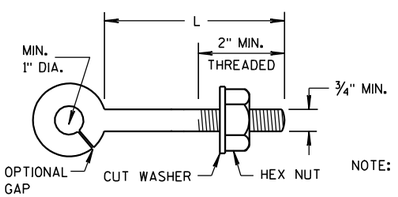


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

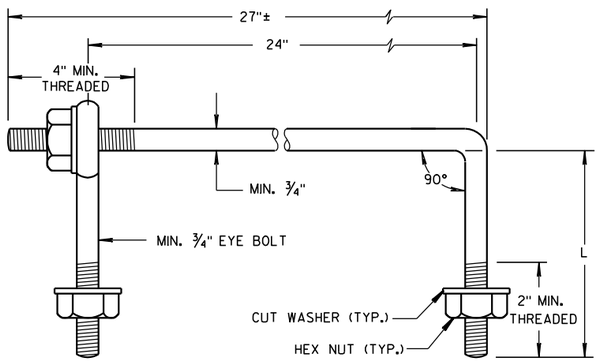
EYE BOLT DIMENSION TABLE

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"	



EYE BOLT

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



EYE BOLT AND TIE ROD

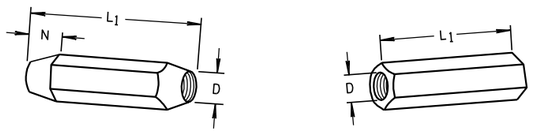
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

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

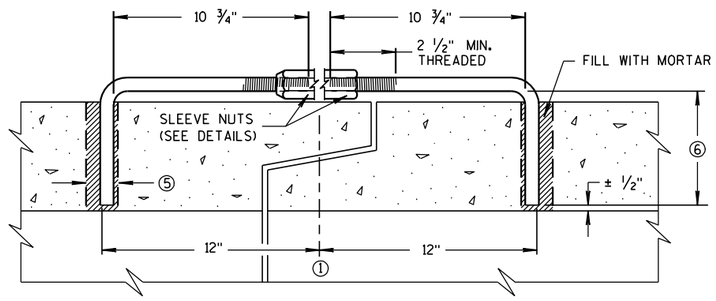
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

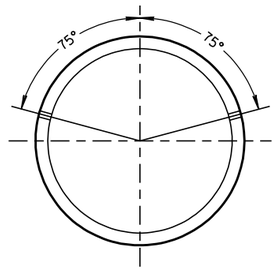
SLEEVE NUTS



LONGITUDINAL SECTION

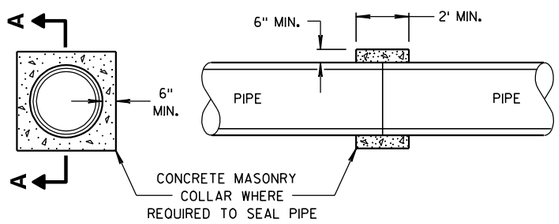
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 F 4-7

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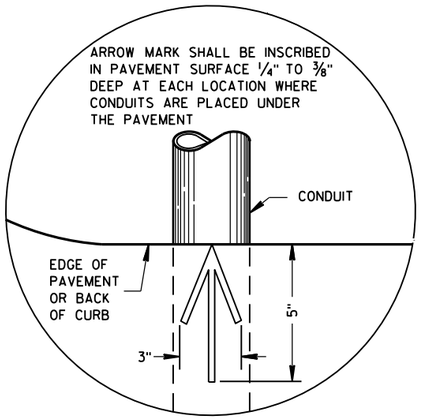
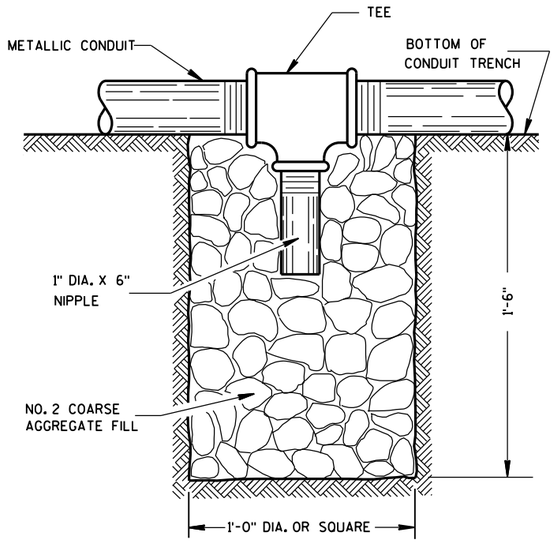


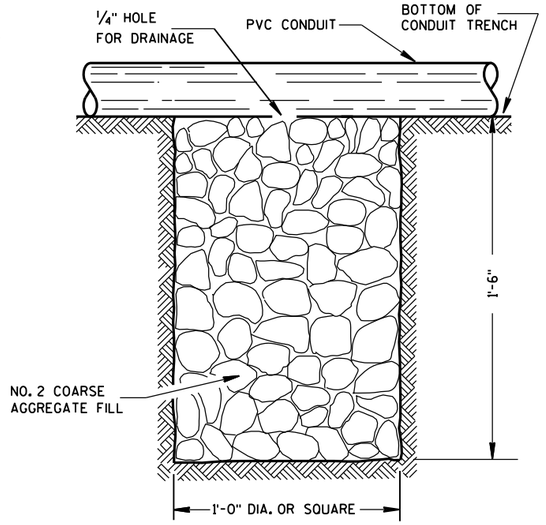
PLAN VIEW

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.

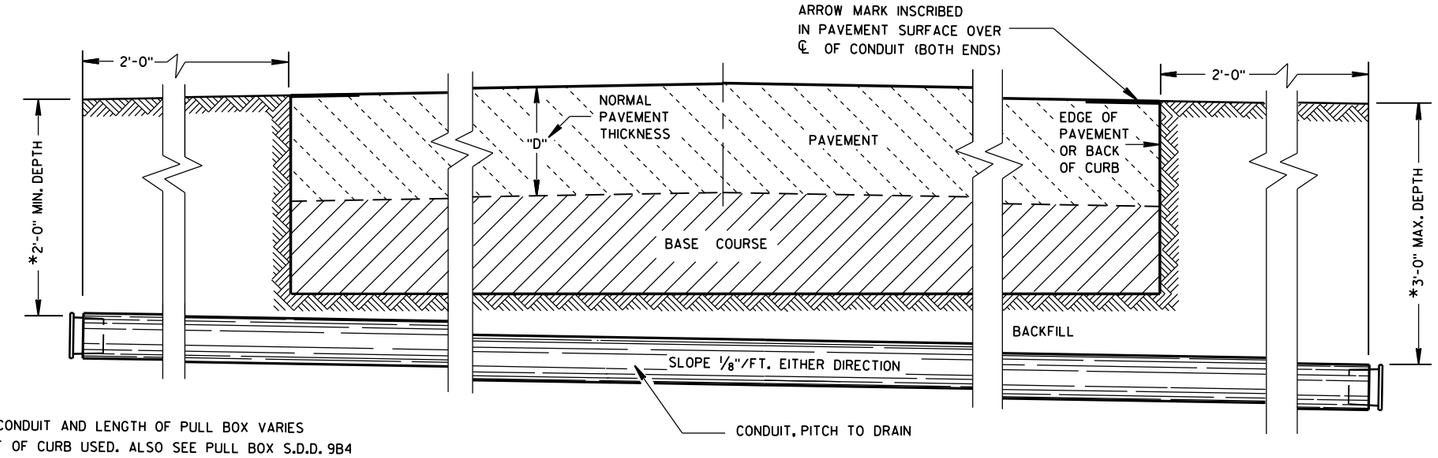
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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.).

TRACER 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
June, 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 9 B 2-9

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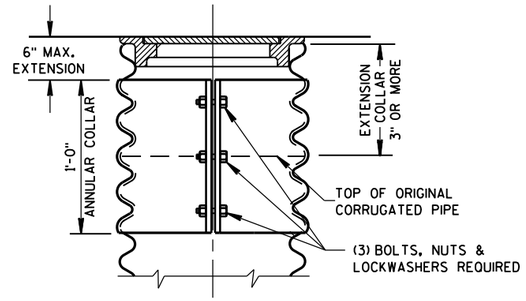
S.D.D. 9 B 2-9

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

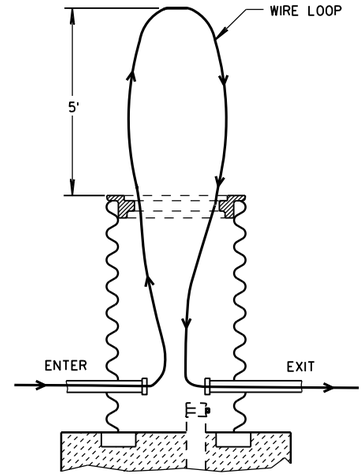
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2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

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

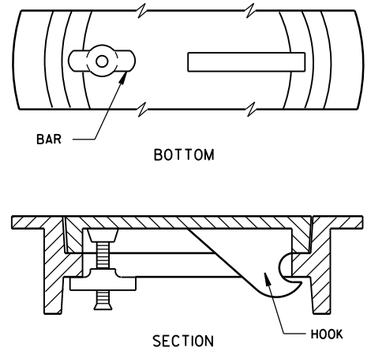
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

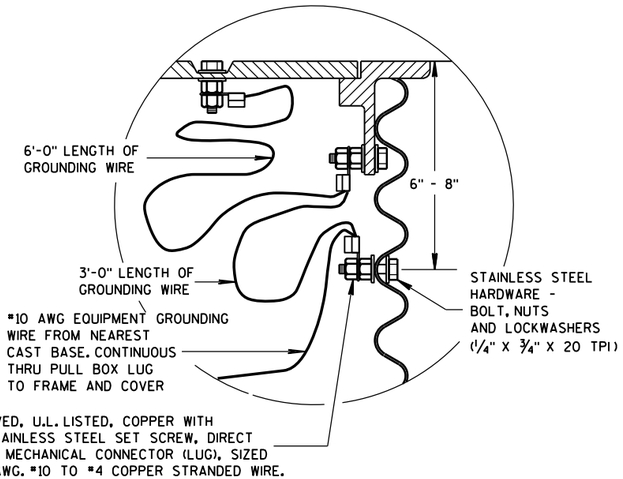


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

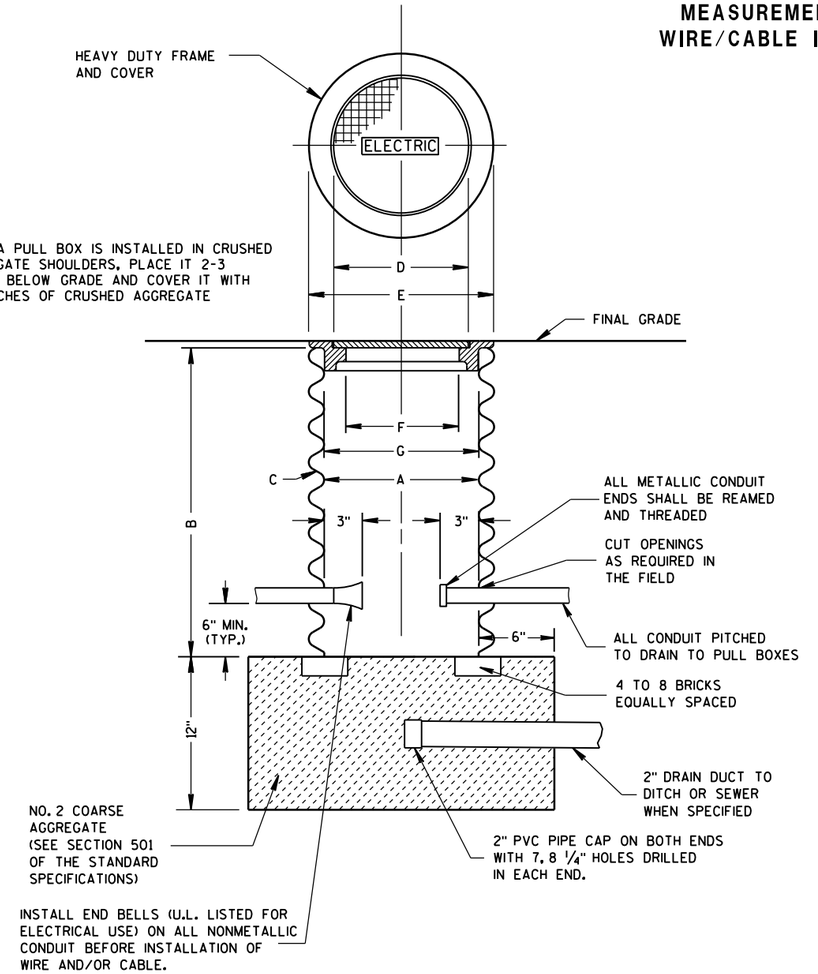
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

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

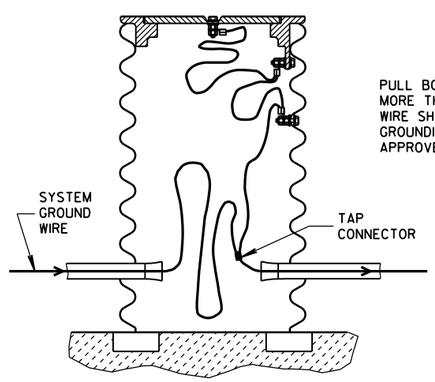
GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

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

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



PULL BOX



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

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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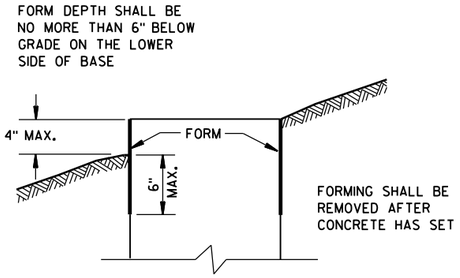
S.D.D. 9 B 4-11



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

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 INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

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

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

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

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

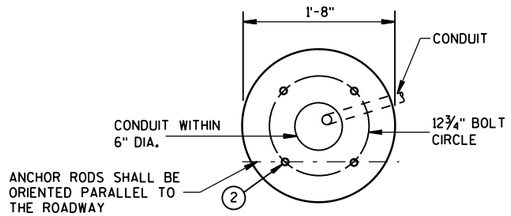
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

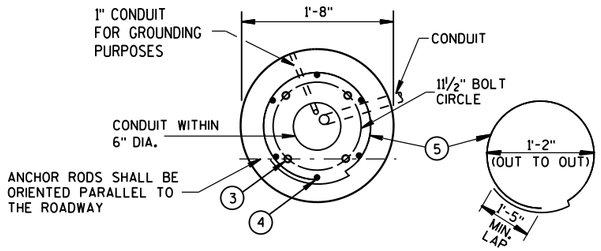
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

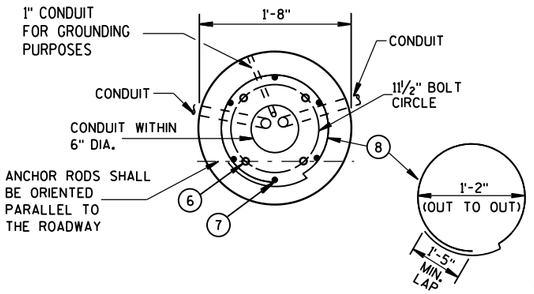
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

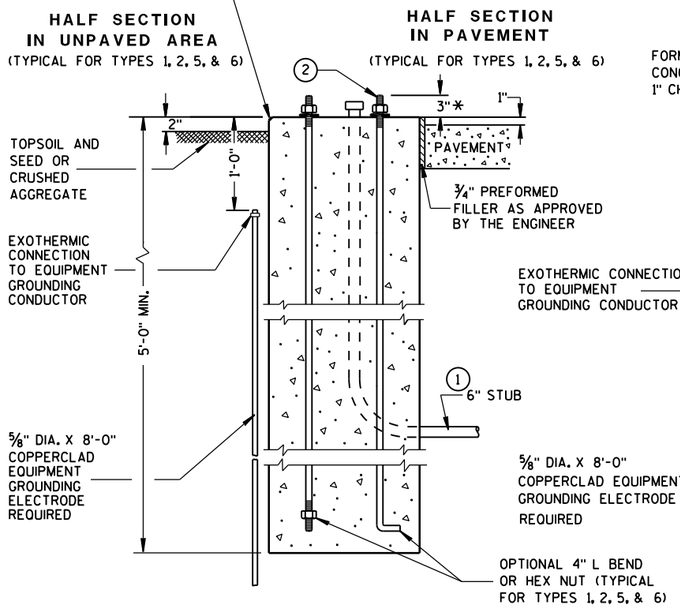
(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.





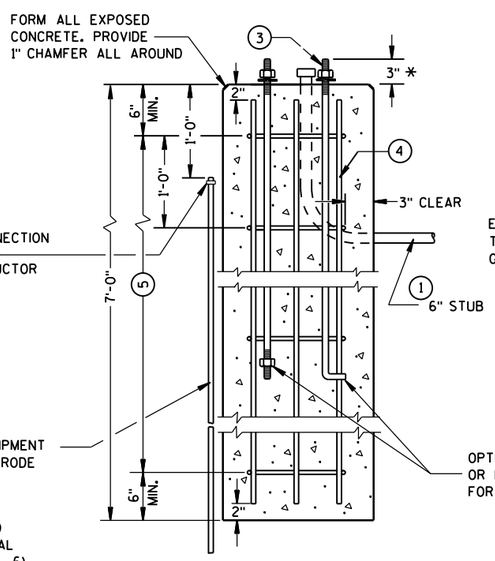


HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5, & 6)

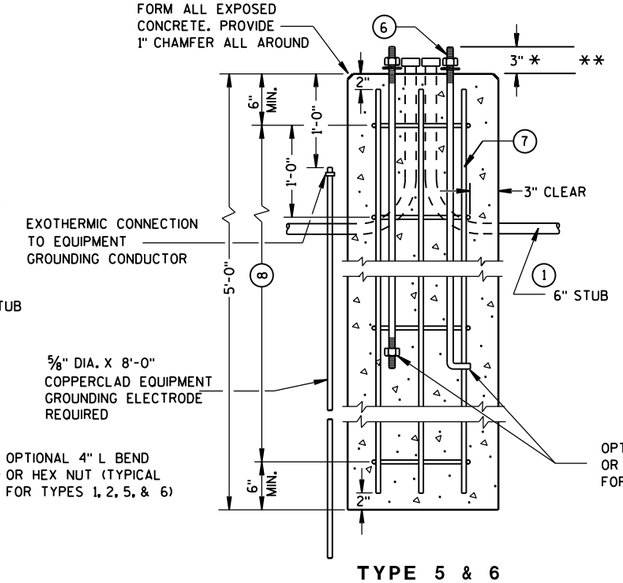


HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5, & 6)

TYPE 2



TYPE 5 & 6



CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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S.D.D. 9 C 2-7

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

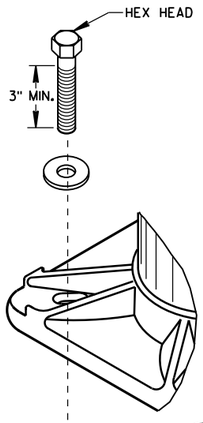
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

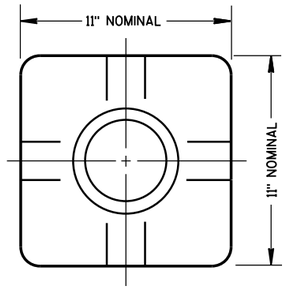
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

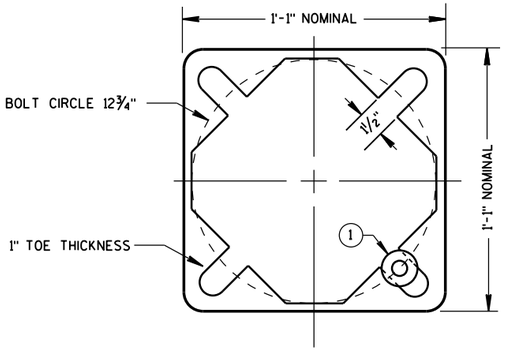
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

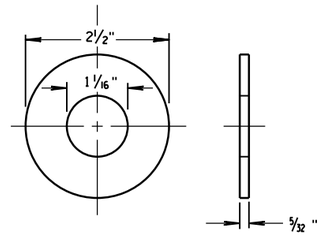




TOP VIEW
(PEDESTAL BASE)

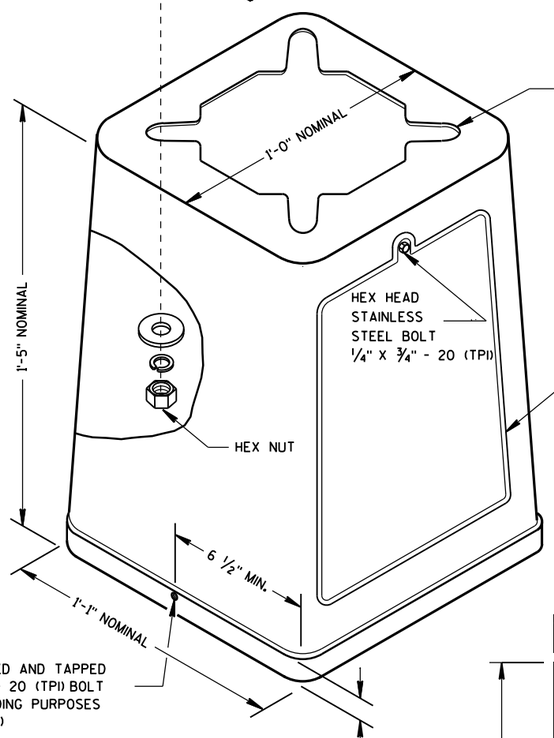


BOTTOM VIEW
(PEDESTAL BASE)

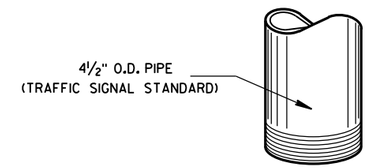


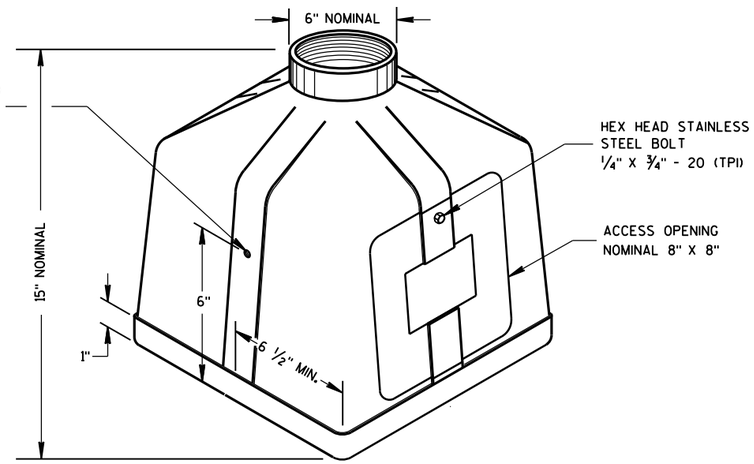
ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)



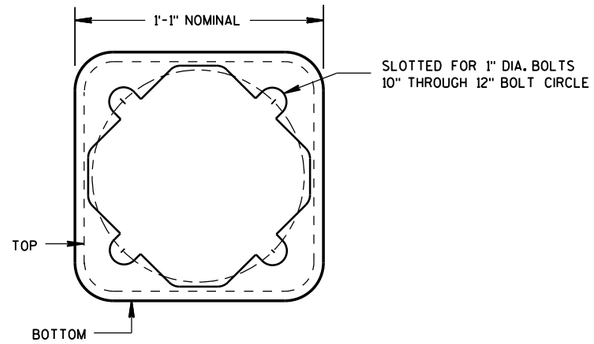
ISOMETRIC VIEW



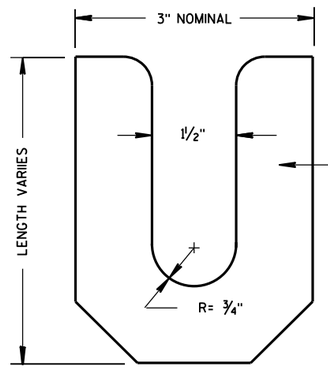


ISOMETRIC VIEW

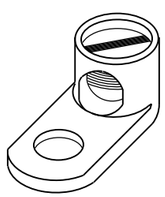
PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)



LEVELING SHIM



TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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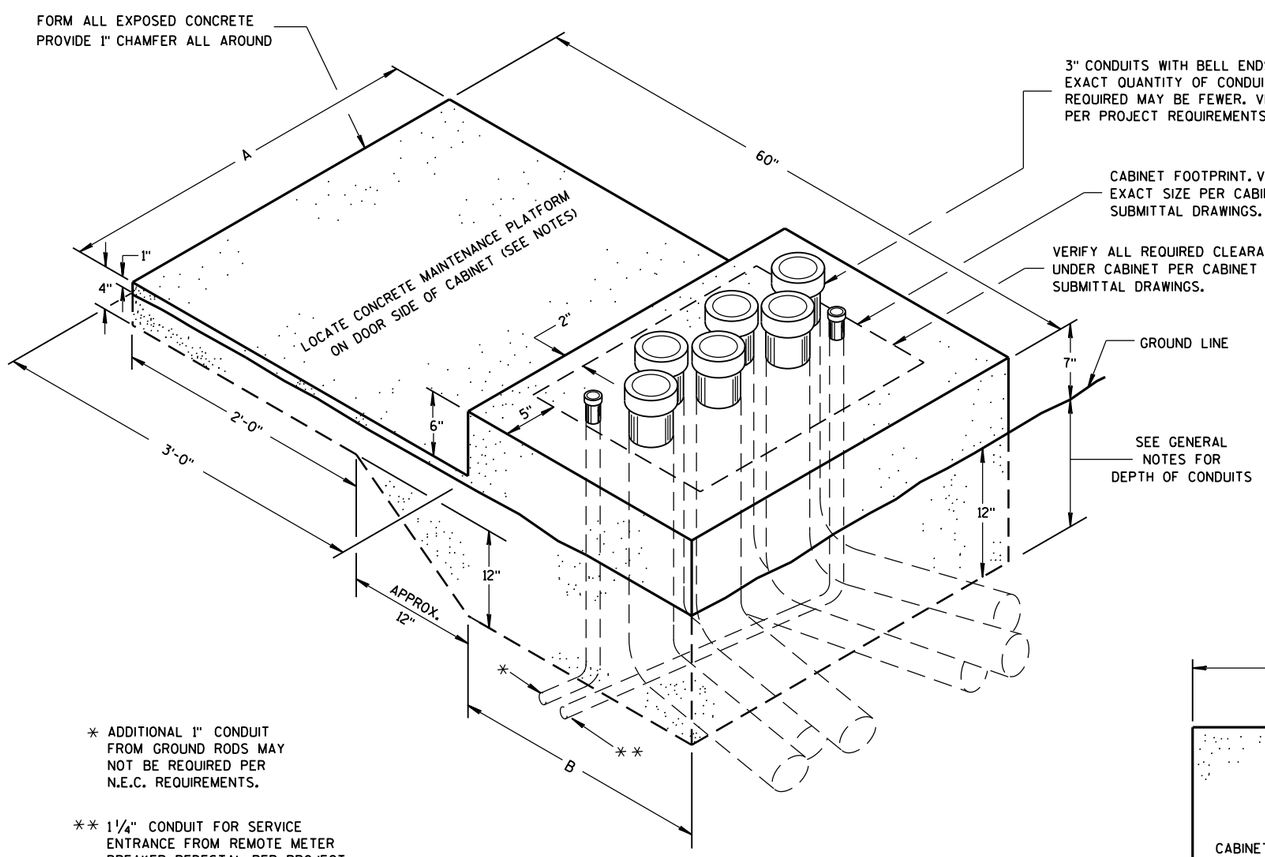


* ADDITIONAL 1" CONDUIT FROM GROUND RODS MAY NOT BE REQUIRED PER N.E.C. REQUIREMENTS.

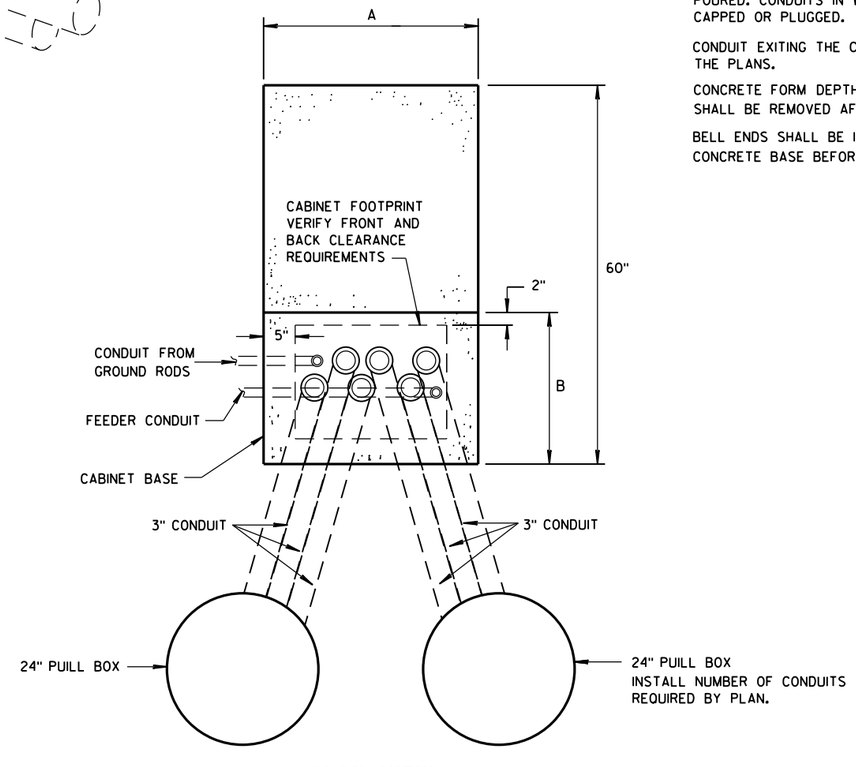
** 1¼" CONDUIT FOR SERVICE ENTRANCE FROM REMOTE METER BREAKER PEDESTAL PER PROJECT REQUIREMENTS. VERIFY LOCATION OF CONDUIT DEPENDENT UPON LOCATION OF INCOMING FEEDER AND FOR EASE OF CONNECTION TO LOAD CENTER.

ISOMETRIC VIEW

CONCRETE CONTROL CABINET BASE, TYPE L

(C.Y. CONCRETE = APPROX. 0.4)

CONCRETE BASE TYPE	CABINET WIDTH	DIMENSIONS		MAXIMUM 3" CONDUITS
		A	B	
L24	24"	34"	24"	4
L30	30"	40"	24"	6



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE L

GENERAL NOTES

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

INSTALL FOUR STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET BASES. THE ANCHORS 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 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 L

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Nov. 2014 — DATE
/S/ Thomas Gonring — STATE LIGHTING ENGINE — WYS
FHWA

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6

GENERAL NOTES

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

ALL INTERNAL ELECTRICAL COMPONENTS WILL BE PRE-WIRED BY THE CABINET FABRICATOR.

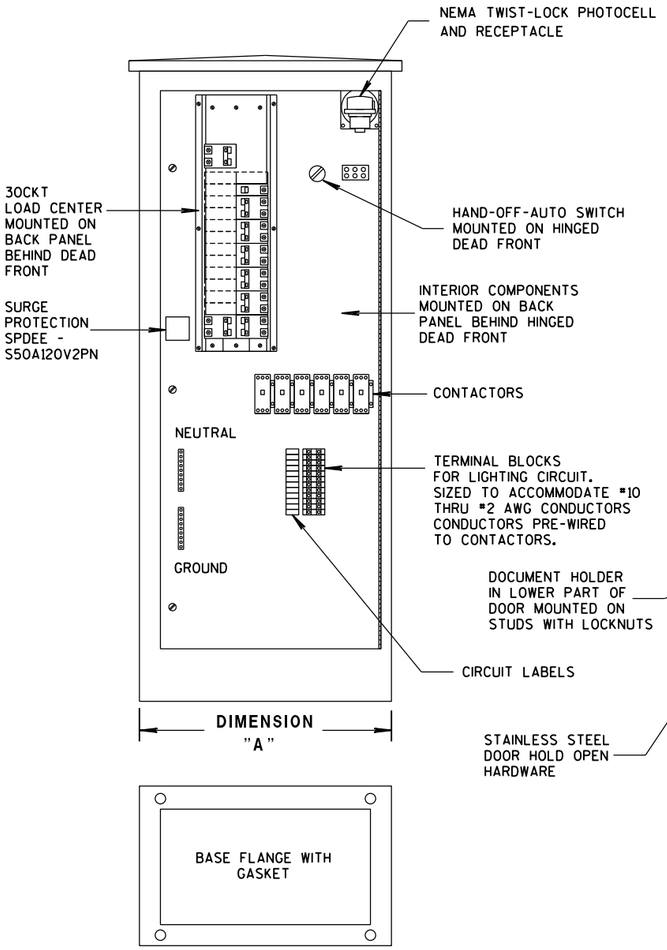
ALL CONDUIT ENTRIES SHALL BE SEALED WITH AN APPROPRIATE DUCT SEALING COMPOUND.

ORIENT PHOTOCELL AWAY FROM AMBIENT LIGHT SOURCES AND ONCOMING TRAFFIC HEADLIGHTS.

THE CONTRACTOR SHALL TOUCH UP ANY DAMAGE TO THE ANODIZED FINISH CAUSED BY THE INSTALLATION PROCESS. COLOR MATCH PAINT SHALL BE USED.

A COMPLETE LIGHTING OR ELECTRICAL PLAN SHALL BE SECURELY PLACED IN THE DOCUMENT HOLDER ATTACHED TO THE DOOR.

FRONT INTERIOR ELEVATION



SIDE VIEW

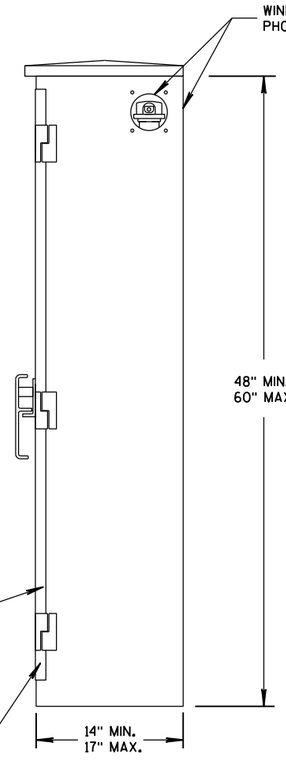
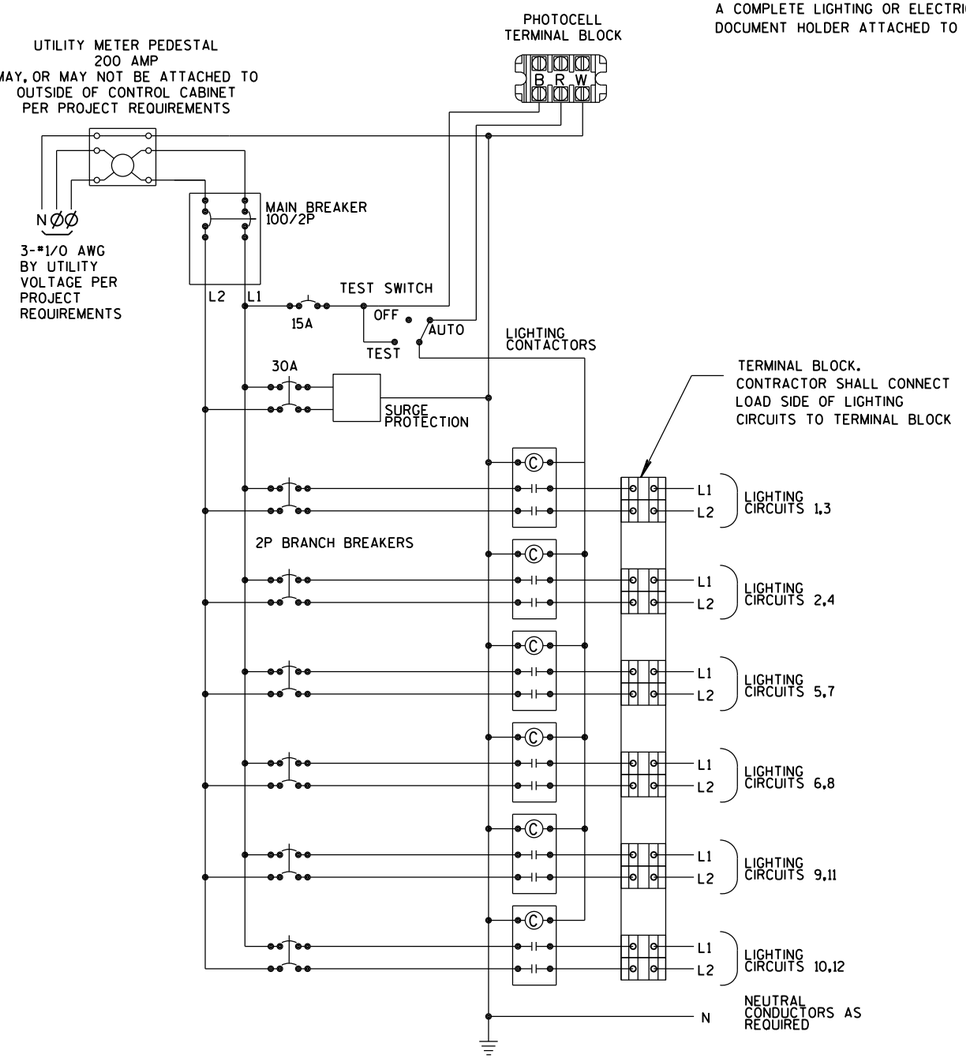


TABLE OF DIMENSIONS (INCHES)

CONCRETE BASE TYPE	CABINET WIDTH	DIMENSION "A"
L24	24"	24"
L30	30"	30"



CONTROL CABINET SCHEMATIC

LIGHTING CONTROL CABINET

LIGHTING CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Thomas Gonring — STATE LIGHTING ENGINEER
FHWA

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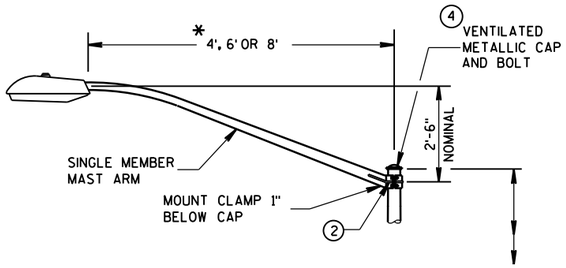
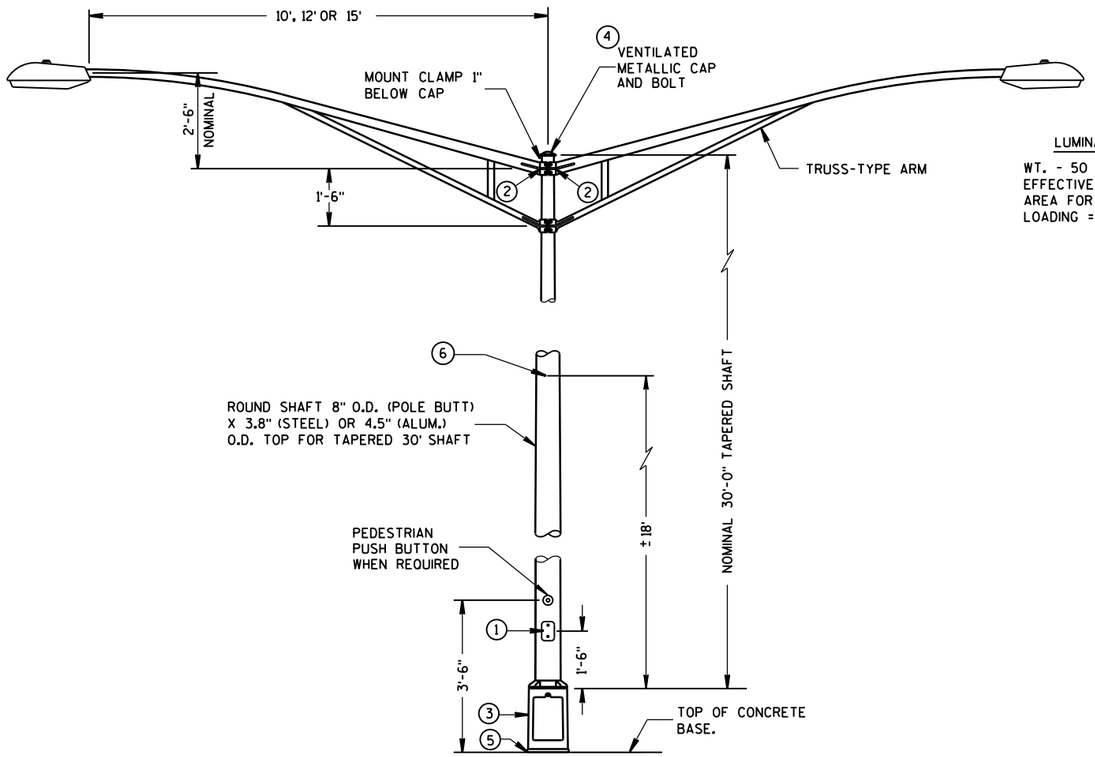
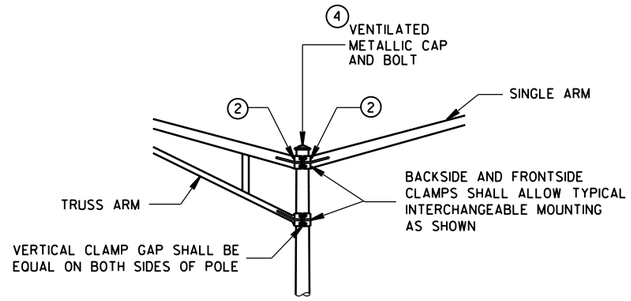
S.D.D. 9 D 4-1

*RISE FOR 4' ARM SHALL BE 2'-0".





TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY



INTERCHANGEABLE MOUNTING DETAIL

LUMINAIRE

WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.

GENERAL NOTES

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

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.188".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONEECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(4) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(6) INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

6

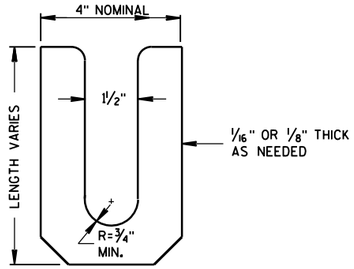
S.D.D. 9 E 1-14d

POLE MONTINGS FOR
LIGHTING UNITS, TYPE 5
(30 FEET)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

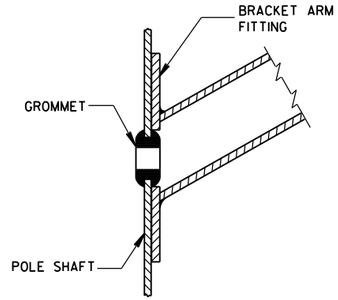
6

S.D.D. 9 E 1-14d

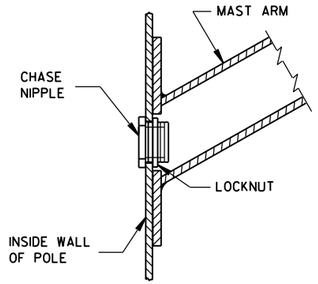


LEVELING SHIM (13)

SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

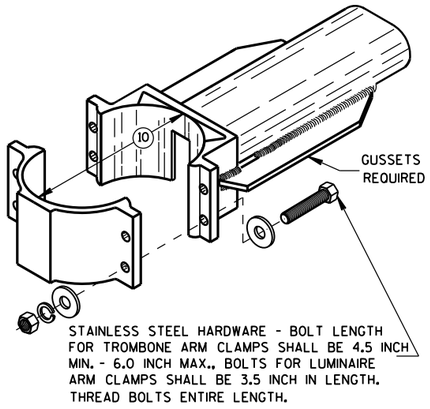
(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(11) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

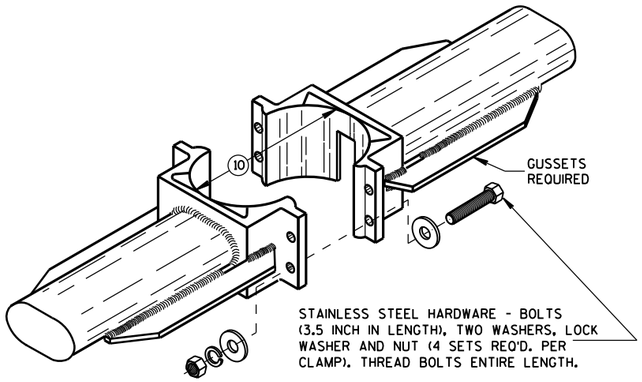
(12) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(13) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

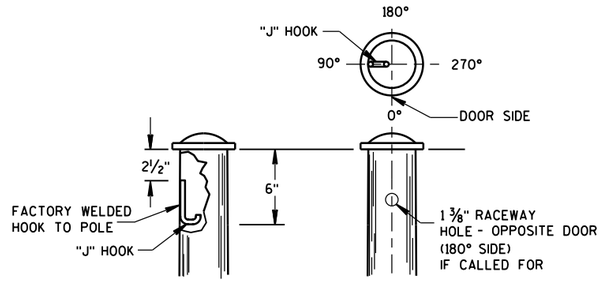
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



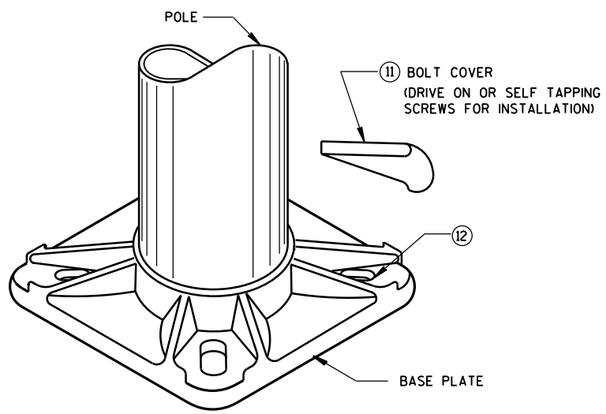
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



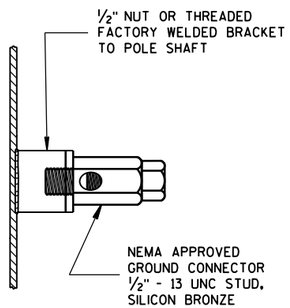
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

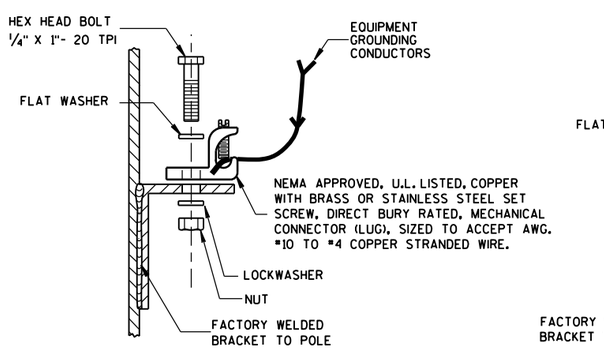


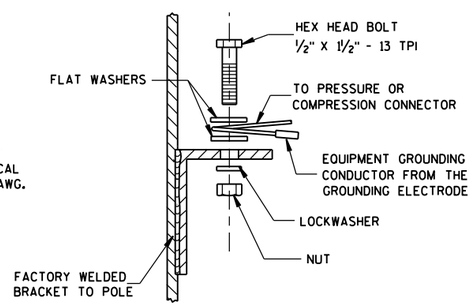
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS

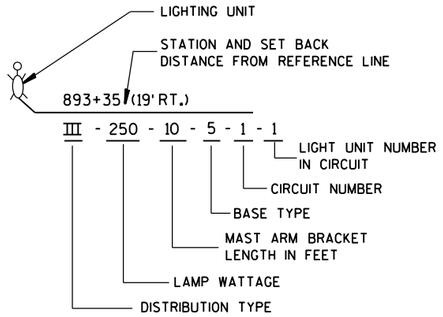
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTINGS

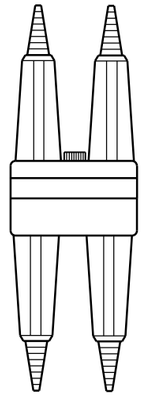
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

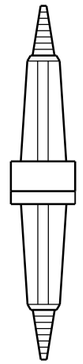
6
S.D.D. 9 E 1-14g



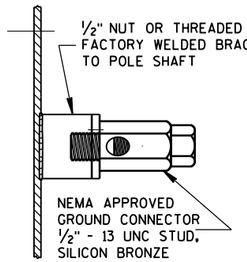
LIGHTING UNIT CODE
(TYPICAL)

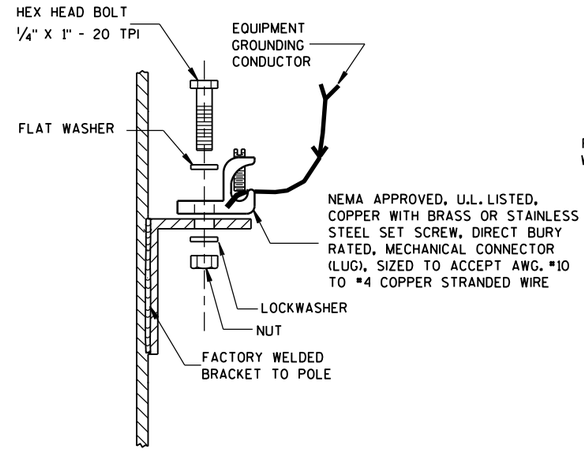


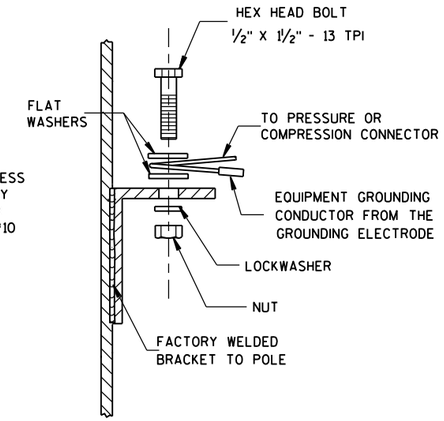
DETAIL "A"
BREAKAWY
DOUBLE POLE WITH
WATERPROOF
INSULATING BOOT



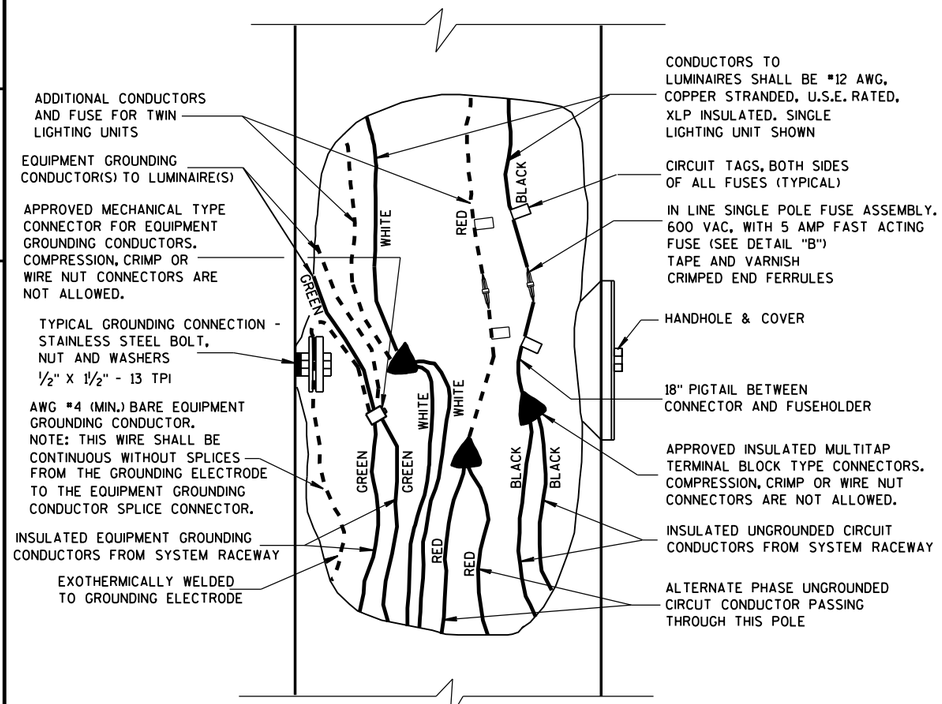
DETAIL "B"
BREAKAWY
SINGLE POLE WITH
WATERPROOF
INSULATING BOOT



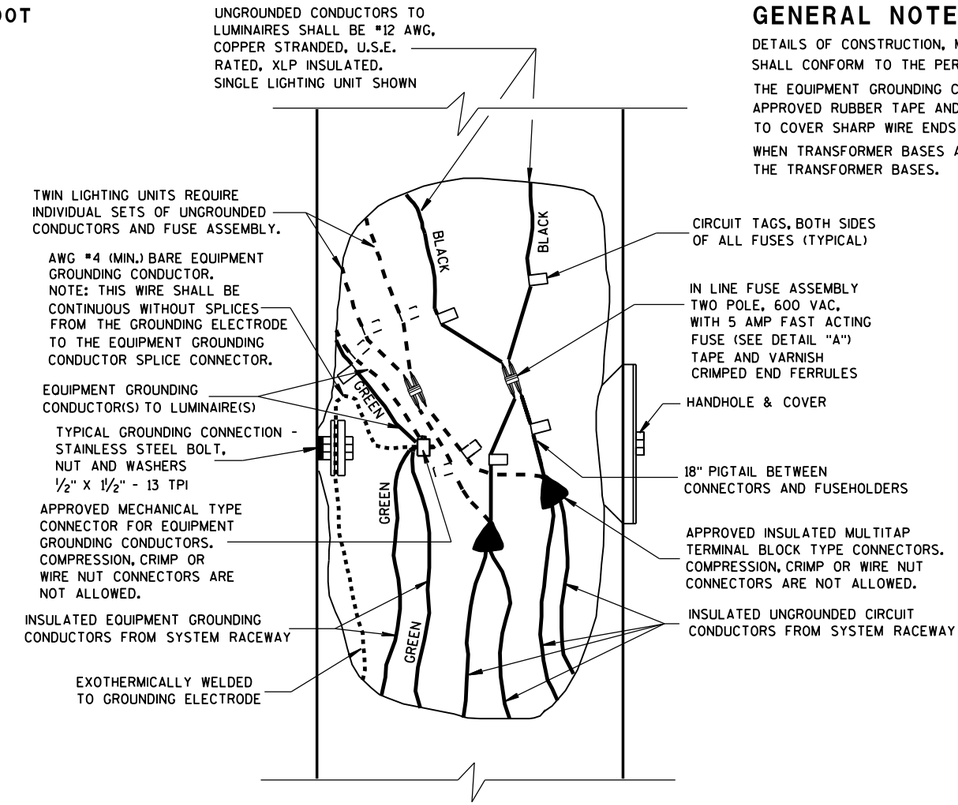




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



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.

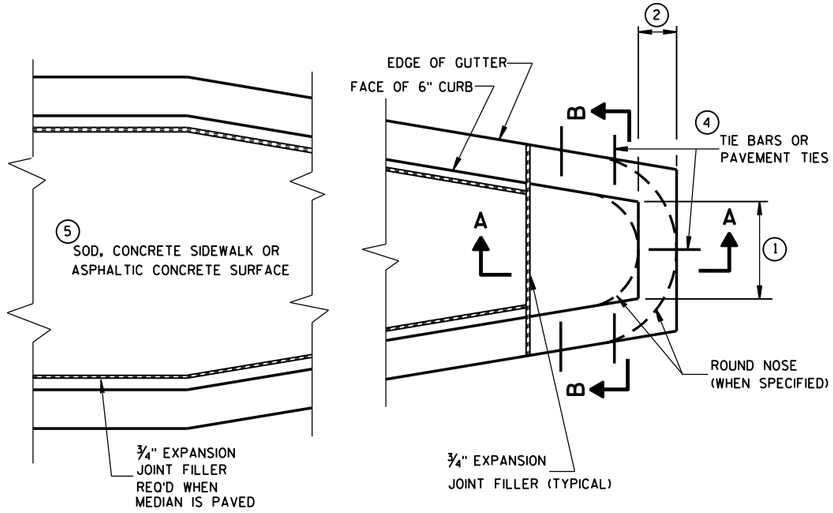
WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

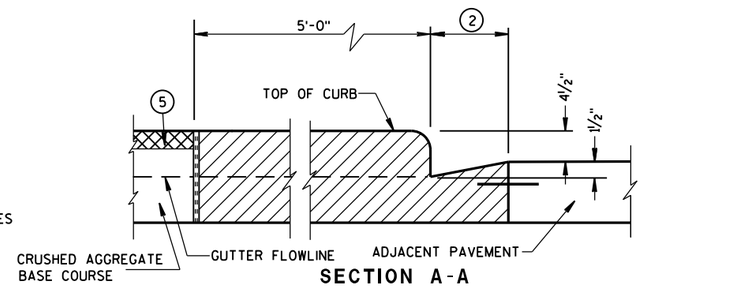
NON-FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 9 E 3-5





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.

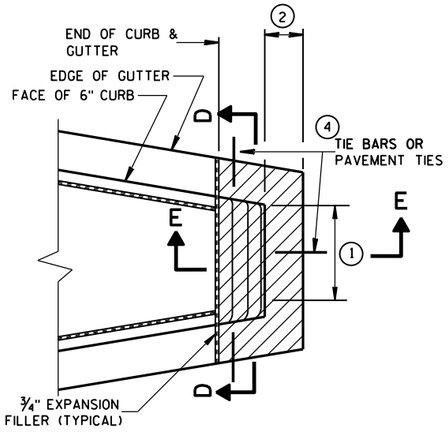
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

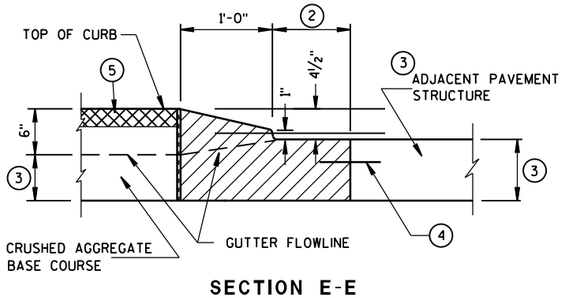
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(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.

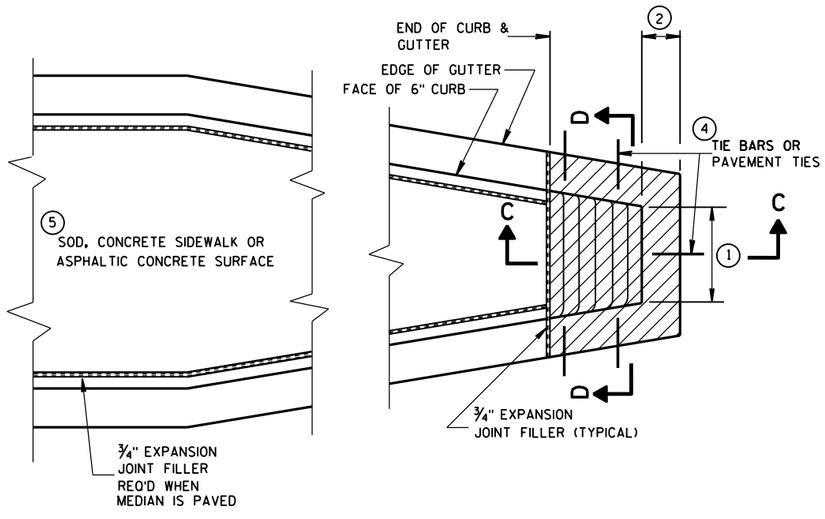
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

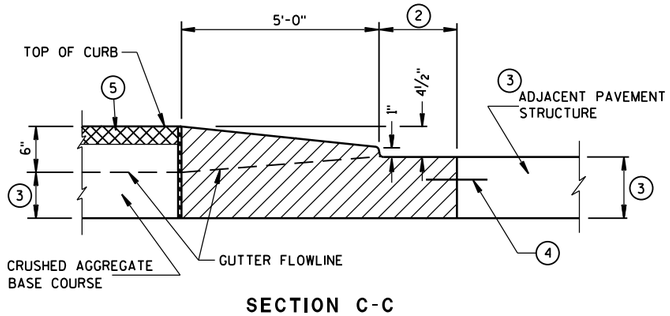
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



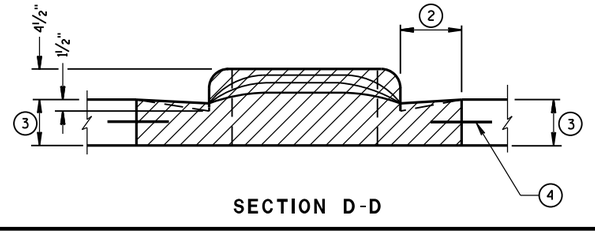


CONCRETE MEDIAN SLOPED NOSE TYPE 2





CONCRETE MEDIAN SLOPED NOSE TYPE 1



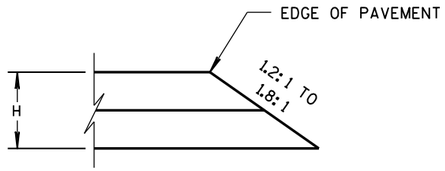
CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

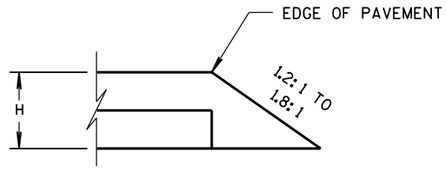
S.D.D. 11 B 2-2

S.D.D. 11 B 2-2



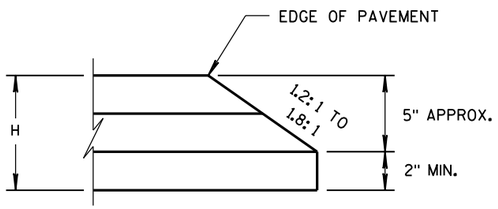
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



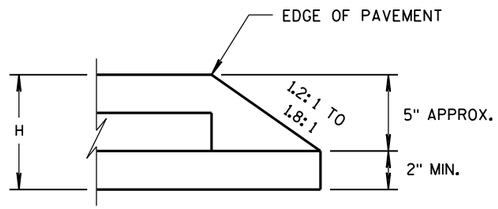
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

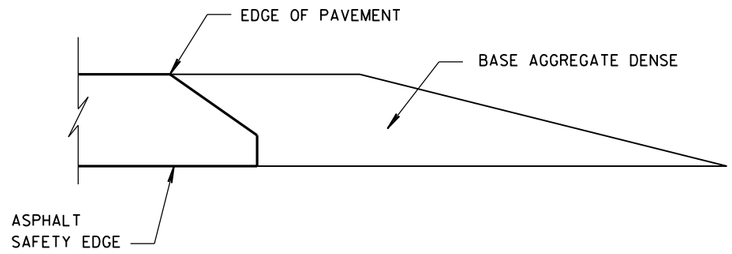
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

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S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

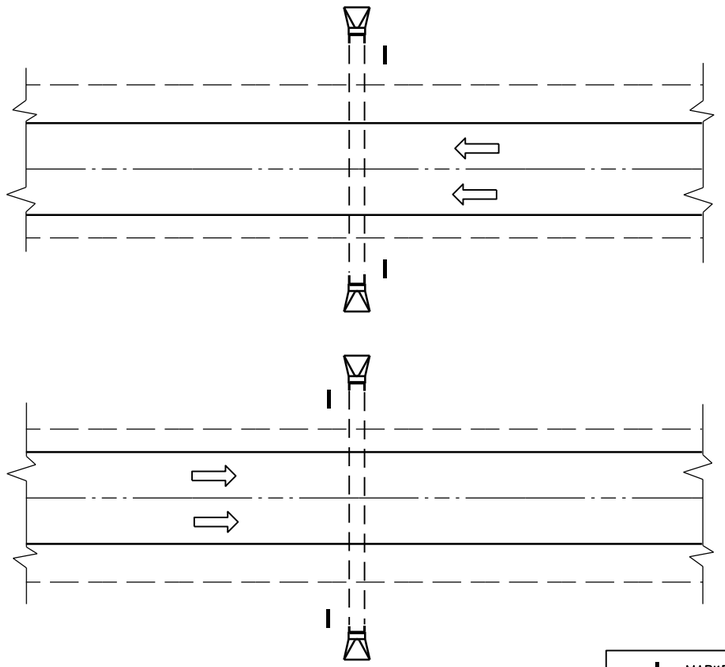
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

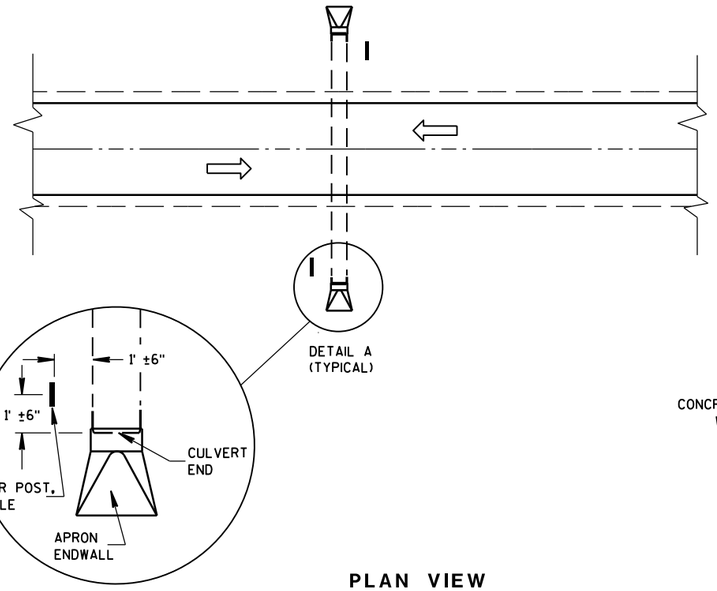
/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

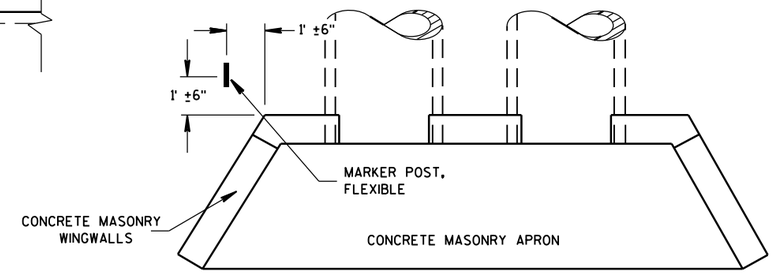
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

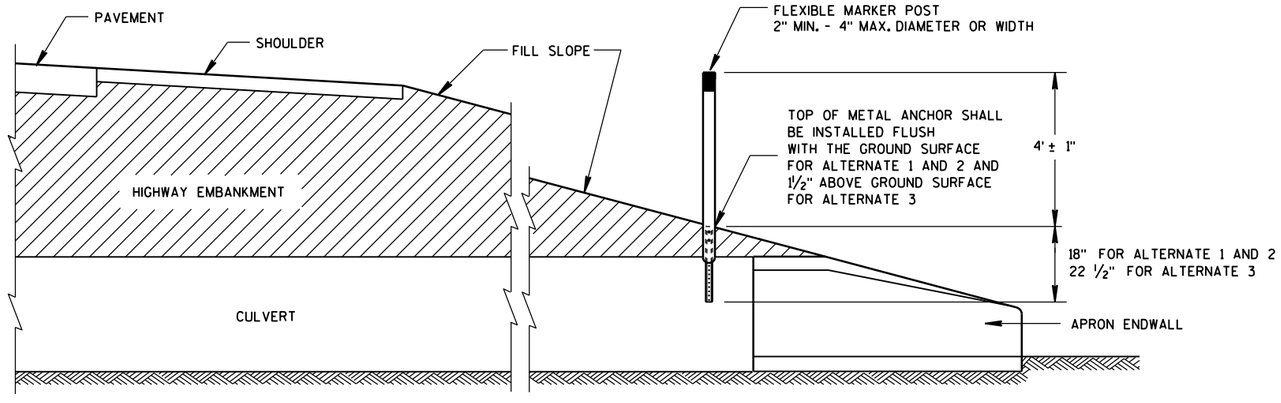
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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

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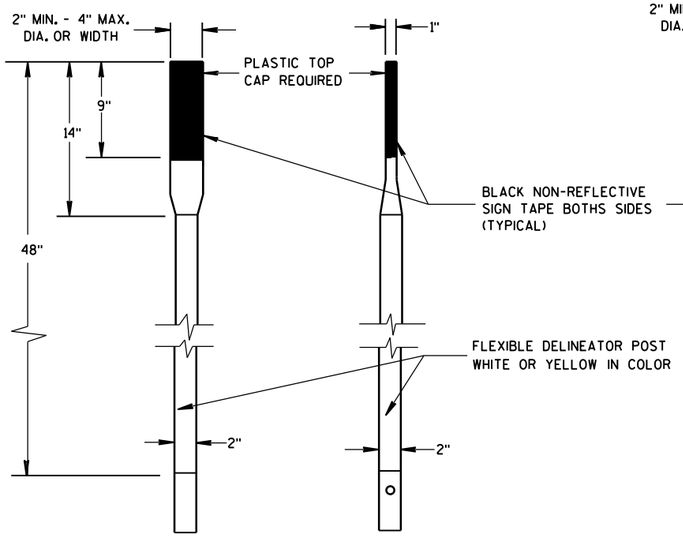
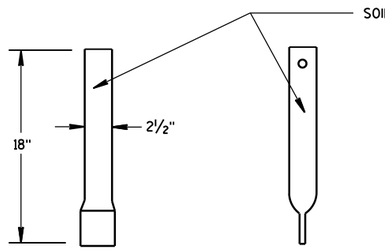
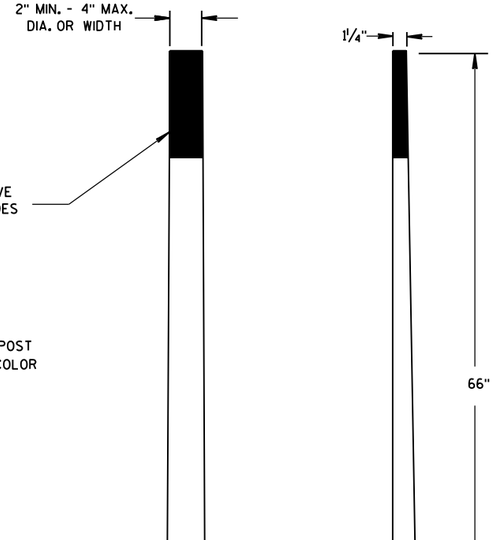
S.D.D. 15 A 3-2a





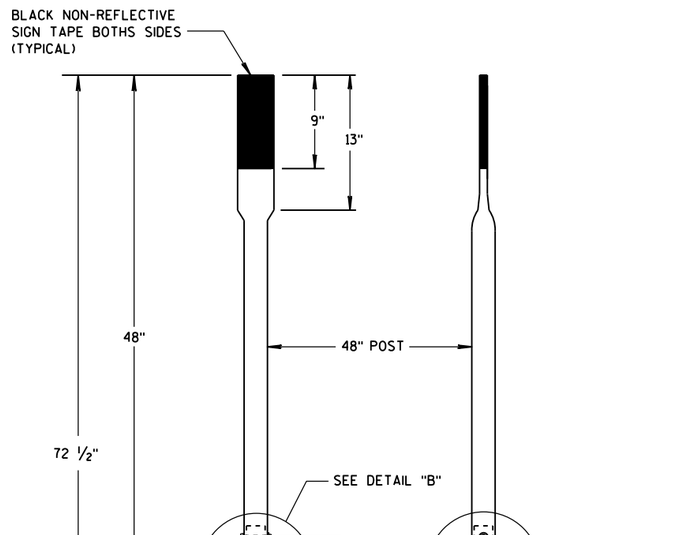
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

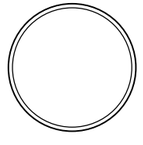
ALTERNATE 2



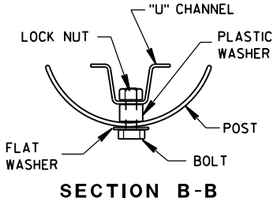
FRONT VIEW SIDE VIEW

ALTERNATE 3

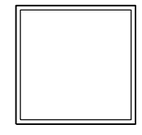
FLEXIBLE MARKER POSTS



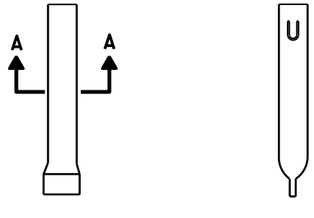
SECTION A-A



SECTION B-B

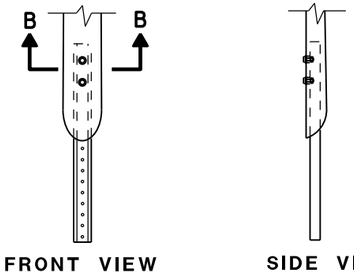


SECTION C-C



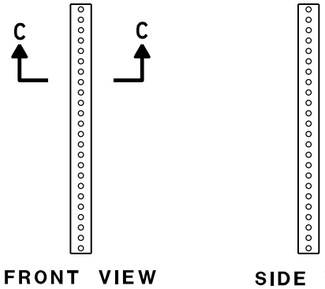
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

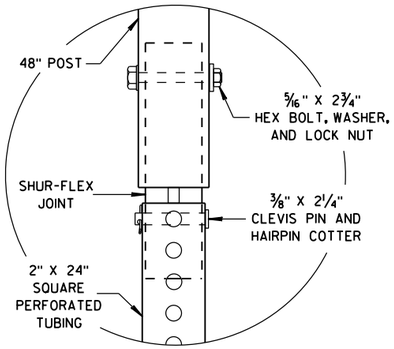
ALTERNATE 2



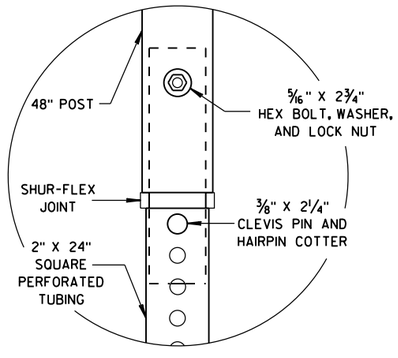
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

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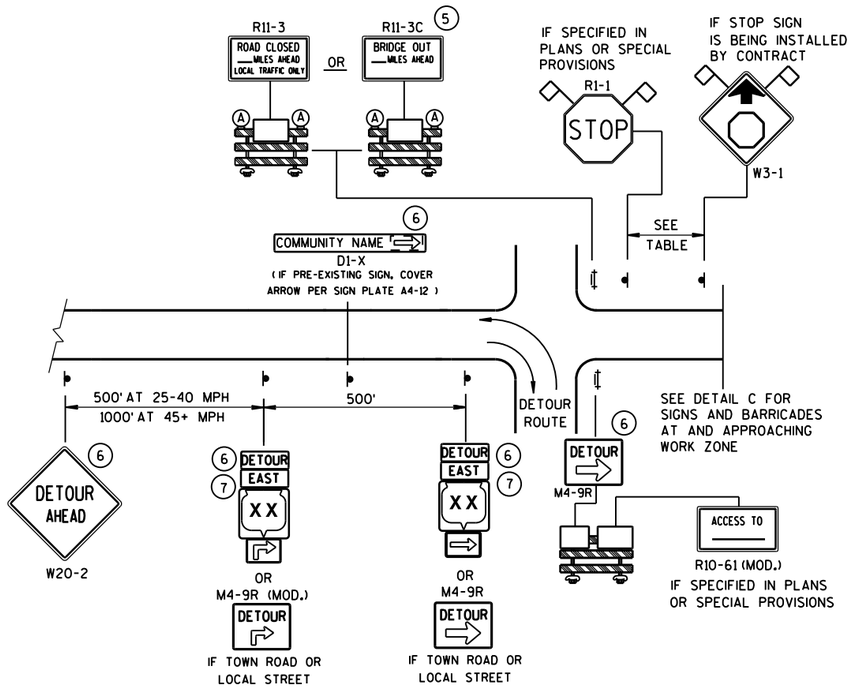
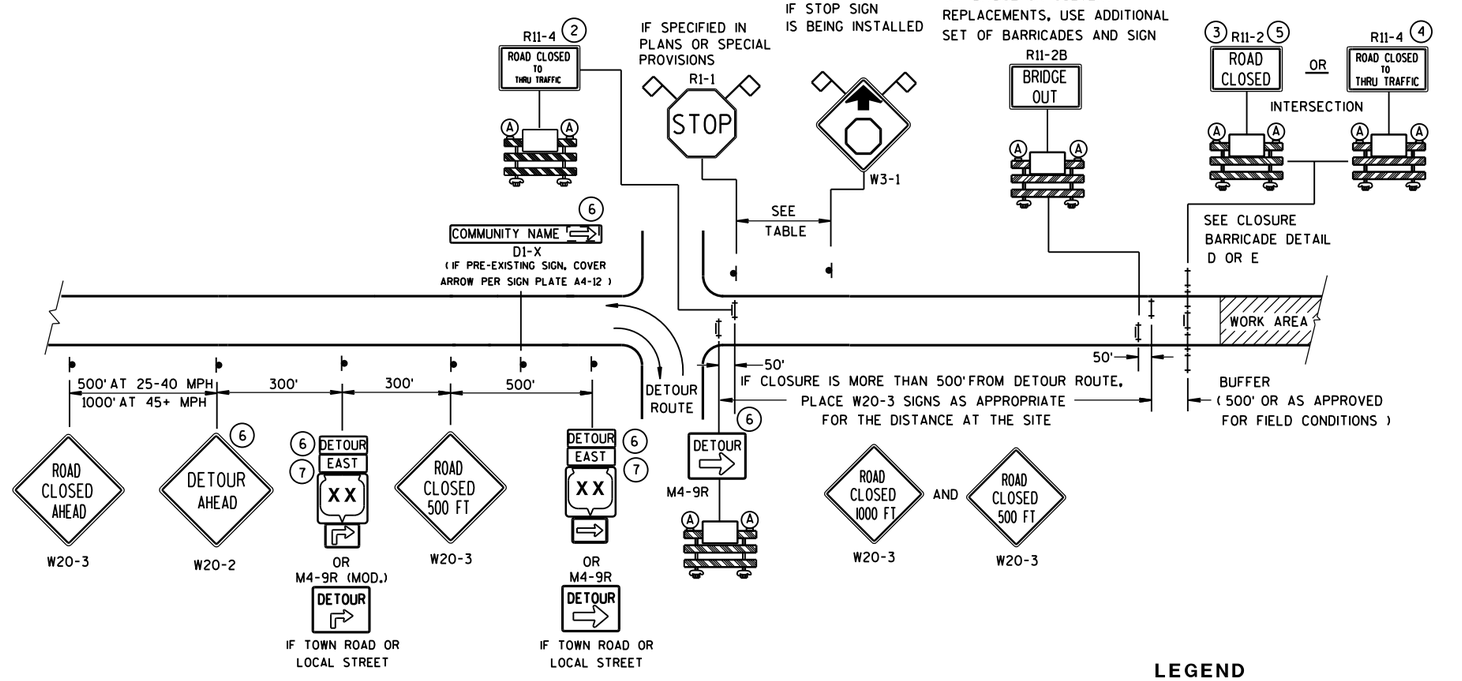
S.D.D. 15 A 3-2b



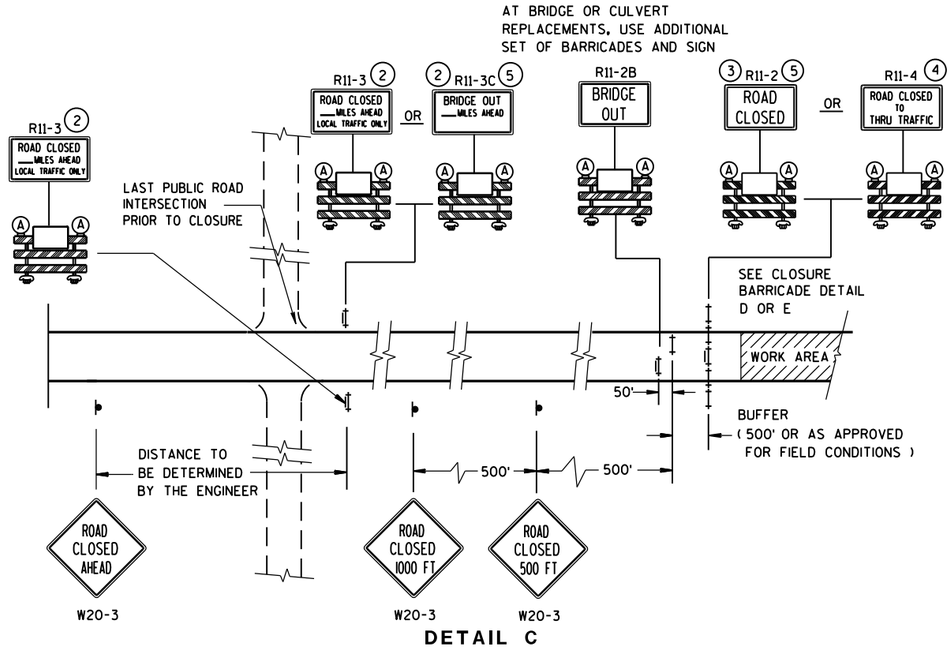
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

128

FHWA

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

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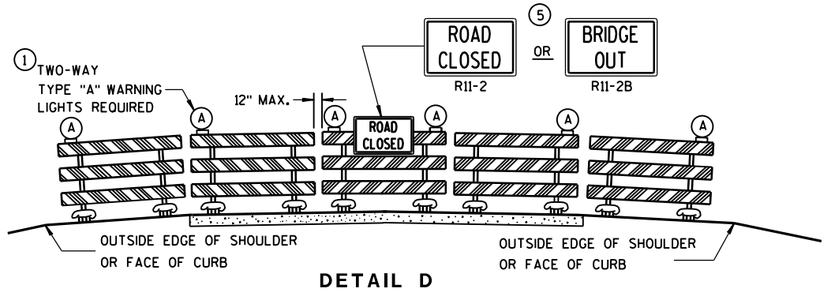
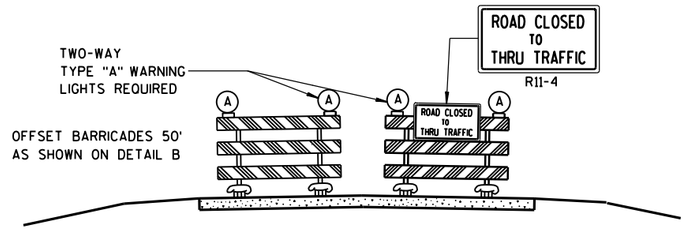
S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

6

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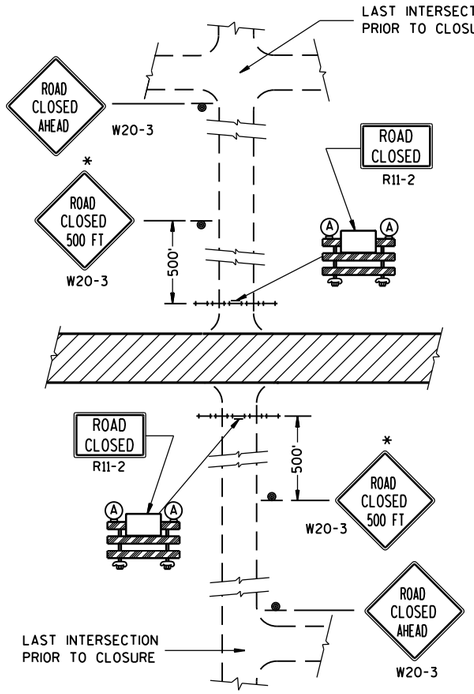
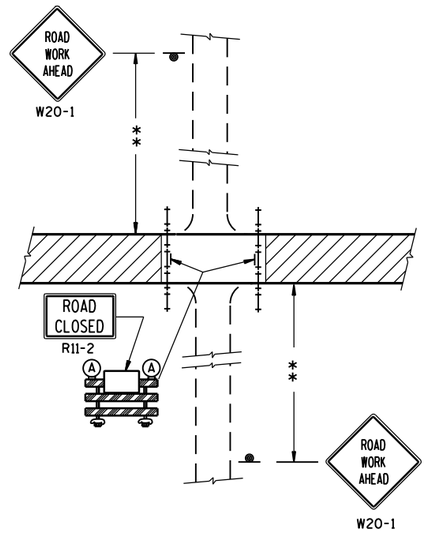


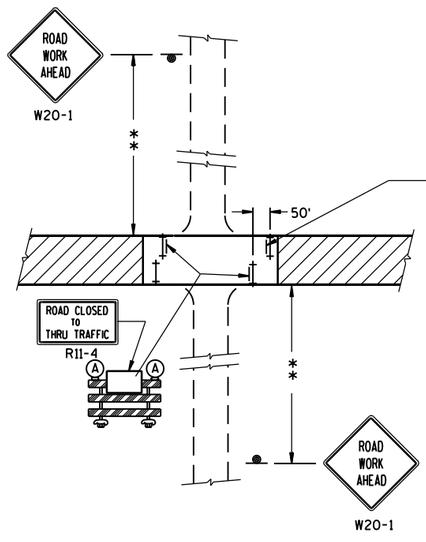
DETAIL 1

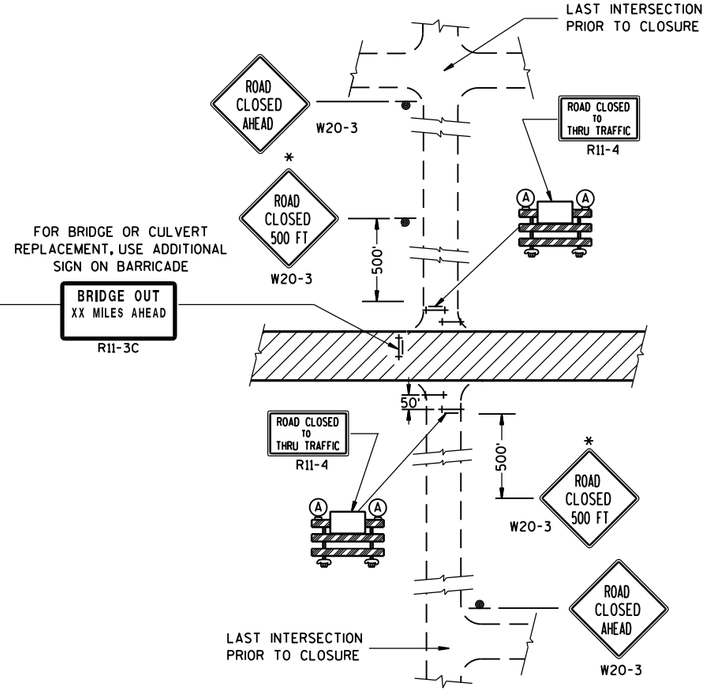
(NO ACCESS TO PROJECT)



DETAIL 2

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





DETAIL 3

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

DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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S.D.D. 15 C 3-2

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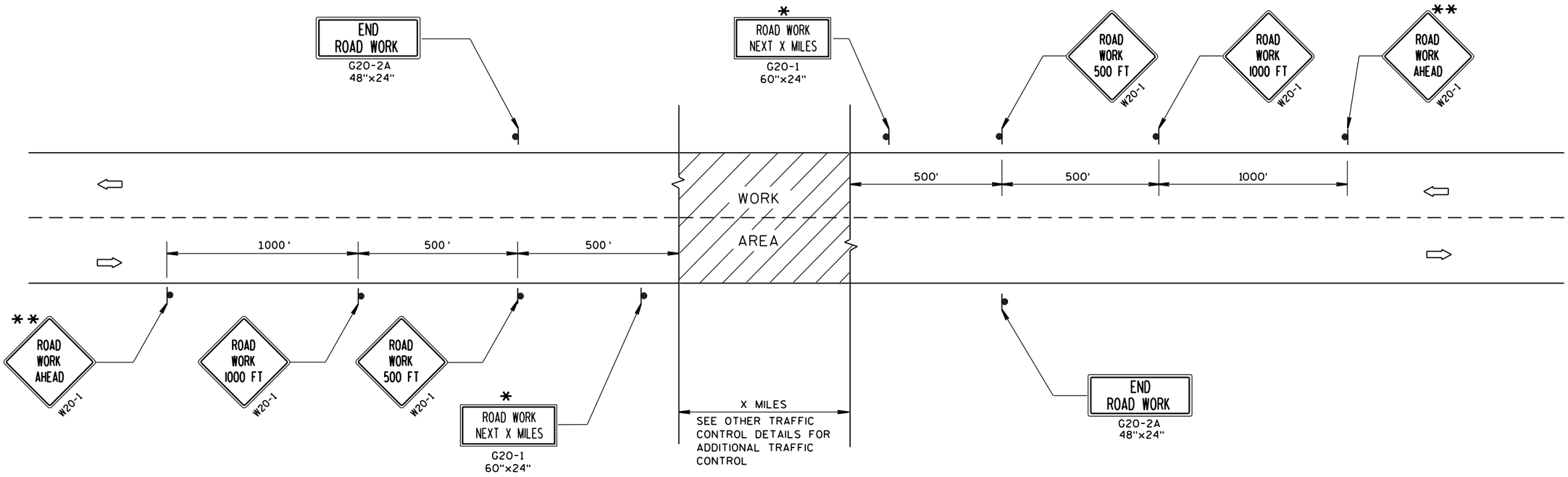


TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

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

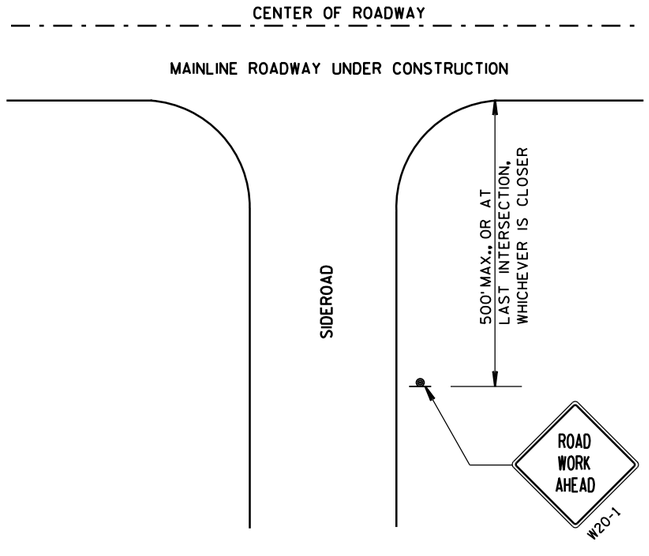
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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



LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

SIGN

FHWA

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S.D.D. 15 C 4-2

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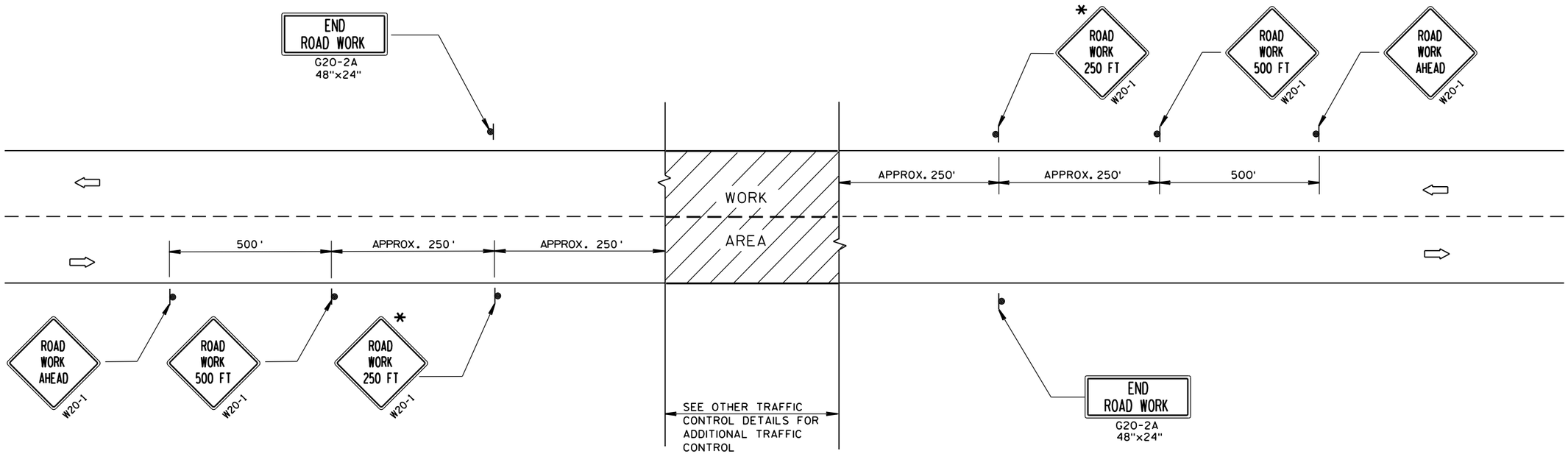
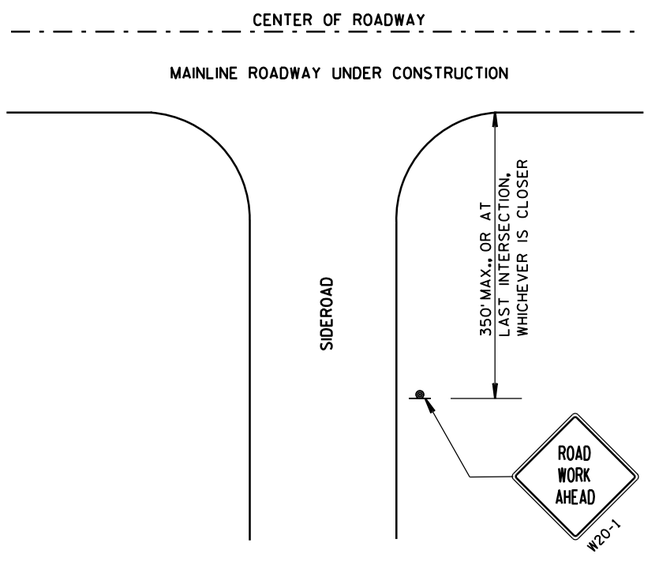


TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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

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

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 DATE — /S/ Travis Feltes STATE TRAFFIC ENGINEER — SIGN

FHWA

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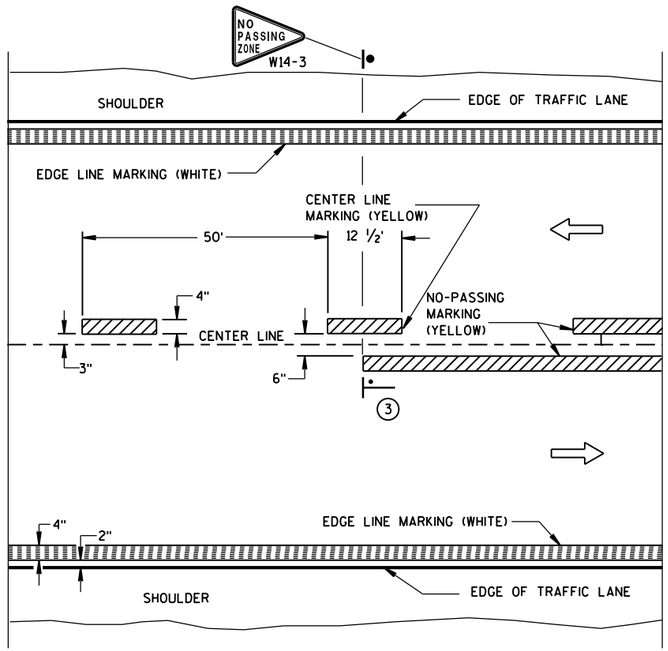
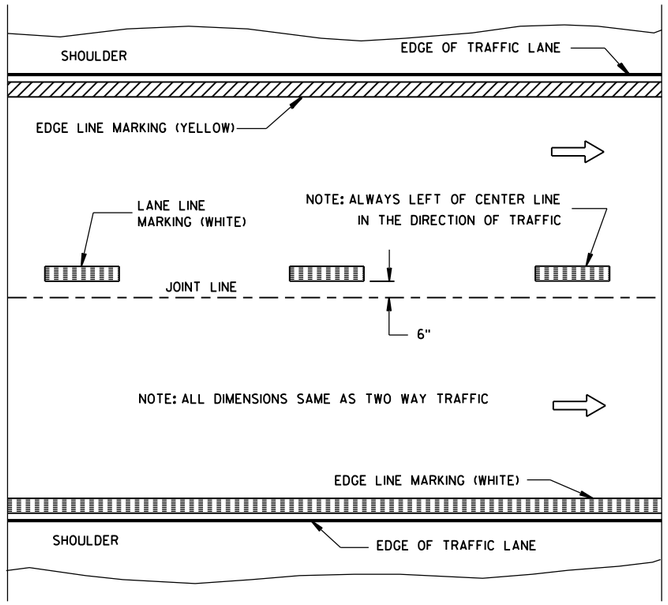
S.D.D. 15 C 5-2

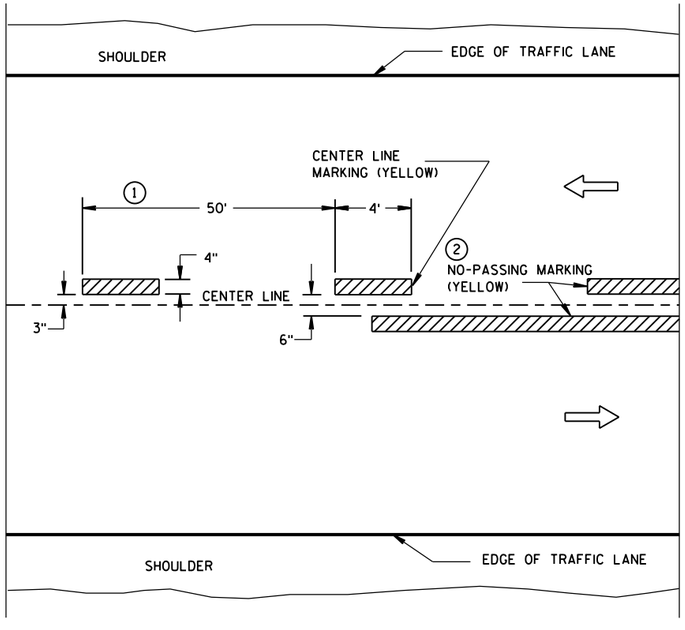


TWO WAY TRAFFIC

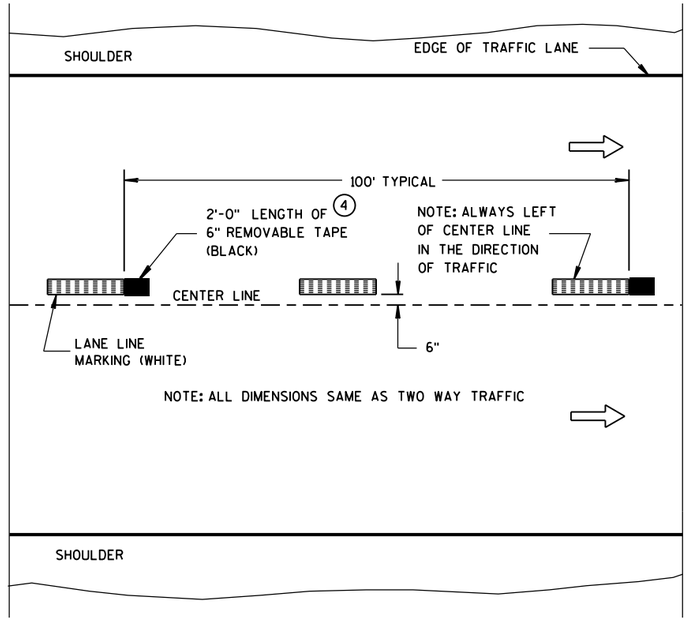


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

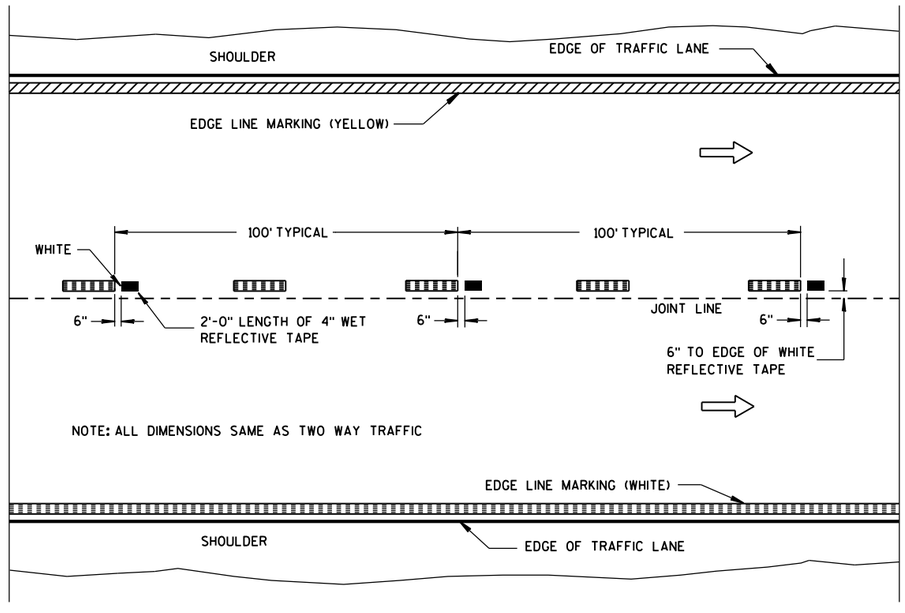
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



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

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC E

FHWA

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

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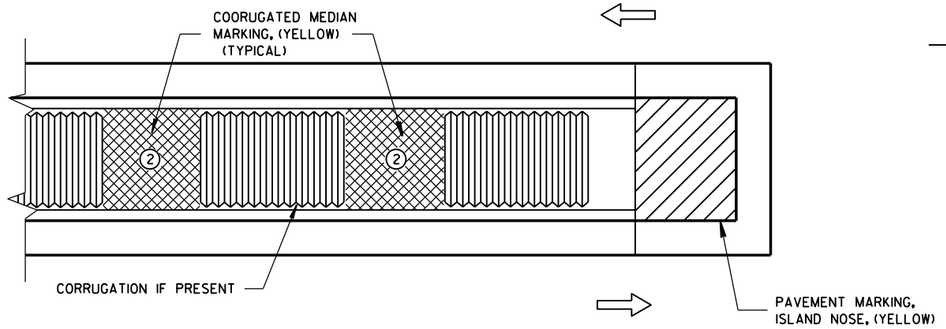
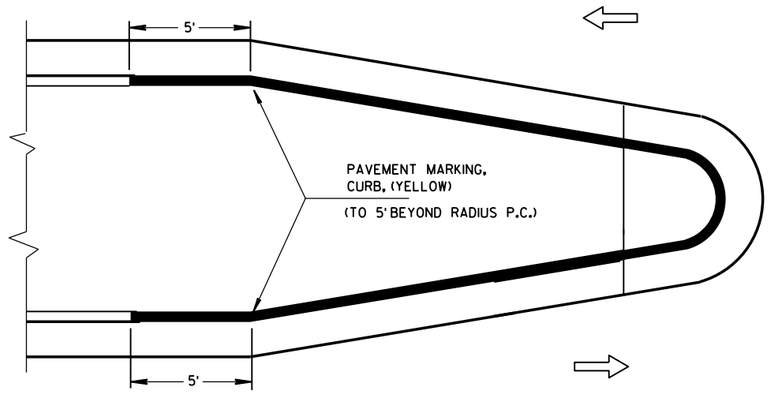
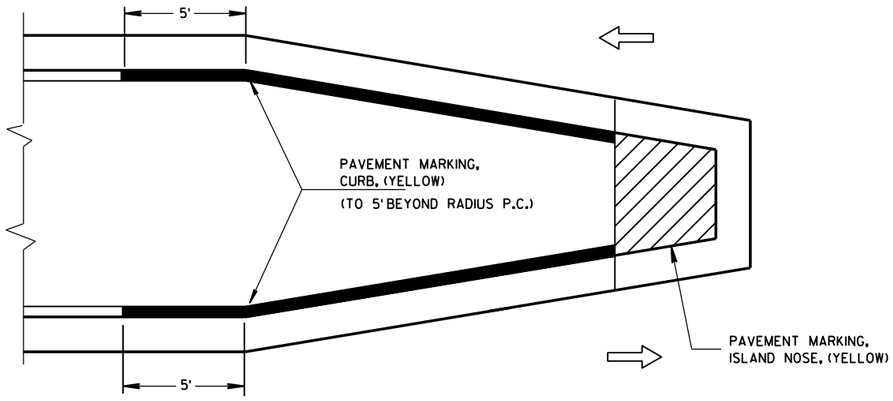


MEDIAN ISLAND WITH SQUARE BLUNT NOSE

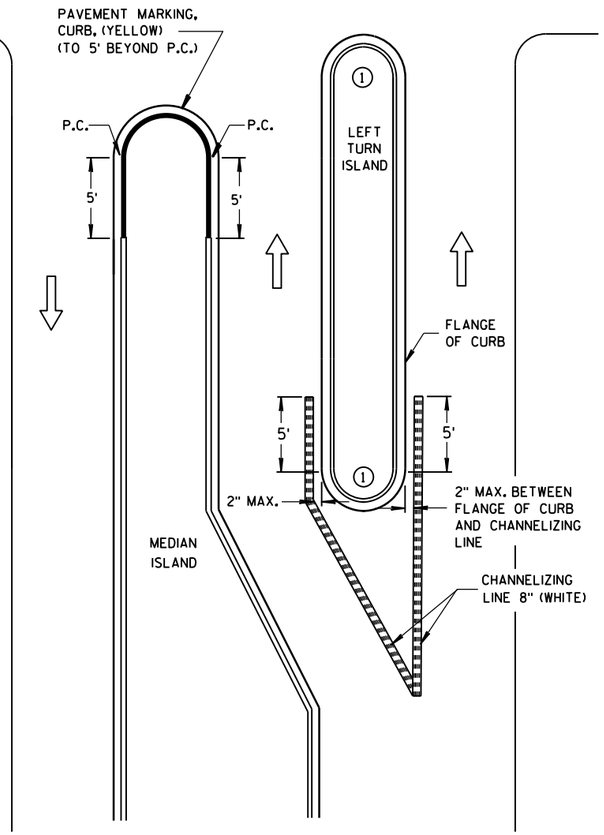


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

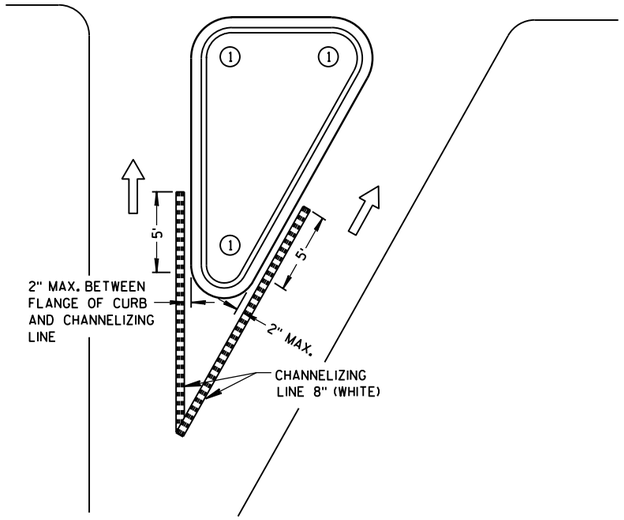


LEFT TURN & MEDIAN ISLAND

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

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

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

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

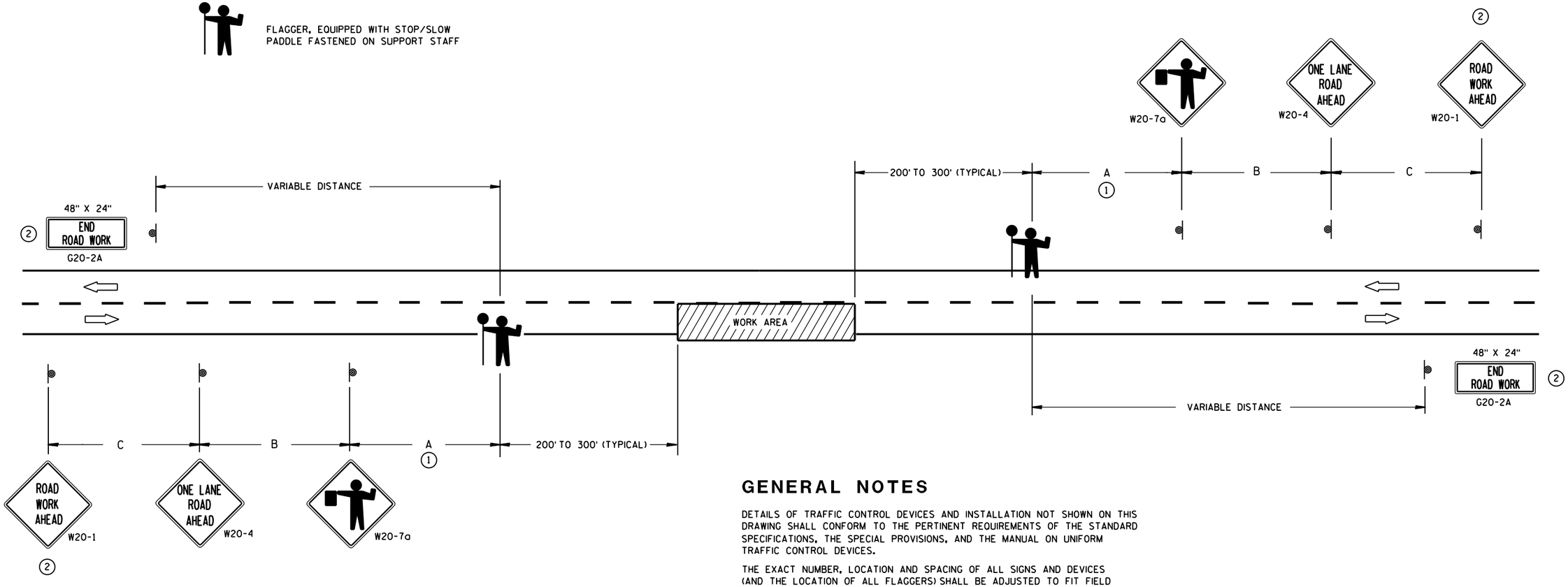
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

W3-4

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



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

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

GENERAL NOTES

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

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

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

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

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
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S.D.D. 15 C 12-4

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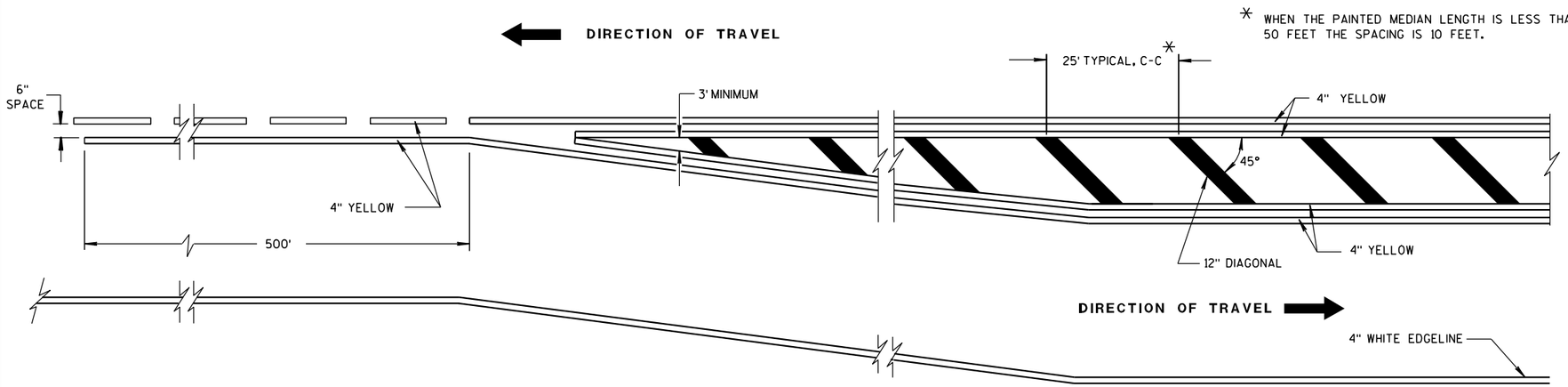
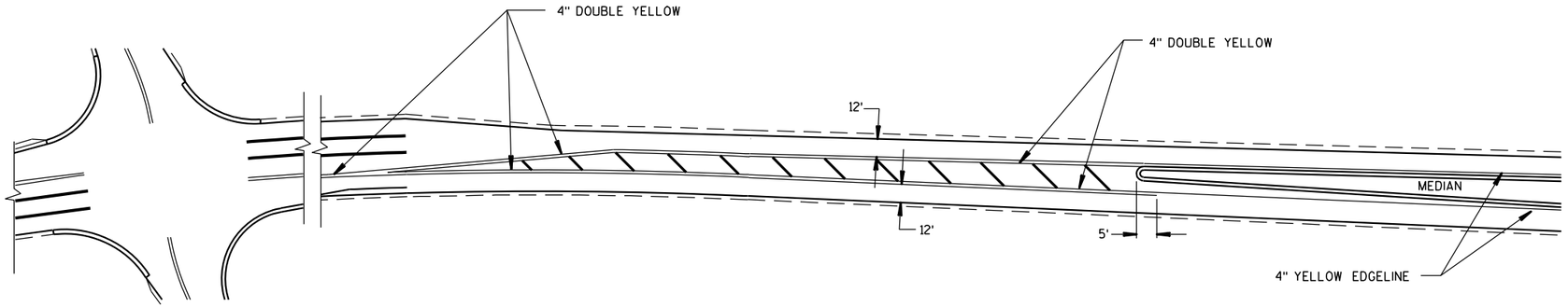
S.D.D. 15 C 12-4



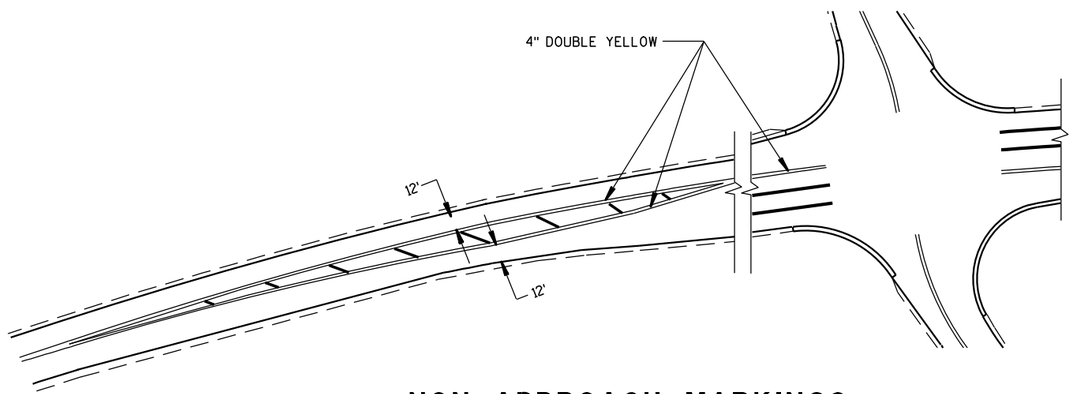
MEDIAN ISLAND DETAIL

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	

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S.D.D. 15 C 18-3

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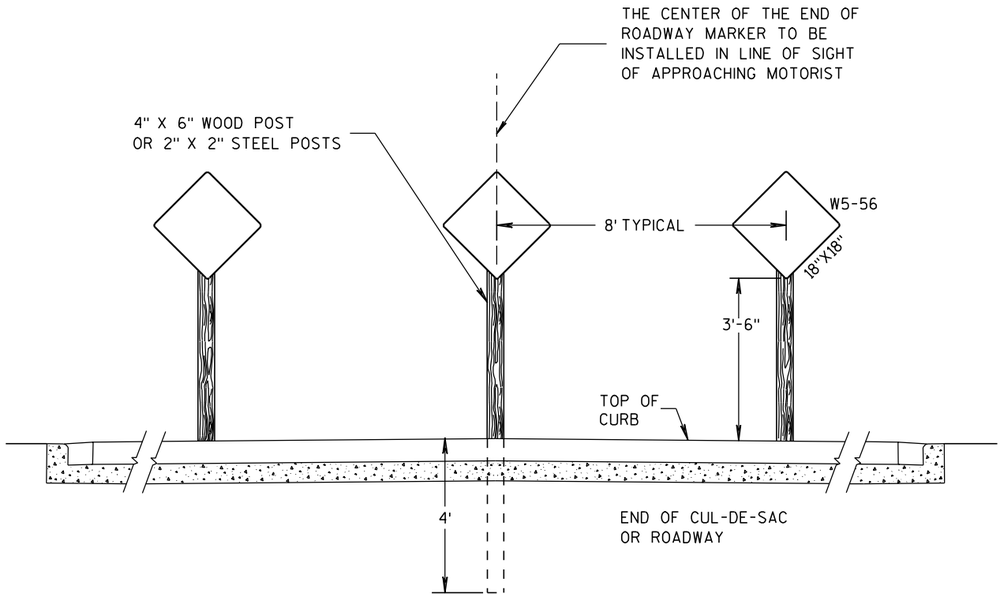
S.D.D. 15 C 18-3

GENERAL NOTES

SIGN LOCATIONS SHOWN ARE TYPICAL PLACEMENT AND MAY BE ADJUSTED BY THE ENGINEER AS FIELD CONDITIONS DICTATE.

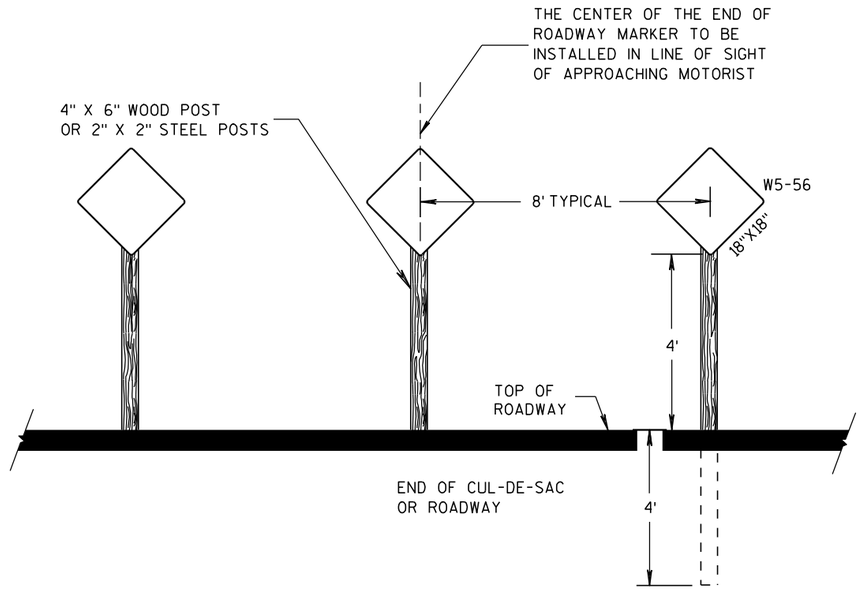
THE MINIMUM NUMBER OF END-OF-ROADWAY SIGNS ARE THREE (AS SHOWN). ADDITIONAL END-OF-ROADWAY SIGNS MAY BE INSTALLED AS FIELD CONDITIONS DICTATE. (SEE SIGNING PLAN).

WHEN BEAMGUARD IS REQUIRED, PLACE END-OF-ROADWAY SIGNING BEHIND BEAMGUARD.



TYPICAL URBAN SIGN INSTALLATION

(WITH CURB & GUTTER)



TYPICAL RURAL SIGN INSTALLATION

(WITHOUT CURB & GUTTER)

END-OF-ROADWAY SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/1/2011 — DATE

/S/ Thomas N. Nothohm — STATE TRAFFIC ENGINEER

FHWA

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S.D.D. 15 C 26-2

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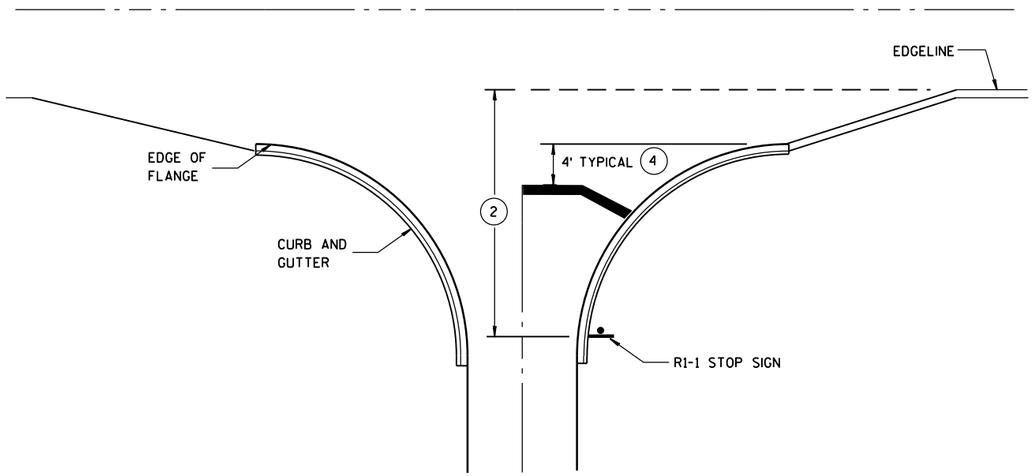
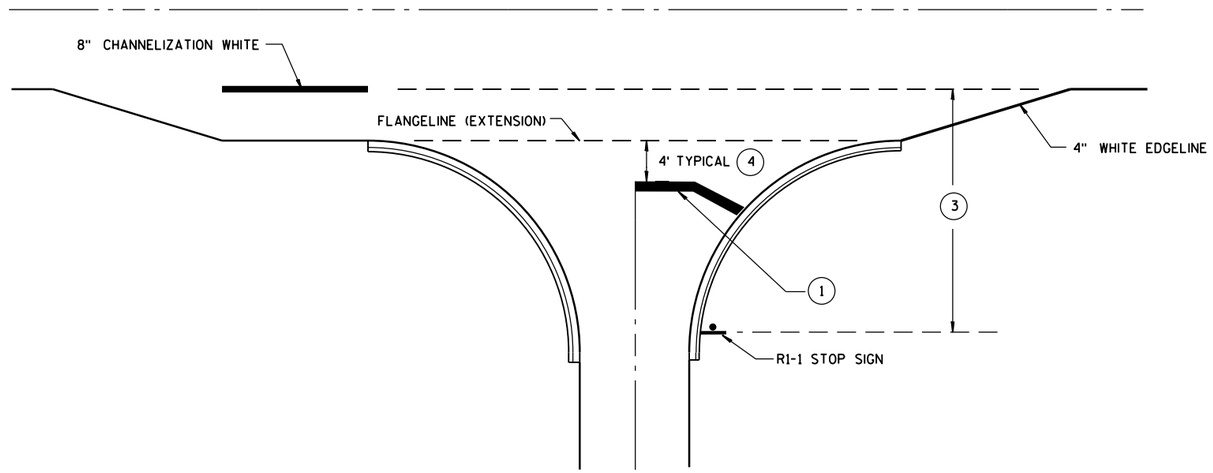
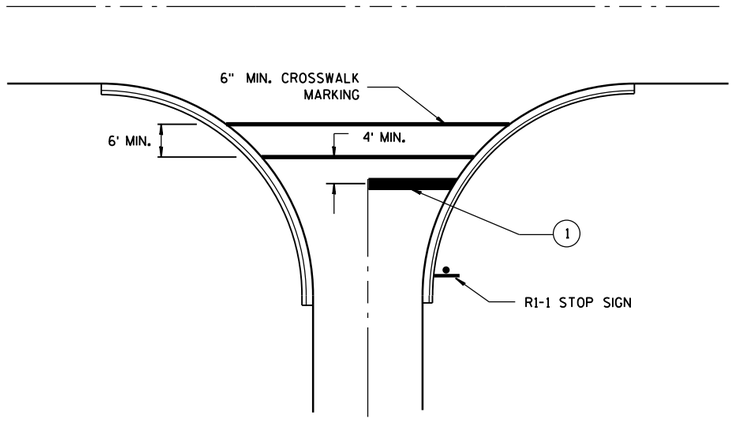
S.D.D. 15 C 26-2



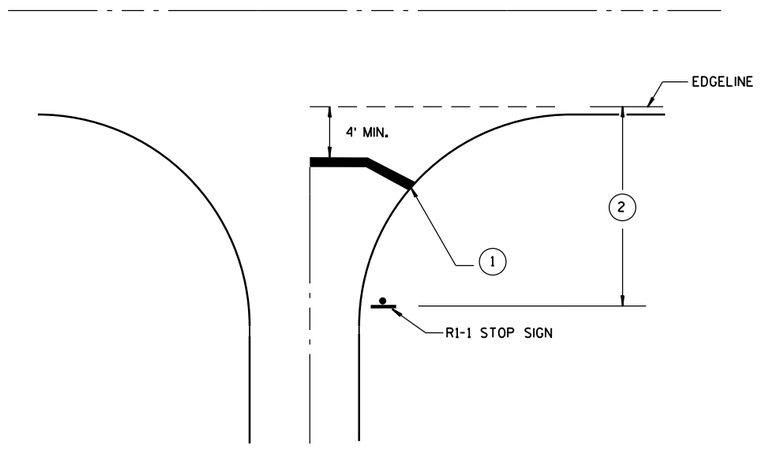
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
3. IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
4. MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

FHWA

6

S.D.D. 15 C 33-1

GENERAL NOTES

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

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

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

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

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

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

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

TABLE A

SHOULDER TAPER LENGTH (FEET)					BUFFER SPACE (FEET)
S \ W	4	6	8	10	
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

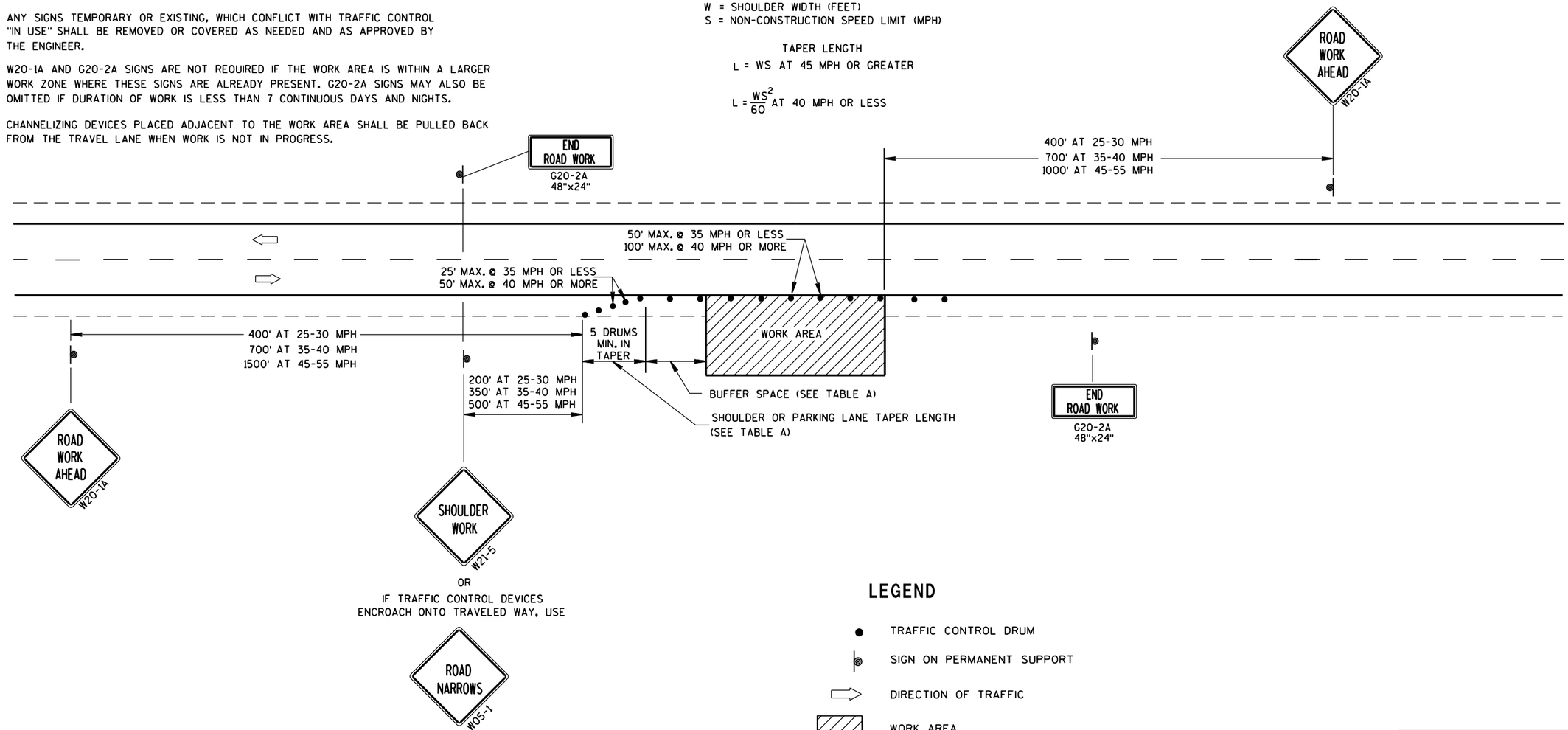
W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

SHOULDER TAPER LENGTH = $\frac{1}{3}L$



LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

July 14, 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible] FIC

FHWA

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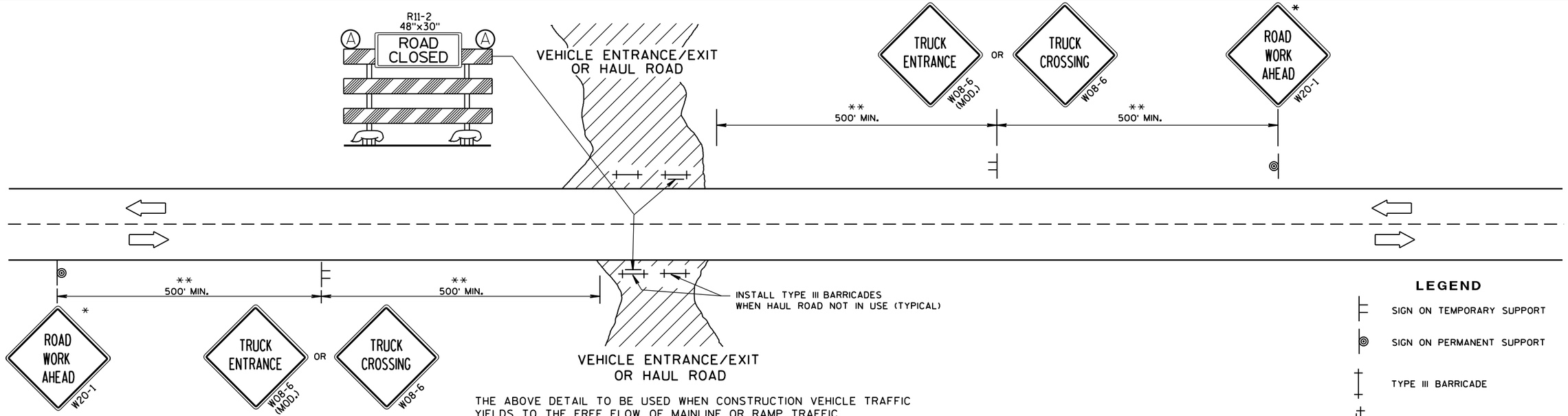
S.D.D. 15 D 28-3



THE ABOVE DETAIL TO BE USED WHEN CONSTRUCTION VEHICLE TRAFFIC YIELDS TO THE FREE FLOW OF MAINLINE OR RAMP TRAFFIC

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

GENERAL NOTES

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

WHEN ACTIVITY REFLECTED BY THE SIGN IS NOT CURRENTLY TAKING PLACE, THE HIGHWAY SHALL BE RESTORED TO NORMAL CONDITION AND THE SIGNS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC.

WHEN A SIDE ROAD OR RAMP INTERSECTS WITHIN THE ADVANCE SIGNING AREA, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

* THESE SIGNS ARE TO BE USED ONLY WHEN VEHICLE ENTRANCE/EXIT CONDITIONS ARE SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA OR SIGNING OR AS DIRECTED BY THE ENGINEER.

** 500 FEET SHOWN IS FOR ROADWAYS WITH A NON-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FEET. FOR 25-30 MPH, USE 200 FEET. USE 1000 FEET/1500 FEET FOR EXPRESSWAY/FREEWAY.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

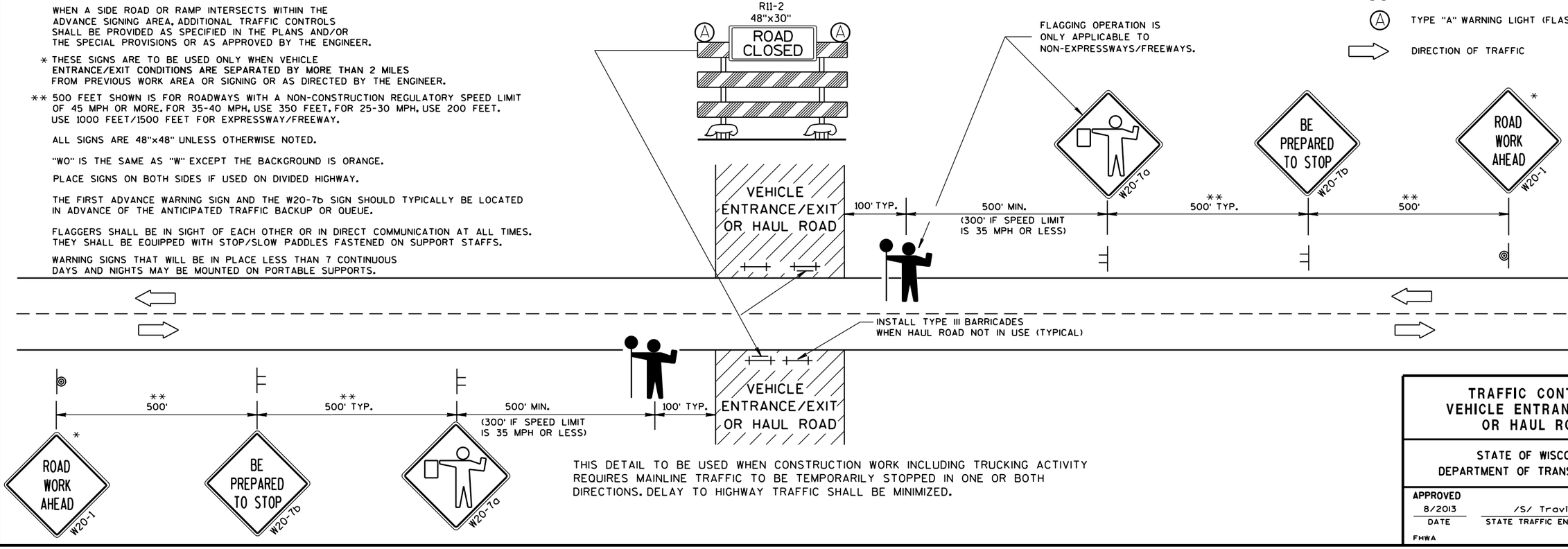
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

PLACE SIGNS ON BOTH SIDES IF USED ON DIVIDED HIGHWAY.

THE FIRST ADVANCE WARNING SIGN AND THE W20-7b SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS.

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



THIS DETAIL TO BE USED WHEN CONSTRUCTION WORK INCLUDING TRUCKING ACTIVITY REQUIRES MAINLINE TRAFFIC TO BE TEMPORARILY STOPPED IN ONE OR BOTH DIRECTIONS. DELAY TO HIGHWAY TRAFFIC SHALL BE MINIMIZED.

TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

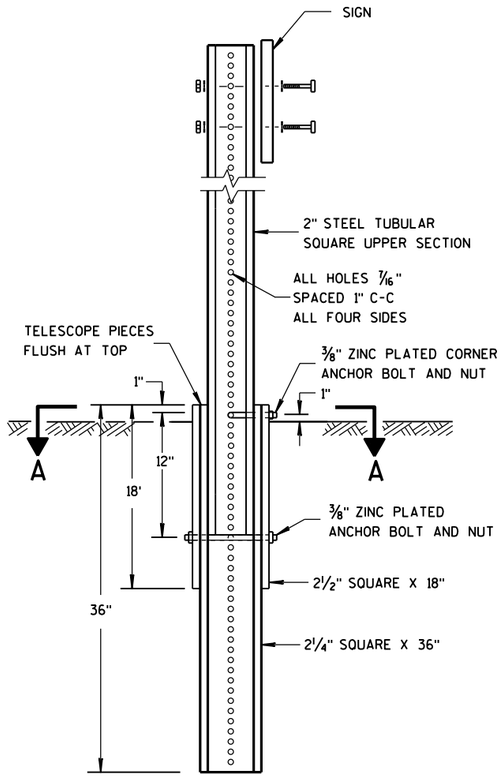
APPROVED

8/2013	/S/ Travis Feltes	
DATE	STATE TRAFFIC ENGINEER	IGN

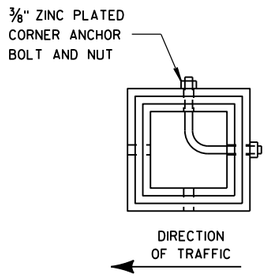
FHWA

6

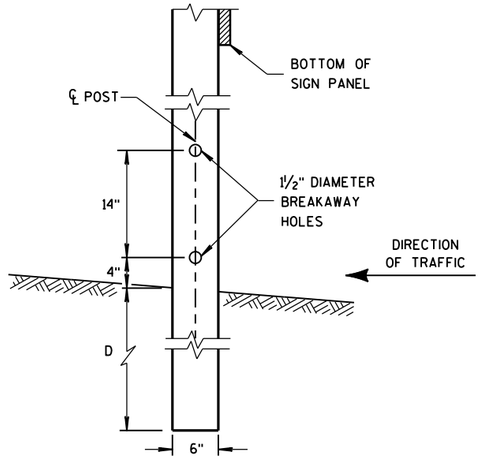
S.D.D. 15 D 29-3



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



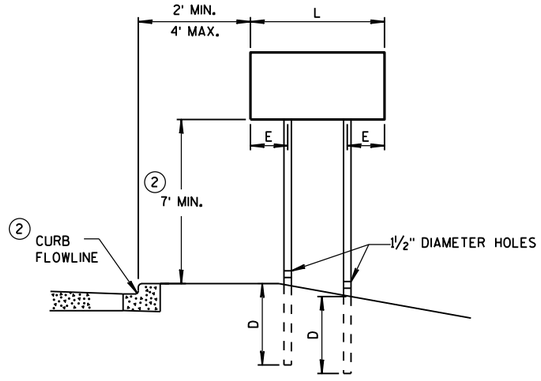
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

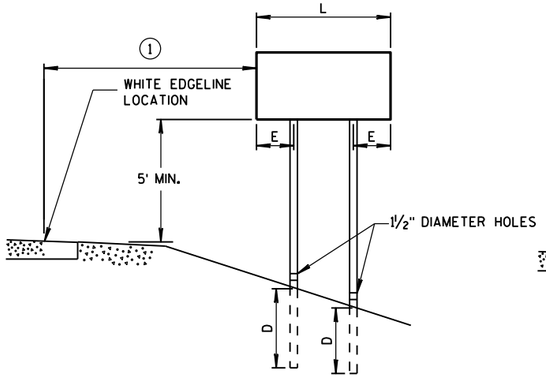
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

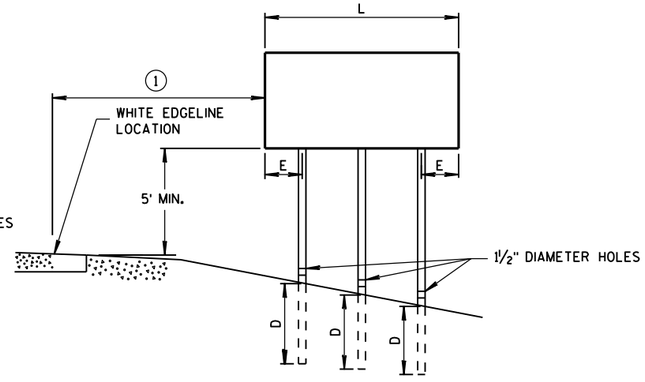
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

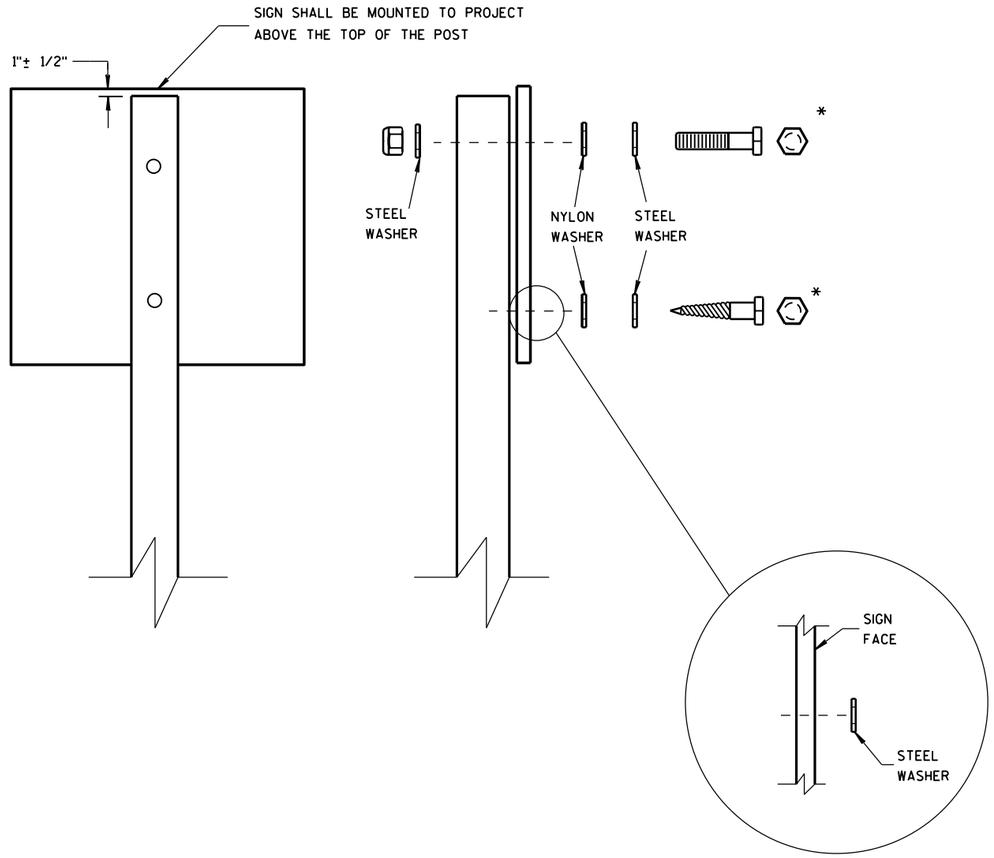
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

STATE OF WISCONSIN DEPARTMENT OF TRANSPOI

6

S.D.D. 15 D 38-1a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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

* 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

S.D.D. 15 D 38-1b

S.D.D. 15 D 38-1b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Feb. 2015 — DATE

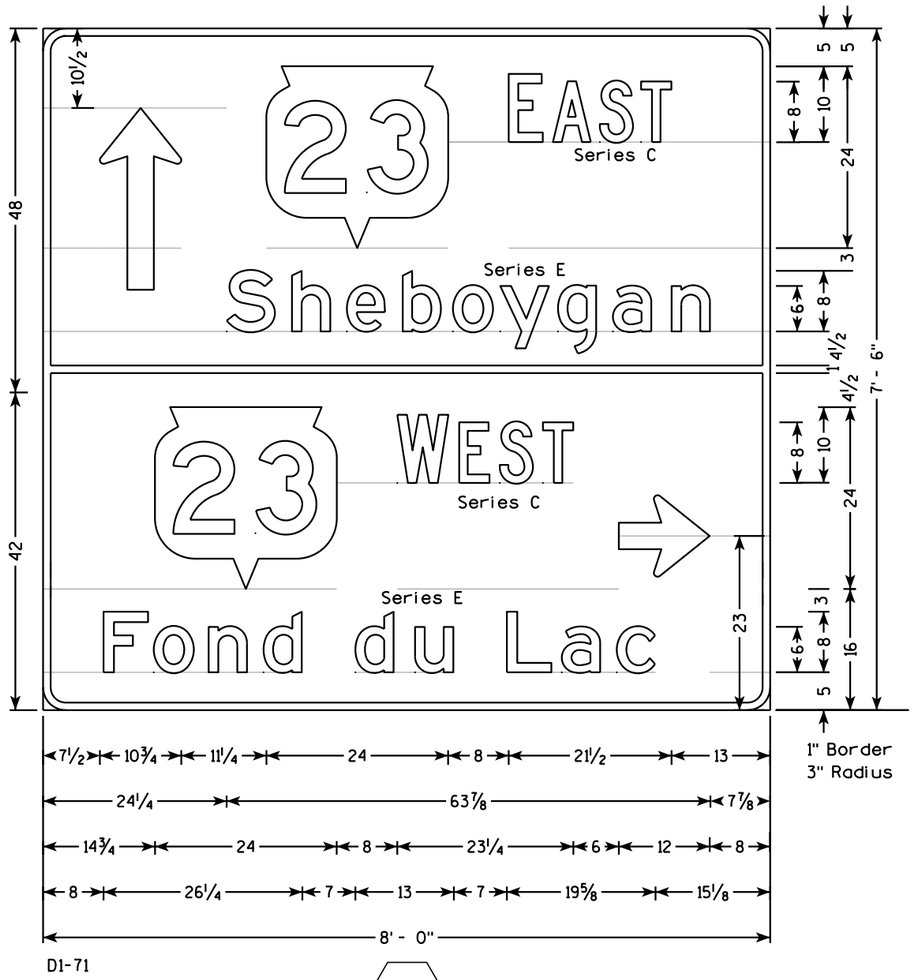
/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

SIGN

NOTES

1. All SignsType 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



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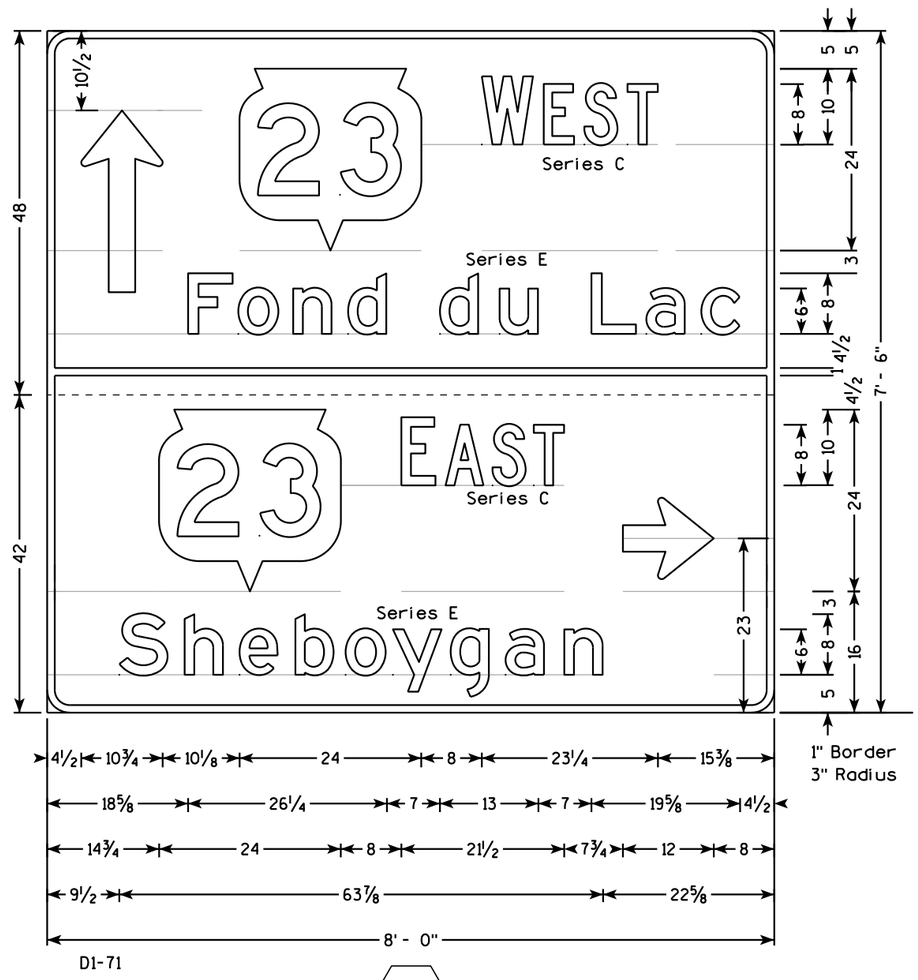
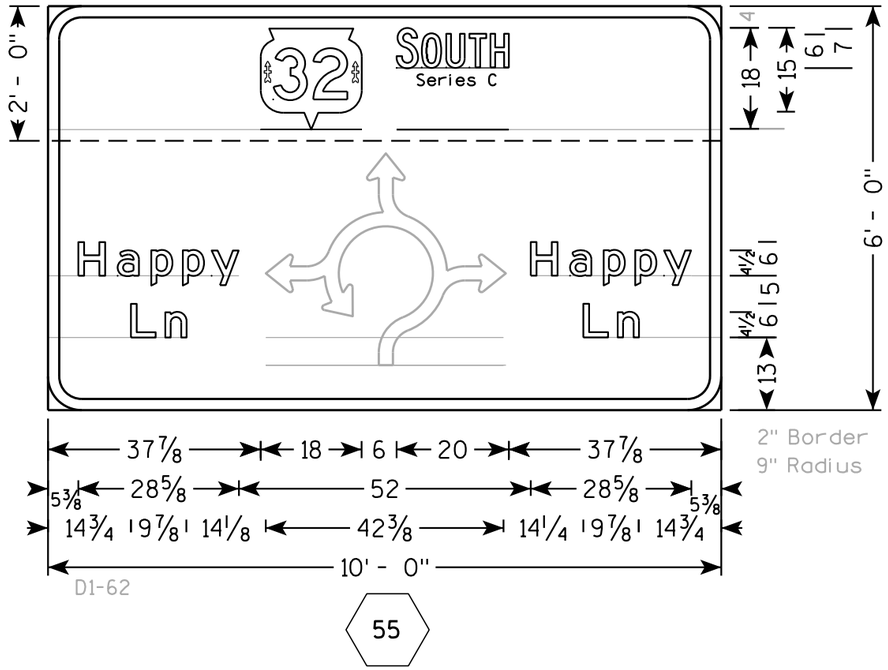


62

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET NO: 143	E

FILE NAME : N:\spo\traffic\SIGNING\Projects\4540-23-71 STH 32 - Happy Lane\070101_sd.dgn PLOT DATE : 06-MAR-2014 07:42 PLOT BY : dotj1f PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 42



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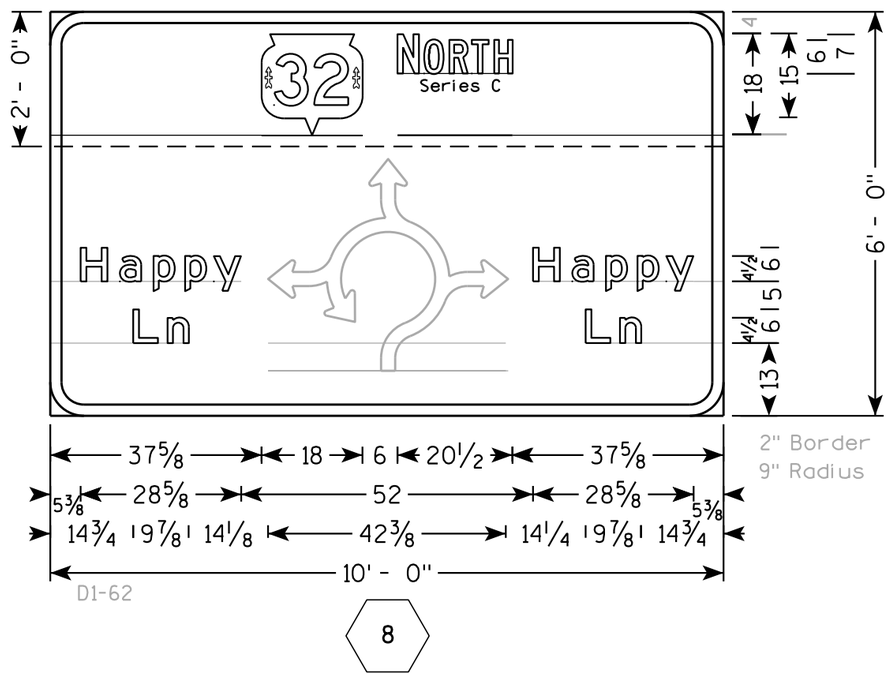
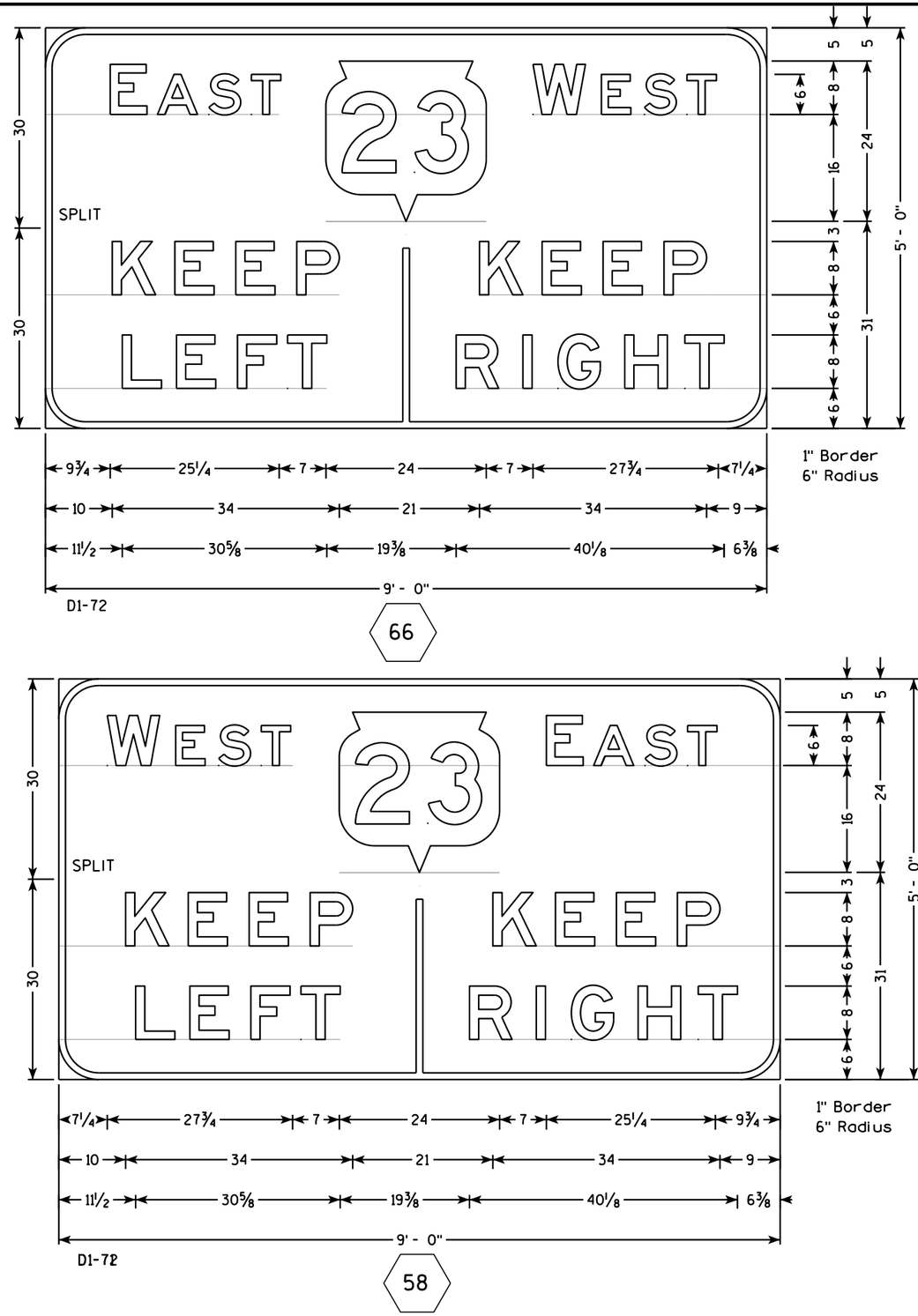


8

NOTES

1. All SignsType 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
4. For Roundabout Detail refer to Standard Plate A11-12 for dimensions.



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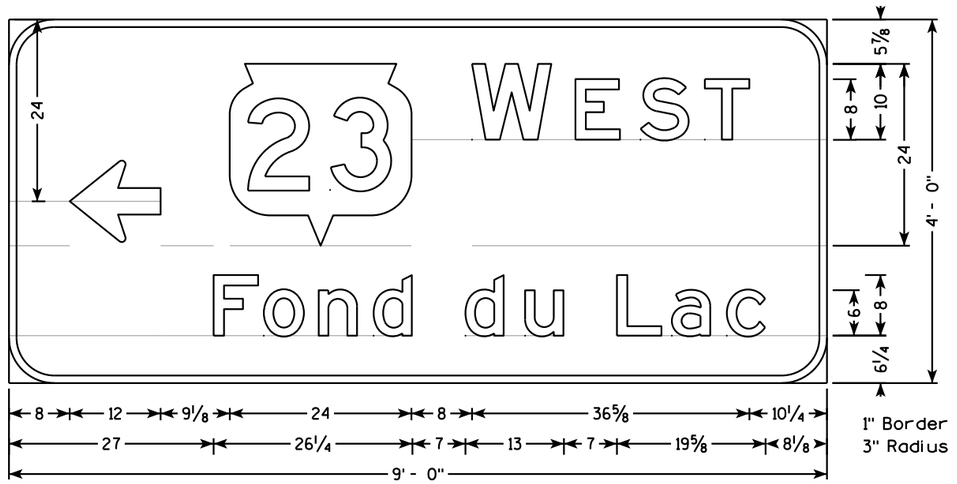
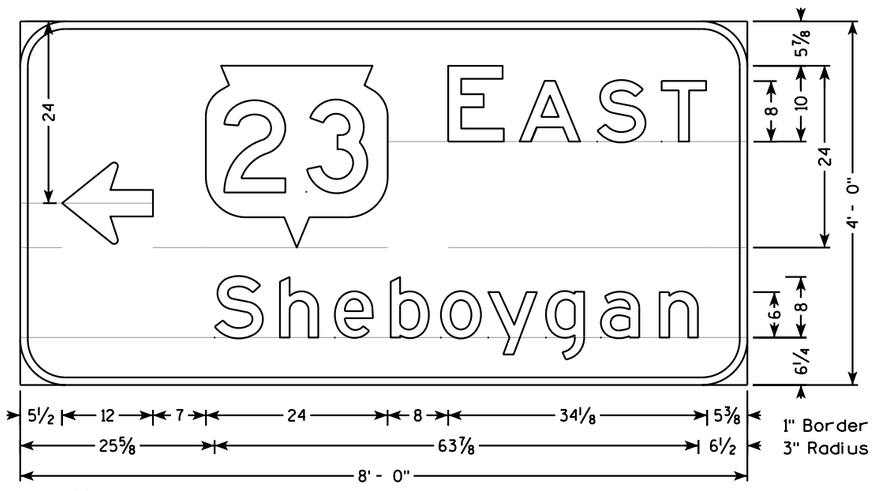


64

58



63

NOTES

1. All SignsType 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

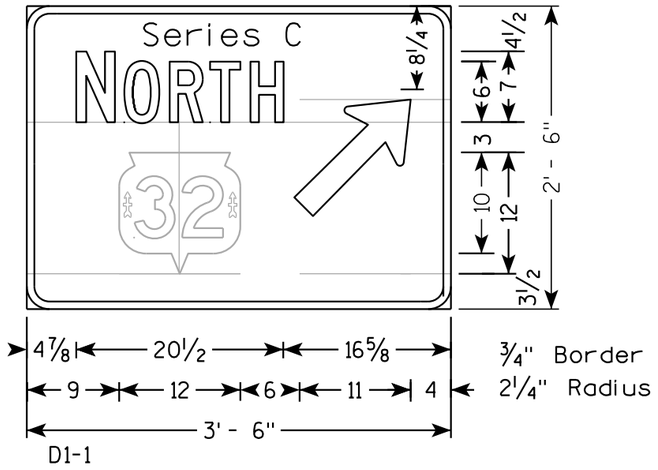
7

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET NO: 145	E

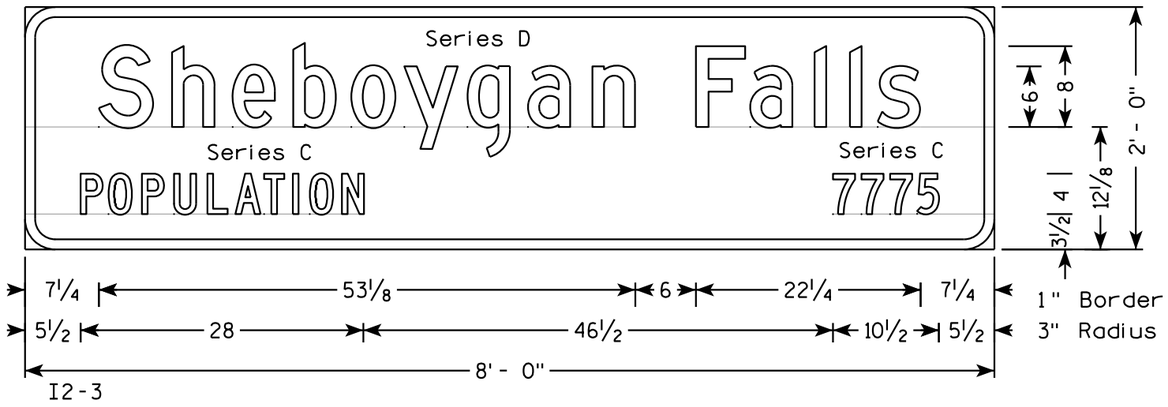
FILE NAME : N:\spo\traffic\SIGNING\Projects\4540-23-71 STH 32 - Happy Lane\070103_sd.dgn PLOT DATE : 06-MAR-2014 07:43 PLOT BY : dotj1f PLOT NAME : PLOT SCALE : 20:1 WISDOT/CADDS SHEET 42

NOTES

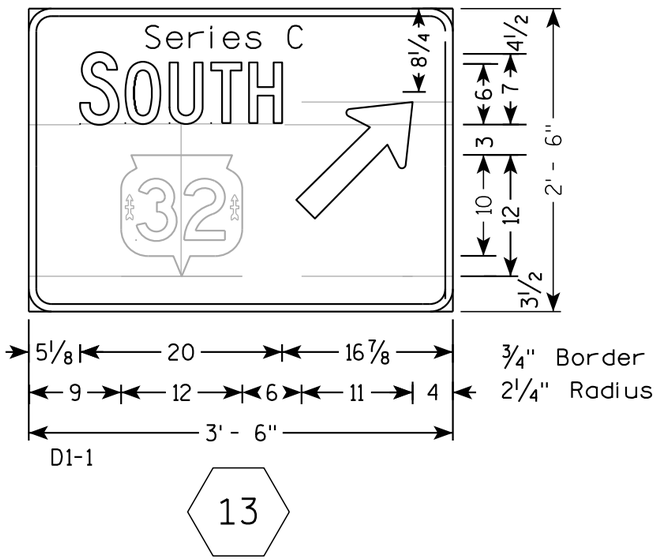
1. All SignsType II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White
3. Message Series - E except as noted



52



2



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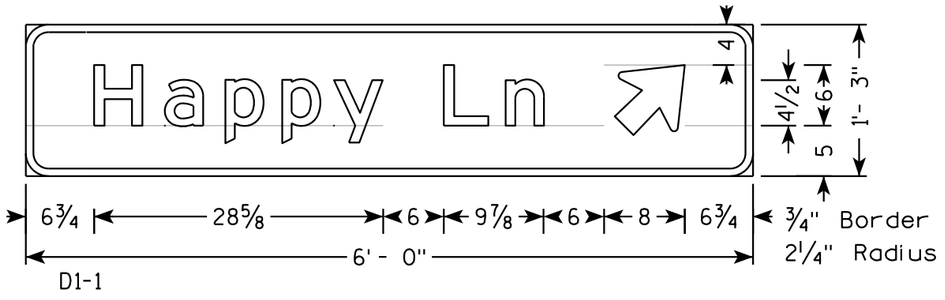
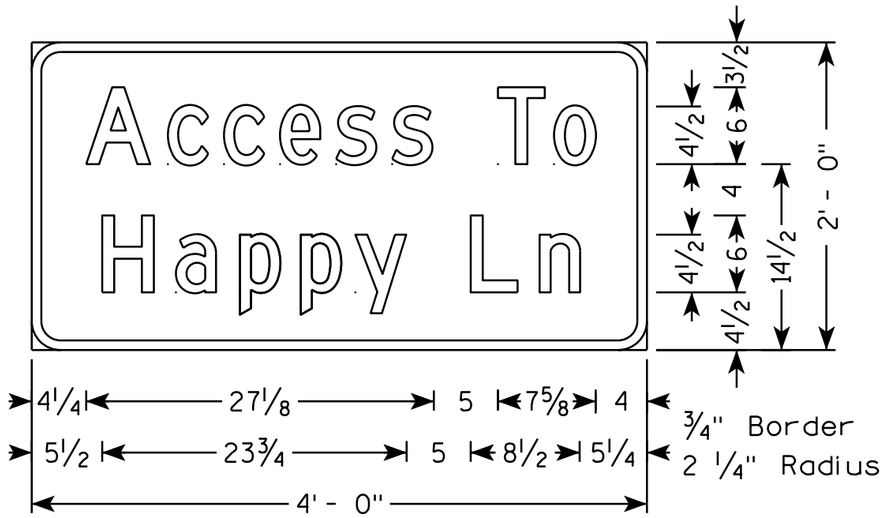


20 45

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET NO: 146	E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - ORANGE
   Message - BLACK
3. Message Series - D



D1-2

7

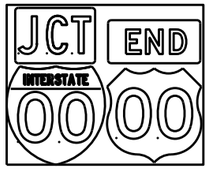
7

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET NO:	E

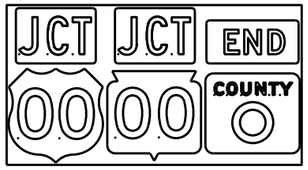
FILE NAME : C:\CAEFiles\Projects\tr_d3\3593A612.DGN PLOT DATE : 15-JUL-2014 07:35 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 11.820994:1.000000
WISDOT/CADDS SHEET 42

TYPICAL ASSEMBLIES

J1-1

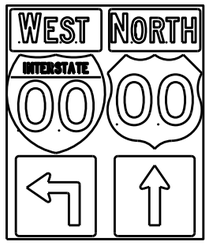


J1-2

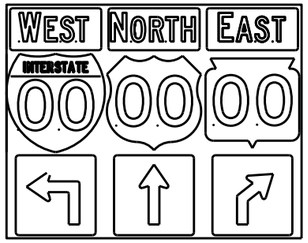


J1-3

J2-1



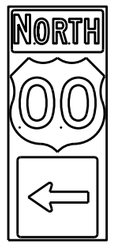
J2-2



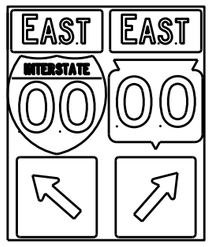
J2-3

JV

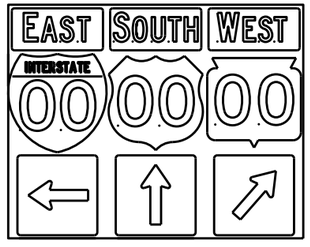
(Typical Vertical J-Assembly
See Note 10 and 11)



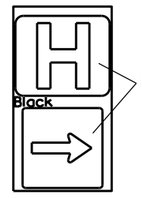
J3-1



J3-2



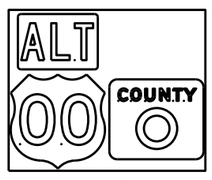
J3-3



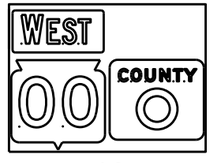
Blue Background

JH-1

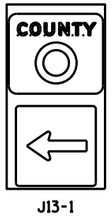
J4-1



J4-2



J4-2



J13-1

J12-1

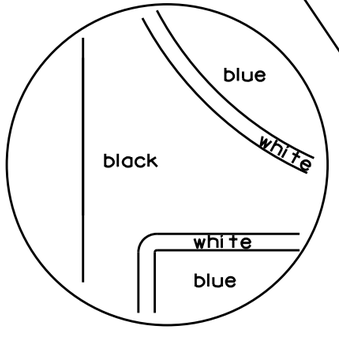
J32-1

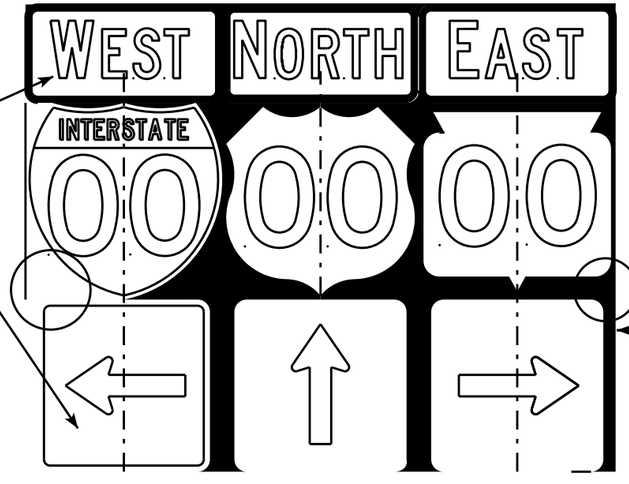
J33-1

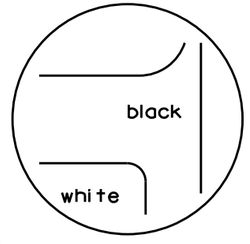
J23-1

J22-1

[blue background with interstate]







[black background]

NOTES

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

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

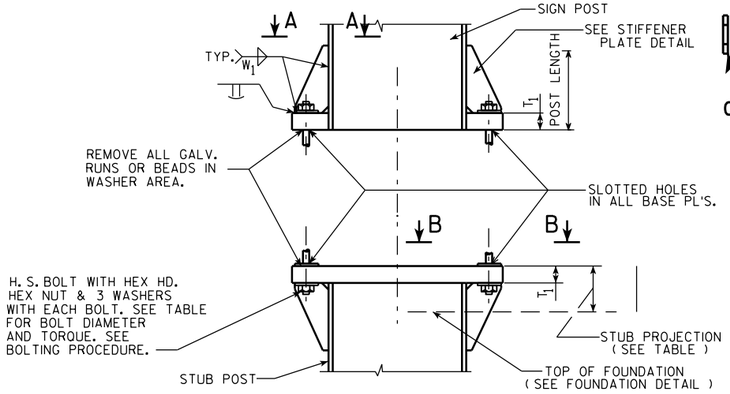
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

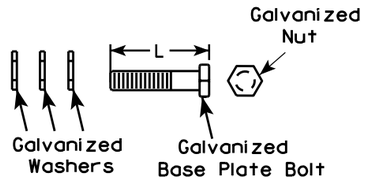
DATE 2/06/14 PL... A2-1S.8

PROJECT NO: SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :
WISDOT/CADDS SHEET 42

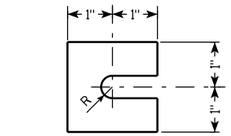


SIGN POST AND STUB POST ELEVATION



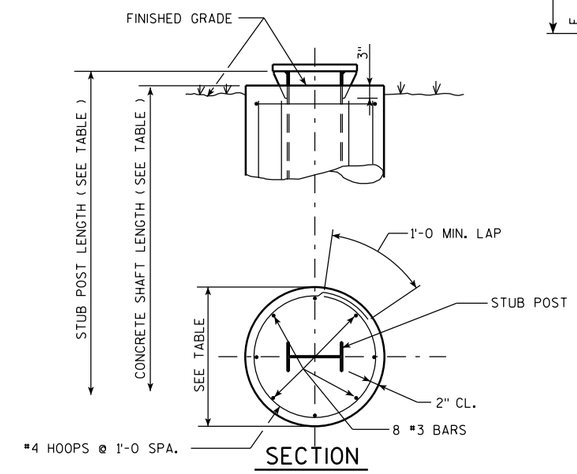
STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)

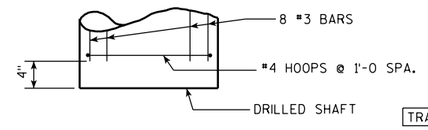


FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

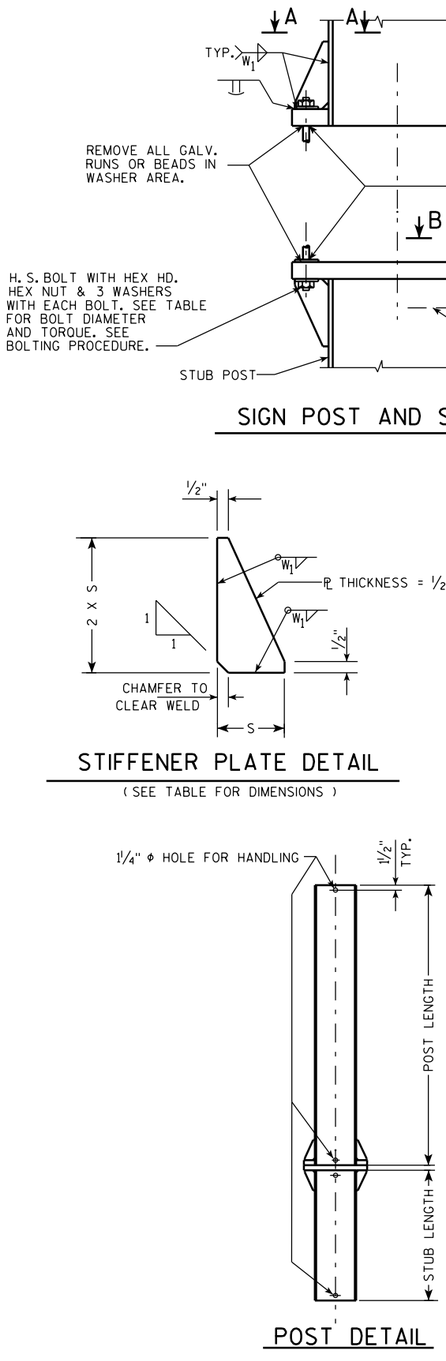
SHIM DETAIL



SECTION



FOUNDATION DETAIL



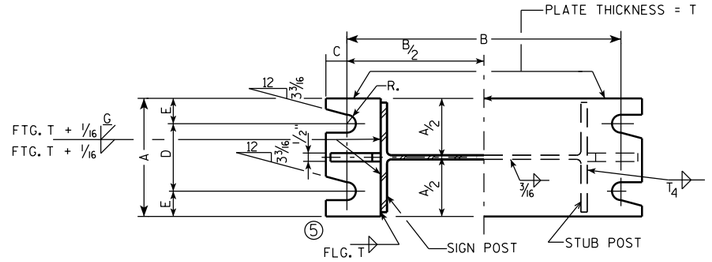
POST DETAIL

QUANTITIES FOR 1 FOOTING		
	CONC. MASONRY C.Y.	REINF. STEEL LBS.
A	0.6	34
B	0.8	49
C	0.9	50
D	0.9	56
E	1.0	62

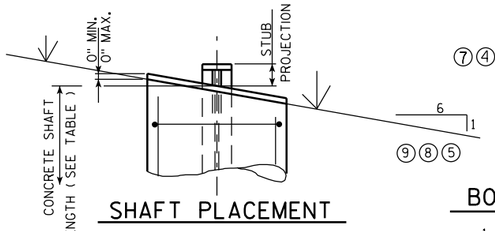
⑦

REINF.	TYPE	#3	#4
	A	8 @ 4'-5	5 @ 6'-3
	B	8 @ 6'-5	7 @ 6'-3
	C	8 @ 6'-11	7 @ 6'-3
	D	8 @ 7'-5	8 @ 6'-3
	E	8 @ 7'-11	9 @ 6'-3

⑦



SECTION A-A SECTION B-B



SHAFT PLACEMENT

DESIGN DATA

WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.

GROUP LOADS	PERCENT OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD & WIND	140
3. DEAD, ICE & ½ WIND[4]	140 [4]25 P.S.F. MIN.

ALLOWABLE SOIL PRESSURE = 1½T / SQ. FT.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.
ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

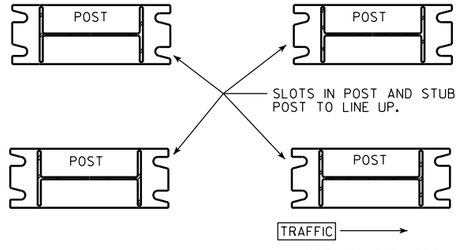
GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50.
⑨ THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
H.S. BOLTS, WASHERS & NUTS SHALL BE A325 GALVANIZED WHEN POSTS, POST STUBS AND ATTACHMENTS ARE A709 GRADE 50 AND GALVANIZED.

BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
2. SHIM AS REQ'D. TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
5. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.



POST SLOT ORIENTATION ⑦

L	X	TYPE	DIMENSION / POST SIZE	BASE CONNECTION DATA TABLE: BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	FOUNDATION DATA: STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	② K
3 ¾	④	A	W10"X12.0 #/FT.	¾" Φ @ 75#-FT.	5¼"	1'-0⅜	⅞"	3½"	⅞"	1"	3/16"	5/16"	13/32"	2⅛"	3'-6	3"	2'-0 Φ	5'-0	76.0# ④
4 ¾	④	B	W12"X16.0 #/FT.	⅞" Φ @ 85#-FT.	5½"	1'-4¼	1"	3½"	1"	1¼"	¼"	5/16"	15/32"	3"	5'-6	3"	2'-0 Φ	7'-0	146.5# ④
5		C	W12"X19.0 #/FT.	⅞" Φ @ 85#-FT.	5½"	1'-4¼	1"	3½"	1"	1½"	5/16"	5/16"	15/32"	3"	6'-0	3"	2'-0 Φ	7'-6	182.1#
5		D	W12"X22.0 #/FT.	⅞" Φ @ 85#-FT.	5½"	1'-4¼	1"	3½"	1"	1½"	⅜"	5/16"	15/32"	3"	6'-6	3"	2'-0 Φ	8'-0	210.5#
5	③	E	W12"X26.0 #/FT.	1" Φ @ 90#-FT.	7"	1'-4¼	1¼"	4"	1½"	1½"	⅜"	5/16"	11/32"	3"	7'-0	3"	2'-0 Φ	8'-6	293.0# ③

① ⑥ ①

STRUCTURAL CARBON STEEL PAY WTS. (1 POST) = K+ (POST LENGTH X POST WT.)
" K " INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/30/14 PLATE NO. A3-1.15

⑩	1-21-14	LUBRICATION OF BASE BOLTS
⑨	4-26-11	REMOVE NON-GALVANIZED
⑧	10-30-96	NOT GALVANIZED/GALVANIZED
⑦	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
⑥	8-24-87	BASE CONN. WELD
⑤	10-13-81	BASE CONN. WELD & FUSE PL WASHERS
④	10-19-79	POST A & B, A572 GR. 50, & K
②	11-28-78	"K" ③ 4-23-79 TYPE "E"
①	5-4-78	T_1 , T_2 & W_1
NO.	DATE	REVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

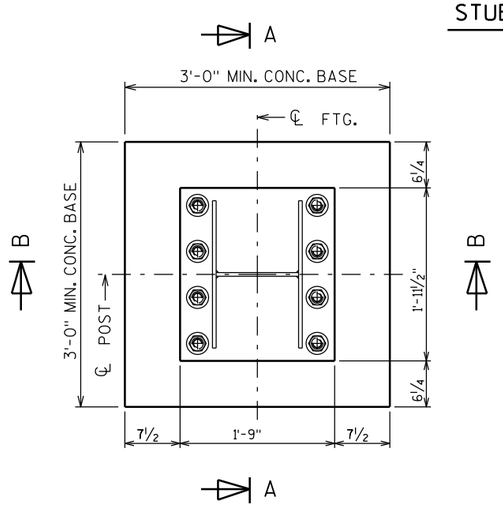
CONST. SPEC. 2011	DRAWN BY JPH	PLANS CK'D.

FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS

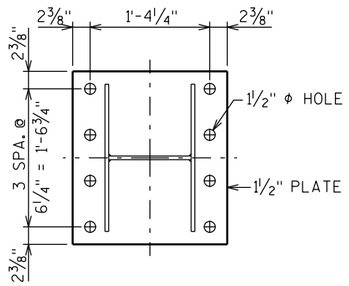
SHEET 149

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

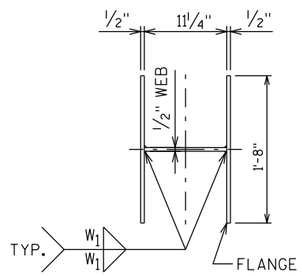
STUB AND MASONRY ANCHOR DETAILS



STUB SECTION



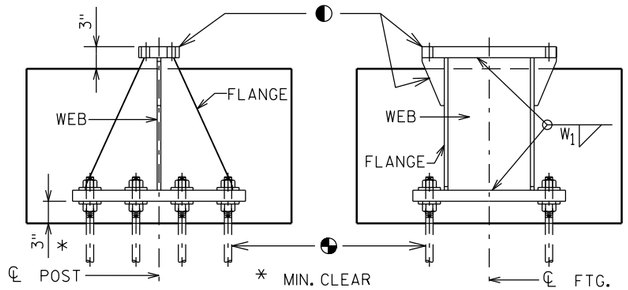
BASE PLATE



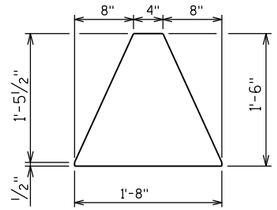
STUB

◐ SEE PLATE NO. A3-1 FOR DETAILS

◒ MASONRY ANCHORS TYPE S 1¼-INCHES (ADHESIVE). ALLOWABLE PULL OUT CAPACITY 14,995 KIPS. EMBED 1'-3" IN ROCK.



SECTION A SECTION B



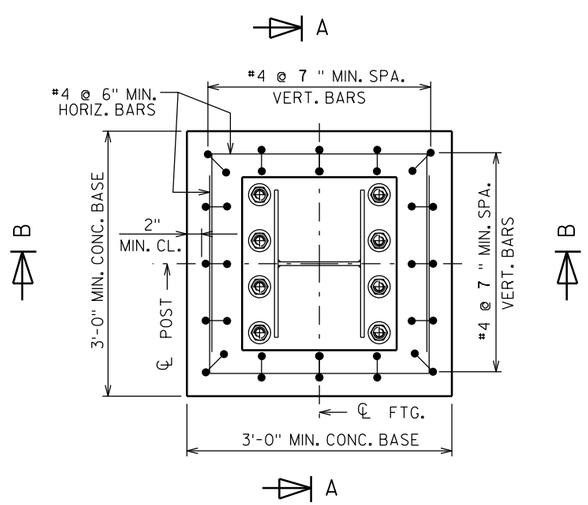
FLANGE

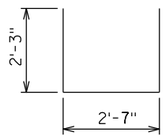
GENERAL NOTES

1. Quantities per Base:
   - REINFORCING BAR STEEL = 62 LBS
   - CONCRETE = 0.6 C.Y.
   - STEEL WEIGHT = 335 LBS
2. All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
3. If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.

CONCRETE BASE AND REINFORCING STEEL DETAILS

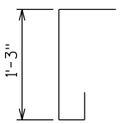
CONCRETE BASE SECTION





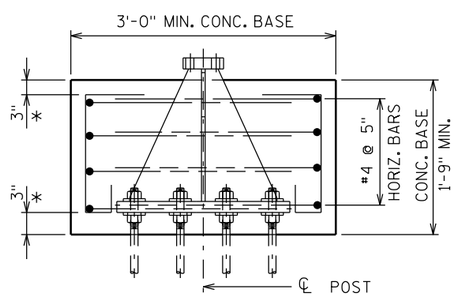
HORIZONTAL BAR

8 BARS @ 6'-11" LENGTH



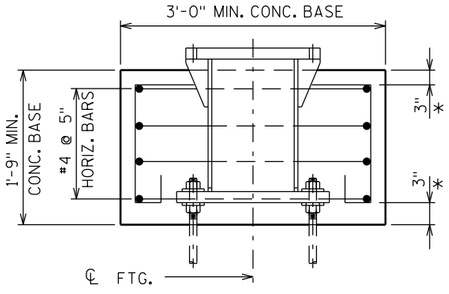
VERTICAL BARS

16 BARS @ 2'-4" LENGTH
MAY BE PLACED IN SKEW
FOR CLEARANCE NEED



SECTION A

* MIN. CLEAR



SECTION B

ALTERNATE BREAK-AWAY BASE ON ROCK
A3-1M

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

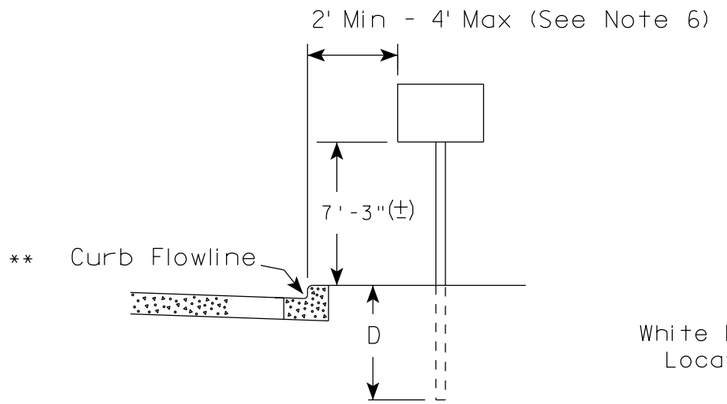
DATE 2/06/2014 PLATE A3-1M.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

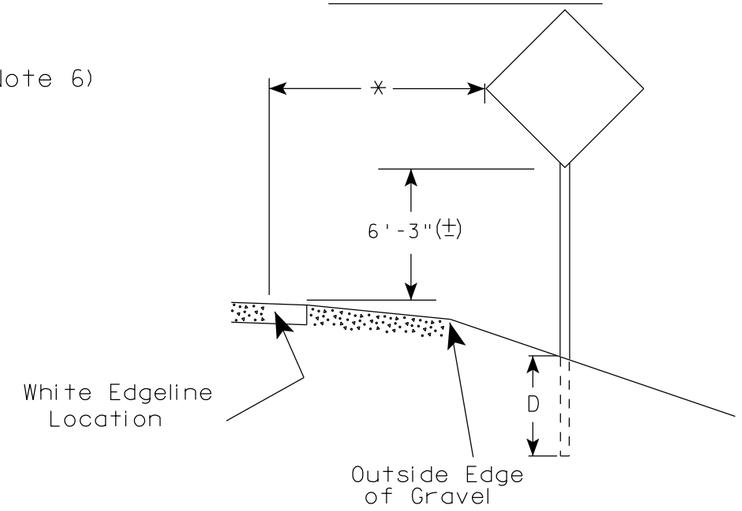
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A31M.DGN PLOT DATE : 10-MAR-2014 15:16 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 1.556674:1.000000

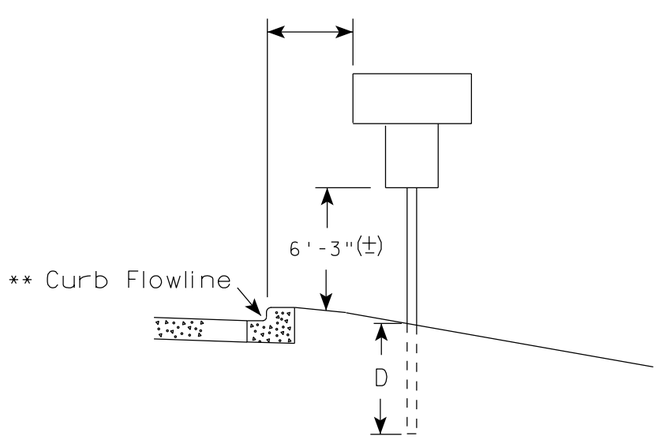
WISDOT/CADDS SHEET 42

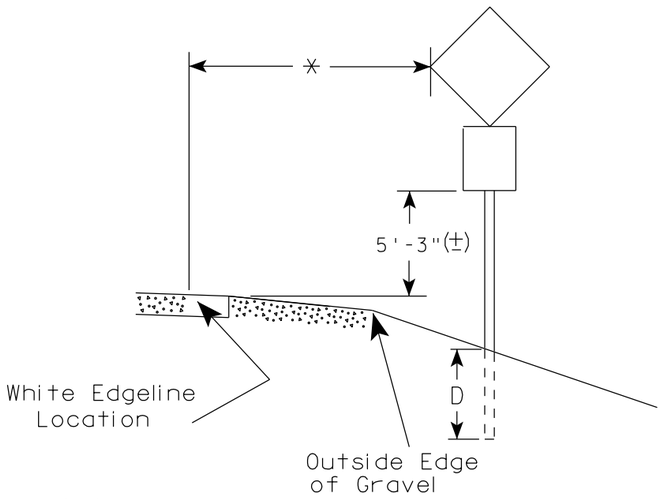
URBAN AREA



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.

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

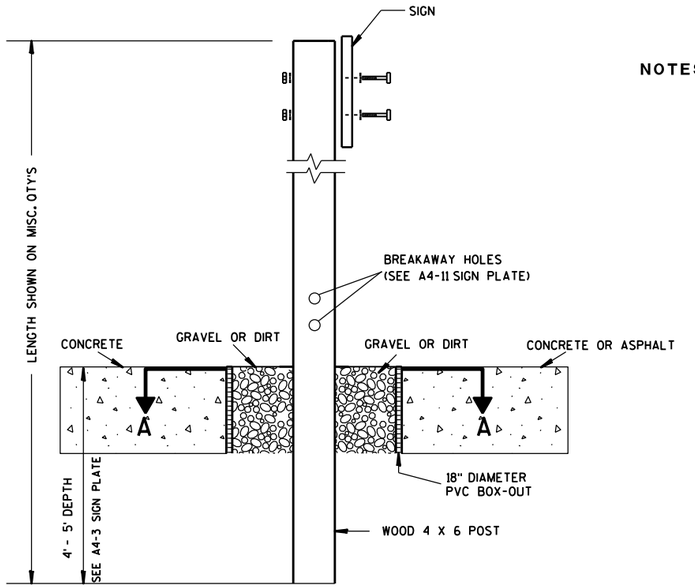
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

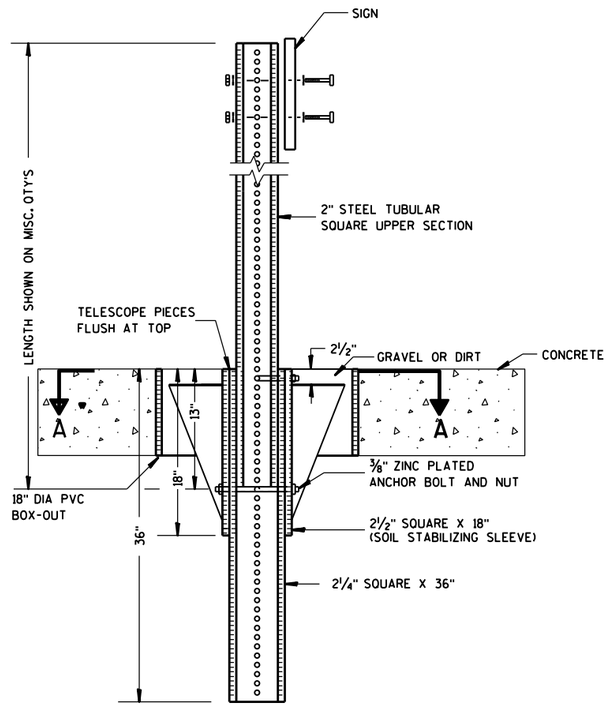
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

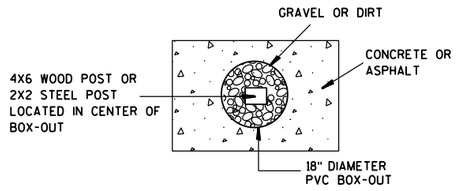
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

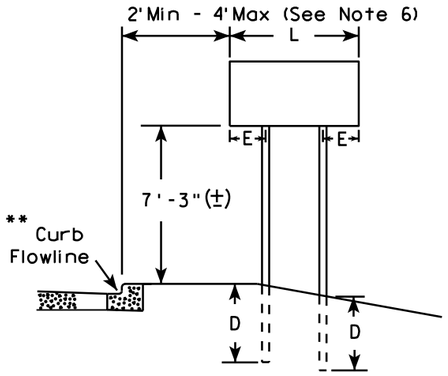
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

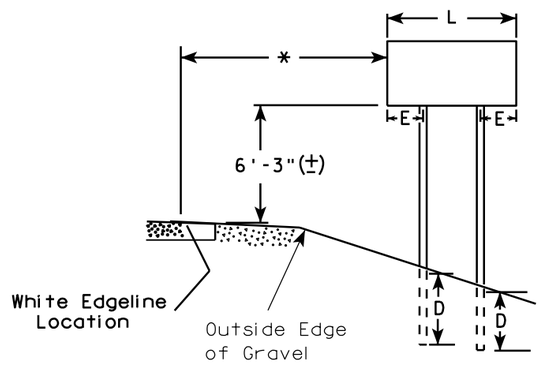
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

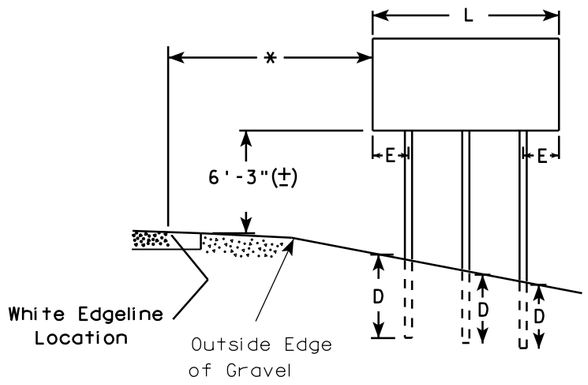
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

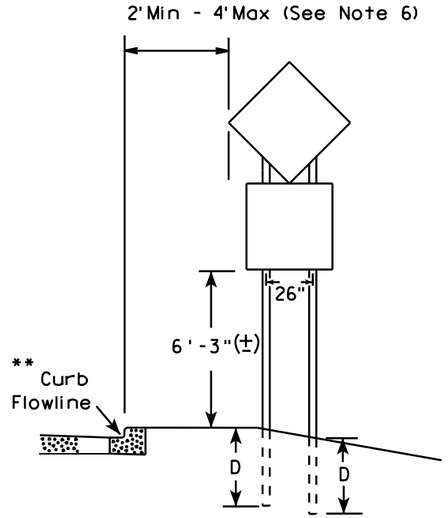
URBAN AREA



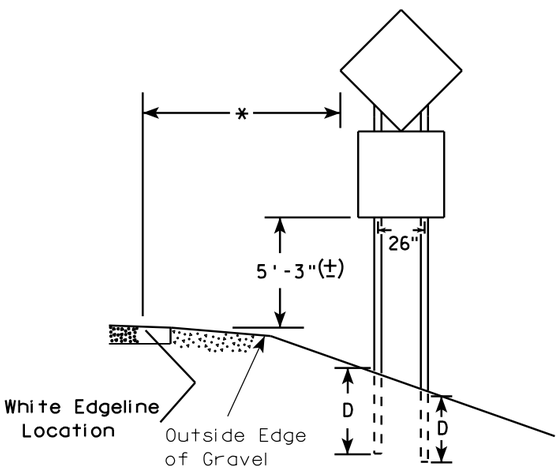
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

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

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

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

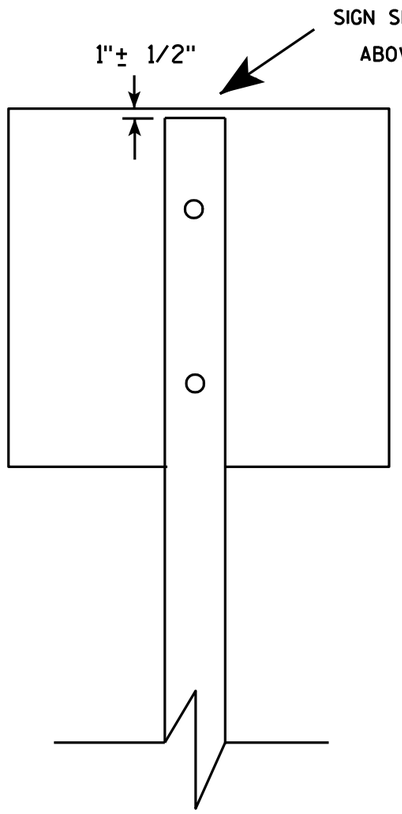
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

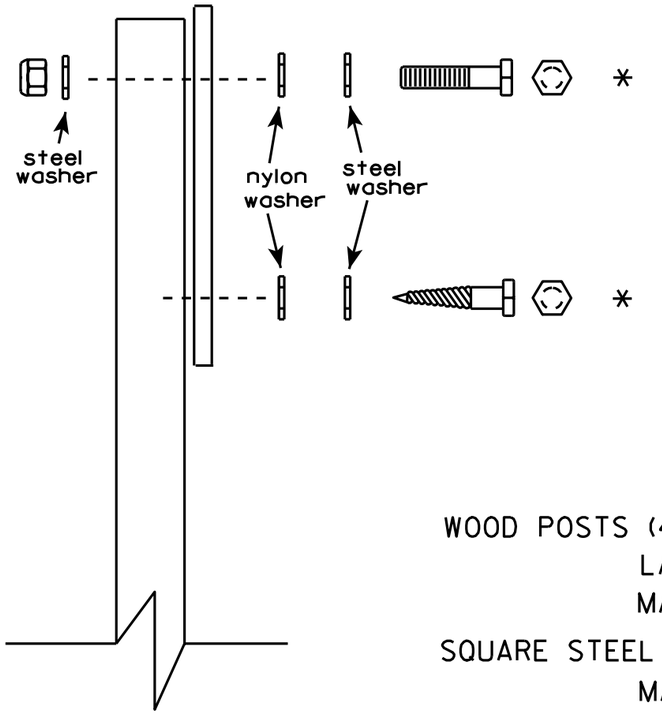
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-4 153 14

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E





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

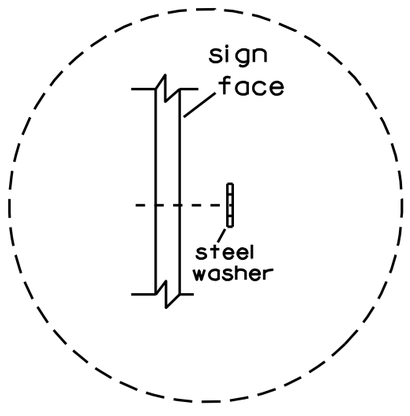
a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

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

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

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



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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/10 PLATE NO. A4-8.7

7

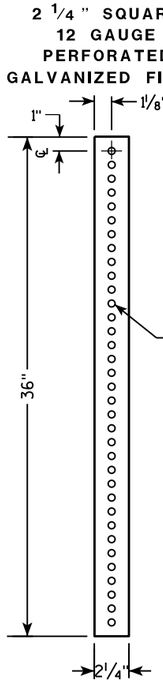
7

PROJECT NO:

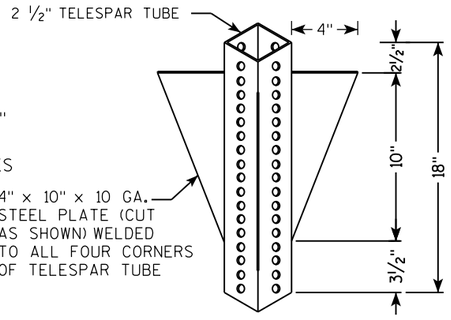
SHEET NO: 154 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

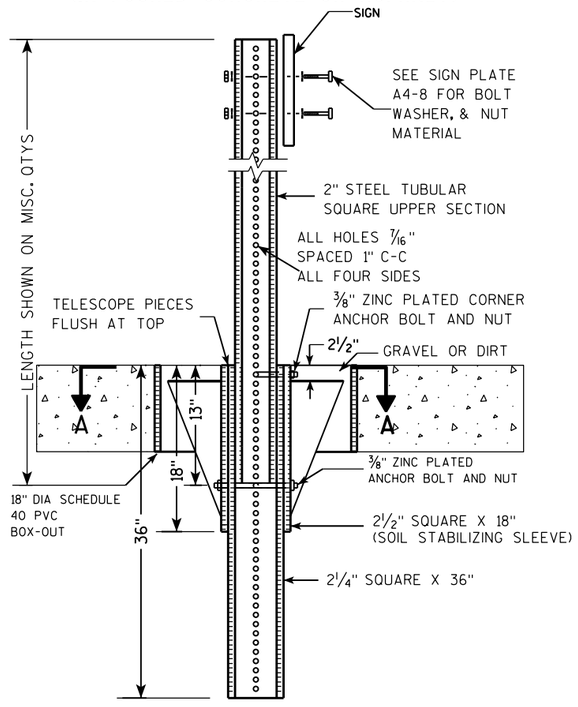
2 ¼ " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



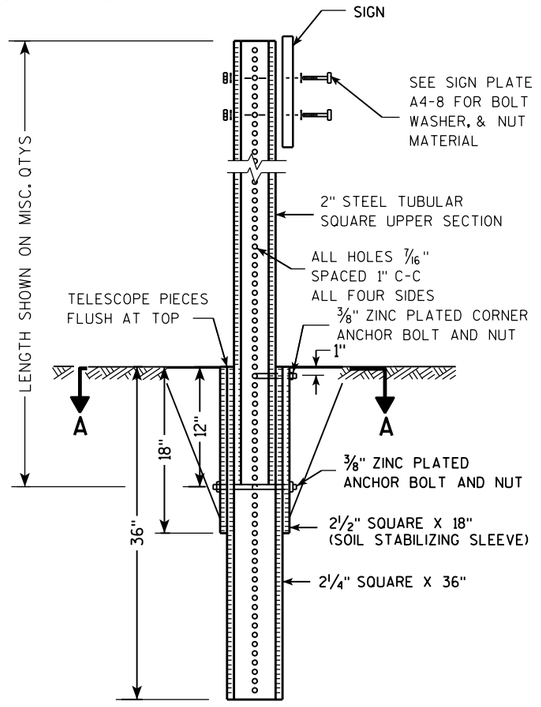
2 ½ " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

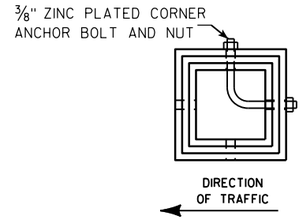


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

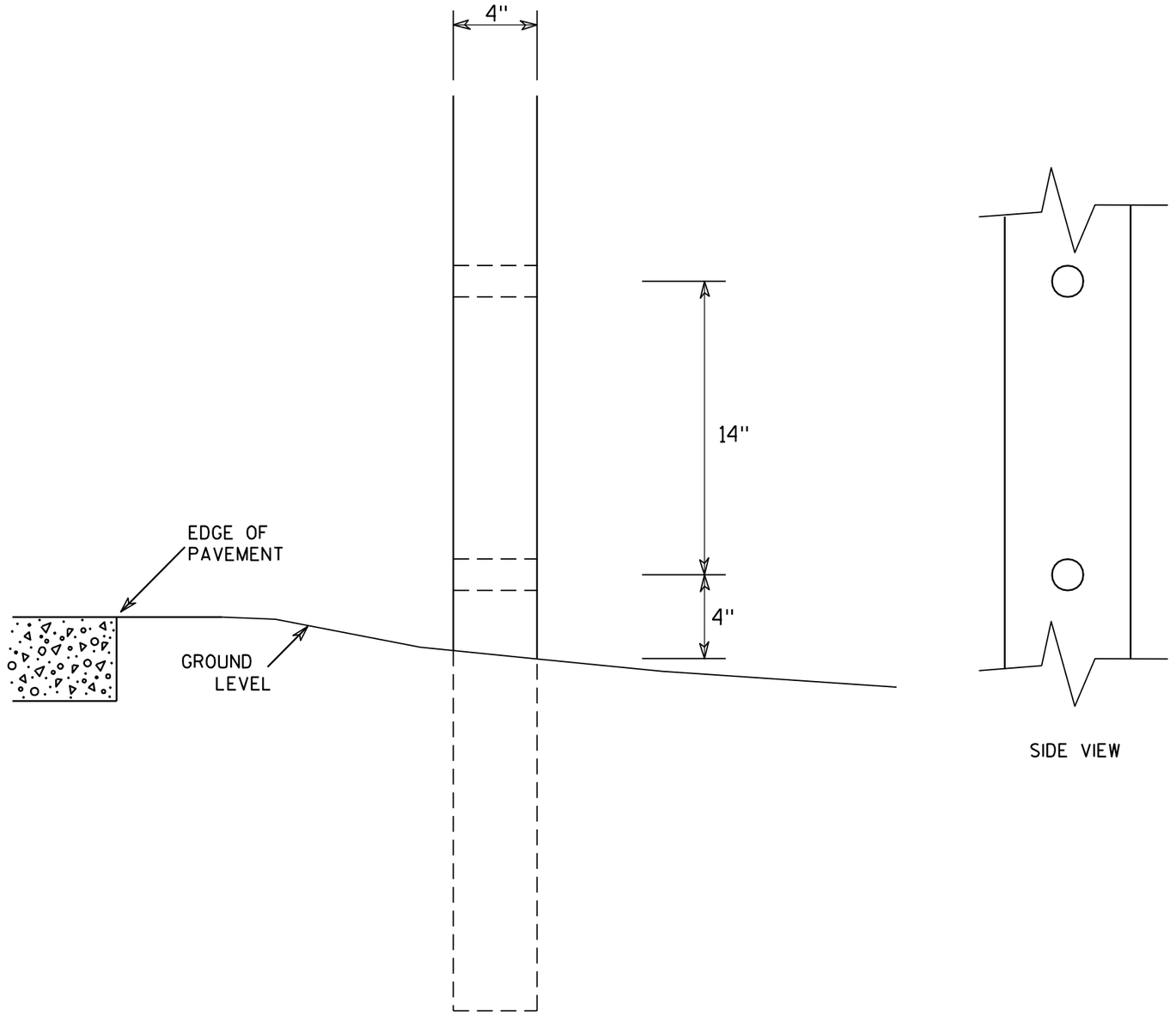
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 155 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

7

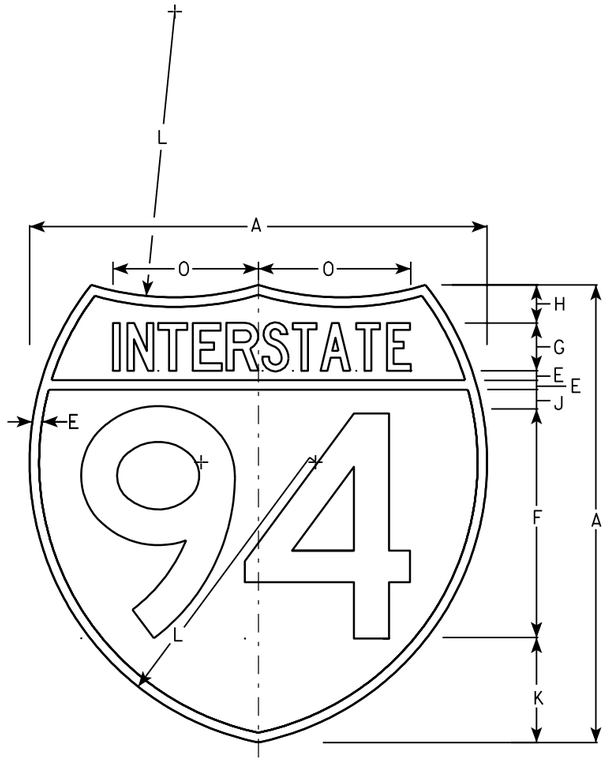
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

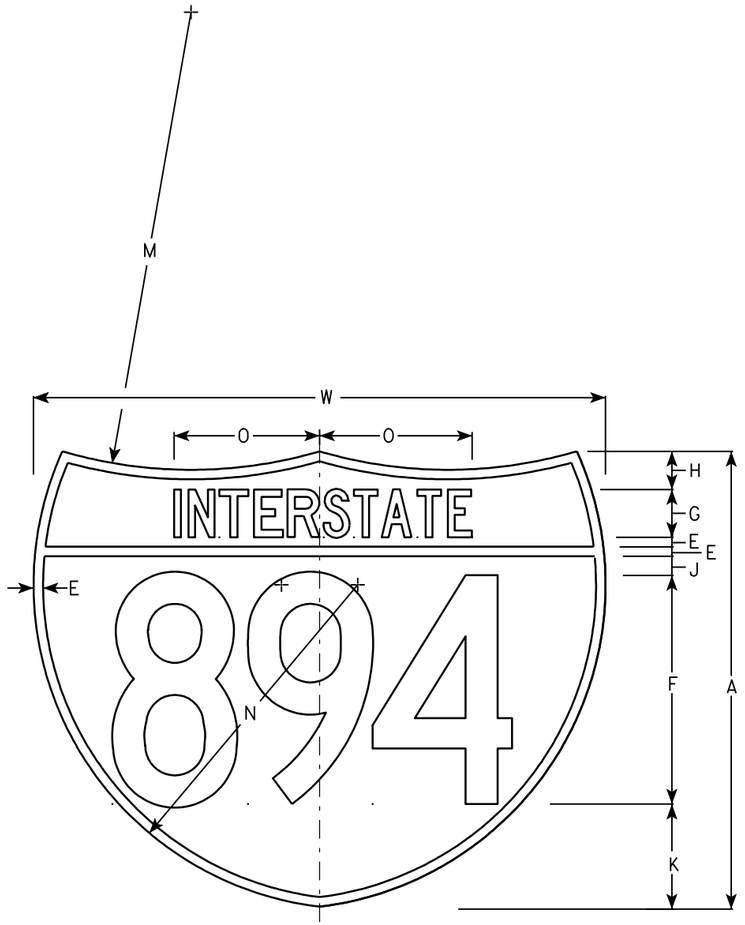
APPROVED Chester J Spang
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 156	E



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

7

7

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

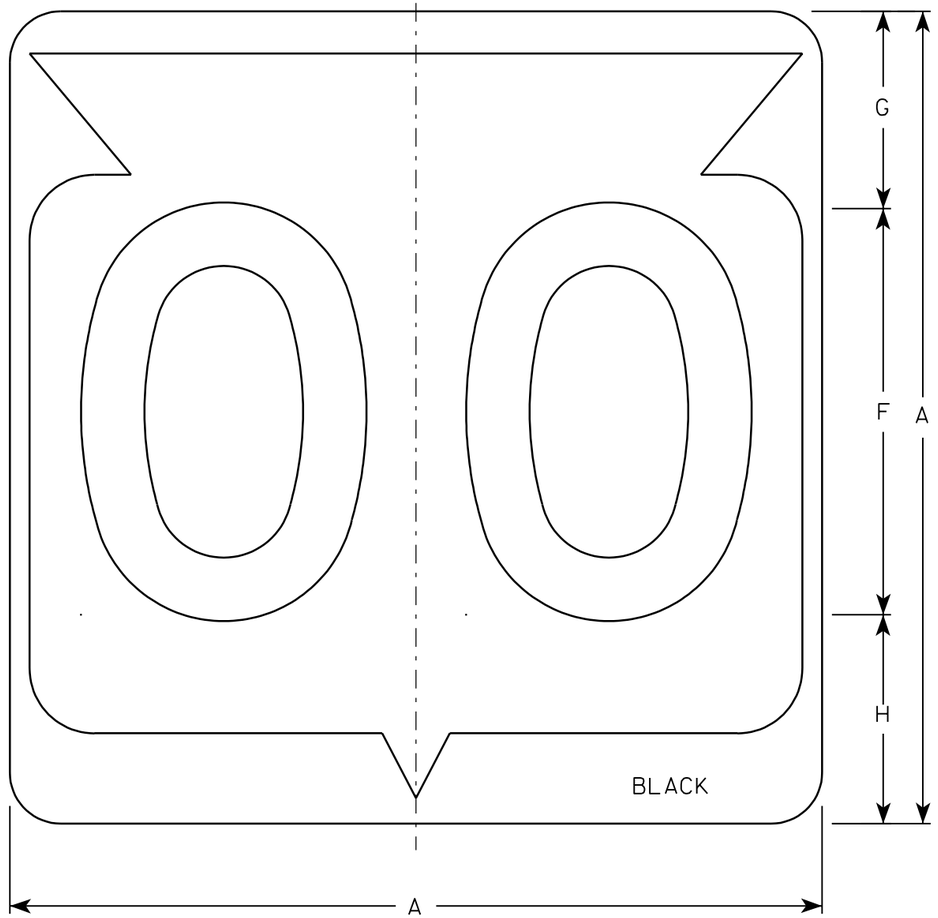
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

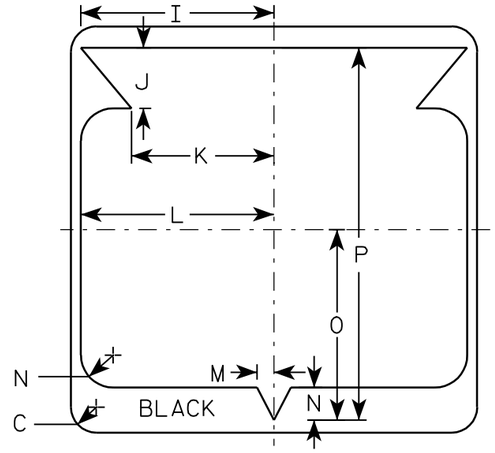
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 157	E



M1-6

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

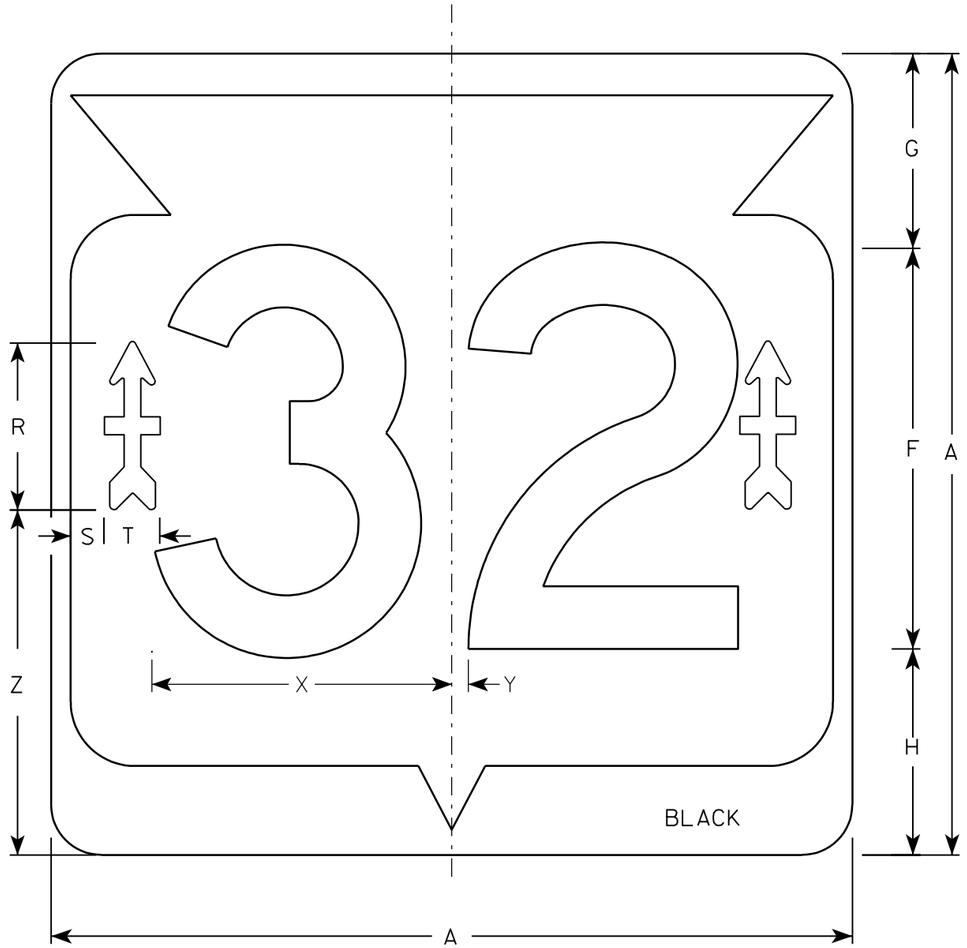
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

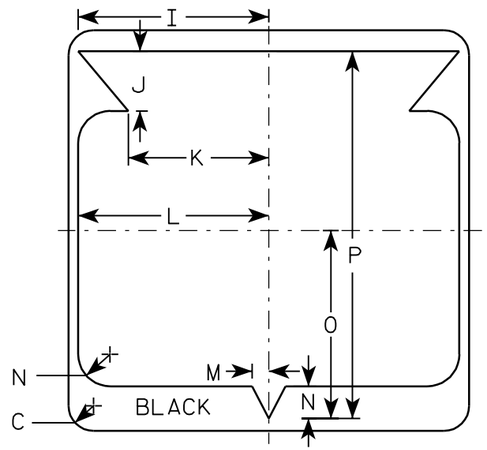
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 158	E



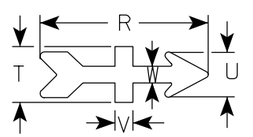
M1-6B

NOTES

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



32nd DIVISION ARROW
ACTUAL SIZE



Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8		5 1/8	3/4	1 7/8	1 1/2	5/8	5/8	9	1/2	10 1/2	4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33		7 1/2	1 1/2	2 1/2	2	7/8	3/4	13 1/2	3/4	15 1/2	9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33		7 1/2	1 1/2	2 1/2	2	7/8	3/4	13 1/2	3/4	15 1/2	9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33		7 1/2	1 1/2	2 1/2	2	7/8	3/4	13 1/2	3/4	15 1/2	9.0	.81

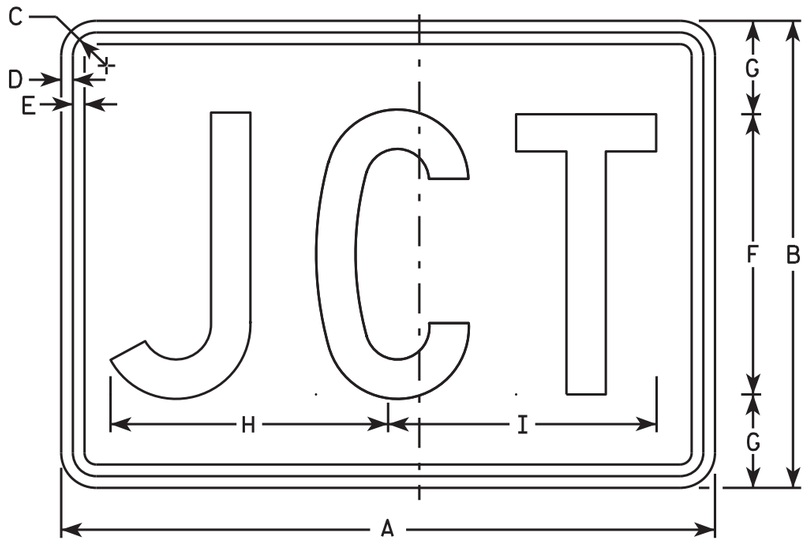
STATE ROUTE MARKER "32"
M1-6B FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

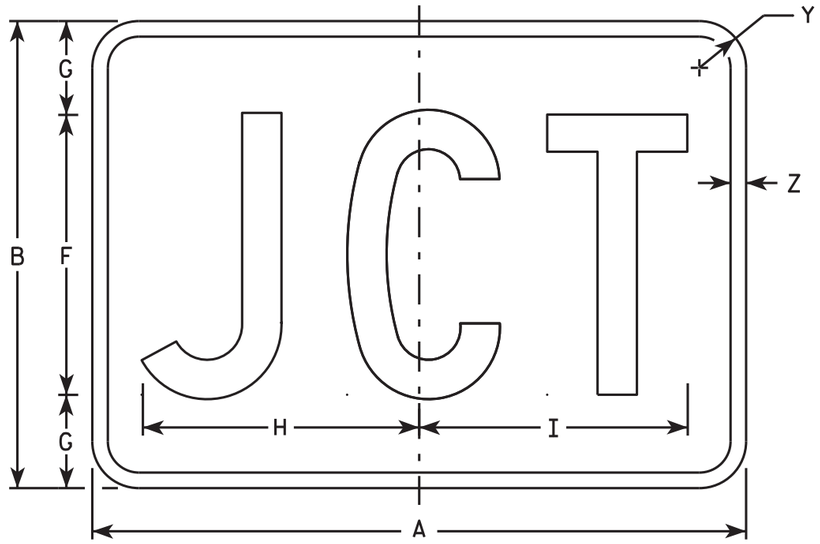
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 12/5/05 PLATE NO. M1-6B.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 159	E



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MP2-1 Background - White
   Message - Blue
   MR2-1 Background - Brown
   Message - Yellow

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	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

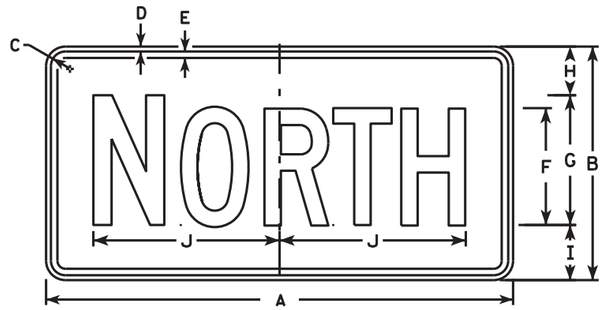
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

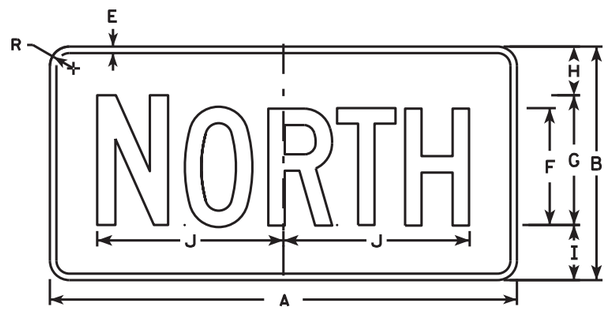
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M2-1.12

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



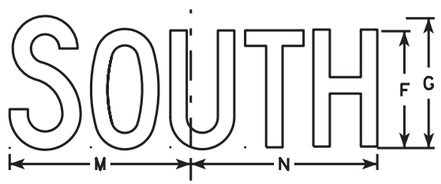
M3-1
MM3-1
MP3-1



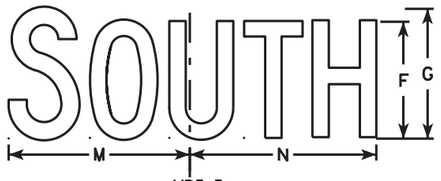
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

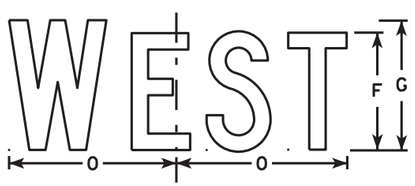
MB3-2
MK3-2
MN3-2



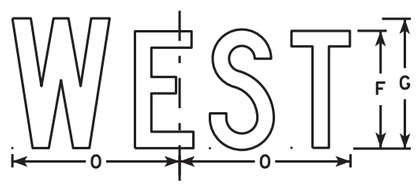
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
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

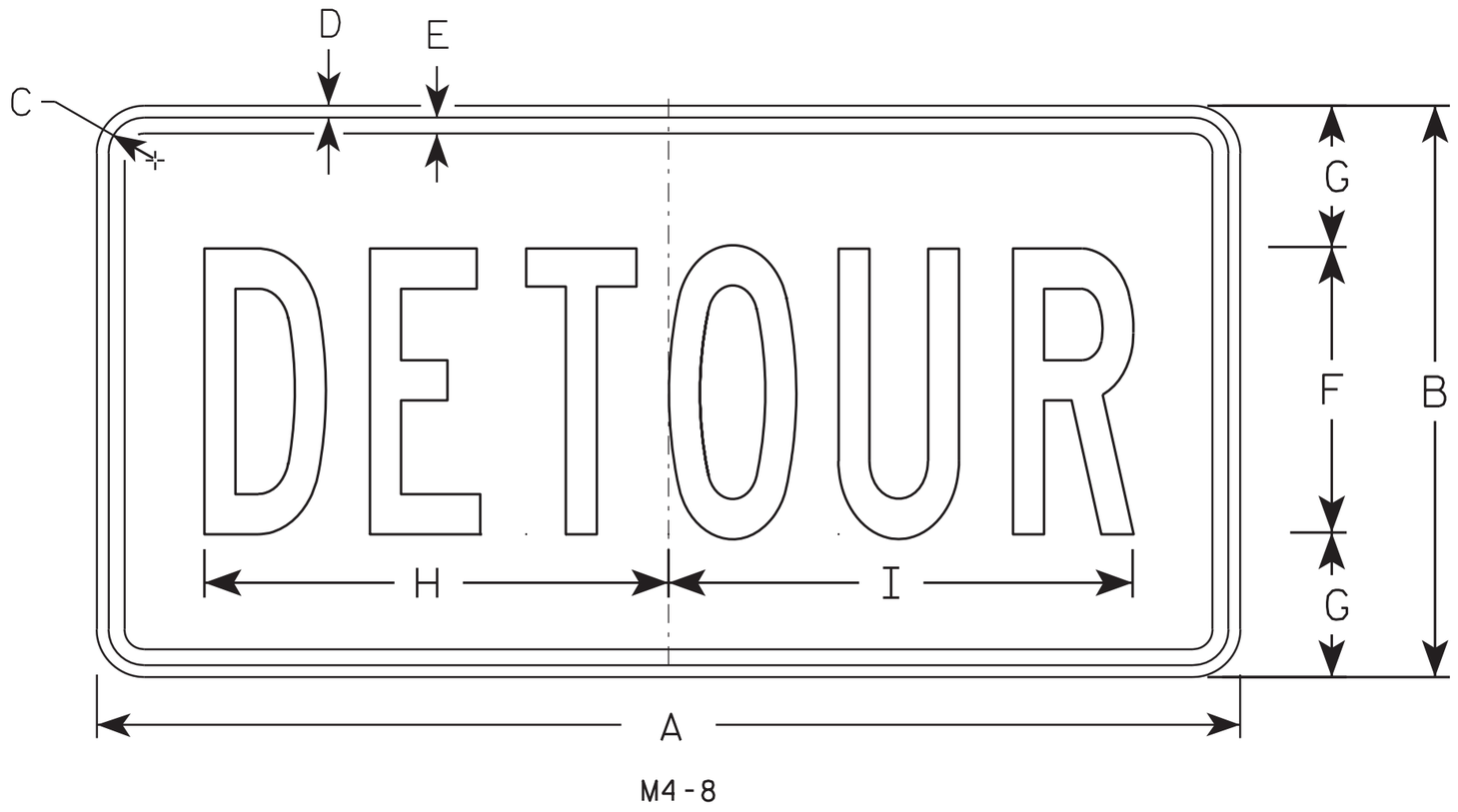
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14

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

7

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 15-OCT-2015 12:16 PLOT BY : ss...plotuser...ss PLOT NAME : PLOT SCALE : 18.607113:1.000000
WISDOT/CADDS SHEET 42



M4-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

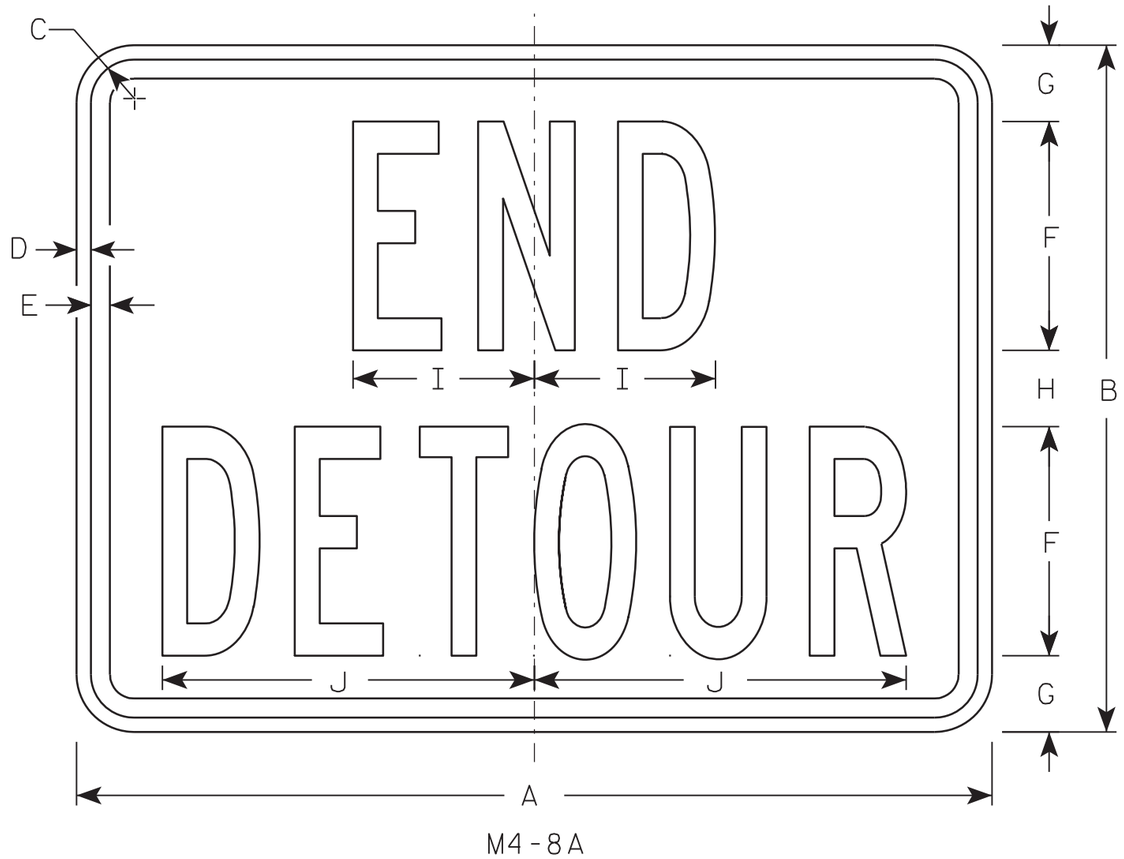
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 162	E



M4-8A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

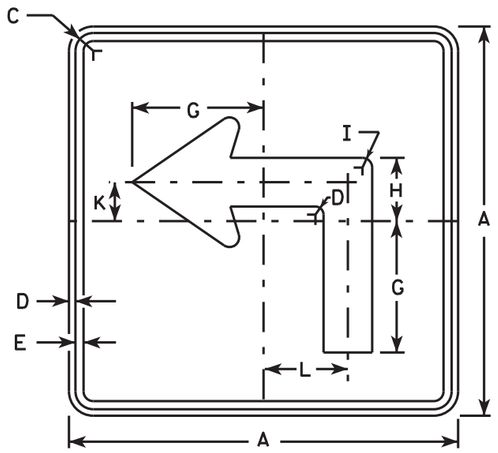
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

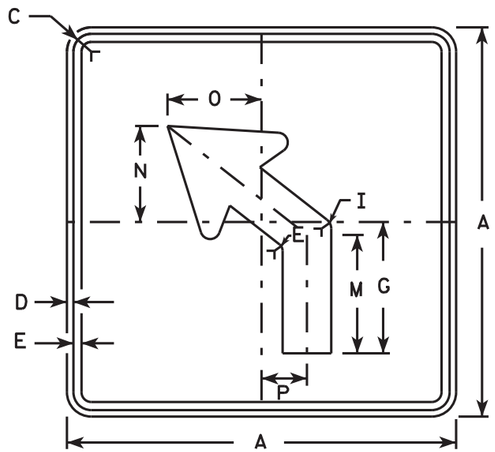
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

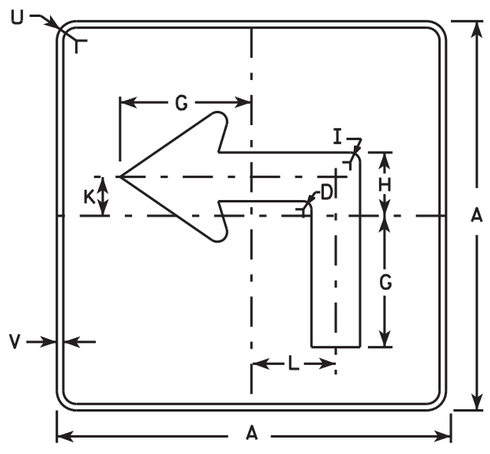
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 163	E



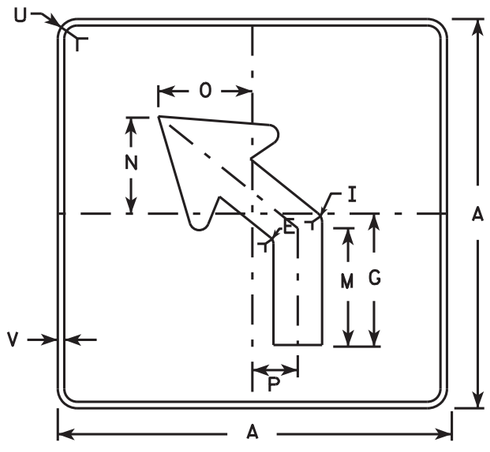
M5-1L
MM5-1L
MO5-1L
MP5-1L



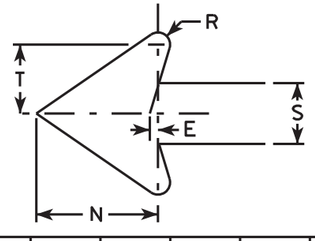
M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4.
   M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

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

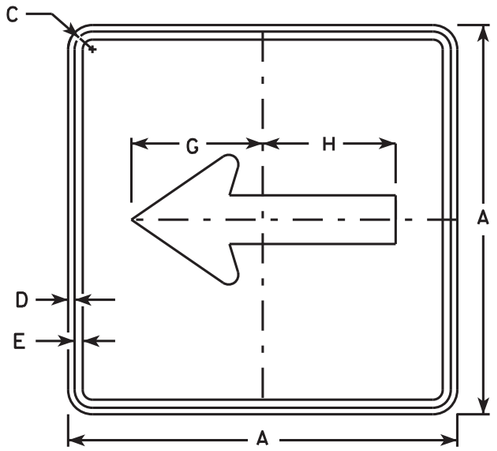
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

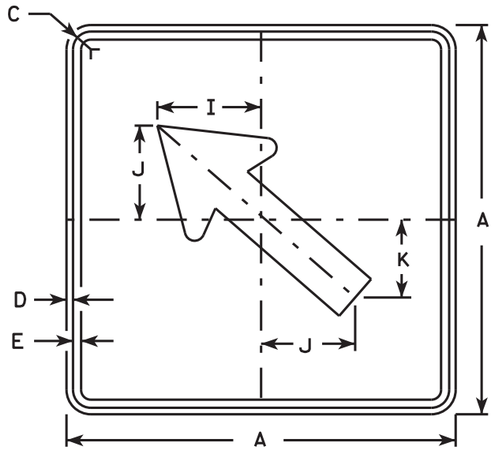
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M5-1.13

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



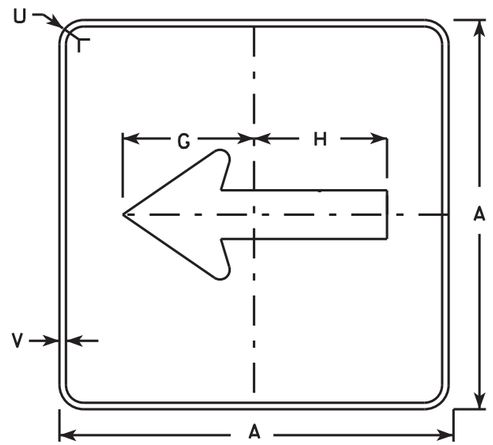
M6-1
MM6-1
MO6-1
MP6-1



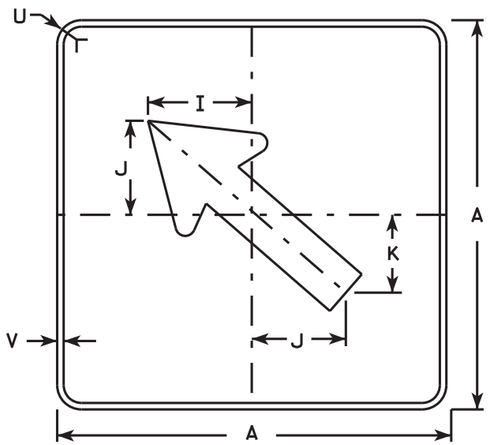
M6-2
MM6-2
MO6-2
MP6-2

NOTES

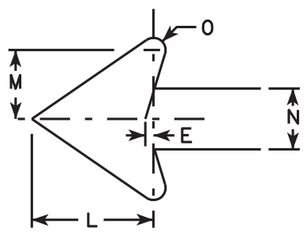
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



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

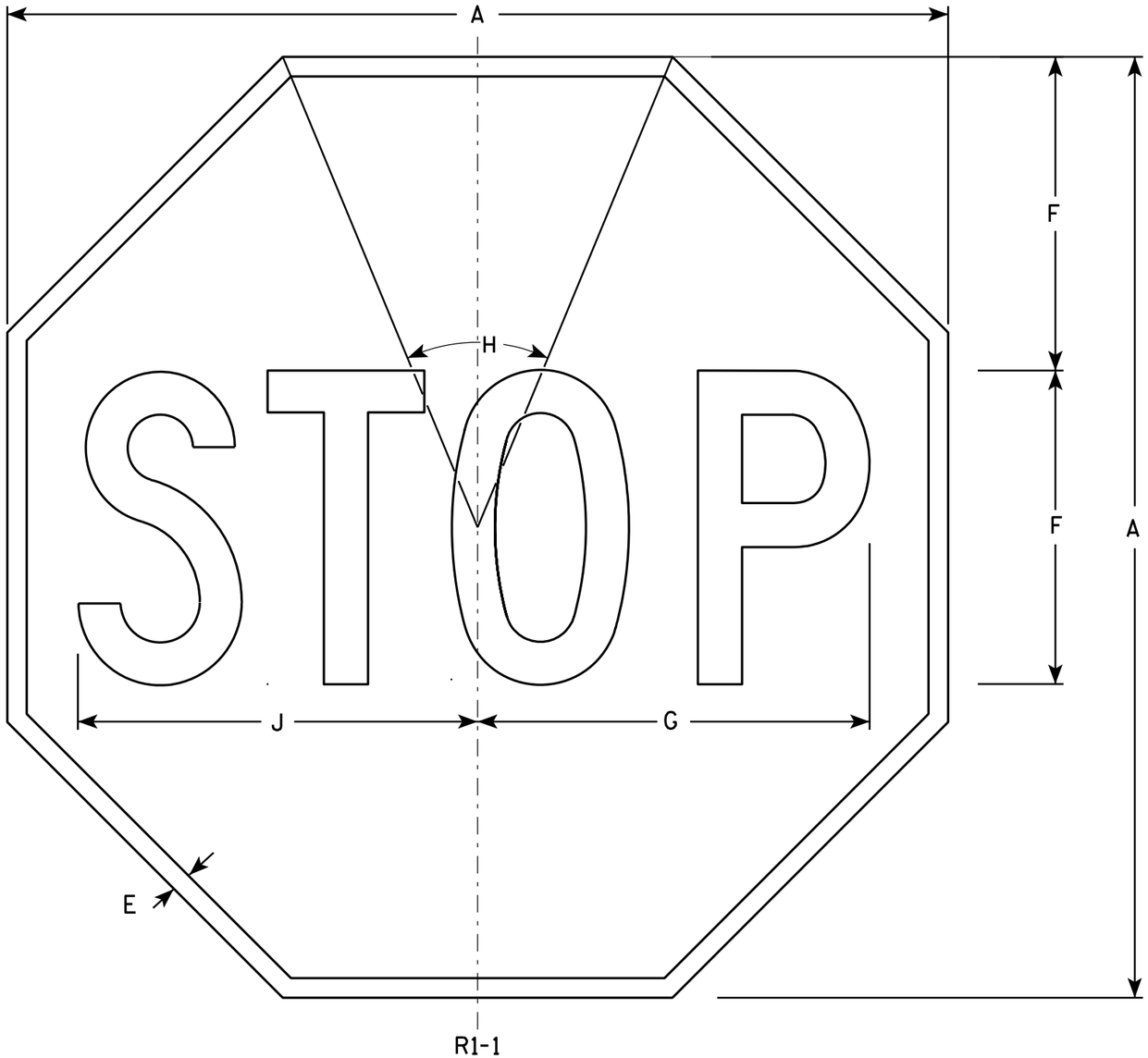
STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	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 - 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

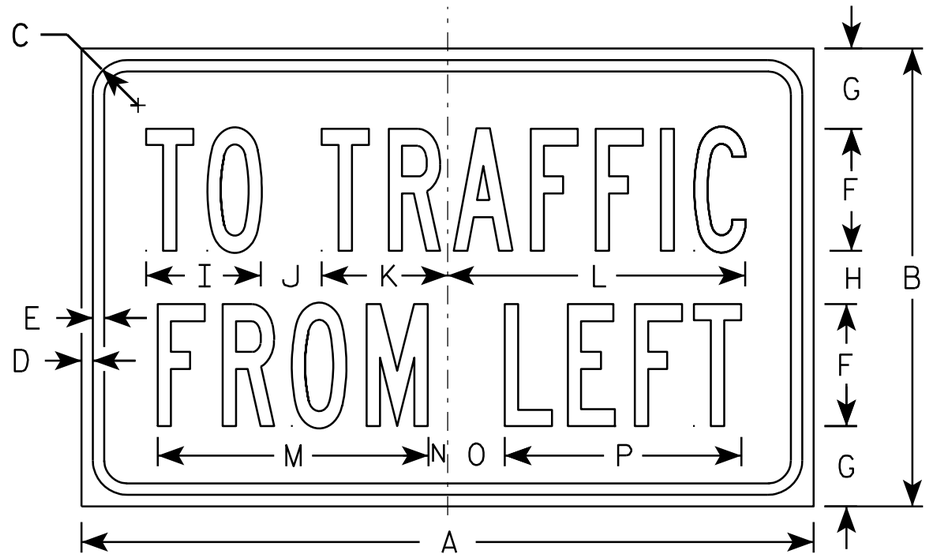
STANDARD SIGN
R1-1

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: 166	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																											

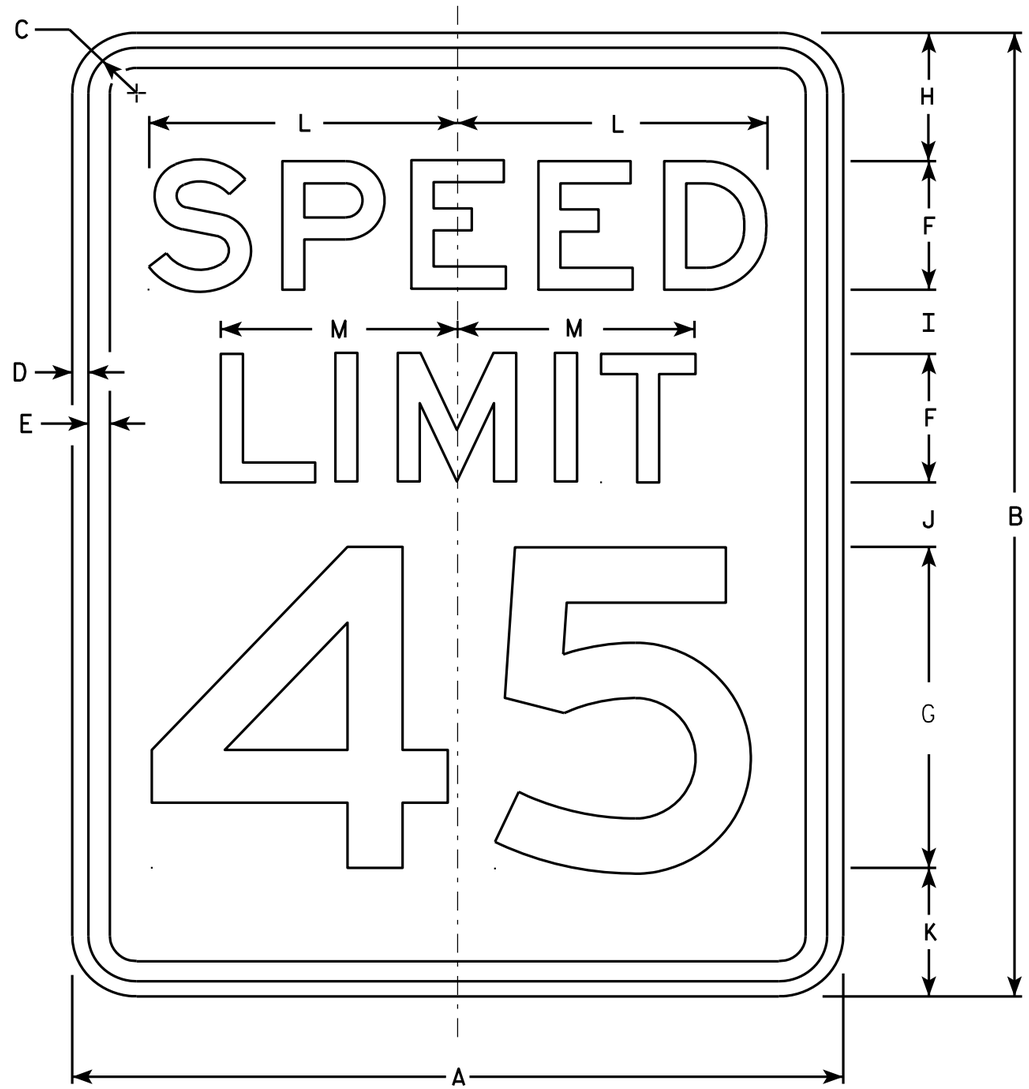
STANDARD SIGN
R1-54

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: 167	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

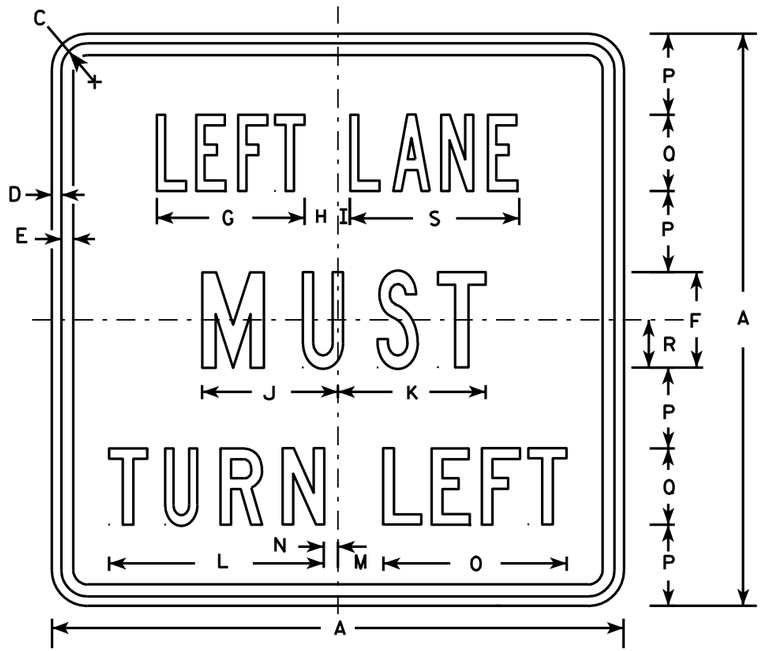
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

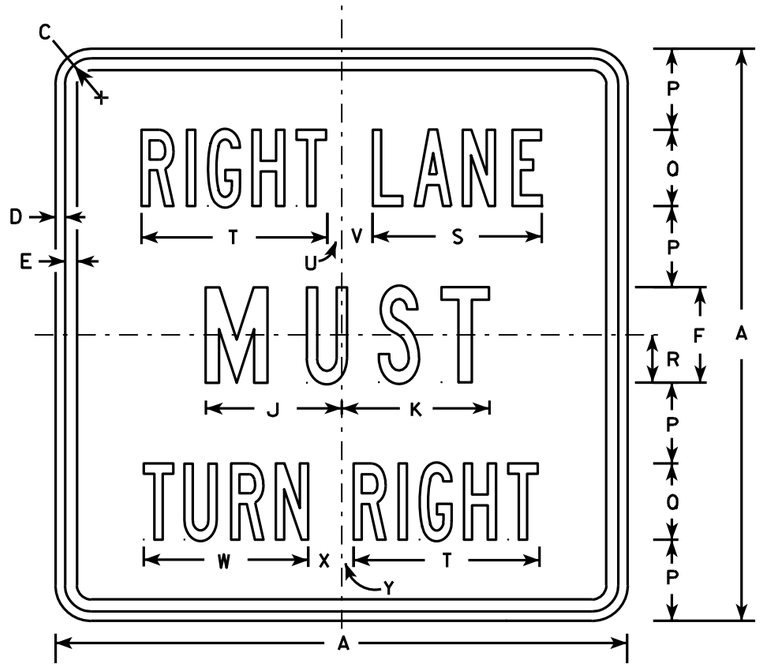
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 168 | E



R3-7L



R3-7R

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 - Line 1 is Series B.
   Line 2 is Series C.
   Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

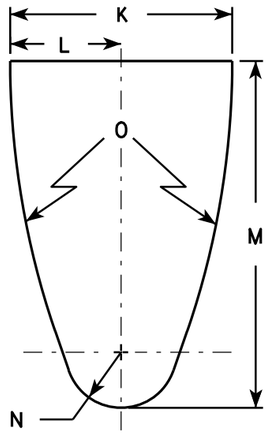
STANDARD SIGN
R3-7L & R3-7R

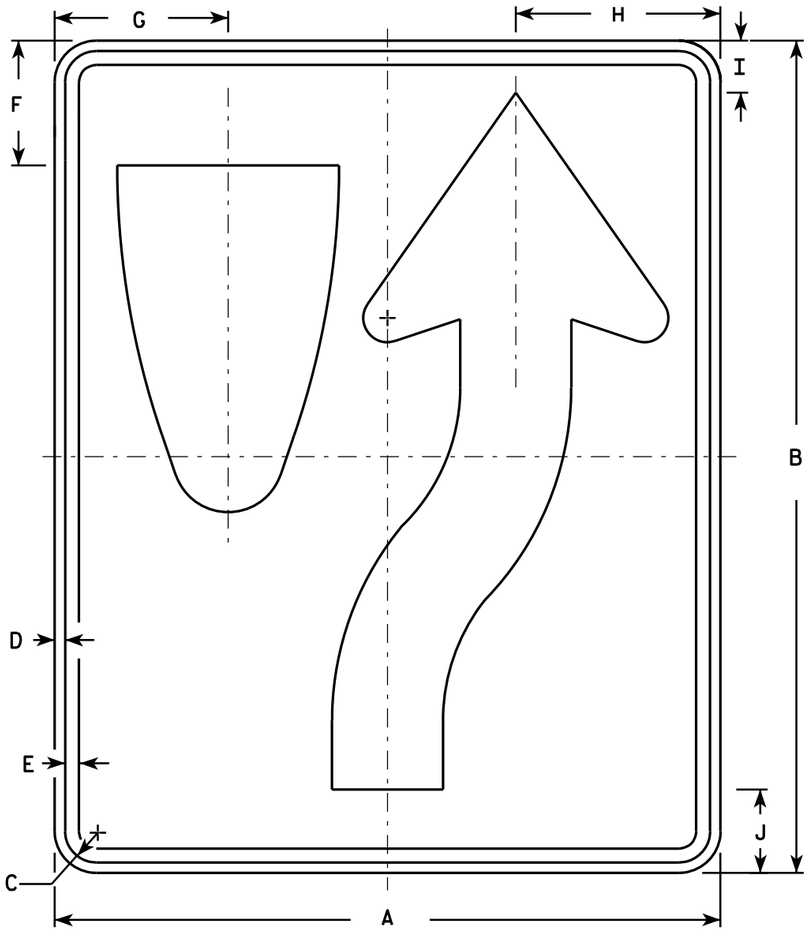
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 169 | E

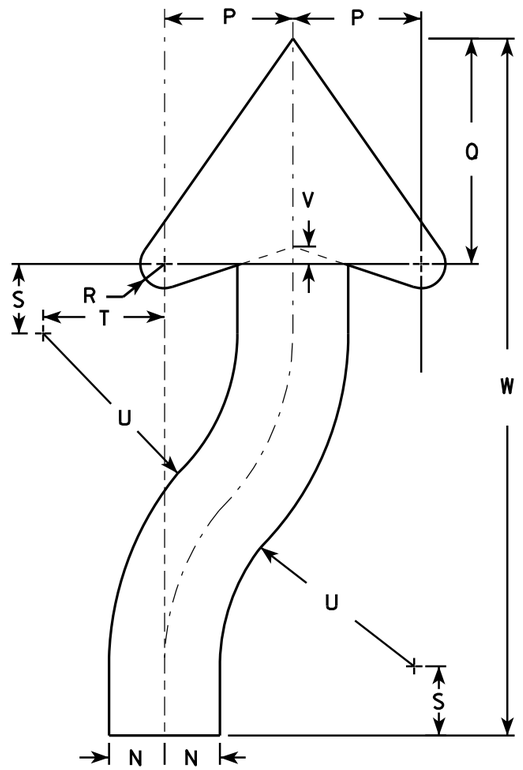




R4-7

NOTES

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



ARROW DETAIL

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

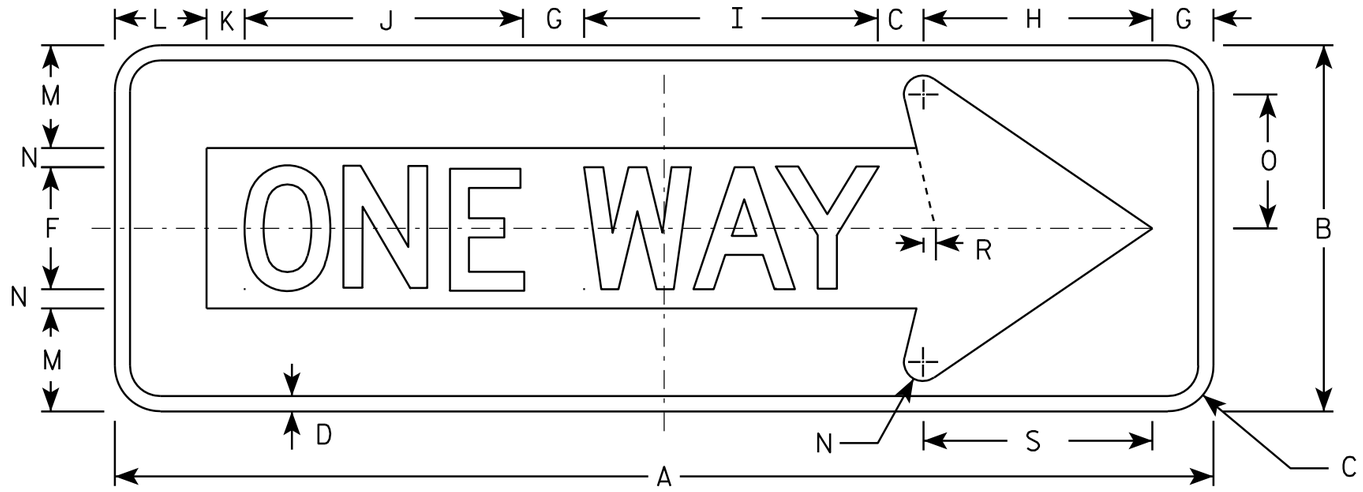
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

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

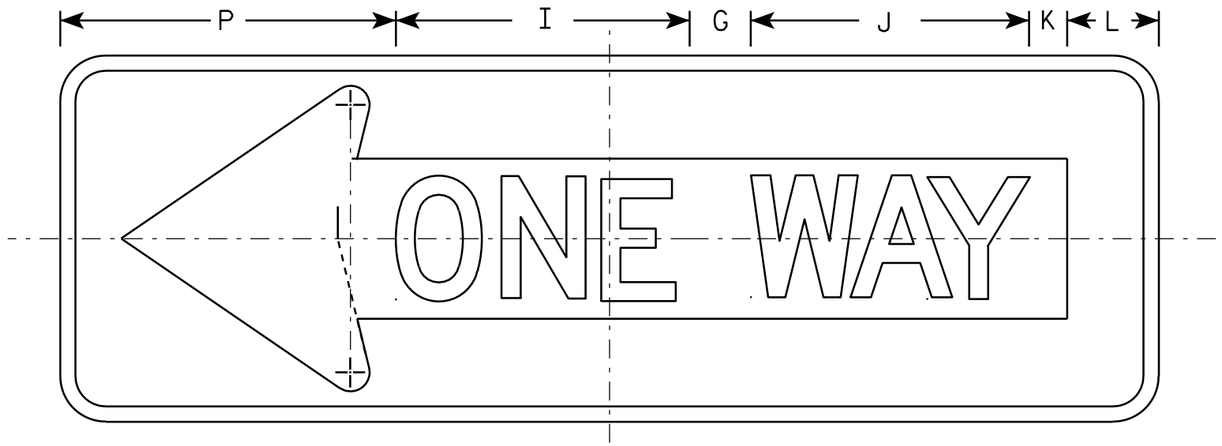
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 170	E



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

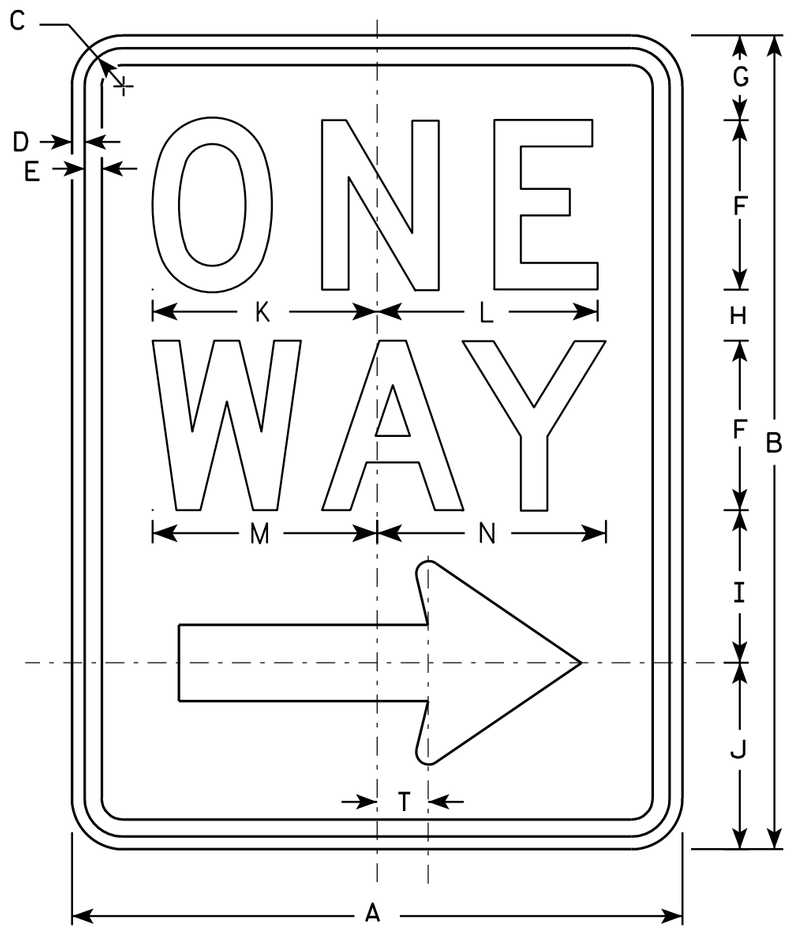
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R6-1.2

PROJECT NO:

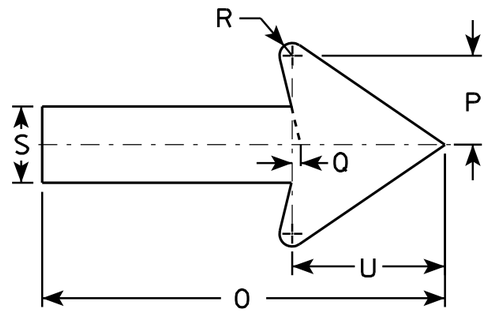
SHEET NO: 171 E



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	O	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

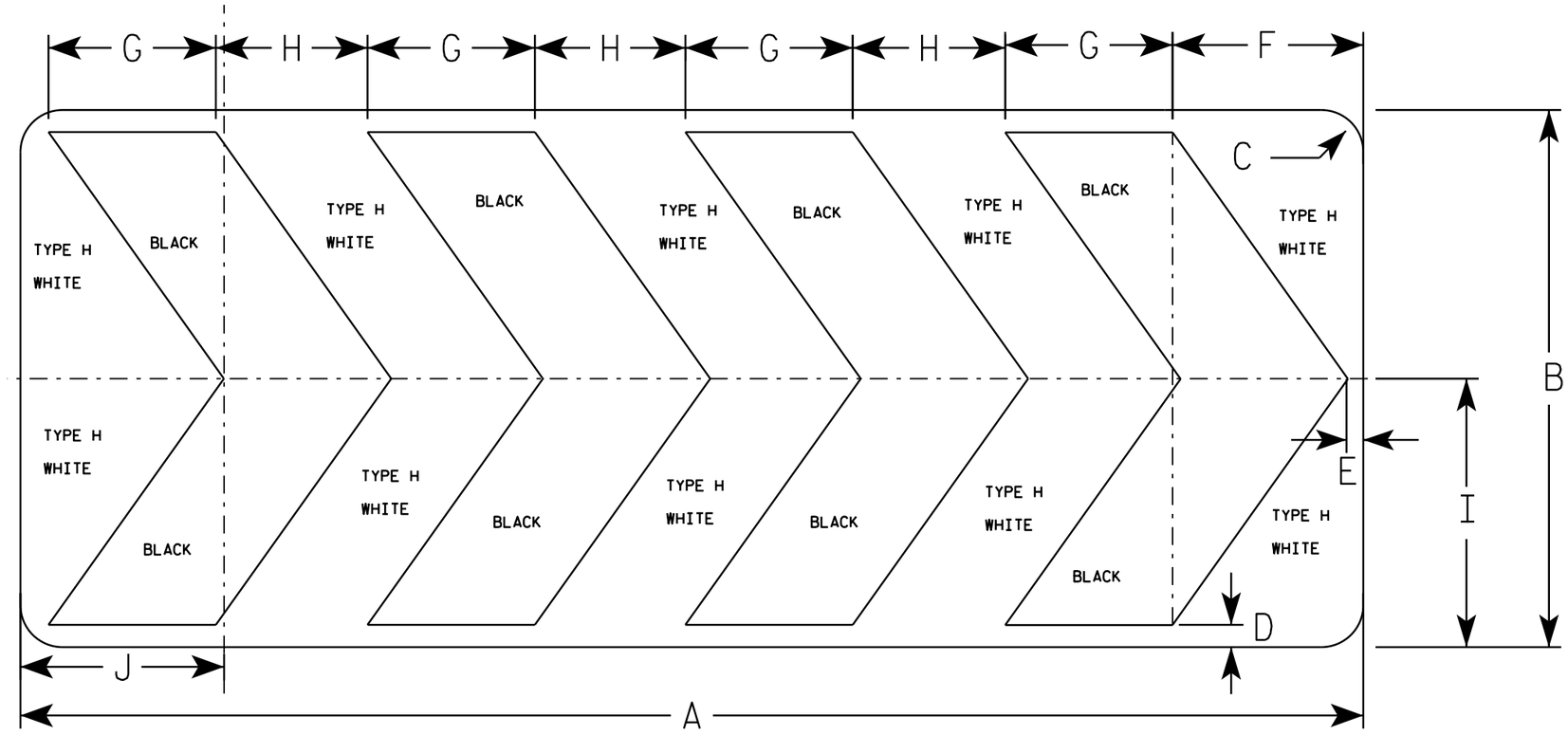
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 172	E

NOTES

1. Sign is Type II - Type H Reflective
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	1 7/8	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
2M	60	24	1 7/8	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

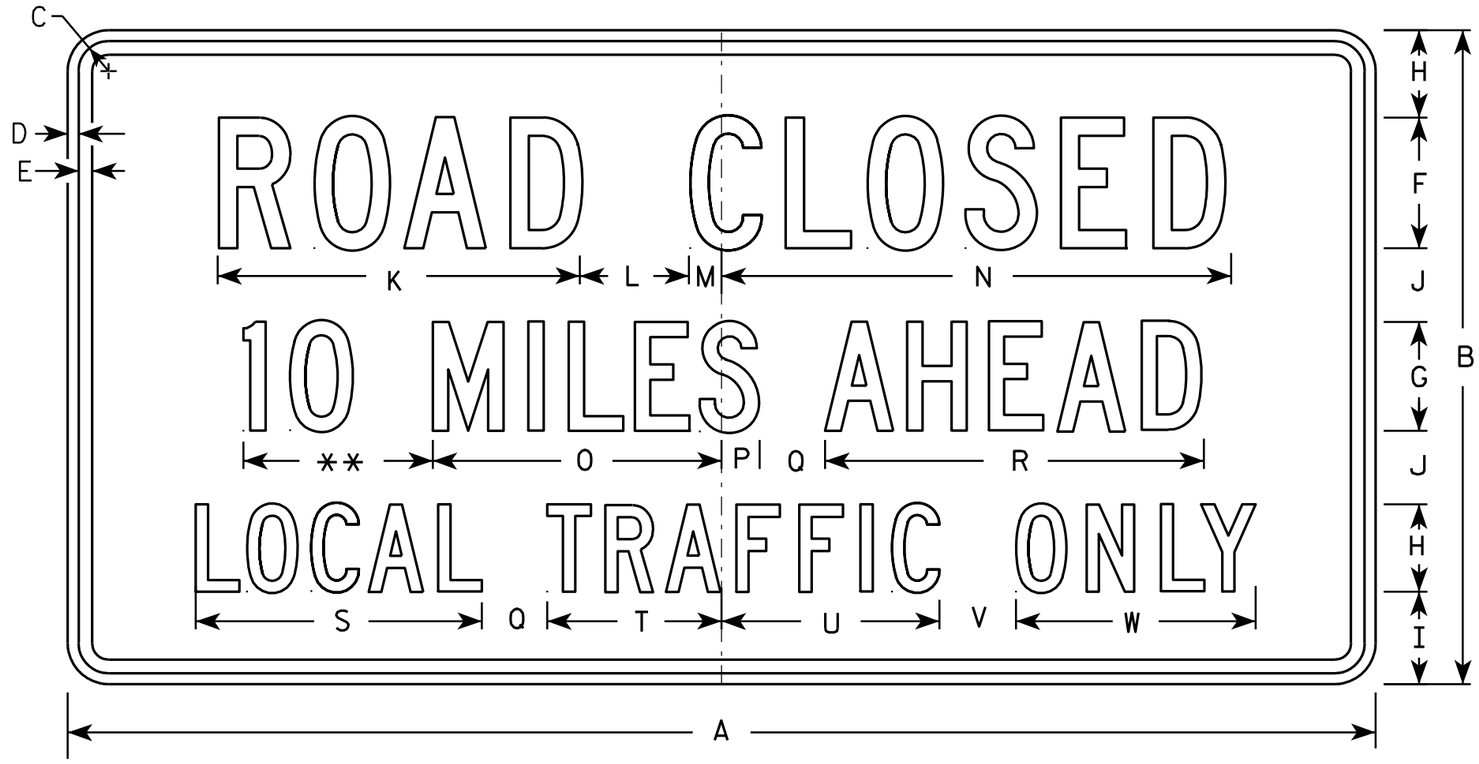
DATE 8/21/14 PLATE NO. R6-4.3

PROJECT NO:

SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R64B.DGN PLOT DATE : 21-AUG-2014 15:01 PLOT BY : mscsja

WISDOT/CADDS SHEET 42



R11-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - 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. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

** See Note 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.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4				4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11				12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11				12.5
3																											
4																											
5																											

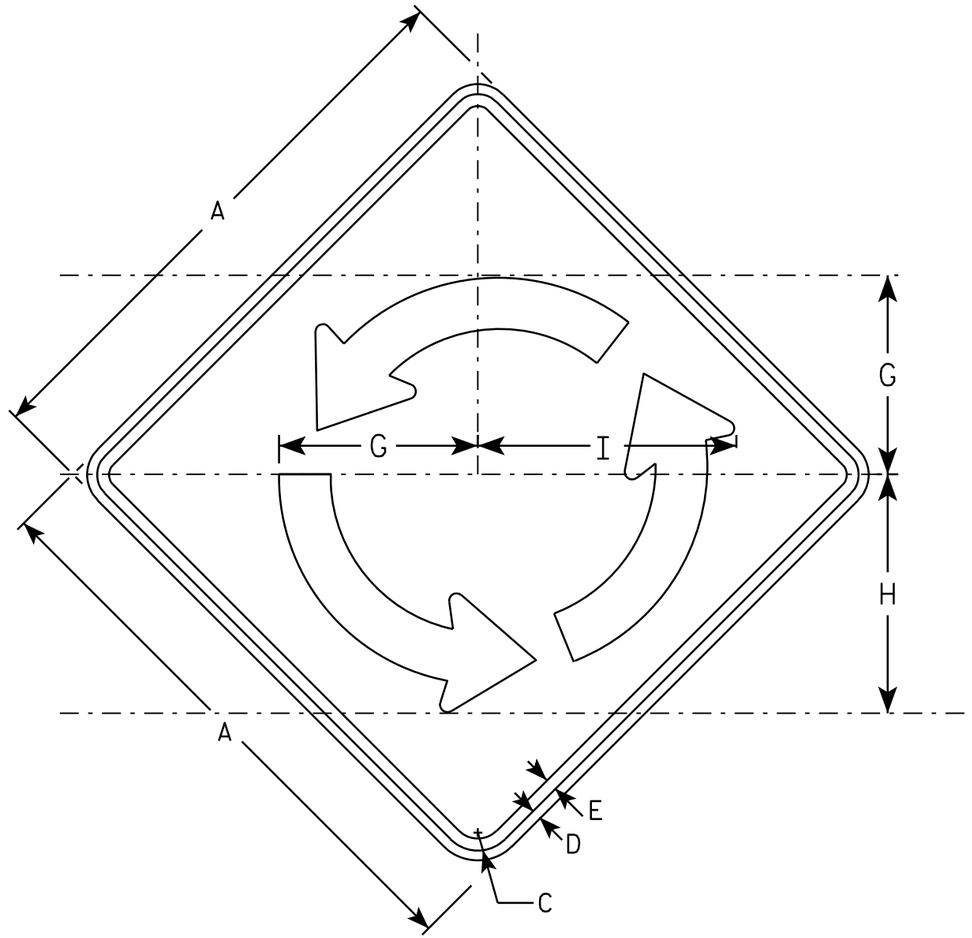
STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-3.6

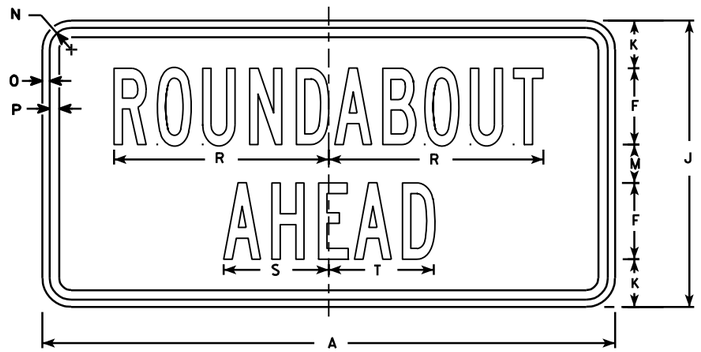
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 174 | E



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

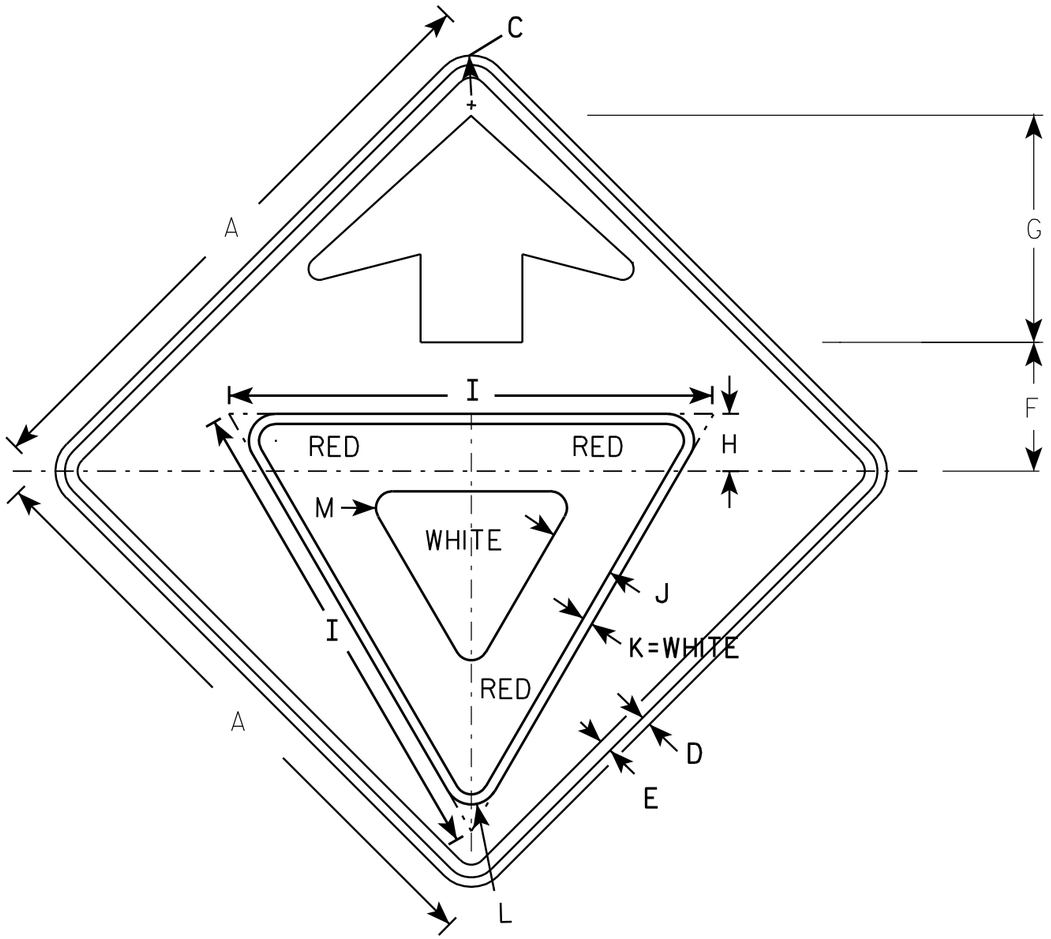
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/29/12 PLATE NO. W2-6.5

PROJECT NO:

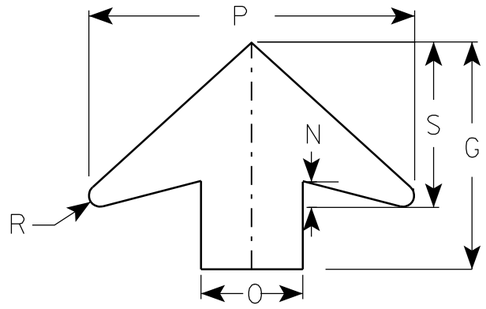
SHEET NO: 175 E



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

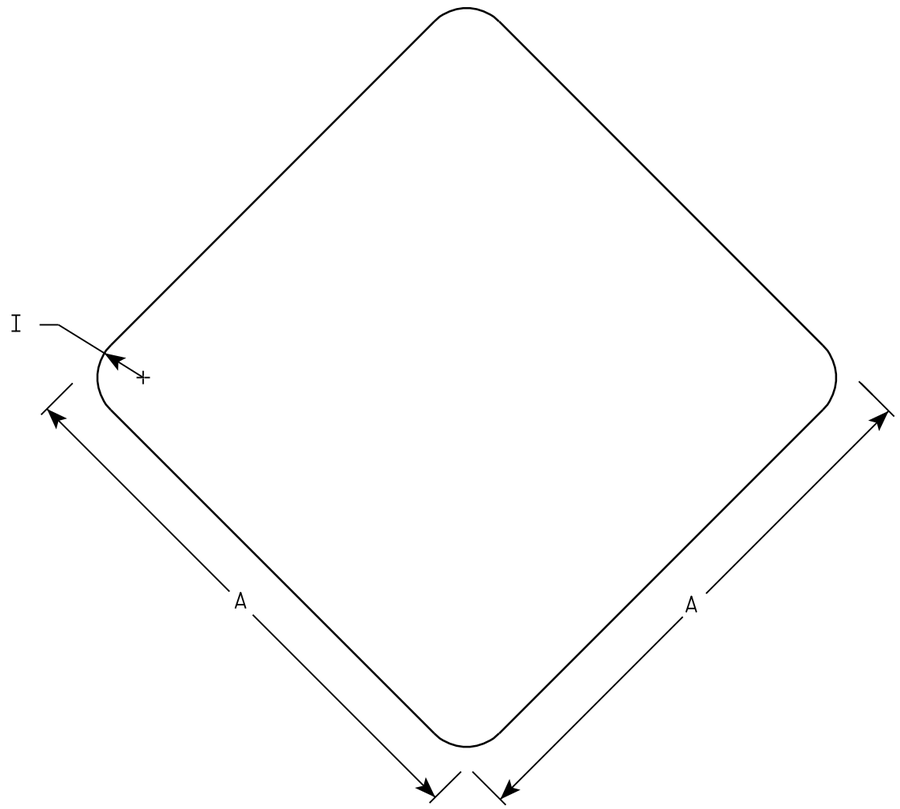
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-2..9

PROJECT NO:

SHEET NO: 176 E



W5-54

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
3. Corners may be square or rounded when base material is plywood. When base material is metal the corners shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12								1																		1.0
2S	18								1 ½																		2.25
2M	18								1 ½																		2.25
3																											
4																											
5																											

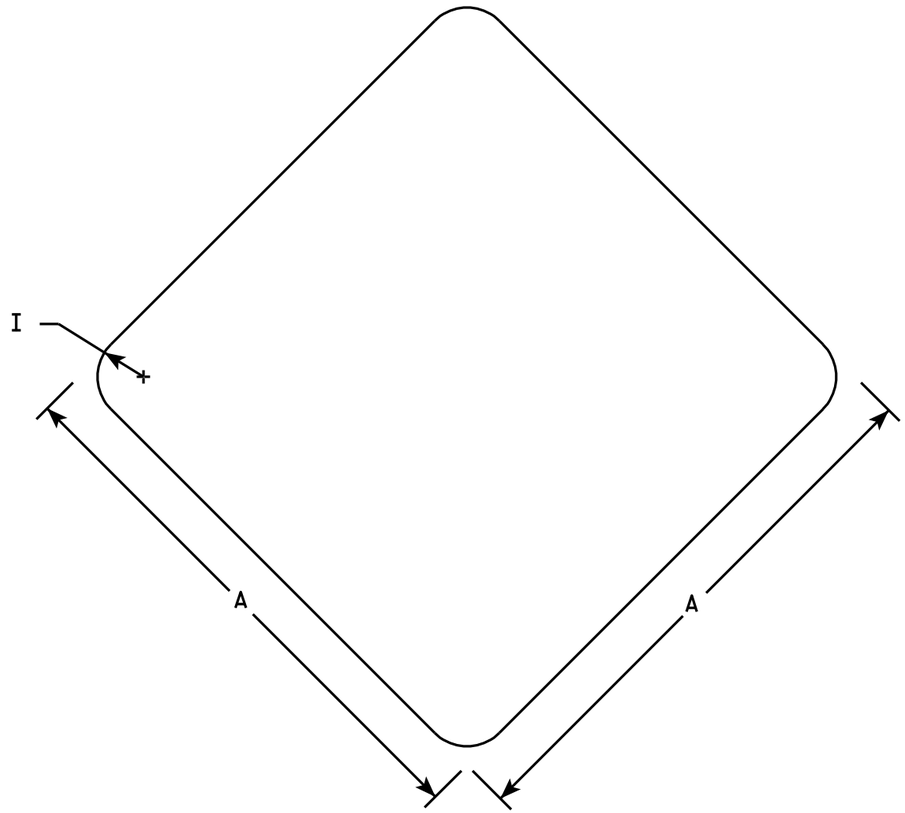
STANDARD SIGN
W5-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/3/10 PLATE NO. W5-54.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 177	E



W5-56

NOTES

1. Sign is Type II - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
3. Corners may be square or rounded when base material is plywood. When base material is metal the corners shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12								1																		1.0
2S	18								1 ½																		2.25
2M	18								1 ½																		2.25
3																											
4																											
5																											

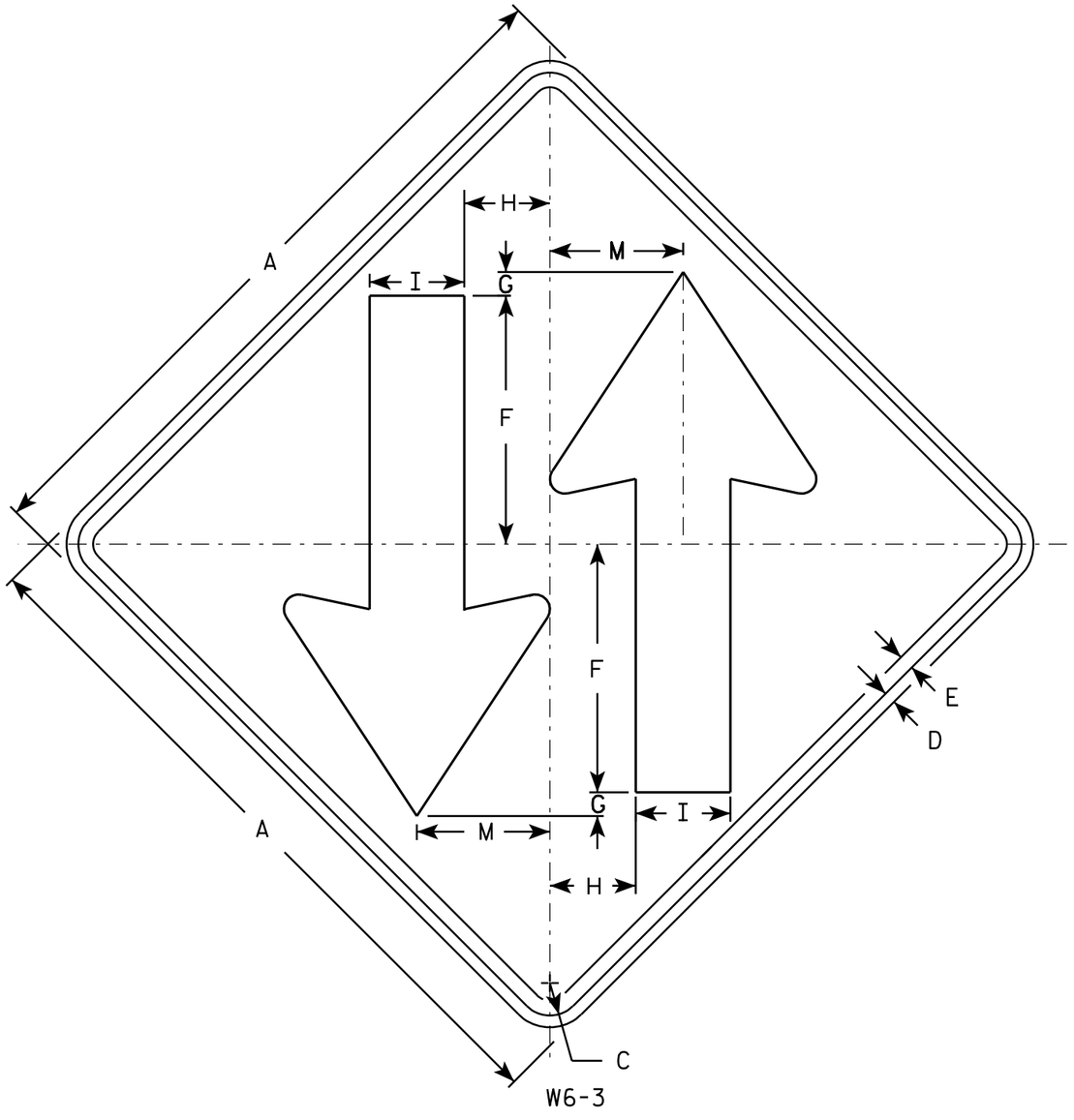
STANDARD SIGN
W5-56

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

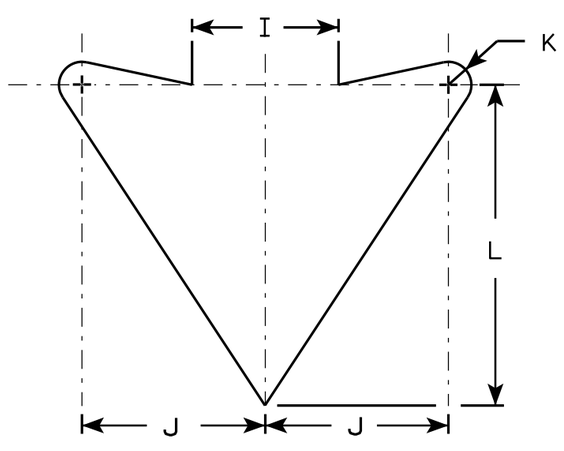
DATE 11/2/10 PLATE NO. W5-56.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 178	E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



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	10 1/2	1	3 5/8	4	5	5/8	8 3/4	5 5/8														6.25
2S	36		1 5/8	5/8	3/4	12	1	4 1/4	5	6	3/4	10 1/2	6 3/4														9.0
2M	36		1 5/8	5/8	3/4	12	1	4 1/4	5	6	3/4	10 1/2	6 3/4														9.0
3																											
4	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
5	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0

STANDARD SIGN
W6-3

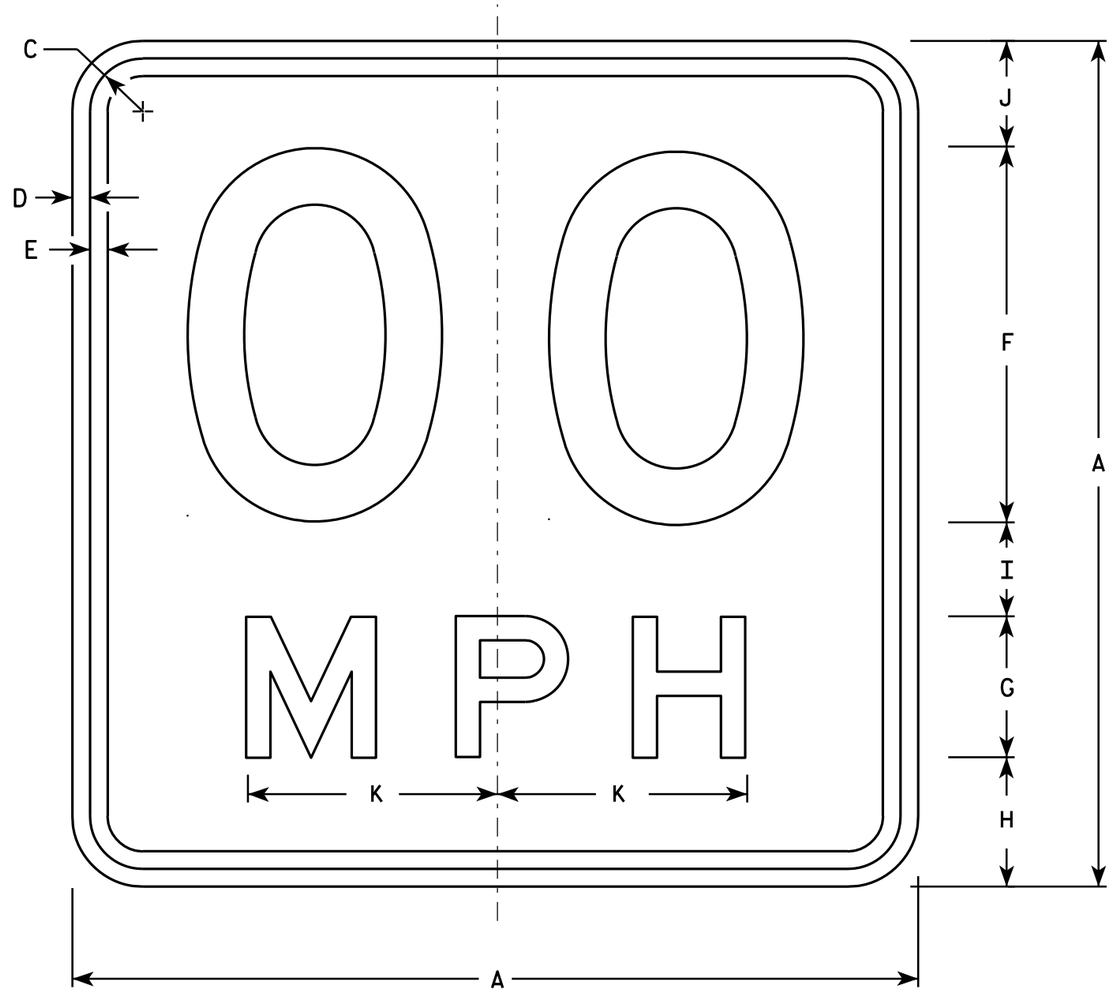
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W6-3.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 179 | E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W63.DGN PLOT DATE : 12-MAR-2013 14:11 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.202372:1.000000
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

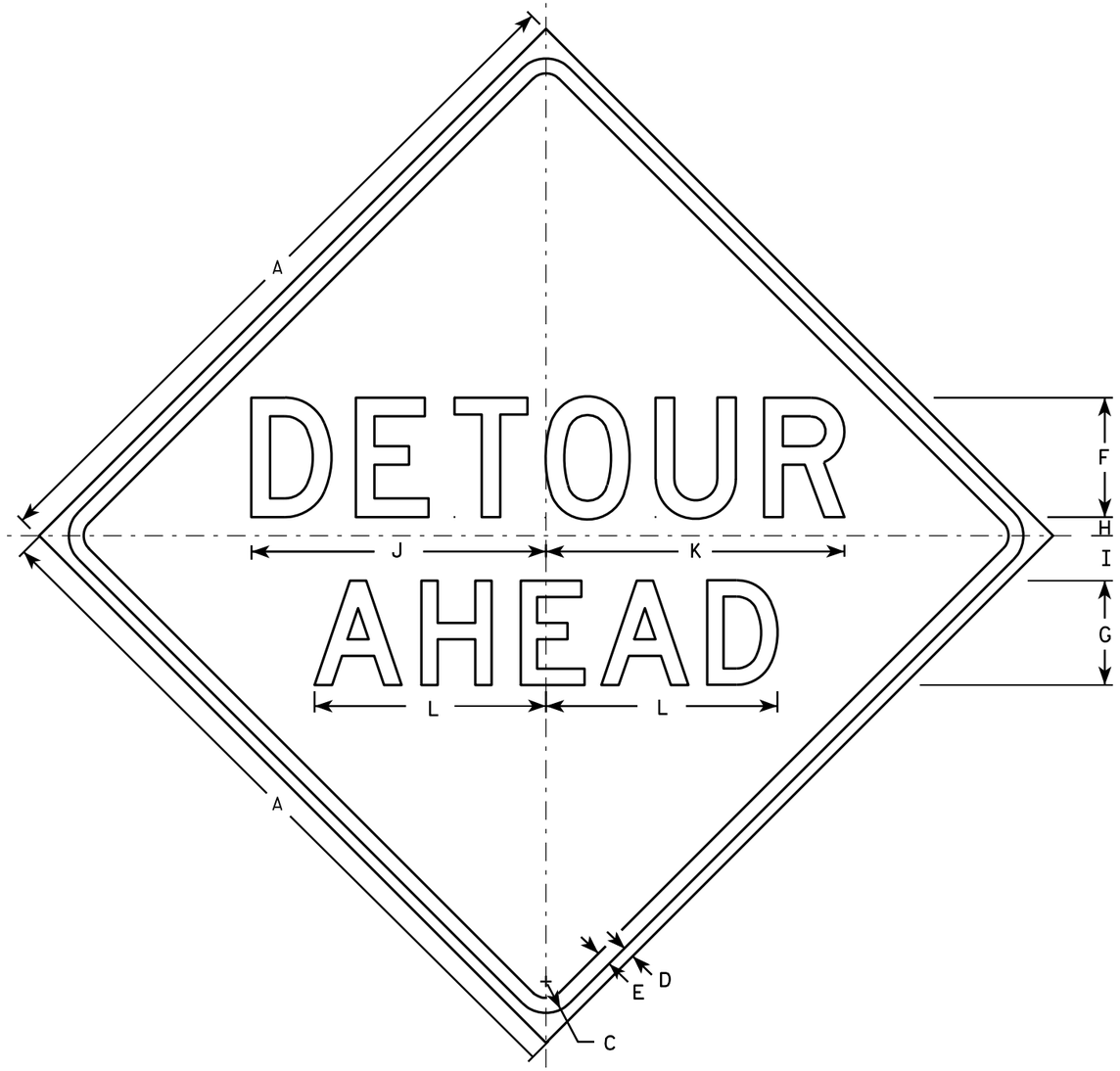
STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

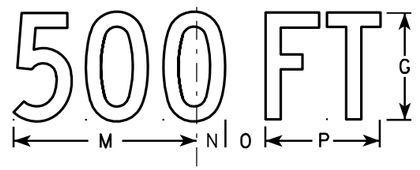
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

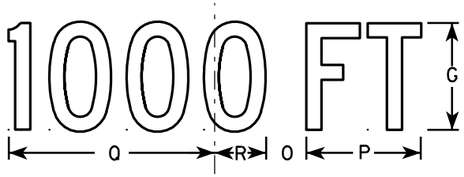
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 180 | E



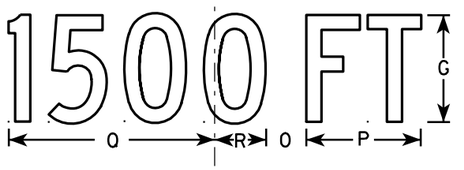
W20-2A



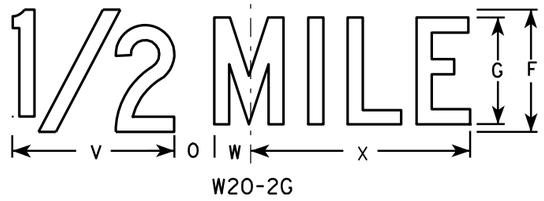
W20-2D



W20-2C



W20-2B



W20-2G

W20-2F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 181 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W202.DGN PLOT DATE : 18-MAR-2011 10:00 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42

NE Temporary Access Road - Construction											
		AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)			
STATION	Distance	Cut	Fill	EBS	Cut	Fill	EBS	Cut 1.00	Expanded Fill **1.27**	Expanded EBS Backfill 1.15 ***Note 8**	Mass Ordinate ***Note 9**
20+50	0	6.8	21.8	0.0	0	0	0	0	0	0	0
21+00	50	0.6	88.7	0.0	7	102	0	7	130	0	-123
21+50	50	1.4	85.0	0.0	2	161	0	9	334	0	-325
22+00	50	1.7	85.8	0.0	3	158	0	12	535	0	-523
22+50	50	4.7	62.0	0.0	6	137	0	17	709	0	-691
23+00	50	61.4	0.9	0.0	61	58	0	79	783	0	-704
23+50	50	77.2	6.3	0.0	128	7	0	207	791	0	-584
23+66	16	4.7	137.0	0.0	24	42	0	231	845	0	-614
				COLUMN TOTAL:	231	665	0				

*See Earthwork Summary in Miscellaneous Quantities for Earthwork Notes.

NW Temporary Access Road - Construction											
		AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)			
STATION	Distance	Cut	Fill	EBS	Cut	Fill	EBS	Cut 1.00	Expanded Fill **1.27**	Expanded EBS Backfill 1.15 ***Note 8**	Mass Ordinate ***Note 9**
10+50	0	2.7	6.2	0.0	0	0	0	0	0	0	0
11+00	50	31.3	0.0	0.0	31	6	0	31	7	0	24
11+50	50	33.7	0.0	0.0	60	0	0	92	7	0	84
12+00	50	39.5	1.7	0.0	68	2	0	160	9	0	150
12+50	50	74.5	0.0	0.0	106	2	0	265	11	0	254
13+00	50	66.9	0.0	0.0	131	0	0	396	11	0	385
13+50	50	13.4	9.9	0.0	74	9	0	470	23	0	447
13+61	11	0.0	78.1	0.0	3	18	0	473	46	0	427
				COLUMN TOTAL:	473	36	0				

*See Earthwork Summary in Miscellaneous Quantities for Earthwork Notes.

9

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STH 32											
		AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)			
STATION	Distance	Cut	Fill	EBS	Cut	Fill	EBS	Cut 1.00	Expanded Fill **1.27**	Expanded EBS Backfill 1.15 ***Note 8**	Mass Ordinate ***Note 9**
118+63	0	70.0	0.0	0.0	0	0	0	0	0	0	0
119+00	37	152.4	5.5	0.0	152	4	0	152	5	0	148
119+50	50	140.0	4.1	0.0	271	9	0	423	16	0	407
120+00	50	176.6	5.5	0.0	293	9	0	716	28	0	689
120+50	50	162.6	1.4	0.0	314	6	0	1,030	36	0	995
121+00	50	140.8	9.0	0.0	281	10	0	1,311	48	0	1,263
121+50	50	133.6	34.3	0.0	254	40	0	1,565	99	0	1,466
122+00	50	131.6	34.7	0.0	246	64	0	1,811	180	0	1,631
122+50	50	141.1	35.2	0.0	252	65	0	2,063	262	0	1,801
123+00	50	134.9	46.7	0.0	256	76	0	2,319	359	0	1,960
123+50	50	137.1	58.7	0.0	252	98	0	2,571	483	0	2,088
124+00	50	134.6	55.9	0.0	252	106	0	2,822	617	0	2,205
124+50	50	142.4	33.8	0.0	257	83	0	3,079	723	0	2,356
125+00	50	134.2	32.4	0.0	256	61	0	3,335	801	0	2,534
125+50	50	107.9	52.4	0.0	224	79	0	3,559	900	0	2,659
126+00	50	275.8	62.6	27.6	355	106	26	3,915	1,036	29	2,879
126+50	50	244.6	260.8	0.0	482	299	26	4,396	1,416	59	2,980
127+00	50	269.7	242.7	0.0	476	466	0	4,873	2,008	59	2,865
127+50	50	231.4	206.3	102.0	464	416	94	5,337	2,536	167	2,800
128+00	50	136.0	211.0	108.2	340	386	195	5,677	3,027	391	2,650
128+50	50	156.7	111.9	83.5	271	299	177	5,948	3,407	595	2,541
129+00	50	189.1	18.0	0.0	320	120	77	6,268	3,559	684	2,709
129+50	50	183.2	17.4	0.0	345	33	0	6,613	3,601	684	3,012
130+00	50	194.0	16.5	0.0	349	31	0	6,962	3,641	684	3,321
130+50	50	187.0	10.3	0.0	353	25	0	7,315	3,672	684	3,642
131+00	50	183.6	16.4	0.0	343	25	0	7,658	3,704	684	3,954
131+50	50	180.7	8.7	0.0	337	23	0	7,995	3,733	684	4,262
131+86	36	181.4	11.8	0.0	241	14	0	8,236	3,751	684	4,486
				COLUMN TOTAL:	8,236	2,953	595				

*See Earthwork Summary in Miscellaneous Quantities for Earthwork Notes.

Happy Lane											
		AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)			
STATION	Distance	Cut	Fill	EBS	Cut	Fill	EBS	Cut 1.00	Expanded Fill **1.27**	Expanded EBS Backfill 1.15 ***Note 8**	Mass Ordinate ***Note 9**
54+30	0	114.0	0.6	0.0	0	0	0	0	0	0	0
54+50	20	116.3	0.4	0.0	85	0	0	85	0	0	85
55+00	50	119.3	0.3	0.0	218	1	0	303	1	0	302
55+50	50	175.4	1.1	0.0	273	1	0	576	3	0	573
56+00	50	163.3	2.0	0.0	314	3	0	890	7	0	883
59+00	0	98.6	25.7	35.0	0	0	0	890	7	0	883
59+50	50	86.5	43.9	43.0	171	64	72	1,061	88	83	973
60+00	50	77.6	45.2	0.0	152	83	40	1,213	193	129	1020
60+50	50	88.8	7.5	0.0	154	49	0	1,367	255	129	1112
61+00	50	131.1	1.1	0.0	204	8	0	1,571	265	129	1306
61+38	38	121.0	0.6	0.0	177	1	0	1,748	267	129	1481
				COLUMN TOTAL:	1,748	210	112				

*See Earthwork Summary in Miscellaneous Quantities for Earthwork Notes.

Green Acres Drive											
		AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)			
STATION	Distance	Cut	Fill	EBS	Cut	Fill	EBS	Cut 1.00	Expanded Fill **1.27**	Expanded EBS Backfill 1.15 ***Note 8**	Mass Ordinate ***Note 9**
12+15	0	55.1	1.2	0.0	0	0	0	0	0	0	0
12+50	35	64.4	3.0	0.0	77	3	0	77	3	0	74
13+00	50	74.4	2.6	0.0	129	5	0	206	10	0	196
				COLUMN TOTAL:	206	8	0				

*See Earthwork Summary in Miscellaneous Quantities for Earthwork Notes.

NE Temporary Access Road - Removal											
		AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)			
STATION	Distance	Cut	Fill	EBS	Cut	Fill	EBS	Cut 1.00	Expanded Fill **1.27**	Expanded EBS Backfill 1.15 ***Note 8**	Mass Ordinate ***Note 9**
20+50	0	63.5	6.8	0.0	0	0	0	0	0	0	0
21+00	50	130.2	0.6	0.0	179	7	0	179	9	0	171
21+50	50	126.5	1.4	0.0	238	2	0	417	11	0	406
22+00	50	127.3	1.7	0.0	235	3	0	652	15	0	637
22+50	50	103.6	4.7	0.0	214	6	0	866	22	0	844
23+00	50	39.4	58.4	0.0	132	58	0	998	96	0	902
23+50	50	46.5	75.9	0.0	80	124	0	1,078	254	0	823
23+66	16	182.7	4.7	0.0	68	24	0	1,146	285	0	861
				COLUMN TOTAL:	1,146	224	0				

*See Earthwork Summary in Miscellaneous Quantities for Earthwork Notes.

NW Temporary Access Road - Removal											
		AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)			
STATION	Distance	Cut	Fill	EBS	Cut	Fill	EBS	Cut 1.00	Expanded Fill **1.27**	Expanded EBS Backfill 1.15 ***Note 8**	Mass Ordinate ***Note 9**
10+50	0	45.0	0.0	0.0	0	0	0	0	0	0	0
11+00	50	20.6	10.4	0.0	61	10	0	61	12	0	49
11+50	50	30.0	22.2	0.0	47	30	0	108	51	0	57
12+00	50	40.0	36.2	0.0	65	54	0	172	119	0	53
12+50	50	34.3	29.0	0.0	69	60	0	241	196	0	45
13+00	50	12.9	41.1	0.0	44	65	0	285	278	0	7
13+50	50	51.5	12.2	0.0	60	49	0	345	341	0	4
13+61	11	130.0	0.0	0.0	37	2	0	382	344	0	37
				COLUMN TOTAL:	382	271	0				

*See Earthwork Summary in Miscellaneous Quantities for Earthwork Notes.

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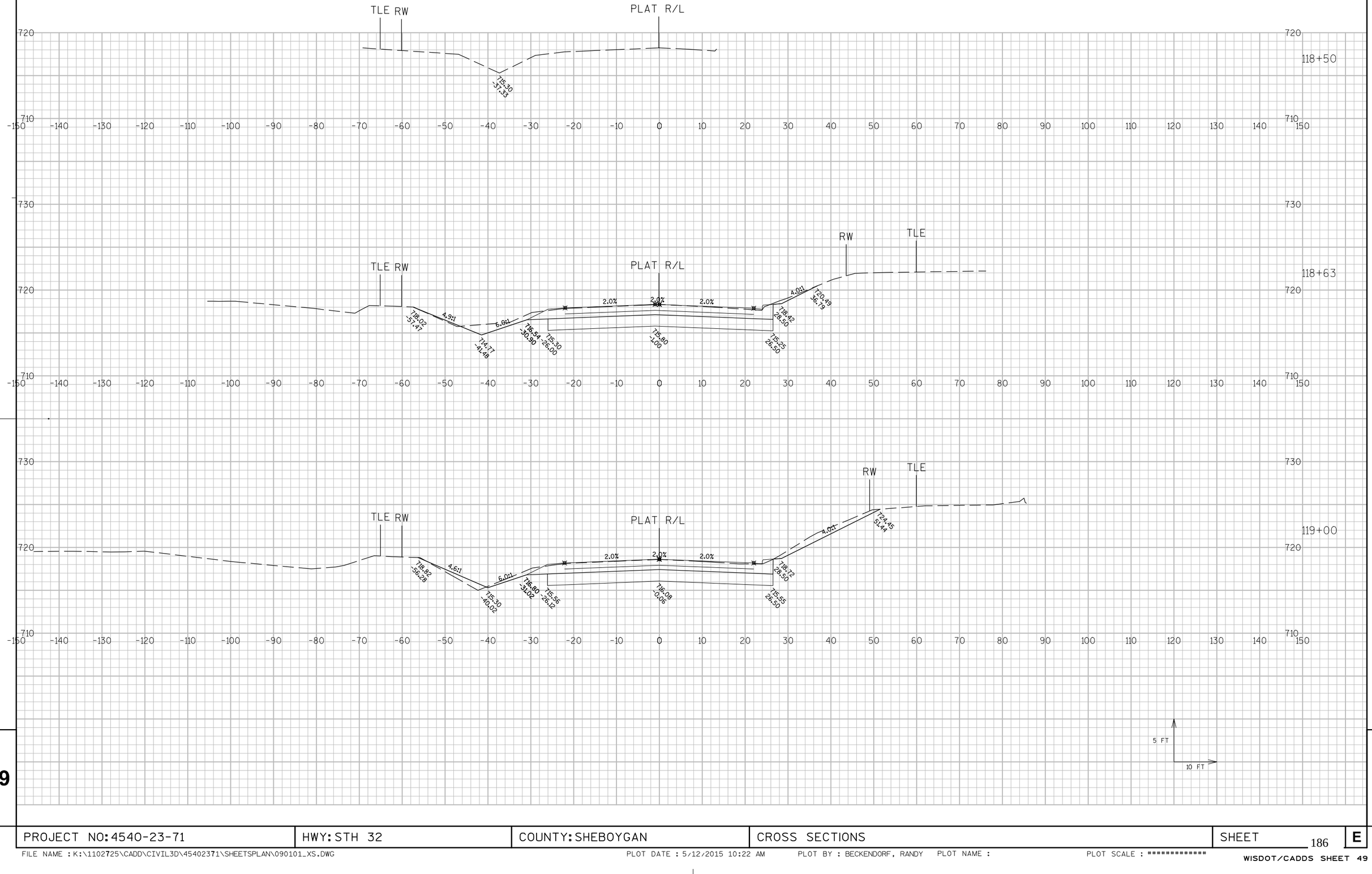

9

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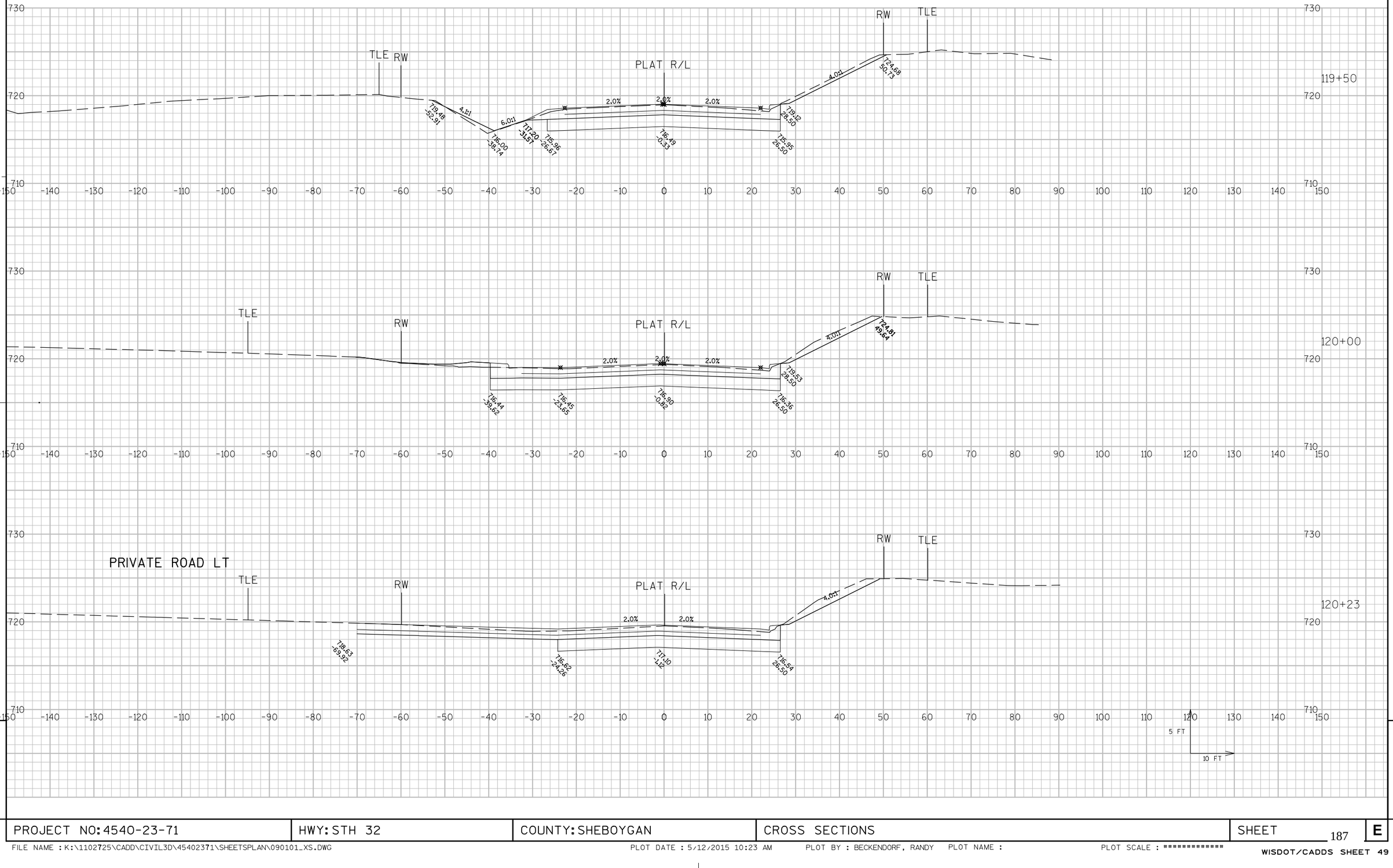
PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS	SHEET	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\090101_XS.DWG PLOT DATE : 5/12/2015 10:22 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : **********



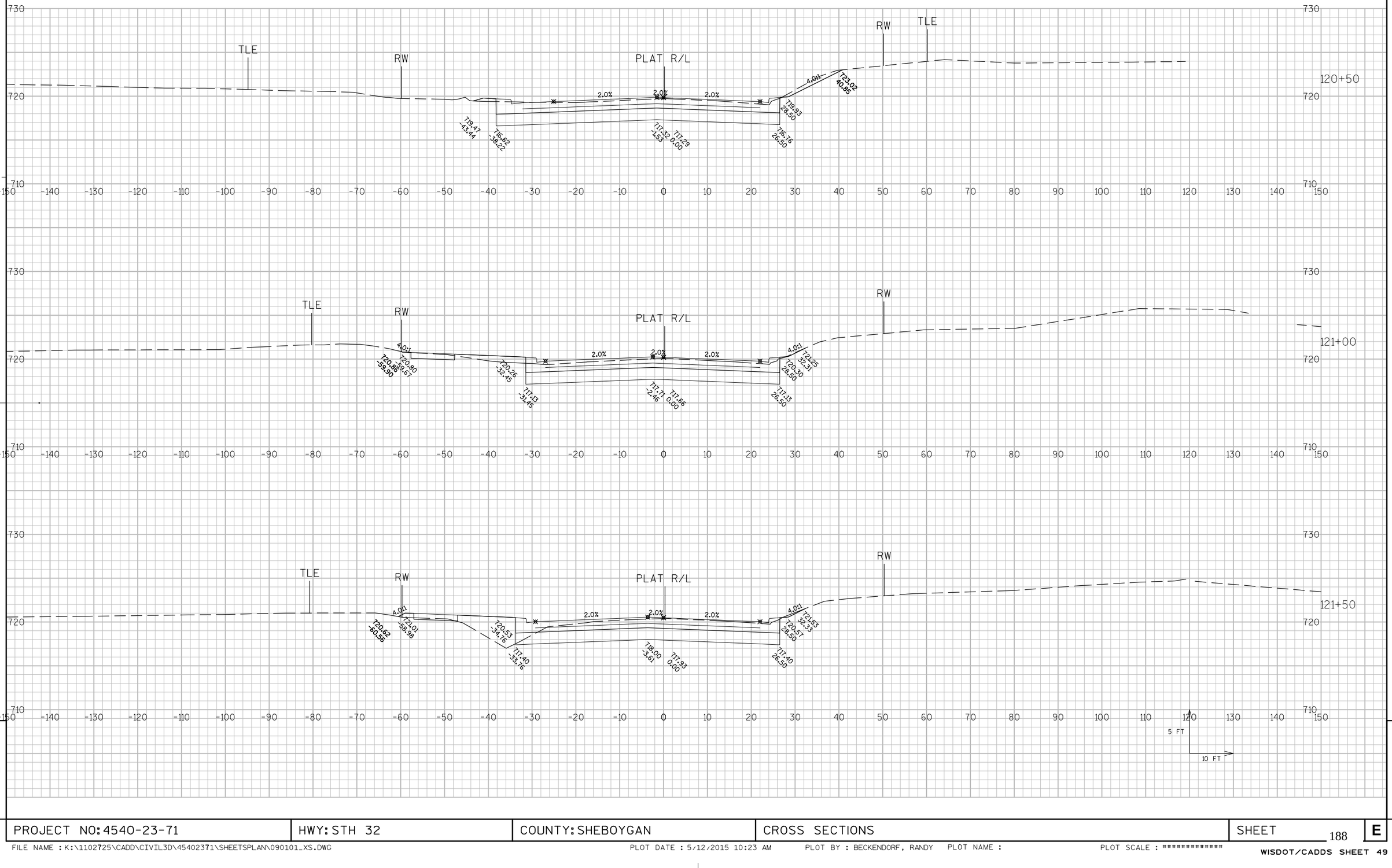
9

9

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS	SHEET 187	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\090101_XS.DWG PLOT DATE : 5/12/2015 10:23 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 49



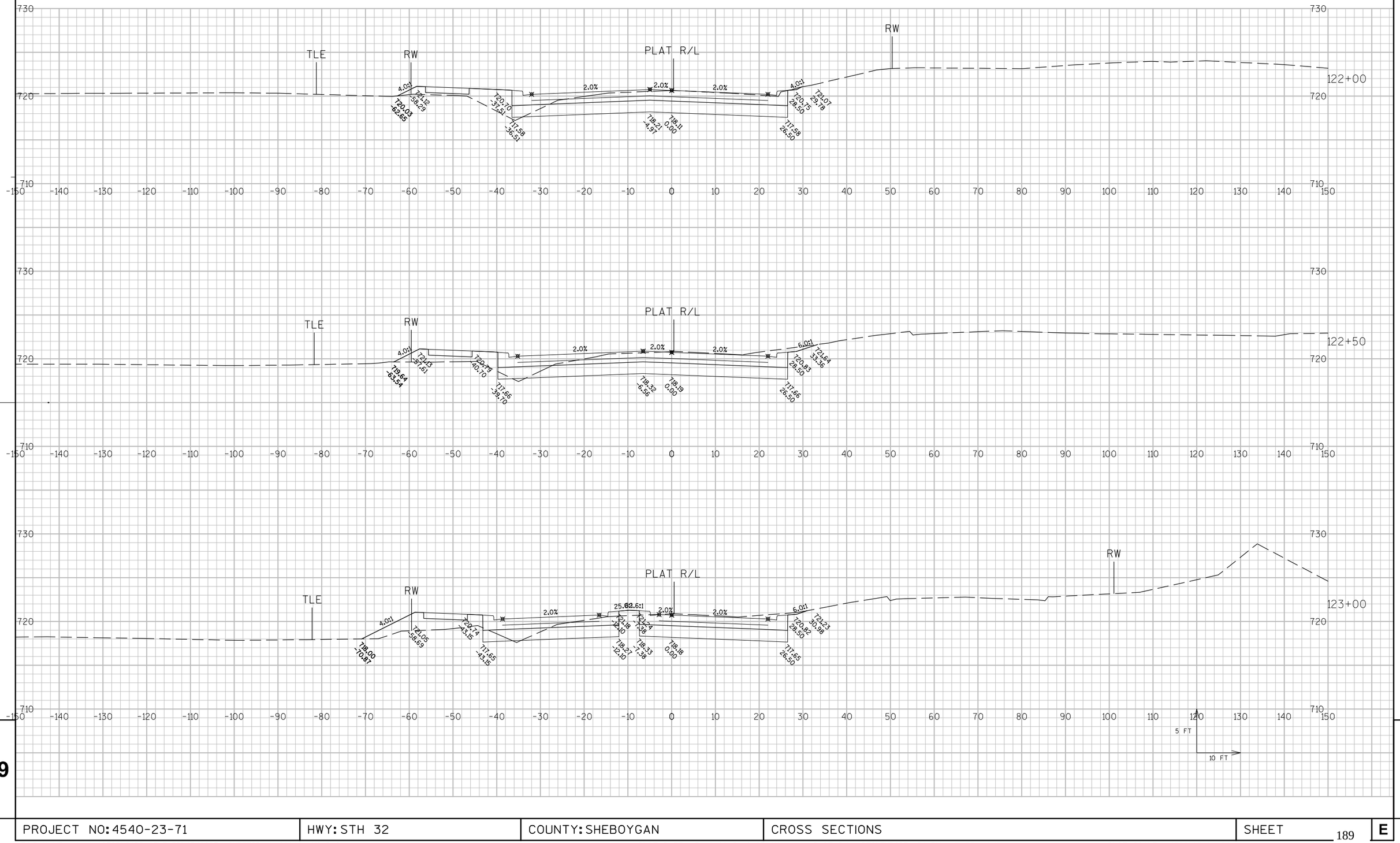
9

9

PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS	SHEET 188	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\090101_XS.DWG PLOT DATE : 5/12/2015 10:23 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : **********

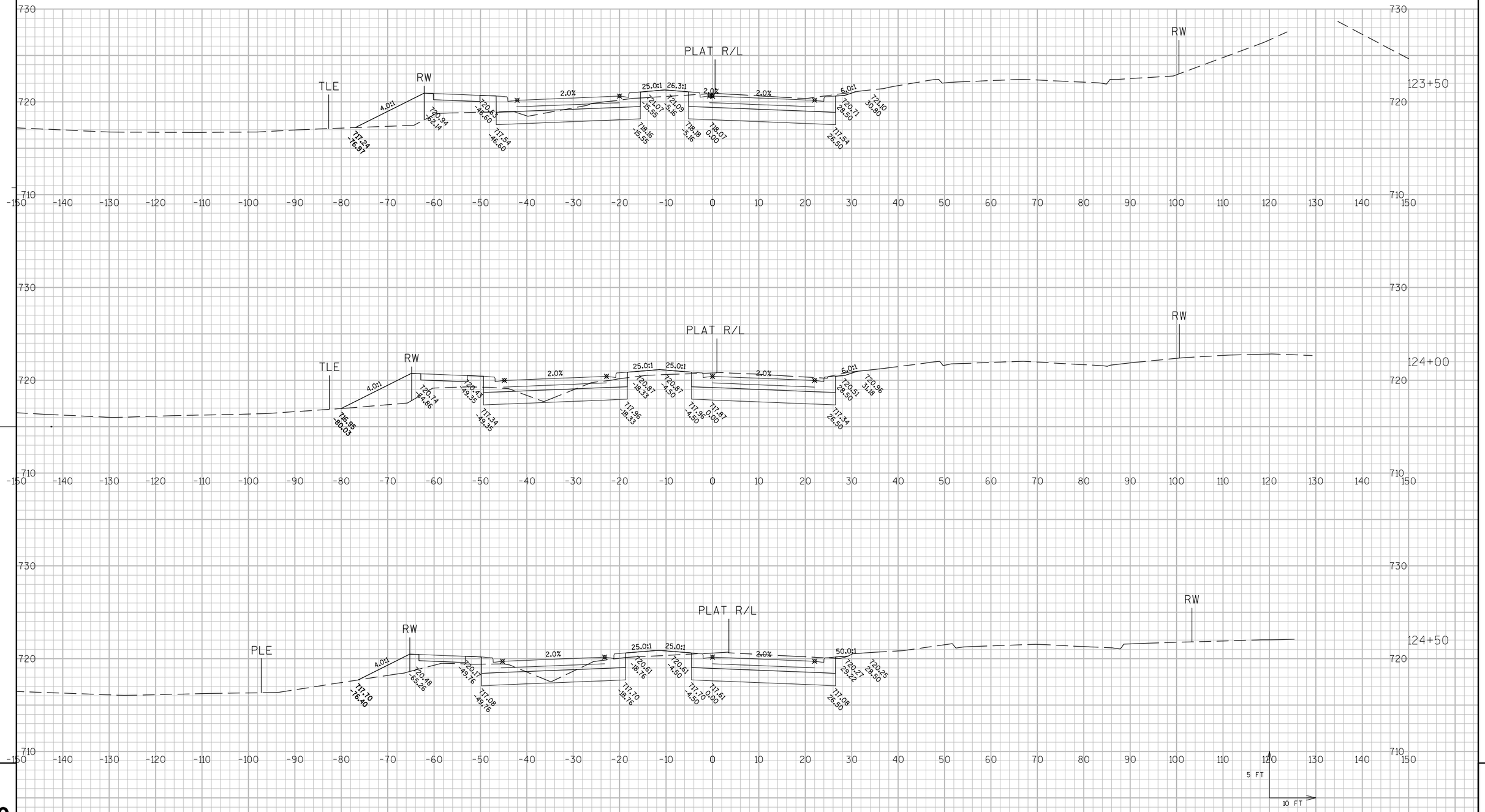
WISDOT/CADDS SHEET 49



PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS	SHEET 189	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\090101_XS.DWG PLOT DATE : 5/12/2015 10:23 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : **********

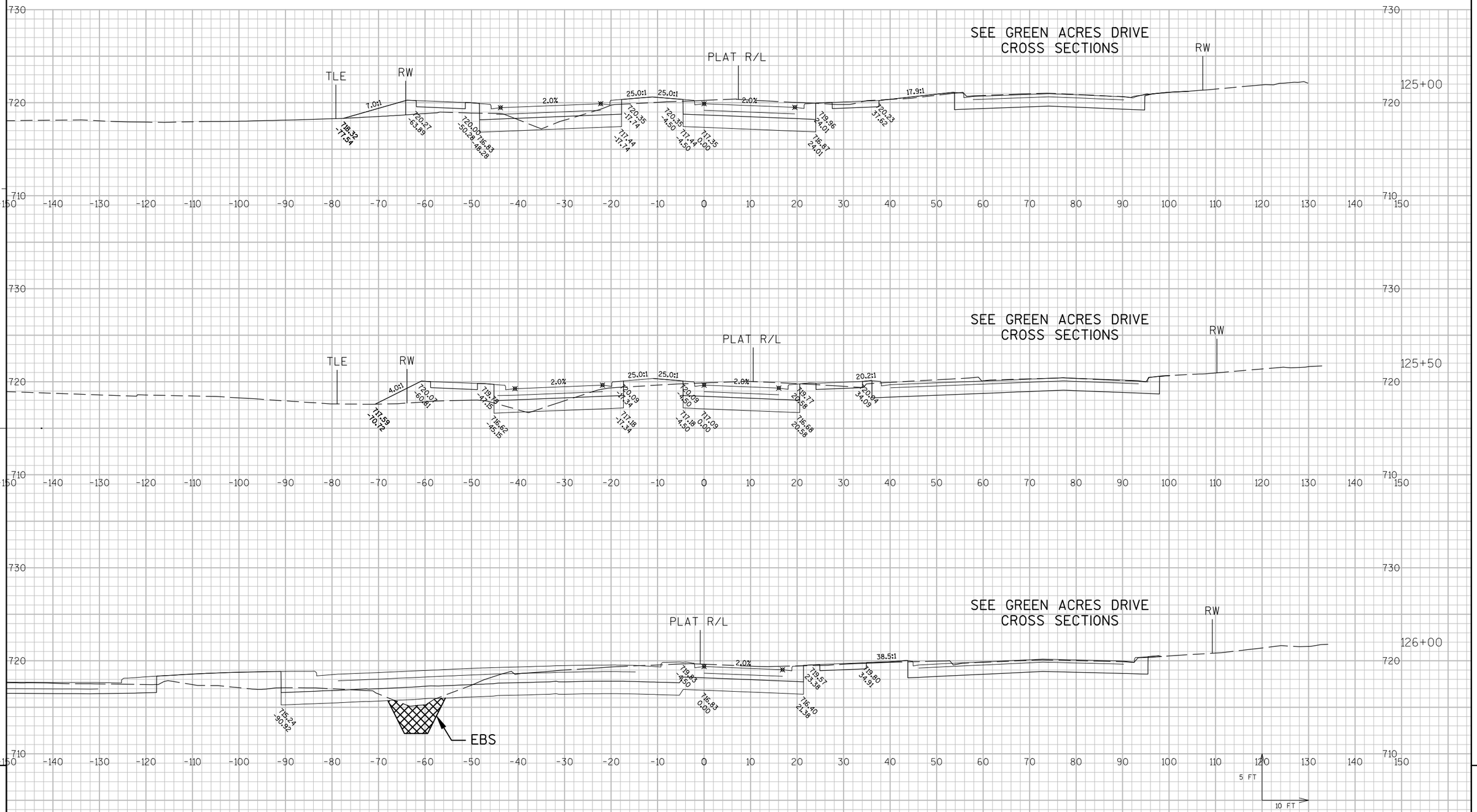
WISDOT/CADDS SHEET 49



PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS	SHEET 190	E

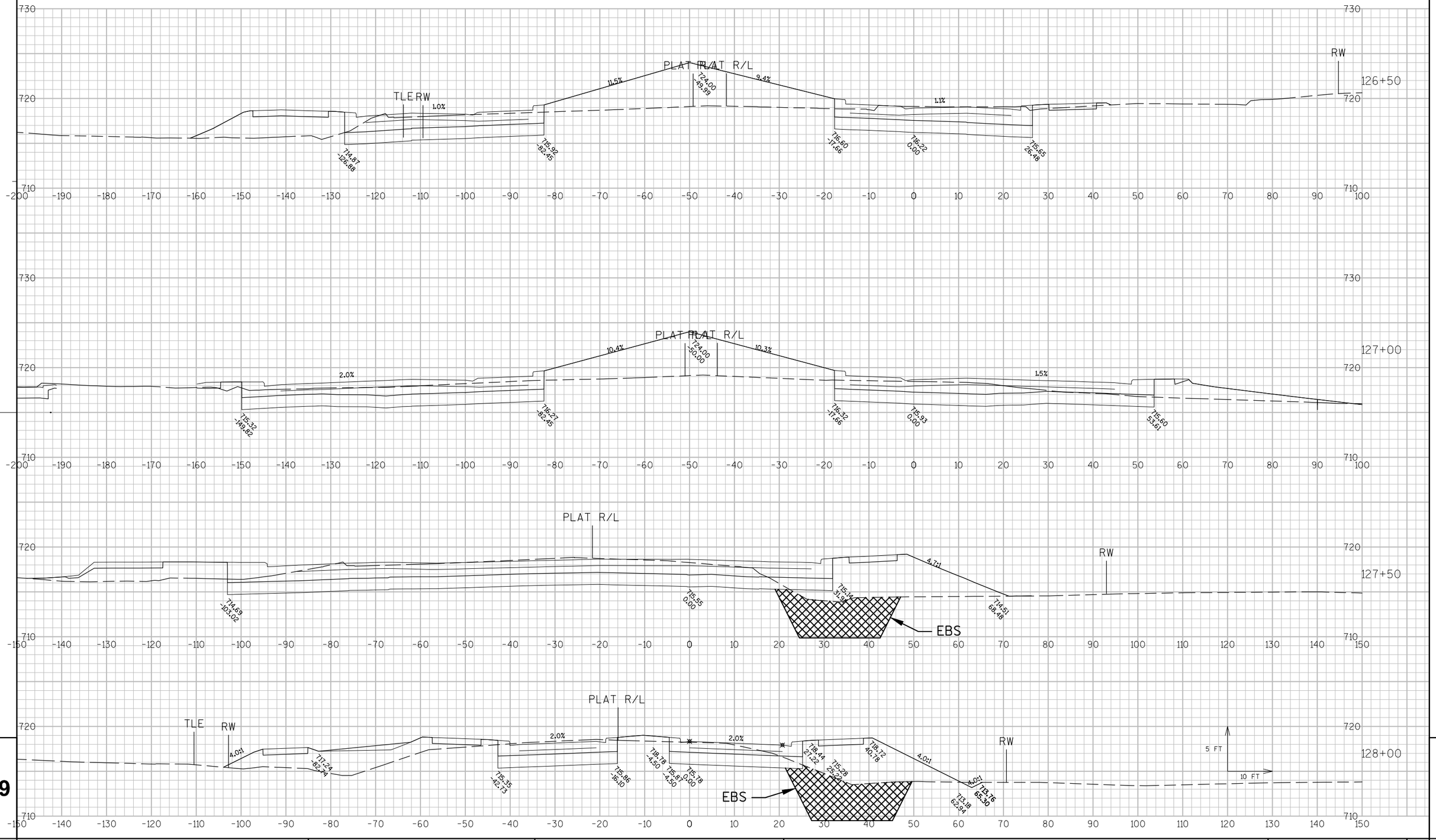
FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\090101_XS.DWG PLOT DATE : 5/12/2015 10:23 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 49



PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS	SHEET 191	E

FILE NAME : K:\1102725\CADD\CIVIL3D\4540237\SHEETSPLAN\090101_XS.DWG PLOT DATE : 5/12/2015 10:23 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : **********



9

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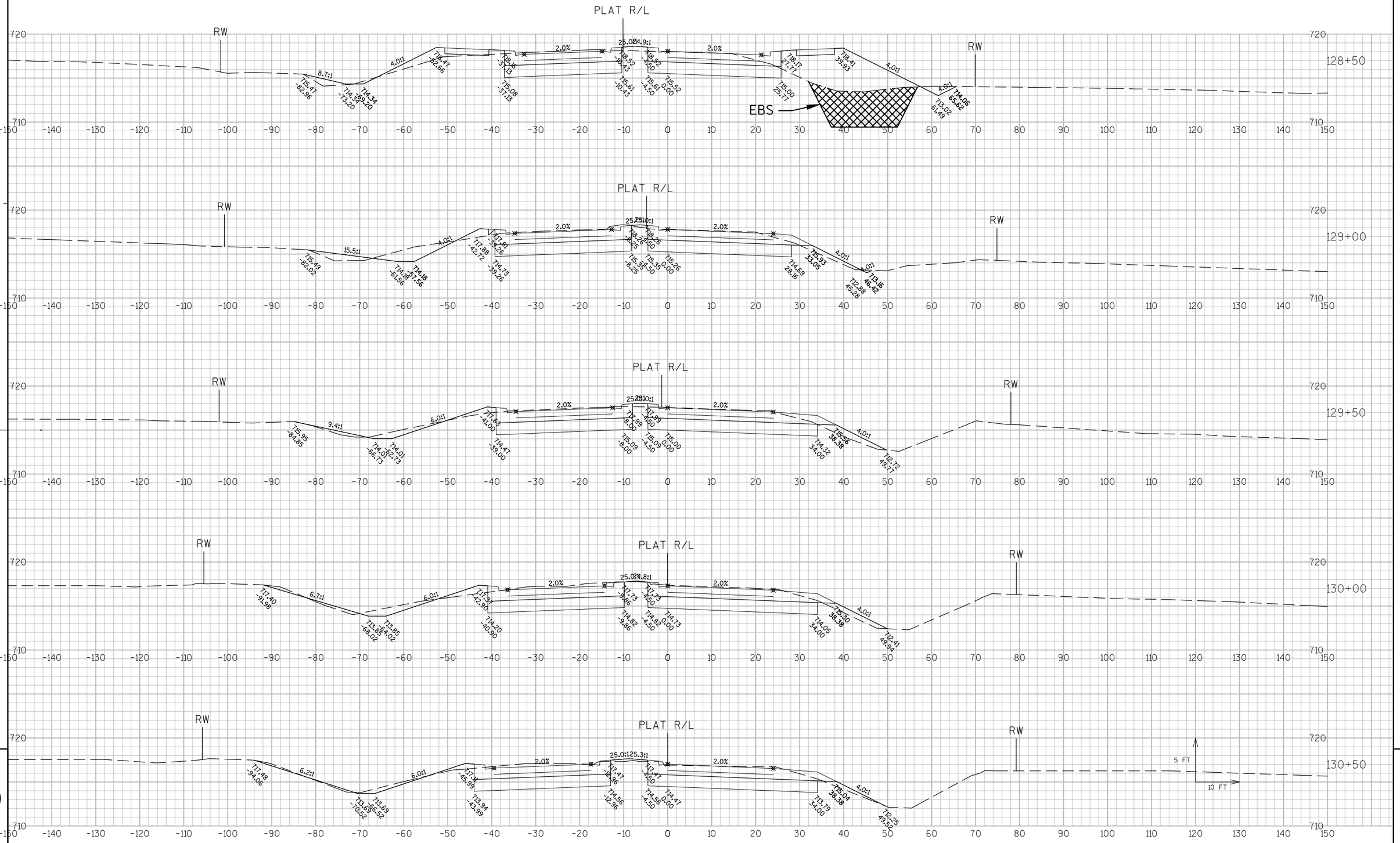
PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS	SHEET 192	E

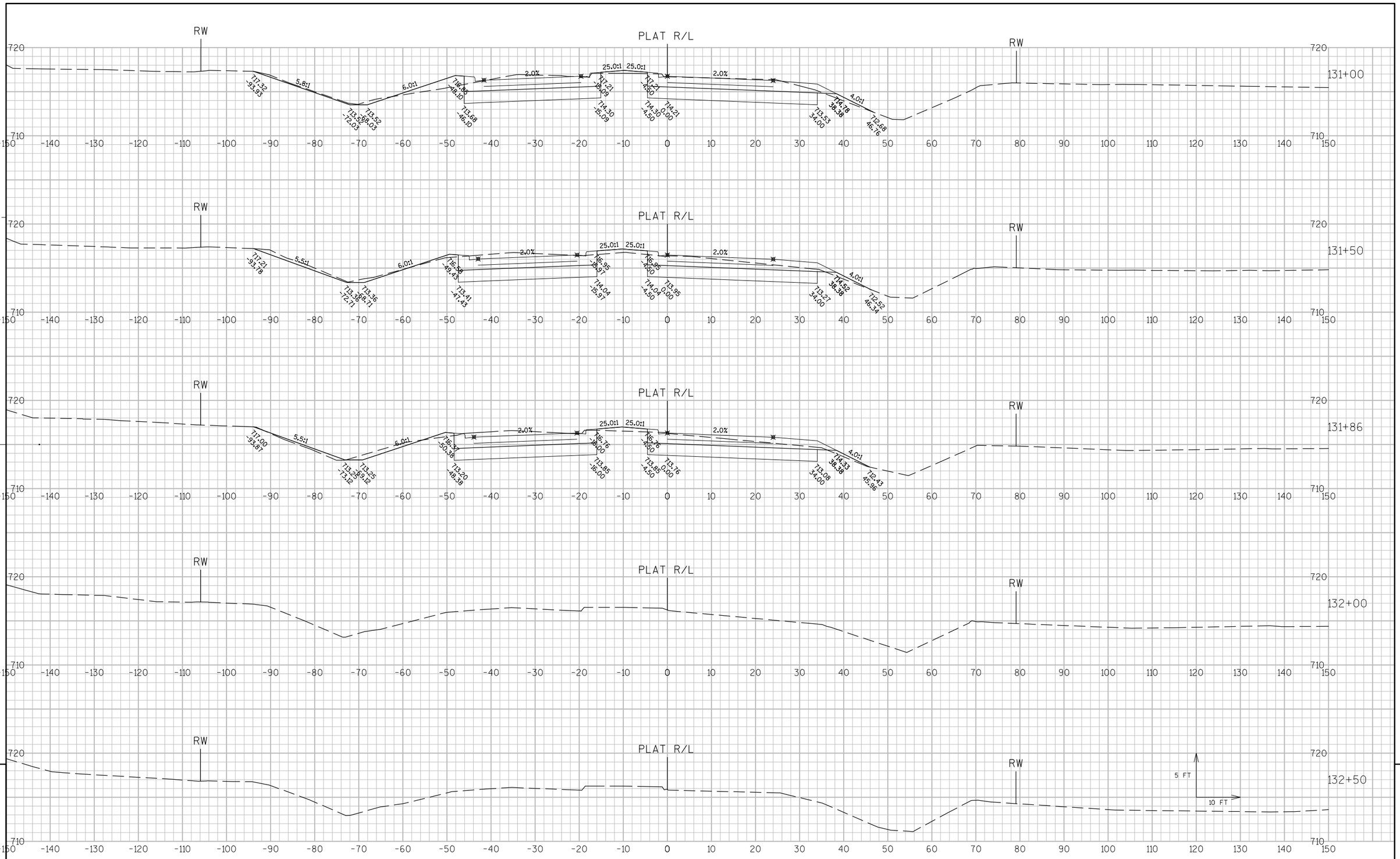
FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\090101_XS.DWG PLOT DATE : 5/12/2015 10:24 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : **********



PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS	SHEET 193	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\090101_XS.DWG PLOT DATE : 5/12/2015 10:24 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : **********

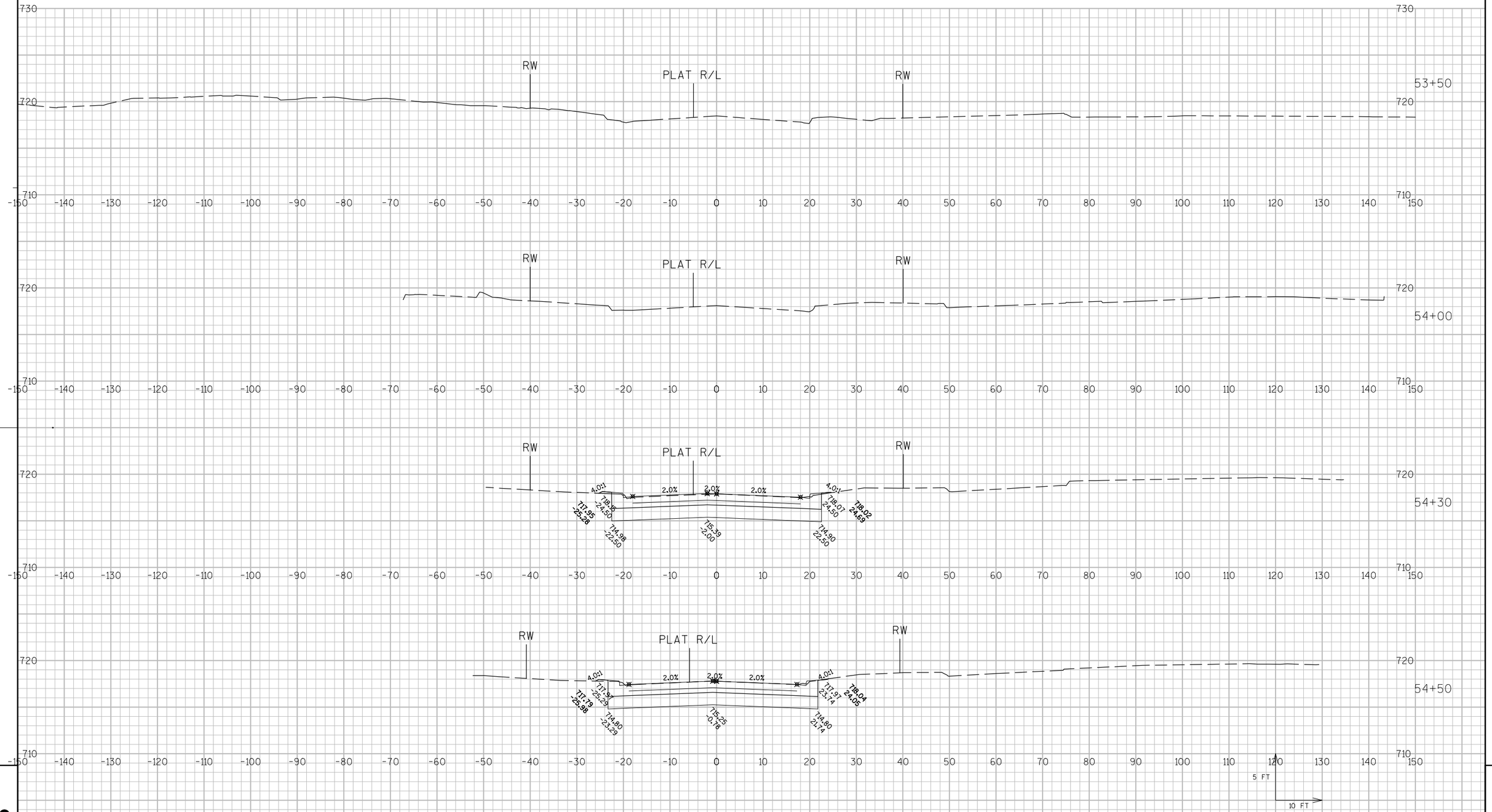
WISDOT/CADDS SHEET 49



PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS	SHEET 194	E

FILE NAME : K:\1102725\CADD\CIVIL3D\4540237 1\SHEETSPLAN\090101_XS.DWG PLOT DATE : 5/12/2015 10:24 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 49



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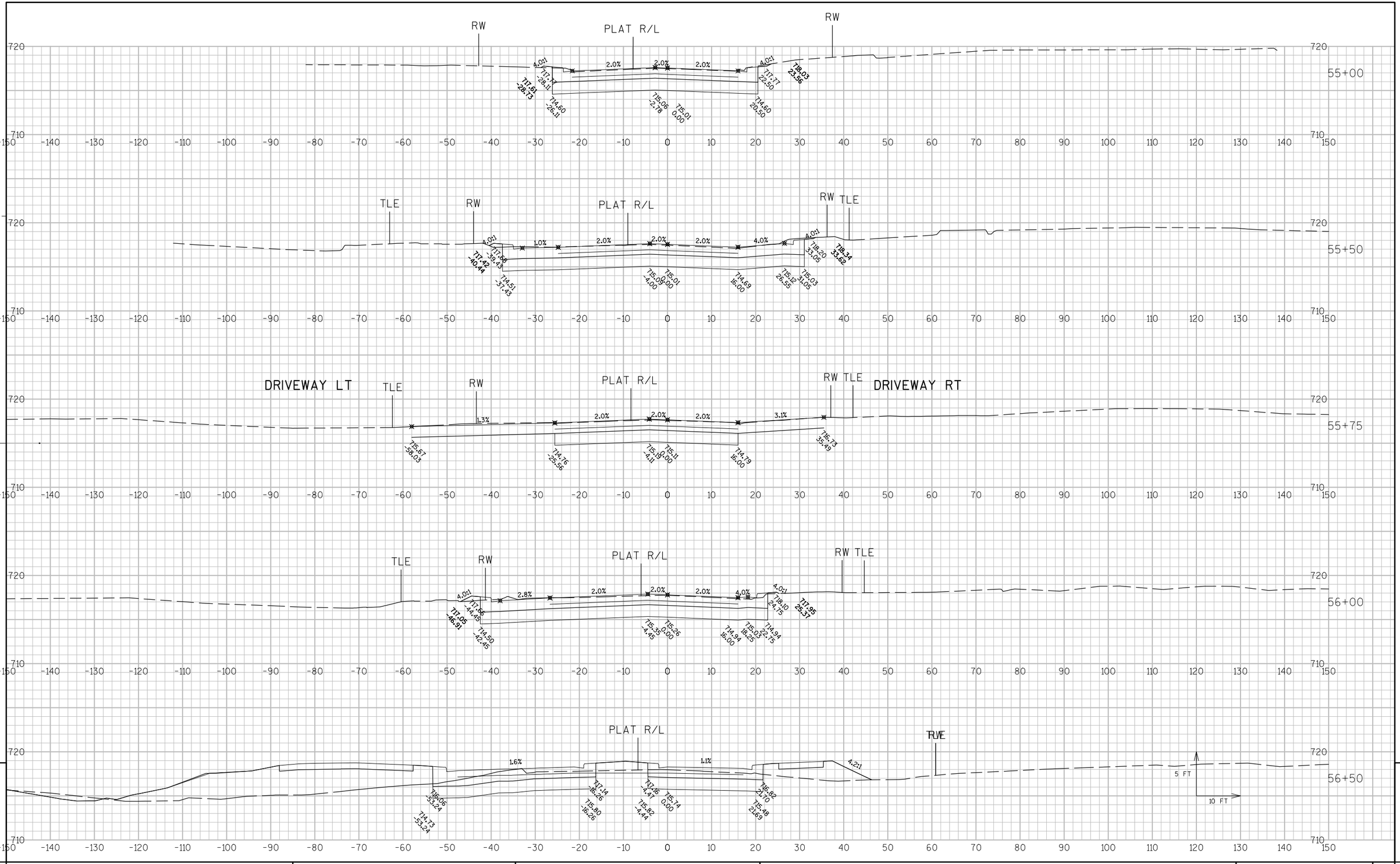
9

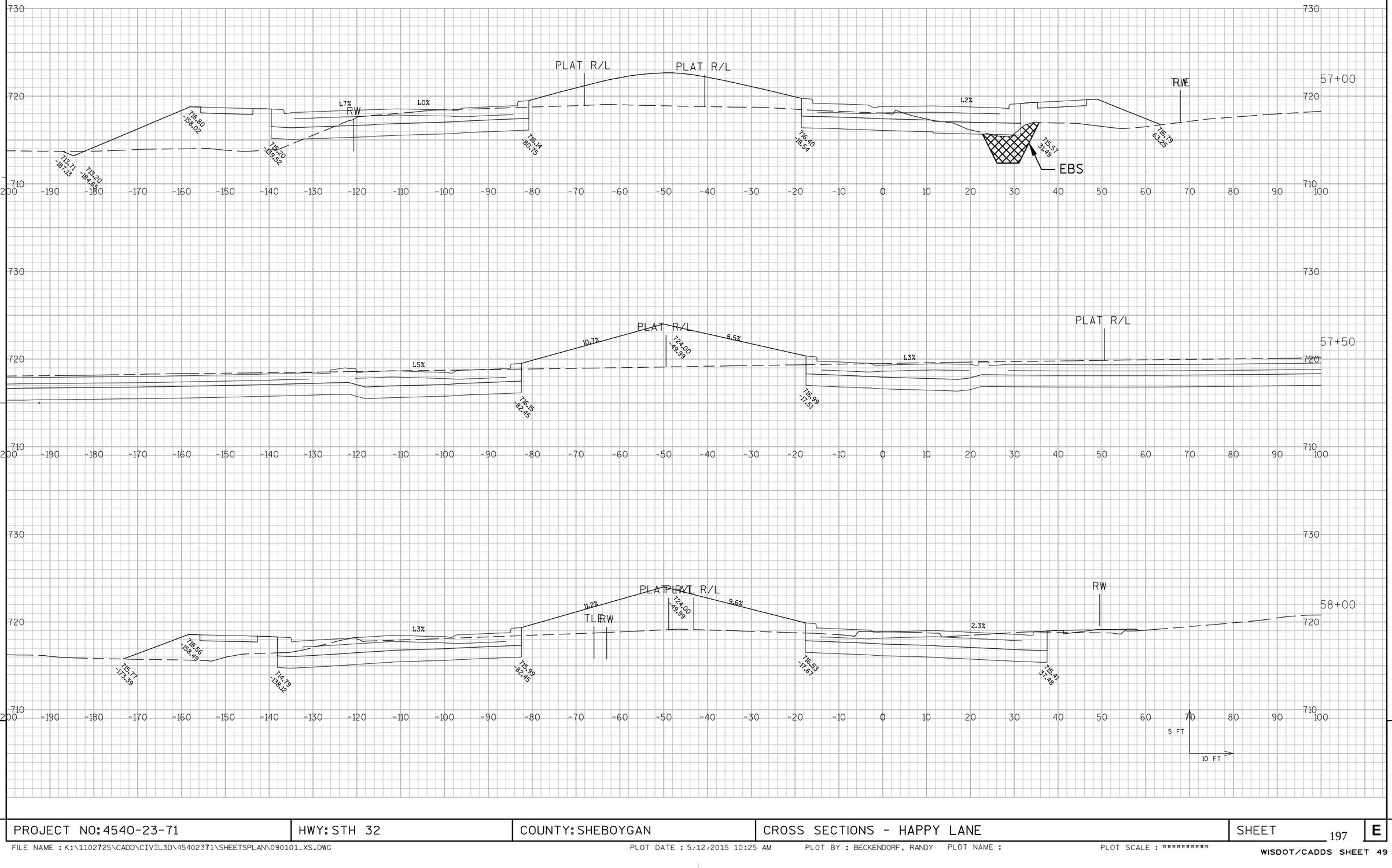
PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS - HAPPY LANE	SHEET 195	E



PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS - HAPPY LANE	SHEET 196	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\090101_XS.DWG PLOT DATE : 5/12/2015 10:25 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : **********

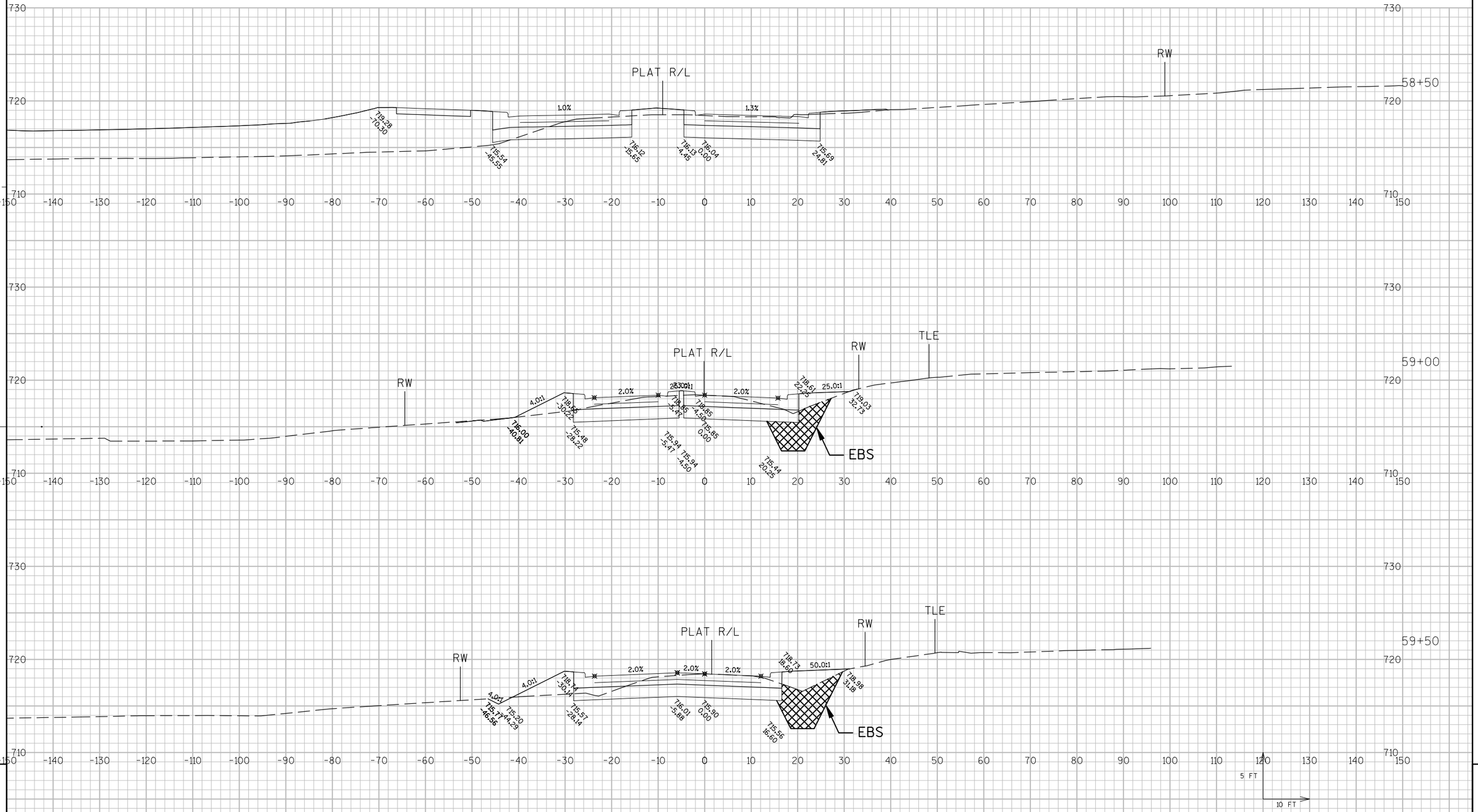
WISDOT/CADDS SHEET 49



PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS - HAPPY LANE	SHEET 197	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\090101_XS.DWG PLOT DATE : 5/12/2015 10:25 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 49



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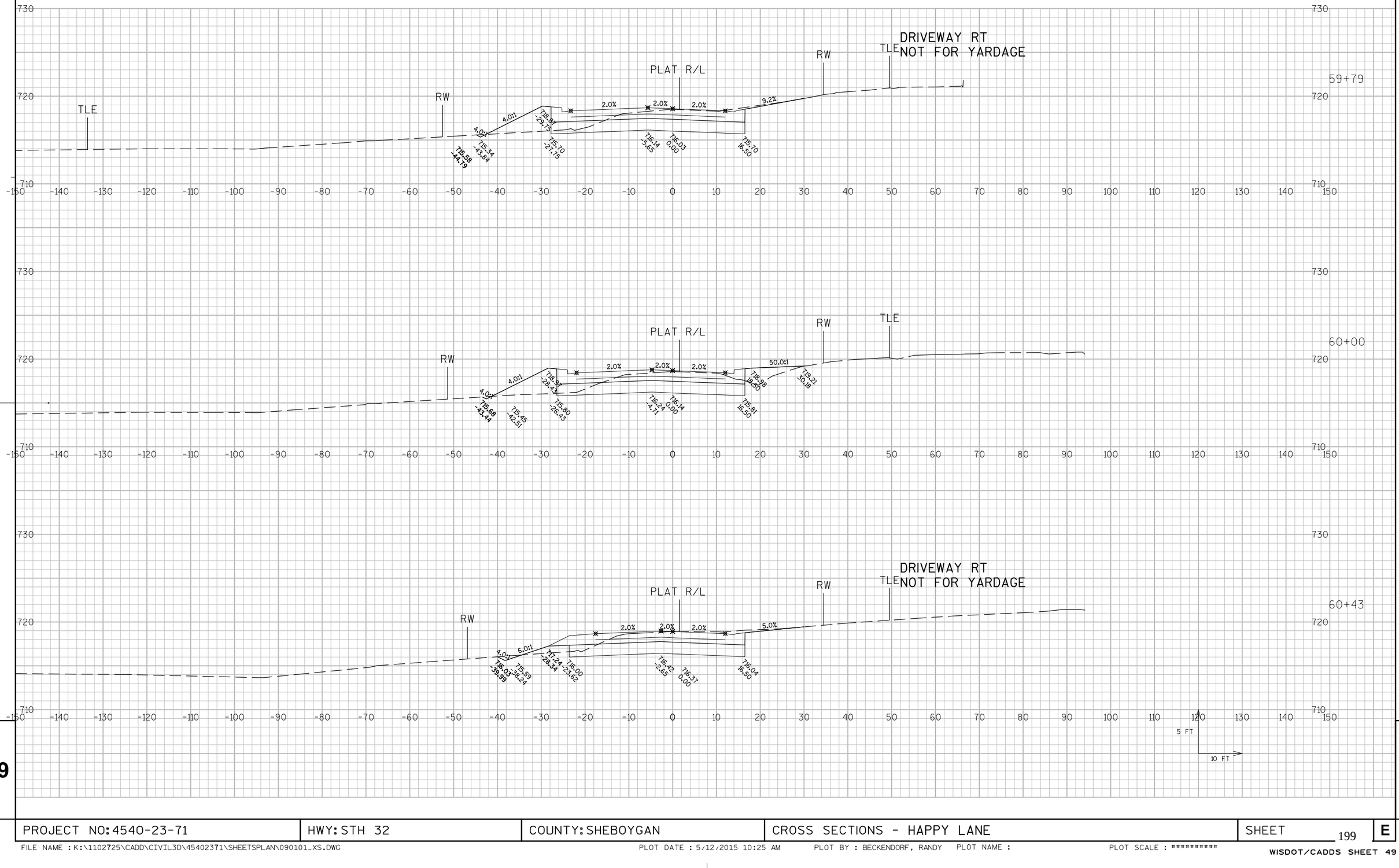
PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS - HAPPY LANE	SHEET 198	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\090101_XS.DWG PLOT DATE : 5/12/2015 10:25 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : **********



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PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS - HAPPY LANE	SHEET 199	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\090101_XS.DWG PLOT DATE : 5/12/2015 10:25 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 49

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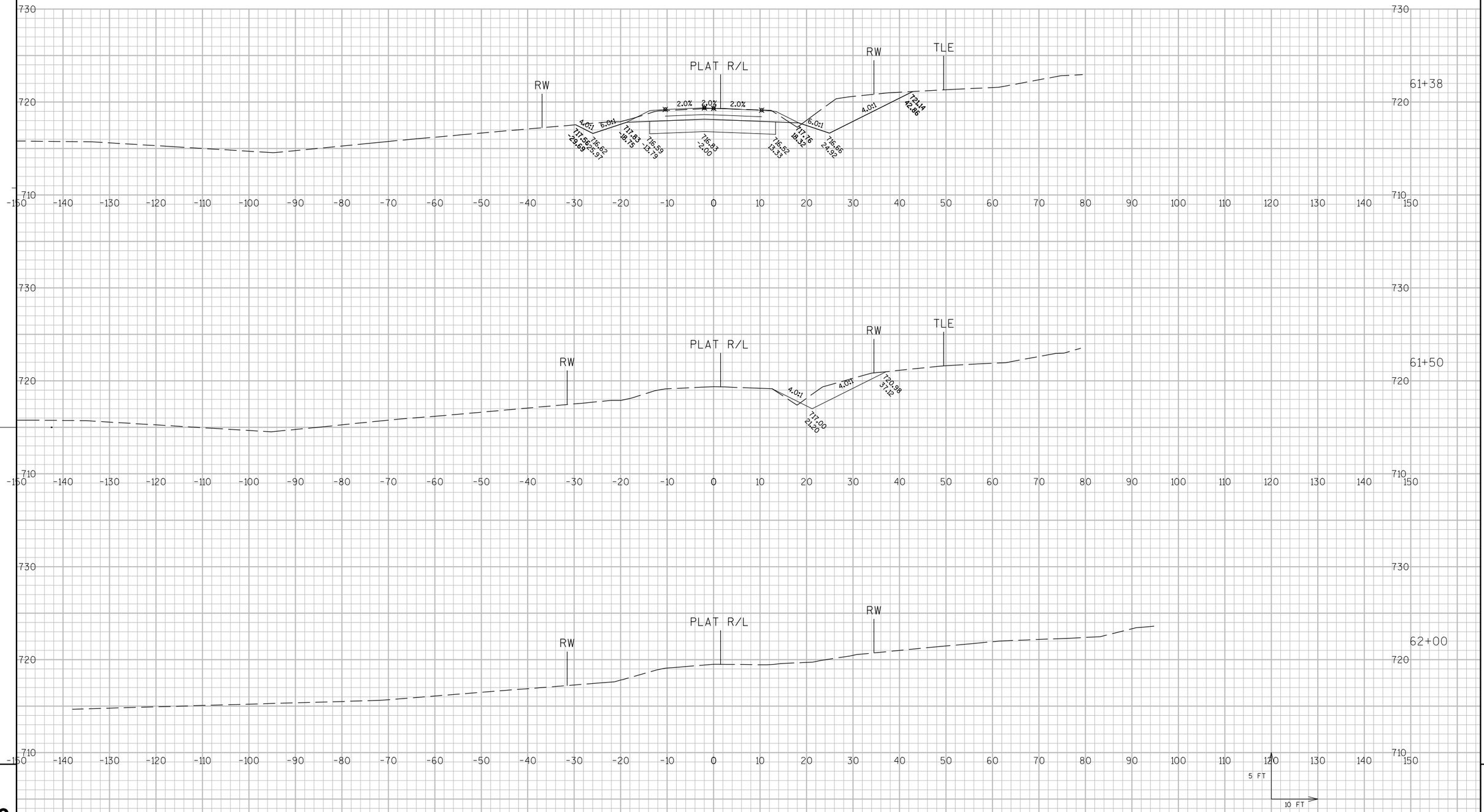
PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS - HAPPY LANE	SHEET 200	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\090101_XS.DWG PLOT DATE : 5/12/2015 10:25 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : **********

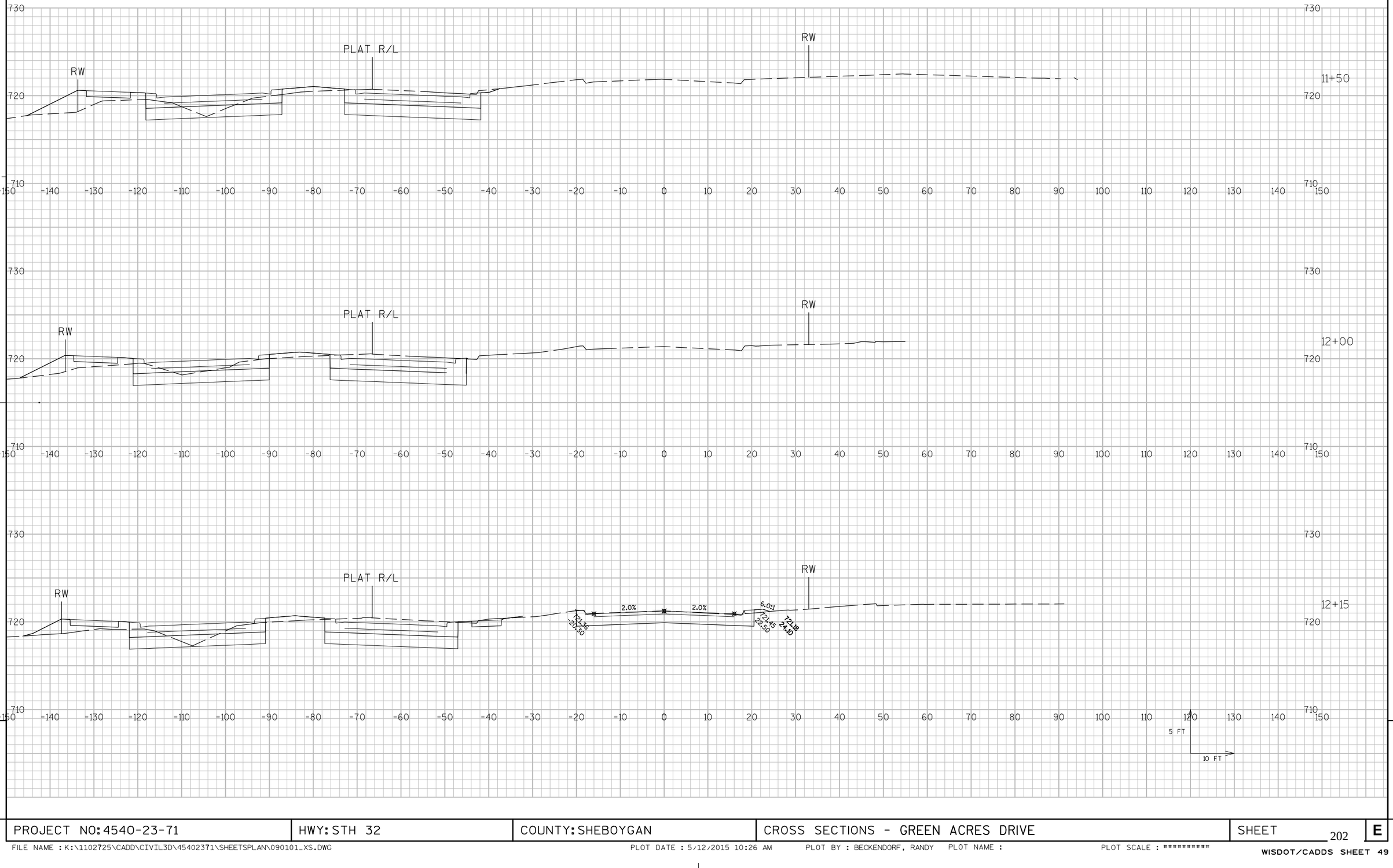
WISDOT/CADDS SHEET 49



PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS - HAPPY LANE	SHEET 201	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\090101_XS.DWG PLOT DATE : 5/12/2015 10:26 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 49



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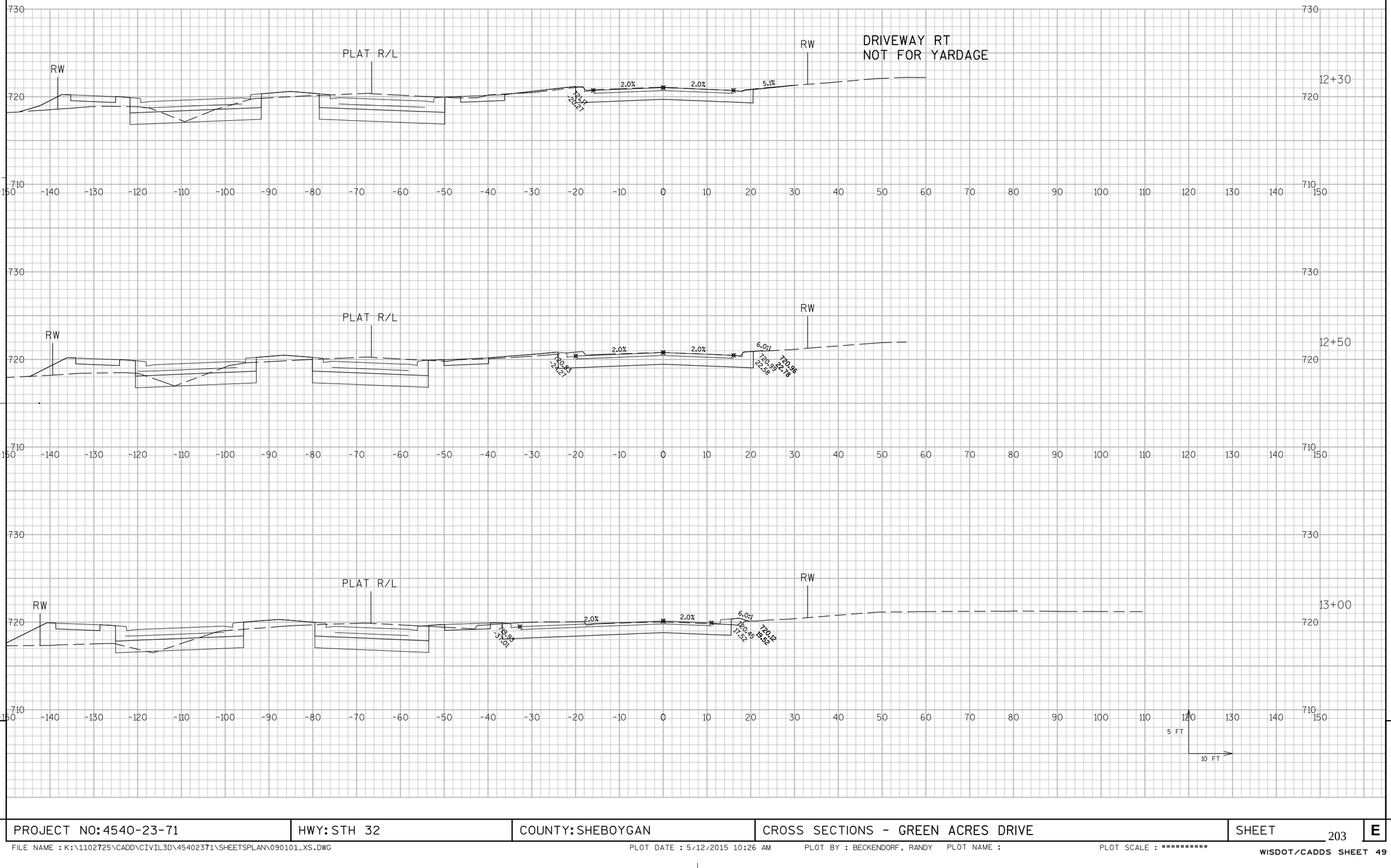
PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS - GREEN ACRES DRIVE	SHEET 202	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\090101_XS.DWG PLOT DATE : 5/12/2015 10:26 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 49



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PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS - GREEN ACRES DRIVE	SHEET 203	E

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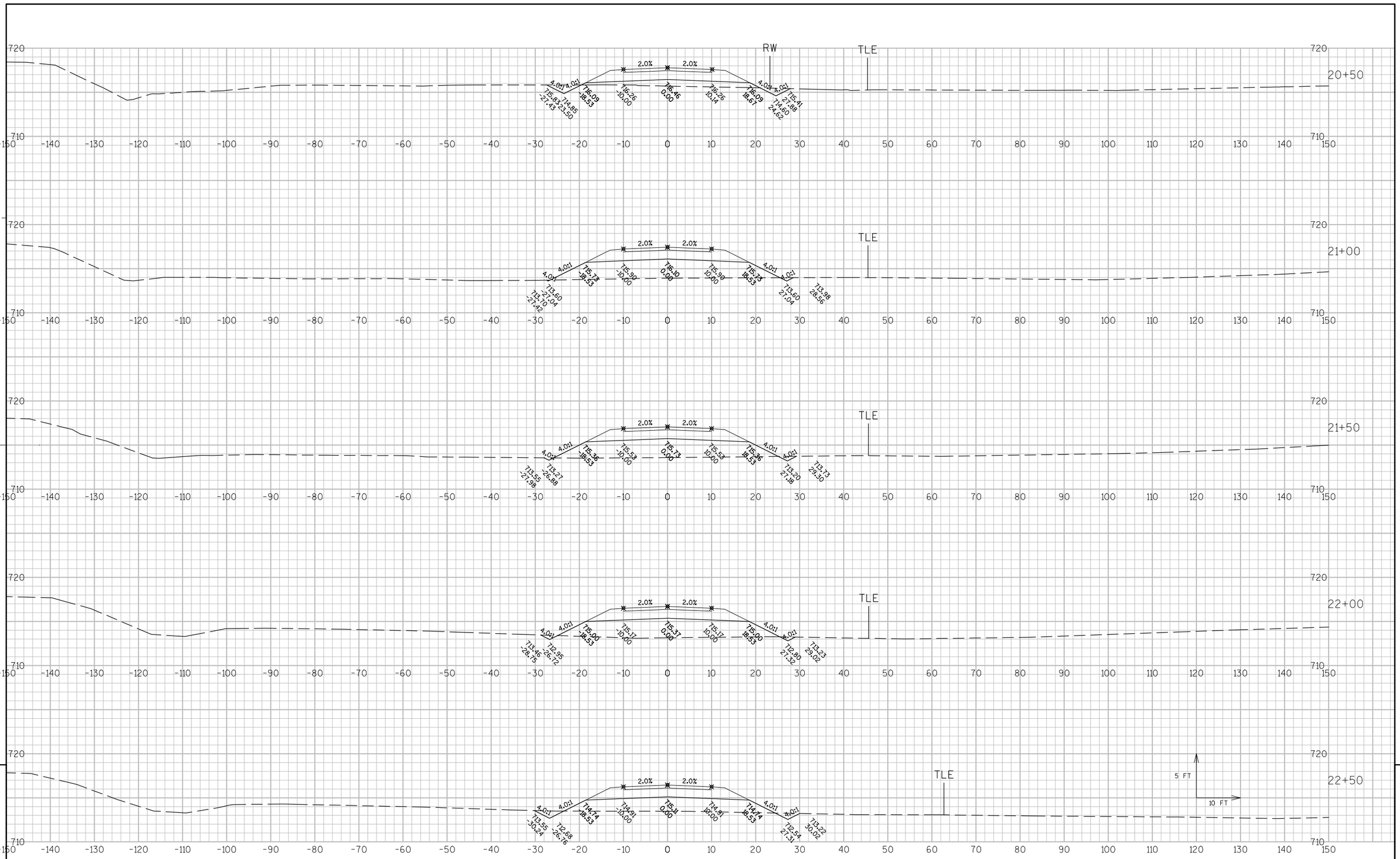

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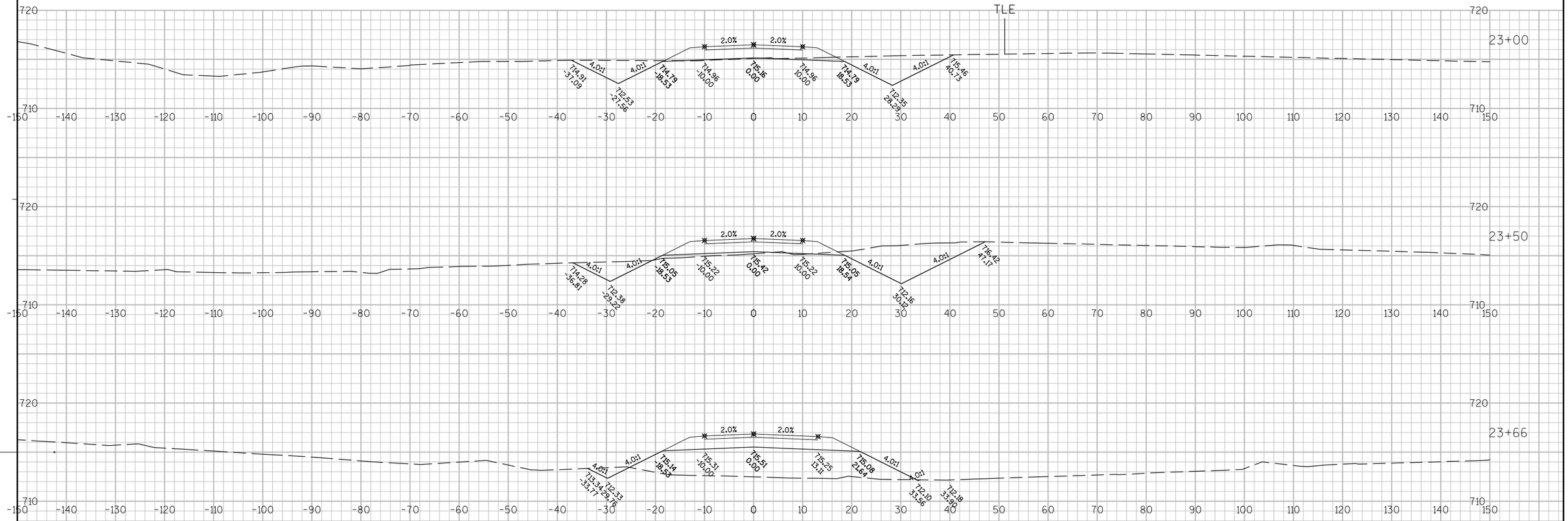
PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS - NE TEMPORARY ACCESS ROAD	SHEET 204	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\090102_XS.DWG PLOT DATE : 5/12/2015 10:31 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 49



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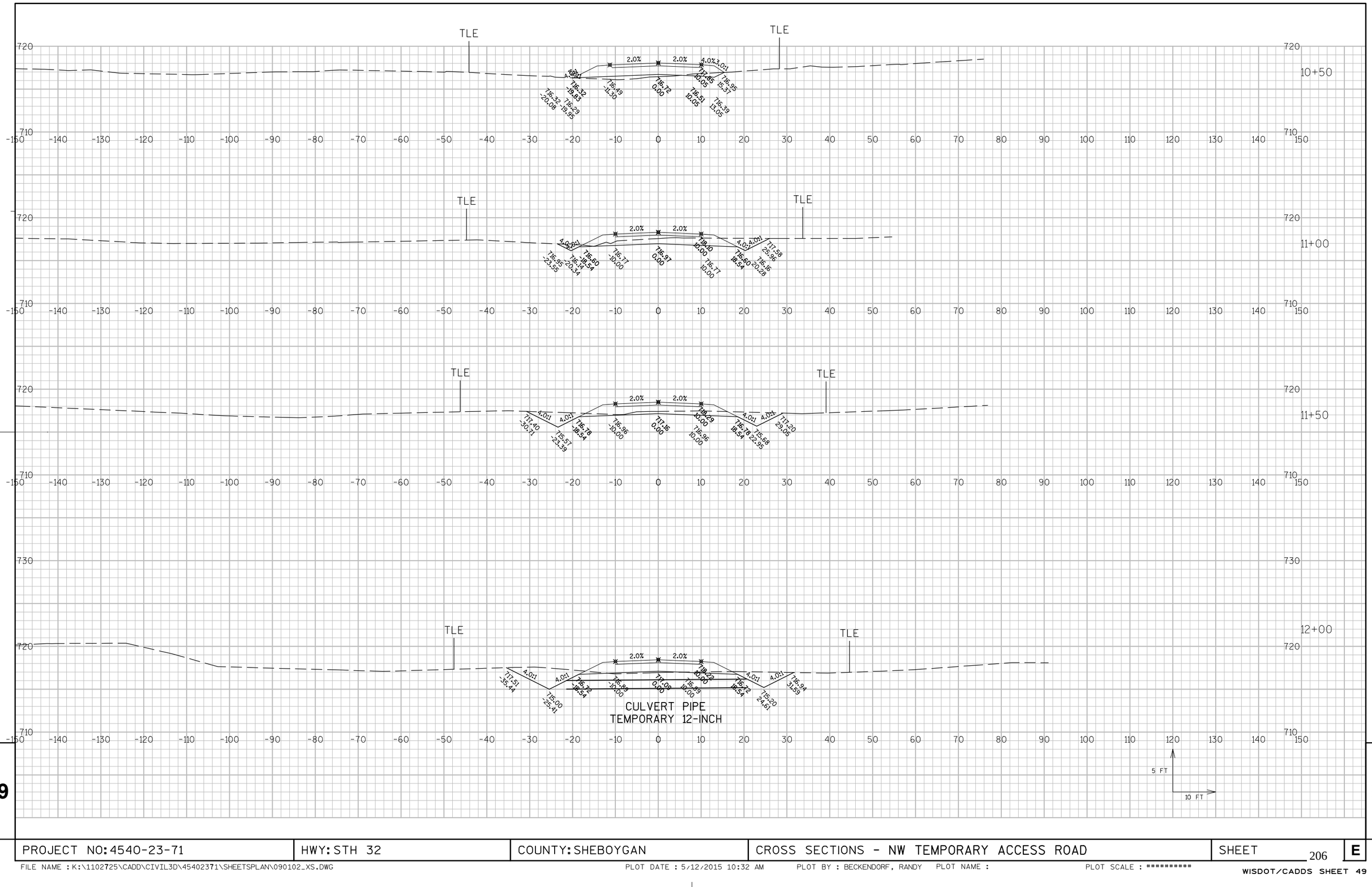
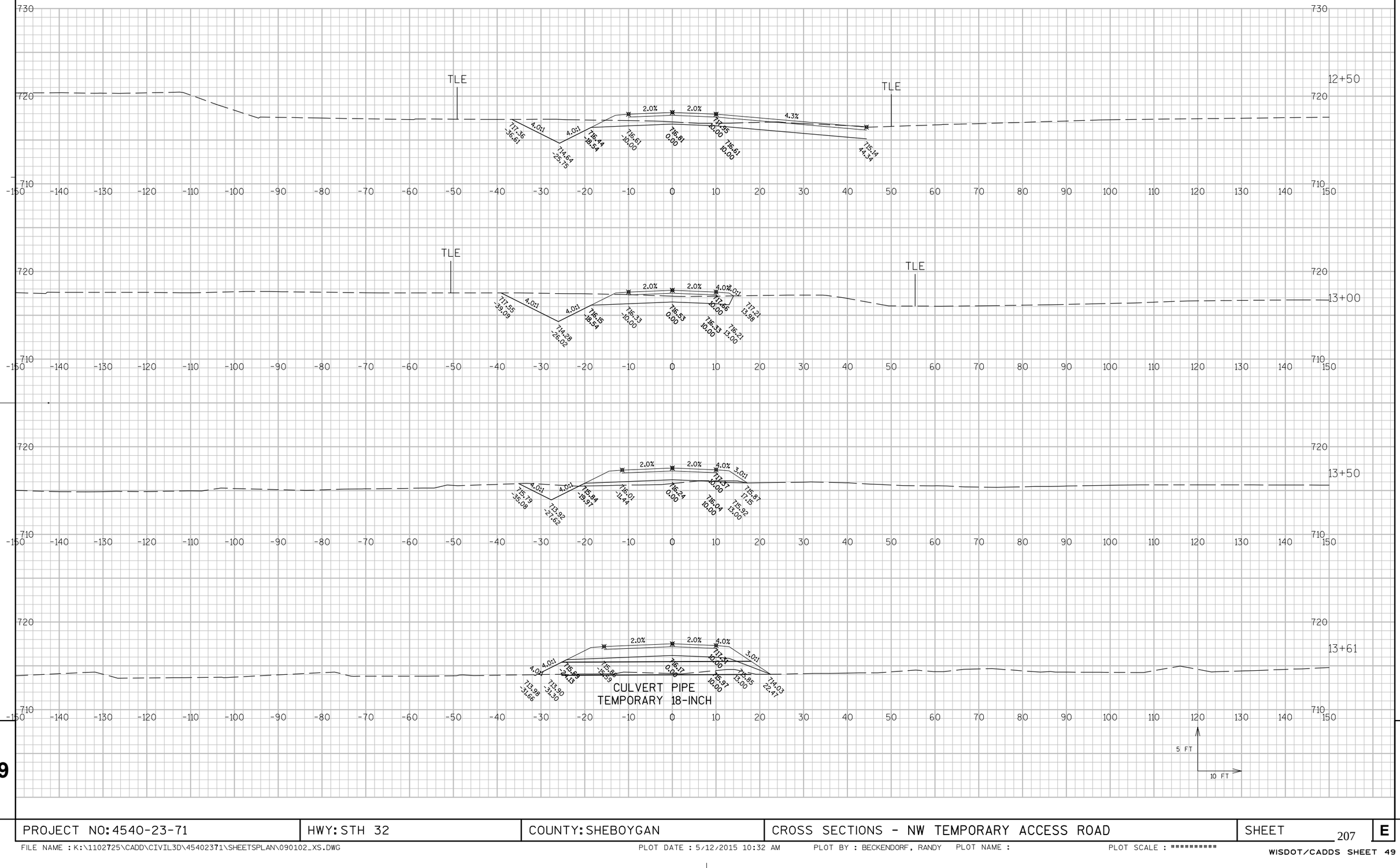
PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS - NE TEMPORARY ACCESS ROAD	SHEET 205	E



PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS - NW TEMPORARY ACCESS ROAD	SHEET 206	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\090102_XS.DWG PLOT DATE : 5/12/2015 10:32 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 49



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PROJECT NO: 4540-23-71	HWY: STH 32	COUNTY: SHEBOYGAN	CROSS SECTIONS - NW TEMPORARY ACCESS ROAD	SHEET 207	E

FILE NAME : K:\1102725\CADD\CIVIL3D\45402371\SHEETSPLAN\090102_XS.DWG PLOT DATE : 5/12/2015 10:32 AM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : **********

Wisconsin Department of Transportation

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