MAD

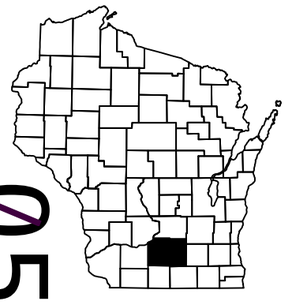
DEC 2016

PROJECT ID: 5290-01-74

WITH:

ORDER OF SHEETS

TOTAL SHEETS = 110



05

N

COUNTY: DANE

DESIGN DESIGNATION

A.A.D.T.	2021	=	8900
A.A.D.T.	2031	=	9700
D.H.V.		=	7.2%
D.D.		=	60/40
T.		=	8.6%
DESIGN SPEED		=	60 MPH
ESALS		=	1,900,000

CONVENTIONAL SYMBOLS

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

MAZOMANIE - SUN PRAIRIE

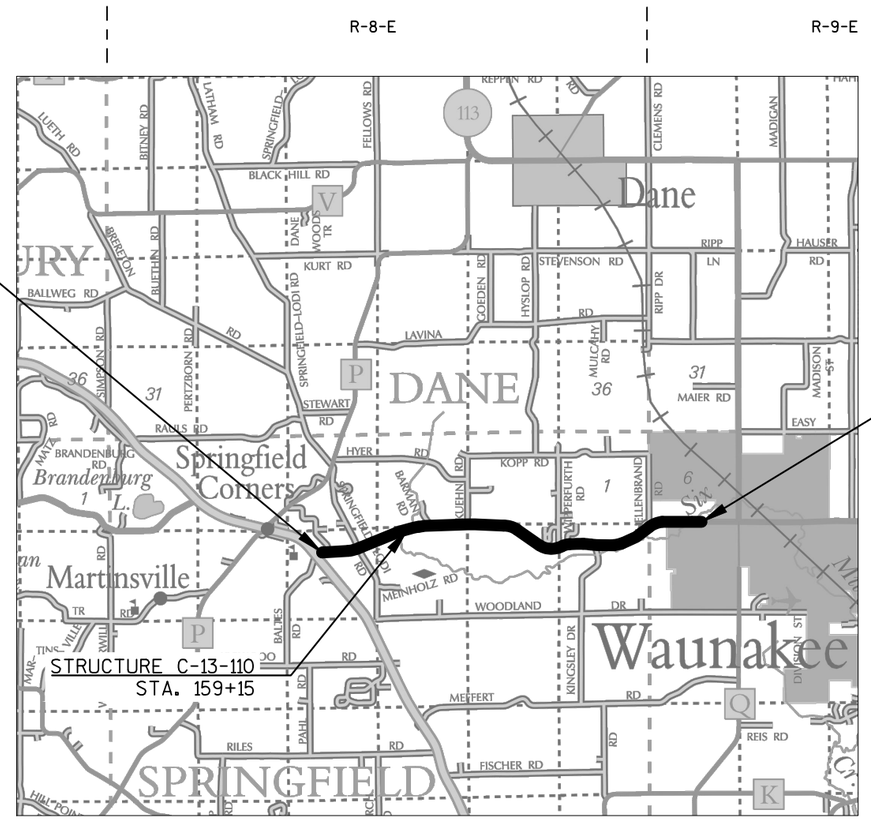
USH 12 TO DORN DRIVE

STH 19

DANE COUNTY

STATE PROJECT NUMBER
5290-01-74

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5290-01-74	WISC 2016467	1



LAYOUT

SCALE 0 1.7 MI.

TOTAL NET LENGTH OF CENTERLINE = 4.299 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, DANE COUNTY, NAD83 (1991), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES. ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NGVD 29.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	SURVEYOR
Designer	PETER FILLIPI
Project Manager	AMY COUGHLIN
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	BRENDA SCHOENFELD

APPROVED FOR THE DEPARTMENT

DATE: _____ Amy Coughlin (Signature)

E

GENERAL NOTES

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

PLACE 3.5" HMA PAVEMENT 4 LT 58-28 S IN TWO 1.75" LAYERS.

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 OR BIKE LANE.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO UTILITIES THAT HAVE FACILITIES IN THE AREA.

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

THE CONTRACTOR WILL BE RESPONSIBLE FOR SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTRUBED BY PROJECT OPERATIONS OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

ALL DISTURBED AREAS SHALL BE RESTORED WITH SALVAGED TOPSOIL, FERTILIZER, SEEDING, AND EROSION MAT.

THE QUANTITY OF THE ITEMS FOR EROSION PROTECTION INCLUDES AN UNDISTRIBUTED AMOUNT FOR PROTECTION, CONTROL AND ABATEMENT OF WATER POLLUTION RESULTING FROM SOIL EROSION. THE DISTRIBUTION AND LOCATION OF THESE MATERIALS ARE TO BE DETERMINED BY THE ENGINEER.

NUMBER, LOCATION, AND SPACING OF SIGNS AND DEVICES, AS SHOWN IN THE PLANS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

ALIGNMENT LOCATION SHOWN ON PLANS IS APPROXIMATE. ESTABLISH THE ALIGNMENT WITH CONSTRUCTION STAKING RESURFACING REFERENCE IN THE FIELD.

EXISTING RIGHT OF WAY LINES ARE APPROXIMATE.

STATIONING OF PAVEMENT DISTRESS REPAIR LOCATIONS IN THE PLAN ARE APPROXIMATE. VERIFY LOCATIONS WITH ENGINEER.

ABBREVIATIONS

AADT	ANNUAL AVERAGE DAILY TRAFFIC
ADT	AVERAGE DAILY TRAFFIC
CTH	COUNTY TRUNK HIGHWAYS
DHV	DESIGN HOUR VOLUME
DD	DIRECTIONAL DISTRIBUTION
ESALS	EQUIVALENT SINGLE AXLE LOADS
NOR	NORMAL
STH	STATE TRUNK HIGHWAYS
SS	STORM SEWER
SSD	STOPPING SIGHT DISTANCE
STA	STATION
T	TRUCKS (PERCENT OF)
TYP	TYPICAL
UG	UNDERGROUND

SECTION 2 ORDER OF SHEETS

DIGGERS HOTLINE

Dial 811 or (800)242-8511

www.DiggersHotline.com

JASON HOGAN
ALLIANT ENERGY - ELECTRICITY
SUITE 1000
4902 N BILTMORE LANE
MADISON, WI 53718
(608) 458-4871
JASONHOGAN@ALLIANTENERGY.COM

BRANDON STORM
CHARTER COMMUNICATIONS - COMMUNICATION LINE
2701 DANIELS ST.
MADISON, WI 53718
(608) 274-3822
BRANDON.STORM@CHARTER.COM

TIM STATZ
MADISON GAS AND ELECTRIC COMPANY - GAS/PETROLEUM
P.O. BOX 1231
MADISON, WI 53701-1231
(608) 252-4727
TSTATZ@MGE.COM

JERRY MYERS
MID-PLAINS TELEPHONE D/B/A TDS TELECOM - COMMUNICATION LINE
525 JUNCTION RD
MADISON, WI 53717
(608) 664-4404
JERRY.MYERS@TDSTELECOM.COM

DAVE DRESEN
WAUNAKEE UTILITIES - ELECTRICITY
322 MORAVIAN VALLEY RD
P.O. BOX 70
WAUNAKEE, WI 53597
(608) 850-5450
DDRESEN@WPPIENERGY.COM

RANDY DORN
WAUNAKEE UTILITIES - WATER/SEWER
322 MORAVIAN VALLEY RD
P.O. BOX 70
WAUNAKEE, WI 53597
(608) 849-4107
RDORN@WPPIENERGY.ORG

OTHER AGENCIES

DNR LIAISON

ERIC HEGGELUND
3911 FISH HATCHERY ROAD
MADISON, WI. 53711
(608) 275-3301
ERIC.HEGGELUND@WISCONSIN.GOV

DESIGN CONTACTS

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PETER FILLIPI, P.E.
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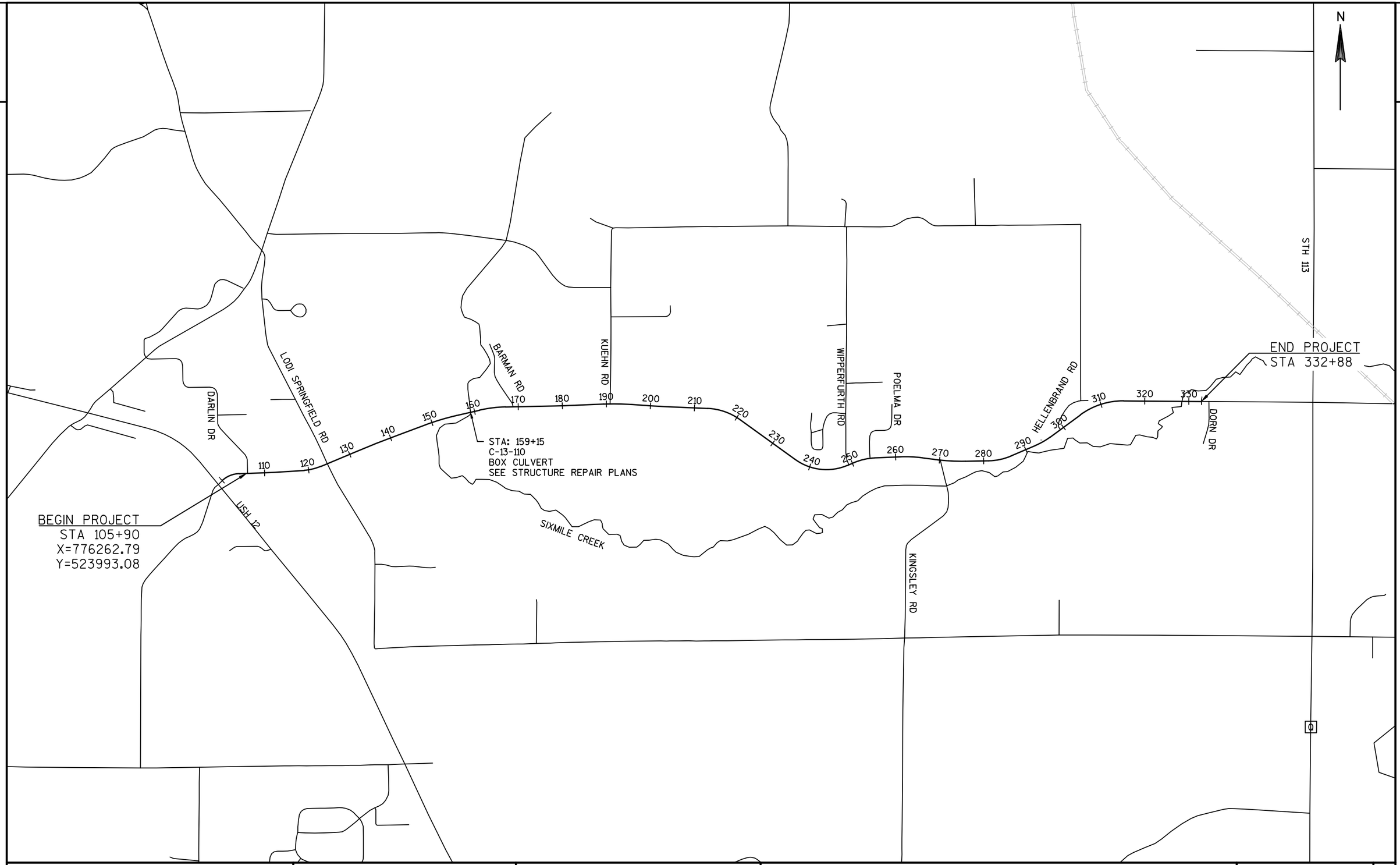
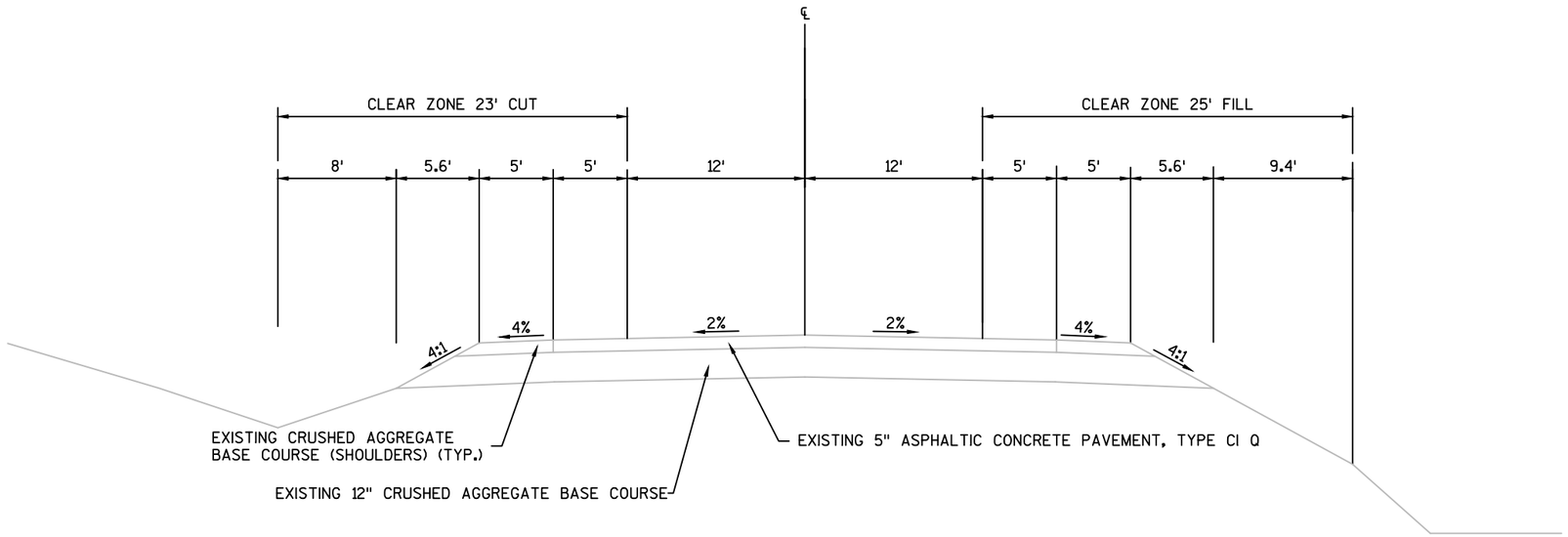
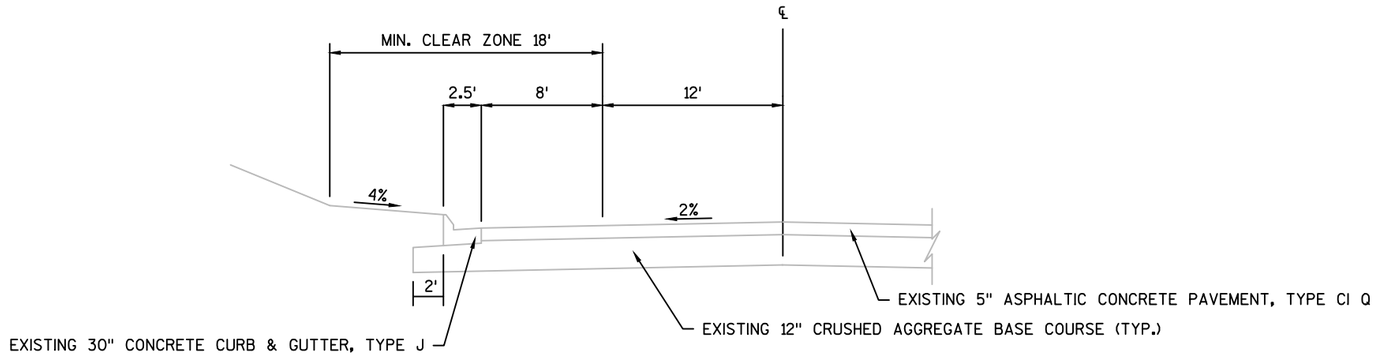


PROJECT NO: 5290-01-74	HWY: STH 19	COUNTY: DANE	PROJECT OVERVIEW	SHEET 3	E



EXISTING TYPICAL SECTION

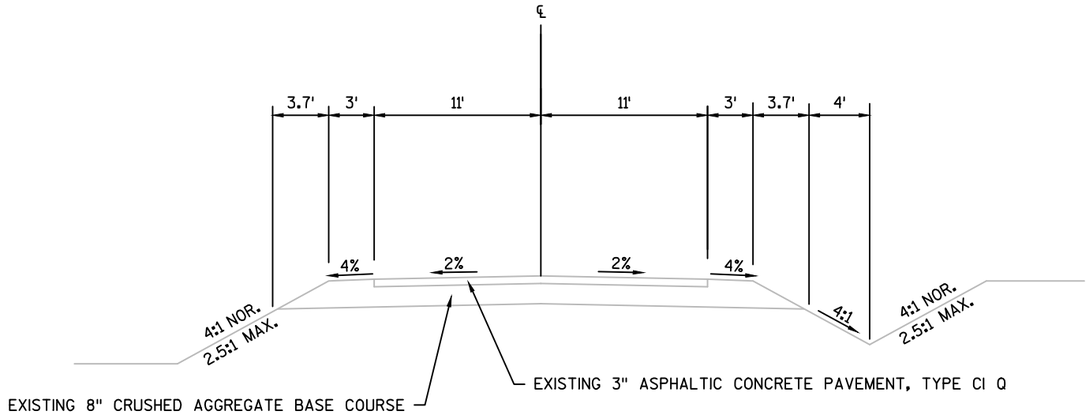
STA. 105+90 - 332+88
STH 19



EXISTING TYPICAL HALF SECTION FOR MAINLINE WITH CURB AND GUTTER

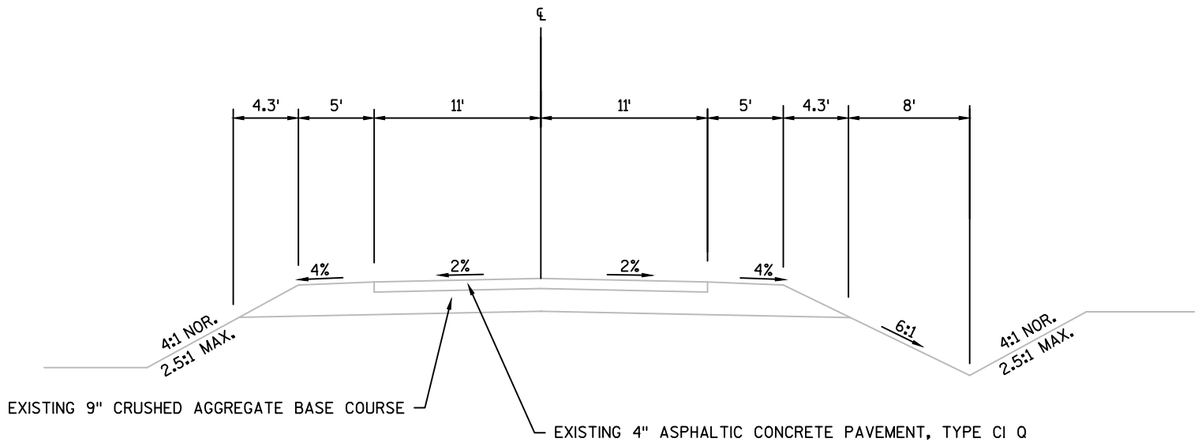
STA. 139+33 - 140+90 LT
STA. 146+90 - 149+10 LT
STA. 272+60 - 273+70 LT
STA. 292+35 - 293+52 LT
STH 19

PROJECT NO:5290-01-74	HWY: STH 19	COUNTY: DANE	TYPICAL SECTIONS	SHEET 4	E



EXISTING SIDE ROAD TYPICAL SECTION

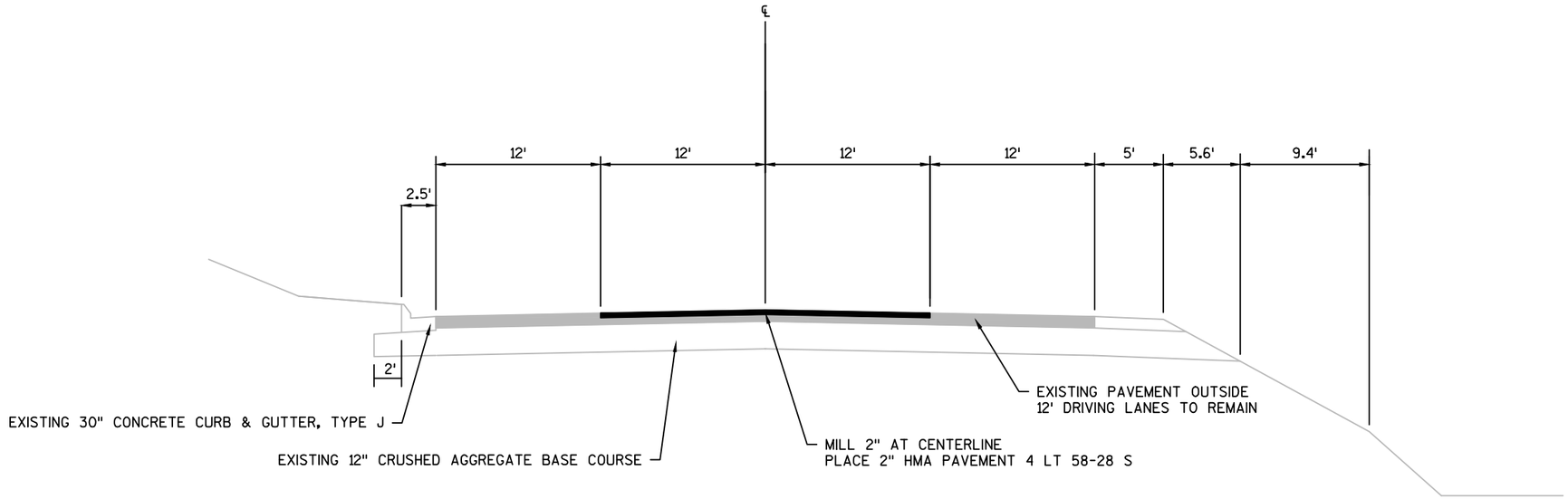
BARMAN ROAD
HELLENBRAND ROAD
KINGSLEY ROAD
KUEHN ROAD
WIPPERFURTH ROAD
DARLIN DRIVE
POELMA ROAD



EXISTING SIDE ROAD TYPICAL SECTION

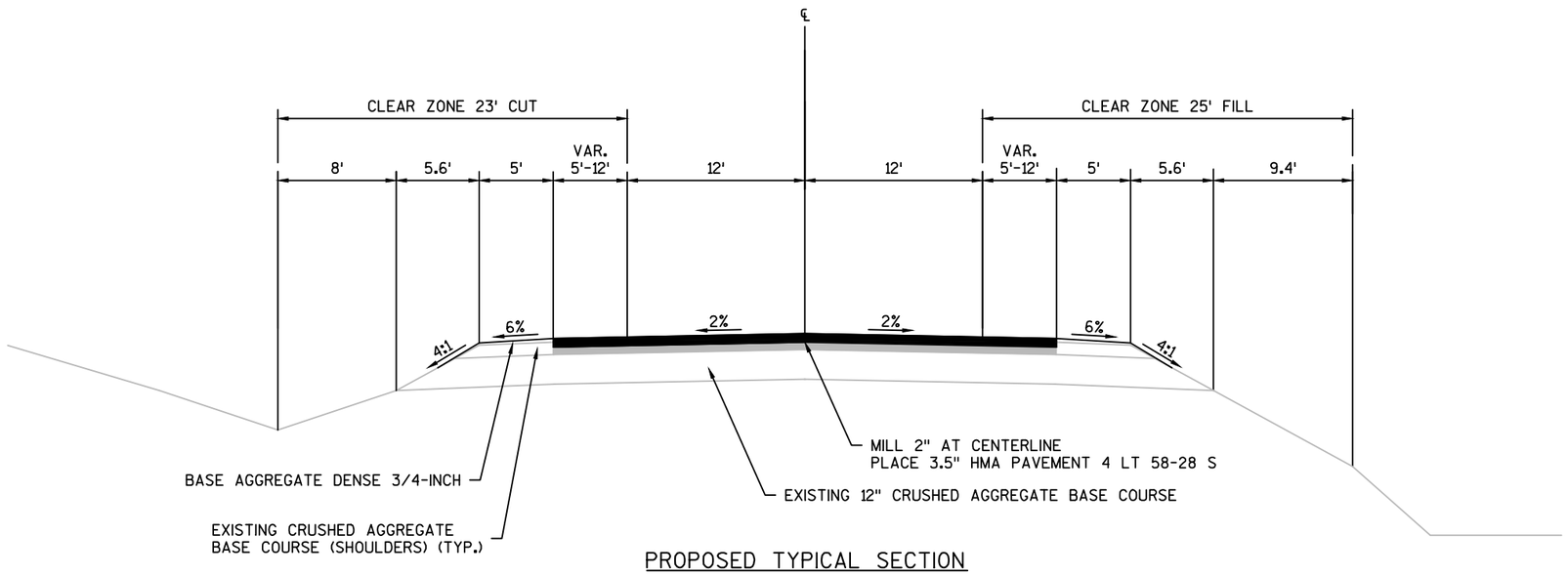
LODI SPRINGFIELD ROAD

PROJECT NO:5290-01-74	HWY: STH 19	COUNTY: DANE	TYPICAL SECTIONS	SHEET 5	E



PROPOSED TYPICAL SECTION

STA. 105+90 - 107+20
STH 19

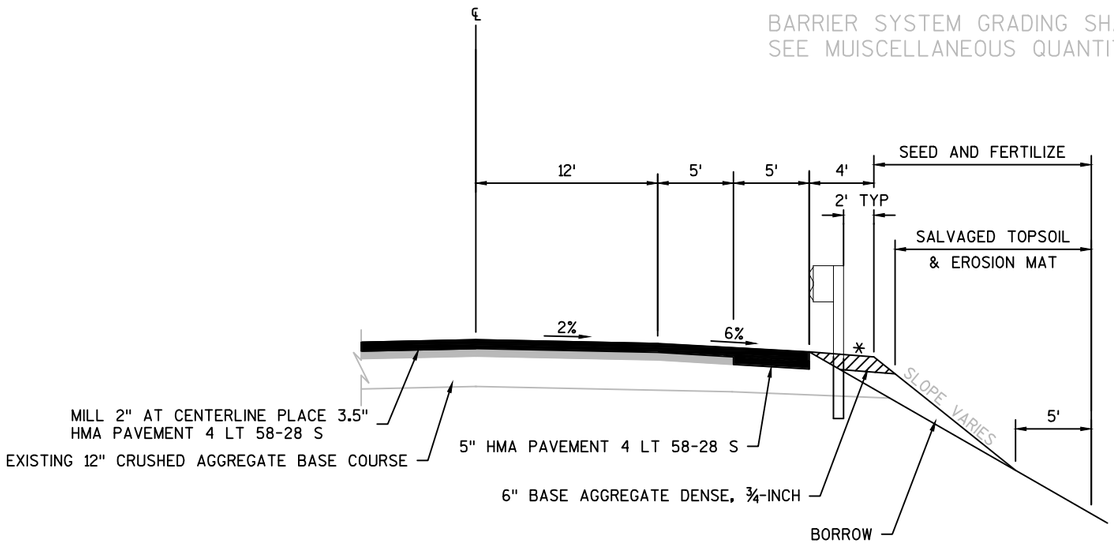


PROPOSED TYPICAL SECTION

STA. 107+20 - 332+88
STH 19

PROJECT NO:5290-01-74	HWY: STH 19	COUNTY: DANE	TYPICAL SECTIONS	SHEET 6	E

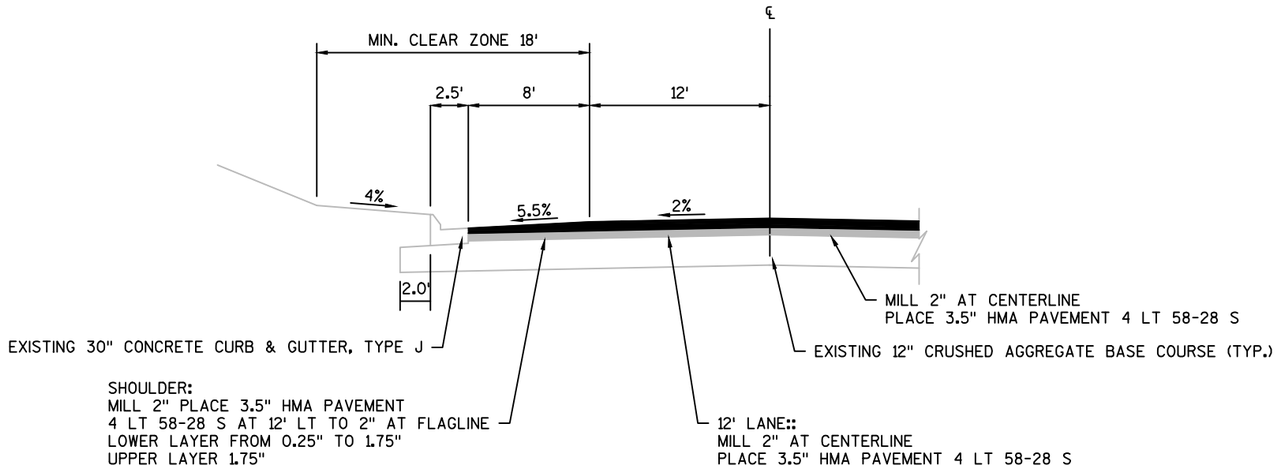
BARRIER SYSTEM GRADING SHAPING FINISHING
SEE MUISCELLANEOUS QUANTITIES AND CROSS SECTIONS FOR MORE DETAIL.



PROPOSED TYPICAL SECTION AT BEAMGUARD

STA. 287+84 - 291+30
STH 19

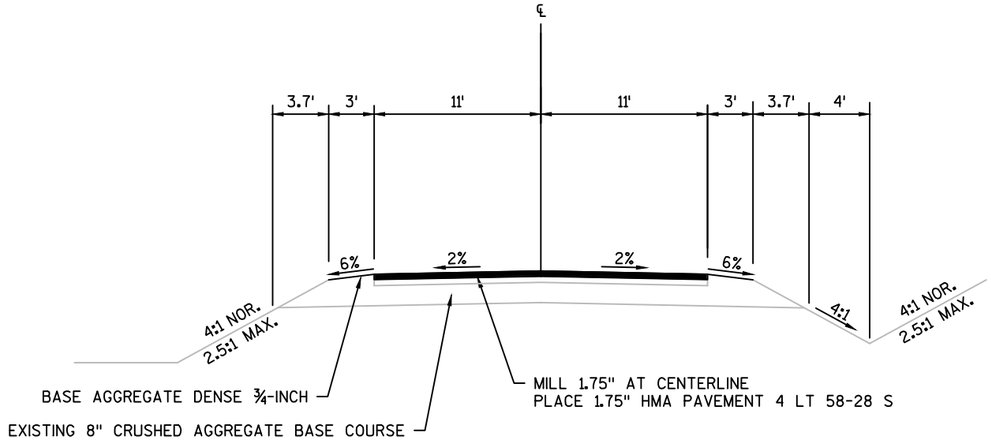
10:1 SLOPE OR FLATTER *



PROPOSED TYPICAL HALF SECTION FOR MAINLINE WITH CURB AND GUTTER

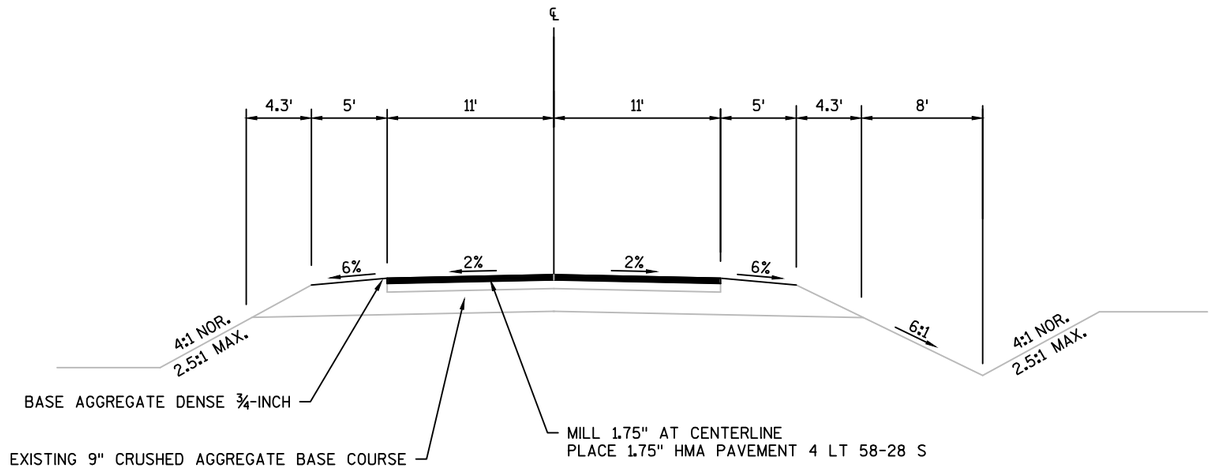
STA. 139+33 - 140+90 LT
STA. 146+90 - 149+10 LT
STA. 272+60 - 273+70 LT
STA. 292+35 - 293+52 LT
STH 19

PROJECT NO: 5290-01-74	HWY: STH 19	COUNTY: DANE	TYPICAL SECTIONS	SHEET 7	E



PROPOSED SIDE ROAD TYPICAL SECTION

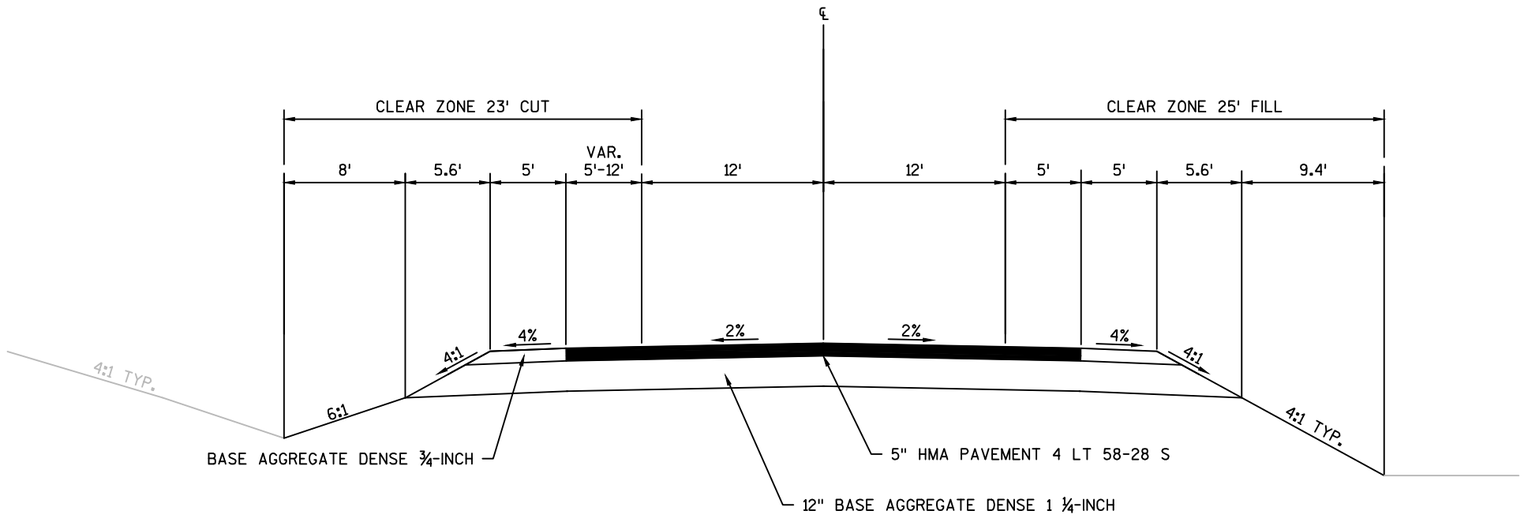
BARMAN ROAD
HELLENBRAND ROAD
KINGSLEY ROAD
KUEHN ROAD
WIPPERFURTH ROAD
DARLIN DRIVE
POELMA ROAD



PROPOSED SIDE ROAD TYPICAL SECTION

LODI SPRINGFIELD ROAD

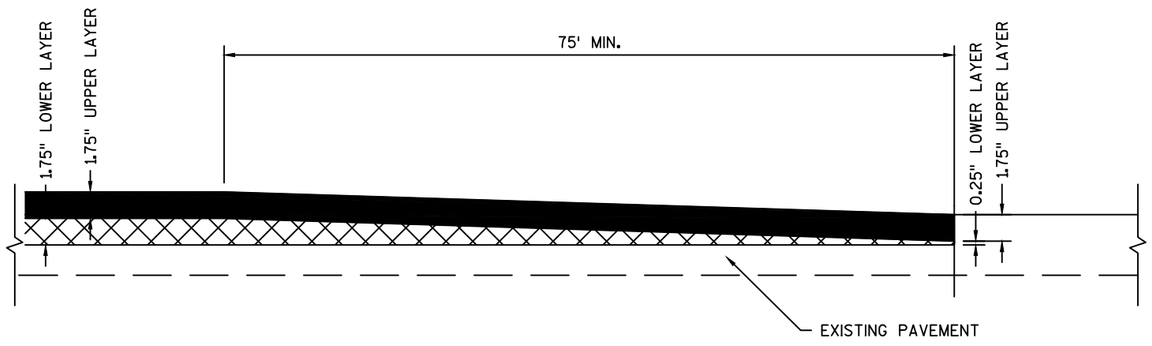
PROJECT NO:5290-01-74	HWY: STH 19	COUNTY: DANE	TYPICAL SECTIONS	SHEET 8	E



PROPOSED TYPICAL SECTION AT PIPE REPLACEMENT LOCATIONS

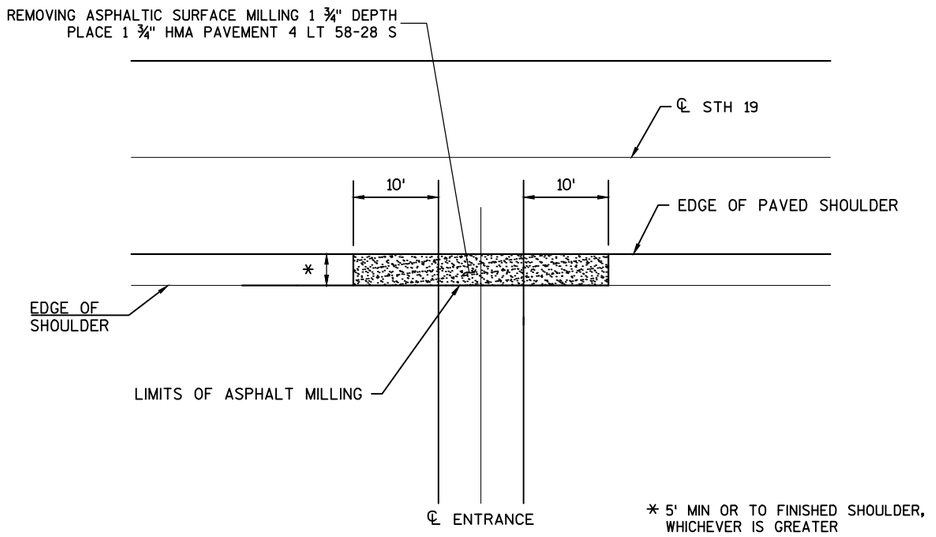
STA. 232+70
STA. 262+60
STA. 289+35
STA. 299+60
STH 19

PROJECT NO:5290-01-74	HWY: STH 19	COUNTY: DANE	TYPICAL SECTIONS	SHEET 9	E

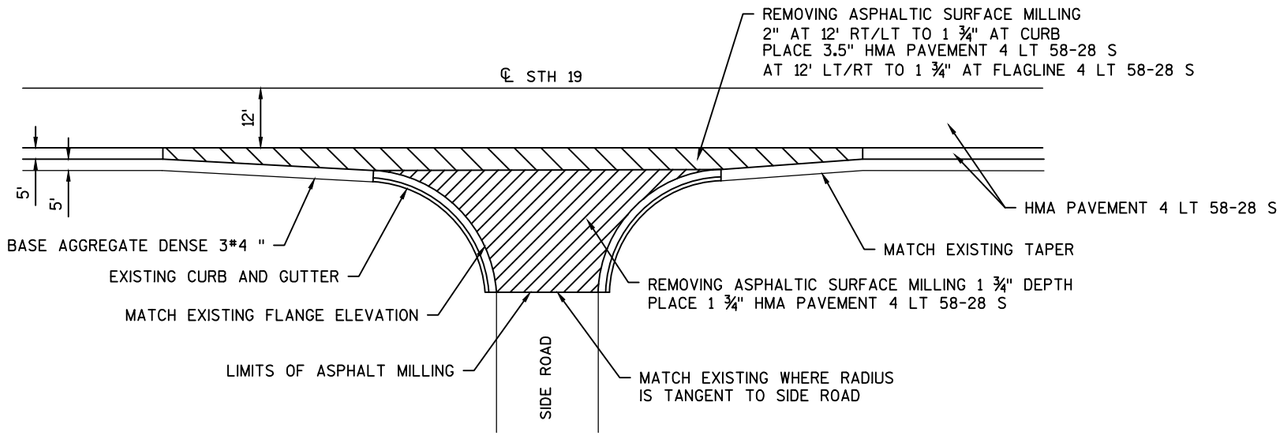


BUTT JOINT DETAIL

NOTE: PAVEMENT THICKNESS SHOWN AT C/L



RURAL DRIVEWAY DETAIL



SIDE ROAD PAVING DETAIL

BARMAN ROAD
HELLENBRAND ROAD
KINGSLEY ROAD
KUEHN ROAD
WIPPERFURTH ROAD
DARLIN DRIVE
POELMA ROAD
SPRINGFIELD LODI ROAD

PROJECT NO:5290-01-74	HWY: STH 19	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET 10	E

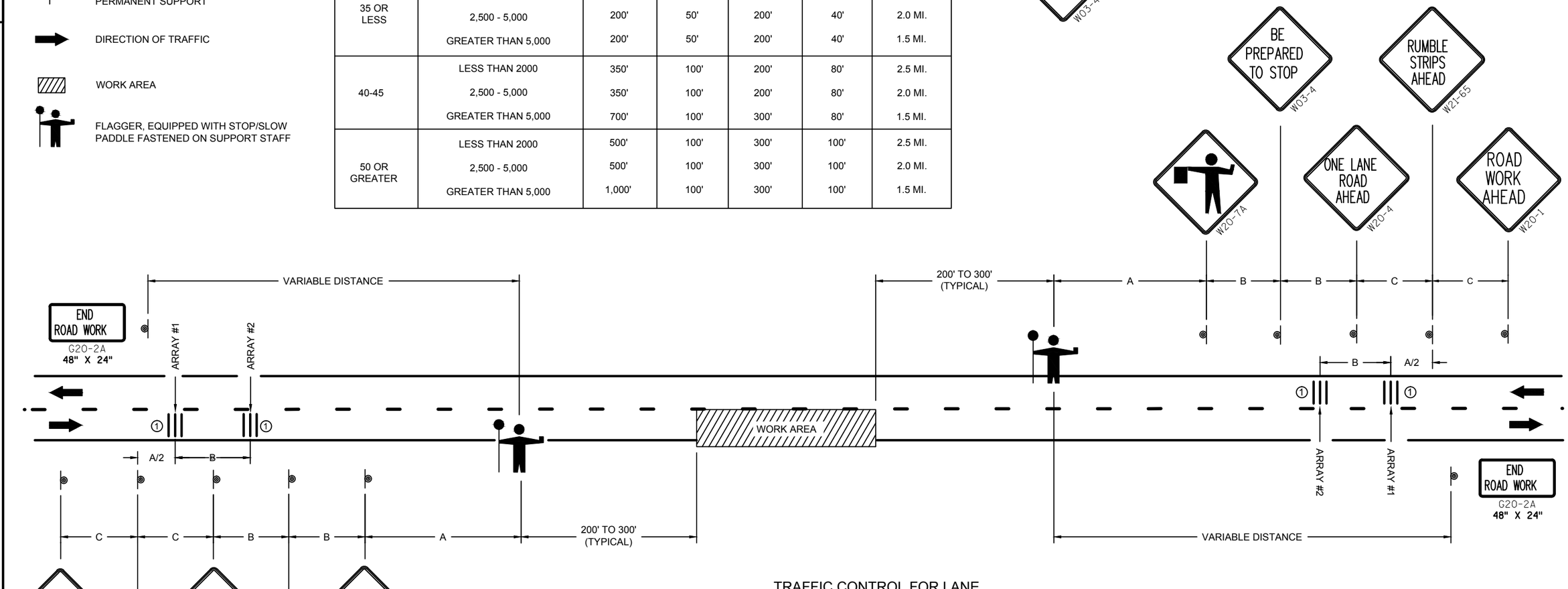
PROJECT NO:5290-01-74	HWY: STH 19	COUNTY: DANE	GUARDRAIL LAYOUT DETAIL	SHEET 11	E

LEGEND

- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SPEED LIMIT (MPH)	ADT	SIGN SPACING A, B, C	TAPER LENGTH (FT)	BUFFER ZONE (FT)	DEVICE SPACING (FT)	WORK ZONE LENGTH
35 OR LESS	LESS THAN 2000	200'	50'	200'	40'	2.5 MI.
	2,500 - 5,000	200'	50'	200'	40'	2.0 MI.
	GREATER THAN 5,000	200'	50'	200'	40'	1.5 MI.
40-45	LESS THAN 2000	350'	100'	200'	80'	2.5 MI.
	2,500 - 5,000	350'	100'	200'	80'	2.0 MI.
	GREATER THAN 5,000	700'	100'	300'	80'	1.5 MI.
50 OR GREATER	LESS THAN 2000	500'	100'	300'	100'	2.5 MI.
	2,500 - 5,000	500'	100'	300'	100'	2.0 MI.
	GREATER THAN 5,000	1,000'	100'	300'	100'	1.5 MI.

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.



TRAFFIC CONTROL FOR LANE CLOSURE TEMPORARY RUMBLE STRIP ARRAY

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 DIRECTED BY THE ENGINEER.

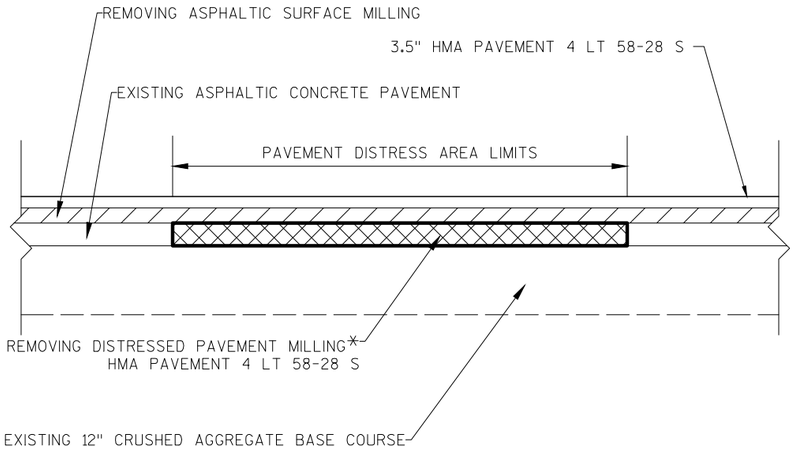
① EACH RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED AT 8-10 FEET CENTER TO CENTER, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

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

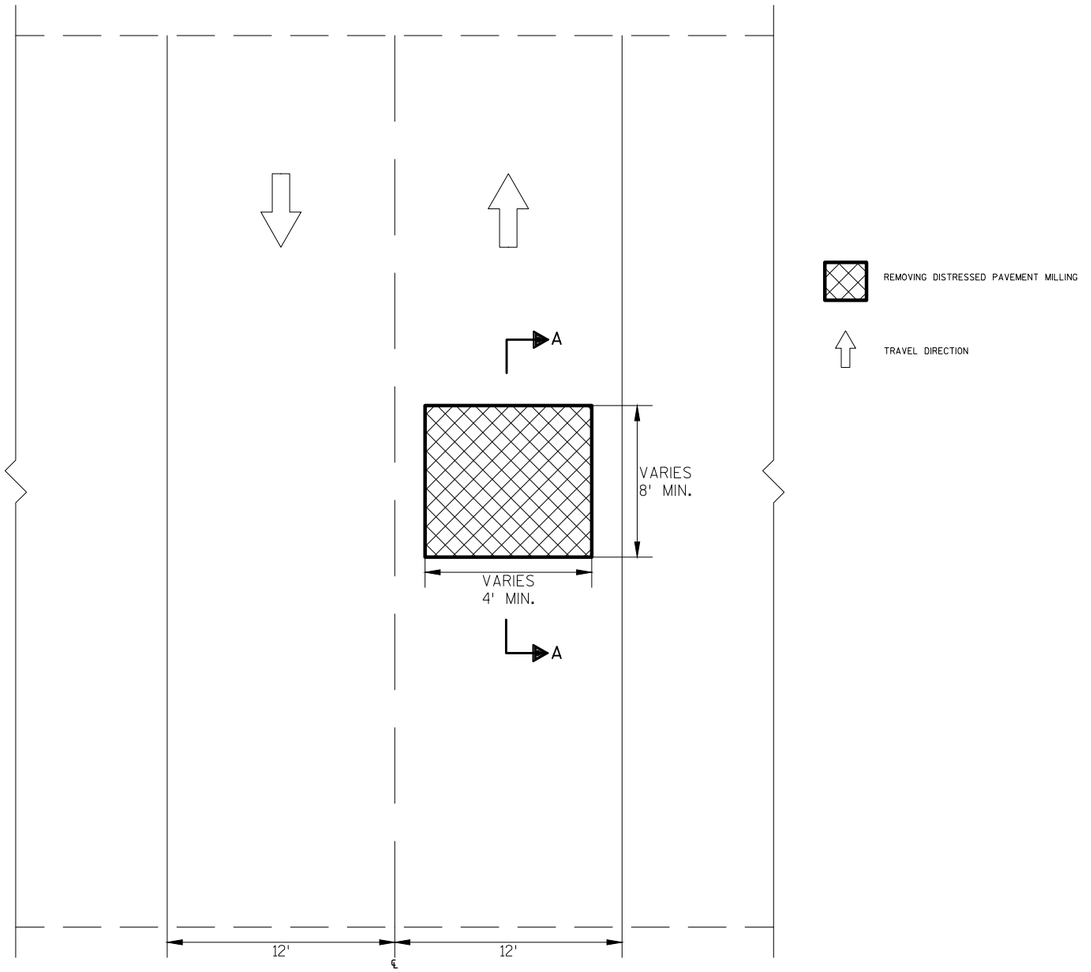
FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATIONS AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, REMOVE TEMPORARY RUMBLE STRIPS AND COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

2



*DEPTH OF MILL AND
REPLACE MAY VARY, 2.5"±

PAVEMENT SECTION AT DISTRESS AREAS
SECTION A-A



PLAN VIEW

PROJECT NO:5290-01-74	HWY: STH 19	COUNTY: DANE	REMOVING DISTRESSED PAVEMENT MILLING	SHEET 13	E

FILE NAME : N:\PDS\C3D\52900104\SHEETSPLAN\021003_CD_PVMT DISTRESS MILLING.DWG
LAYOUT NAME - 021003_CD_PVMT DISTRESS MILLING - 01
PLOT DATE : 8/17/2016 4:30 PM PLOT BY : FILLIPI, PETER L PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

EROSION MAT URBAN CLASS I, TYPE A

SILT FENCE

EROSION BALE, BARRIER

TEMPORARY DITCH CHECK

SURFACE WATER FLOW

RIGHT OF WAY

ENVIRONMENTALLY SENSITIVE AREA

*SEE C-13-110 STRUCTURE PLANS FOR CHANNEL DIVERSION.

N

WETLAND

PC: 161+21.17

157+00 158+00 159+00 160+00 161+00 162+00 163

RESTORE ALL DISTURBED AREAS AS NEEDED WITH
SEEDING MIXTURE NO. 20
FERTILIZER TYPE B
EROSION MAT URBAN CLASS I TYPE A

PROJECT NO:5290-01-74	HWY: STH 19	COUNTY: DANE	EROSION CONTROL	SHEET 14	E

2

2

N

231+00

232+00

233+00

234+00

235+00

236+00

PC: 236+35.96

LEGEND

EROSION MAT URBAN CLASS I, TYPE A

SILT FENCE

EROSION BALE, BARRIER

TEMPORARY DITCH CHECK

SURFACE WATER FLOW

RIGHT OF WAY

ENVIRONMENTALLY SENSITIVE AREA

RESTORE ALL DISTURBED AREAS AS NEEDED WITH
SEEDING MIXTURE NO. 40
FERTILIZER TYPE B
EROSION MAT URBAN CLASS I TYPE A

PROJECT NO:5290-01-74	HWY: STH 19	COUNTY: DANE	EROSION CONTROL	SHEET 15	E

2

2

N

PC: 261+06.88

259+00 260+00 261+00 262+00 263+00 264+00

LEGEND

- EROSION MAT URBAN CLASS I, TYPE A
- SILT FENCE
- EROSION BALE, BARRIER
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW
- RIGHT OF WAY
- ENVIRONMENTALLY SENSITIVE AREA

RESTORE ALL DISTURBED AREAS AS NEEDED WITH
SEEDING MIXTURE NO. 40
FERTILIZER TYPE B
EROSION MAT URBAN CLASS I TYPE A

PROJECT NO:5290-01-74	HWY: STH 19	COUNTY: DANE	EROSION CONTROL	SHEET 16	E

2

2

N

283+00

284+00

285+00

286+00

PT: 286+34.32

287+00

288+00

289+

SLOPE INTERCEPT

RESTORE ALL DISTURBED AREAS AS NEEDED WITH
SEEDING MIXTURE NO. 40
FERTILIZER TYPE B
EROSION MAT URBAN CLASS I TYPE A

LEGEND

- ###### EROSION MAT URBAN CLASS I, TYPE A
- SILT FENCE
- EROSION BALE, BARRIER
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW
- RIGHT OF WAY
- ENVIRONMENTALLY SENSITIVE AREA

PROJECT NO:5290-01-74	HWY: STH 19	COUNTY: DANE	EROSION CONTROL	SHEET 17	E

2

RESTORE ALL DISTURBED AREAS AS NEEDED WITH
SEEDING MIXTURE NO. 40
FERTILIZER TYPE B
EROSION MAT URBAN CLASS I TYPE A

LEGEND

- ###### EROSION MAT URBAN CLASS I, TYPE A
- SILT FENCE
- EROSION BALE, BARRIER
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW
- RIGHT OF WAY
- ENVIRONMENTALLY SENSITIVE AREA

PROJECT NO:5290-01-74	HWY: STH 19	COUNTY: DANE	EROSION CONTROL	SHEET 18	E

2

2

LEGEND

EROSION MAT URBAN CLASS I, TYPE A

SILT FENCE

EROSION BALE, BARRIER

TEMPORARY DITCH CHECK

SURFACE WATER FLOW

RIGHT OF WAY

ENVIRONMENTALLY SENSITIVE AREA

N

PT: 296+20.76

296+00 297+00 298+00 299+00 300+00 301+00

RESTORE ALL DISTURBED AREAS AS NEEDED WITH
SEEDING MIXTURE NO. 40
FERTILIZER TYPE B
EROSION MAT URBAN CLASS I TYPE A

PROJECT NO: 5290-01-74	HWY: STH 19	COUNTY: DANE	EROSION CONTROL	SHEET 19	E

2

ONE WAY
R6-2-L
24"X30"
1-1
REMOVE AND REPLACE

Madison
Mazomanie
Sauk City
D1-3
78"X36"
1-9
REMOVE AND REPLACE

REMOVE
1-4

EAST 12 | WEST 12 | WEST 19
J3-3
72"X57"
1-2
REMOVE AND REPLACE

EAST 12 | WEST 12 | WEST 19
J2-3
72"X57"
1-11

PARK & RIDE
D4-2-L
30"X36"
1-15

W11-15
30"X30"
1-3
1-5

W16-7L
24"X12"
1-4
1-6

HWY 19
DARLIN DR
ESTR

DARLIN DR

STOP
R1-1
30"X30"
1-16
REMOVE AND REPLACE

W3-3
36"X36"
1-18

W11-15
30"X30"
1-19

AHEAD
W16-9P
24"X12"
1-20

PARK & RIDE
REMOVE
1-22

REMOVE
1-23

JCT 12
J1-1
24"X39"
1-24

JCT 12
REMOVE
1-28

HIGHWAY 19
Lodi-Springfield Rd
ESTR

LODI SPRINGFIELD RD

W1-2R
30"X30"
1-31

REMOVE
1-32

N

100
110
115
120
125
130

BP: 100+00.00

USH 12

PARK & RIDE
D4-2-R
30"X36"
1-8

SPEED LIMIT 55
R2-1
24"X30"
1-17

EAST 19
J4-1
24"X36"
1-13

Waunakee 6
Sun Prairie 18
D2-2
84"X24"
1-21

REMOVE
1-25

W1-2L
30"X30"
1-26

W2-1
30"X30"
1-27
REMOVE AND REPLACE

STOP
R1-1
30"X30"
1-29
1-30
REMOVE AND REPLACE

NO PASSING ZONE
W14-3
48"X36"
1-33
REMOVE AND REPLACE

EAST 19
Waunakee 6
Sun Prairie 18
REMOVE
1-7

STOP
R1-1
30"X30"
1-12
REMOVE AND REPLACE

EAST 12 | WEST 12 | WEST 19
REMOVE
1-14

ESTR = EXISTING SIGN TO REMAIN

PROJECT NO: 5290-01-74	HWY: STH 19	COUNTY: DANE	PERMANENT SIGNING	SHEET 20	E

FILE NAME : N:\PDS\C3D\52900104\SHEETSPLAN\023201_PS.DWG
LAYOUT NAME - 023201-PS (1)

PLOT DATE : 8/17/2016 4:34 PM PLOT BY : FILLIPI, PETER L PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

ESTR = EXISTING SIGN TO REMAIN

PROJECT NO: 5290-01-74	HWY: STH 19	COUNTY: DANE	PERMANENT SIGNING	SHEET 21	E

FILE NAME : N:\PDS\C3D\52900104\SHEETSPLAN\023201_PS.DWG
LAYOUT NAME - 023201-PS (2)
PLOT DATE : 8/17/2016 4:34 PM PLOT BY : FILLIPI, PETER L PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

N

BARMAN RD

STOP
R1-1
30"X30"
3-2
REMOVE AND REPLACE

HIGHWAY 19
Barman Rd
ESTR

NO PASSING ZONE
W14-3
48"X36"
3-3
REMOVE AND REPLACE

165 170 175 180 185 190

STOP
R1-1
30"X30"
3-5
REMOVE AND REPLACE

HIGHWAY 19
Kuehn Rd
ESTR

KUEHN RD

S3-1
30"X30"
3-4
REMOVE AND REPLACE

SPONSOR
H&H
CARPETS
WAUNAKEE
REMOVE
3-1

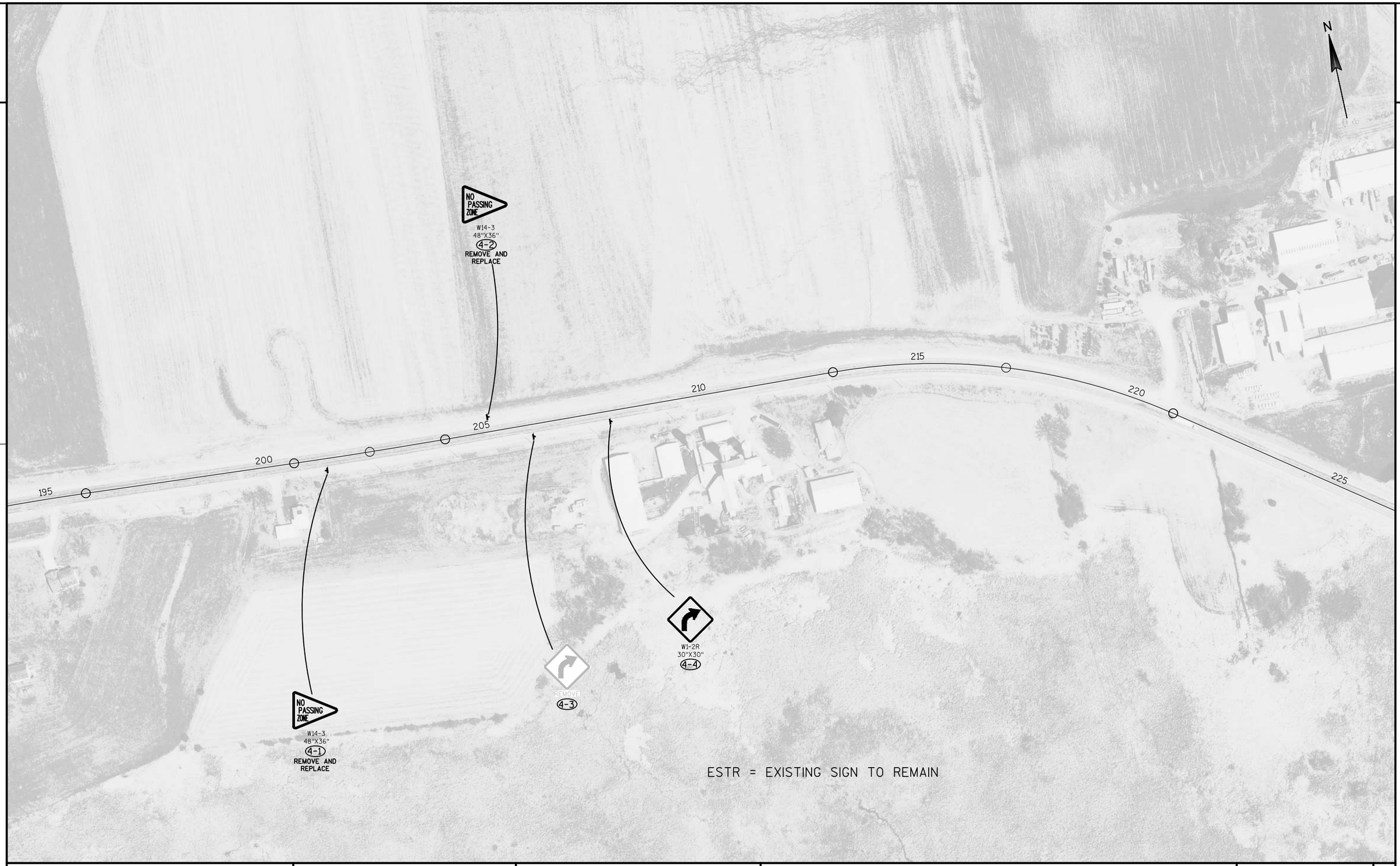
ESTR = EXISTING SIGN TO REMAIN

PROJECT NO: 5290-01-74	HWY: STH 19	COUNTY: DANE	PERMANENT SIGNING	SHEET 22	E

FILE NAME : N:\PDS\C3D\52900104\SHEETSPLAN\023201_PS.DWG
LAYOUT NAME - 023201-PS (3)

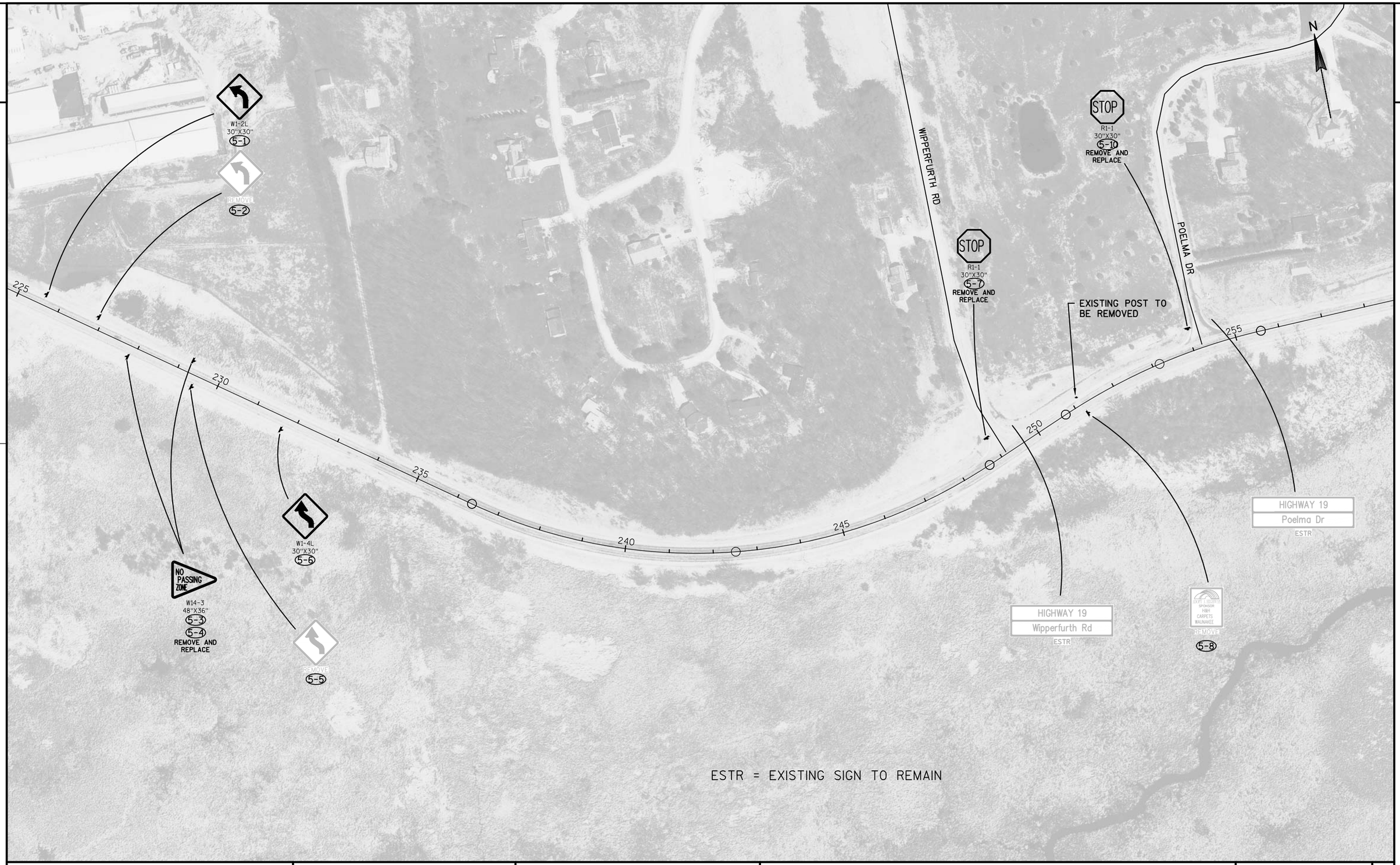
PLOT DATE : 8/17/2016 4:35 PM PLOT BY : FILLIPI, PETER L PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



PROJECT NO: 5290-01-74	HWY: STH 19	COUNTY: DANE	PERMANENT SIGNING	SHEET 23	E

FILE NAME : N:\PDS\C3D\52900104\SHEETSPLAN\023201_PS.DWG
LAYOUT NAME - 023201-PS (4)
PLOT DATE : 8/17/2016 4:35 PM PLOT BY : FILLIPI, PETER L PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

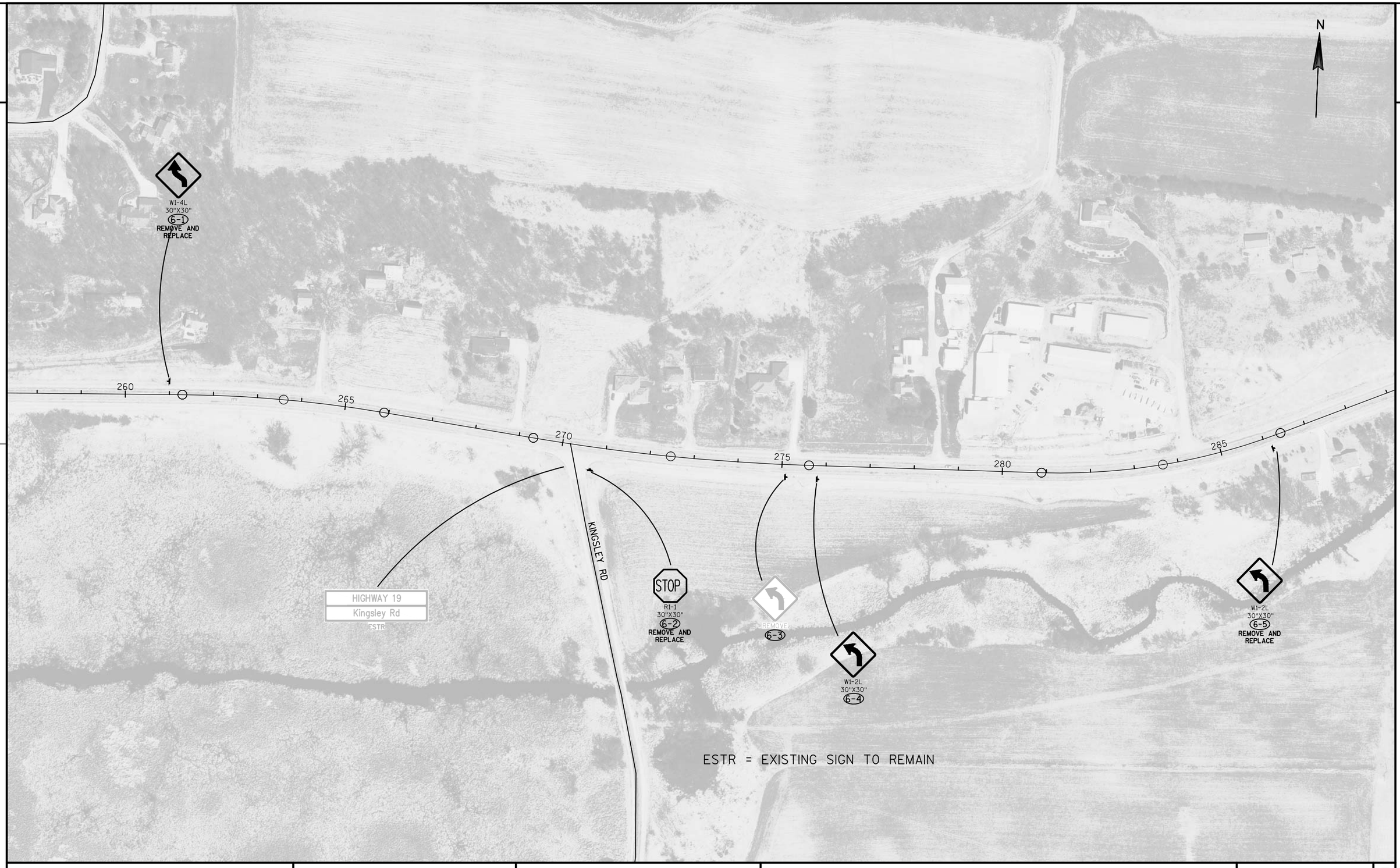


PROJECT NO:5290-01-74	HWY: STH 19	COUNTY: DANE	PERMANENT SIGNING	SHEET 24	E

FILE NAME : N:\PDS\C3D\52900104\SHEETSPLAN\023201_PS.DWG
LAYOUT NAME - 023201-PS (5)

PLOT DATE : 8/17/2016 4:35 PM PLOT BY : FILLIPI, PETER L PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42



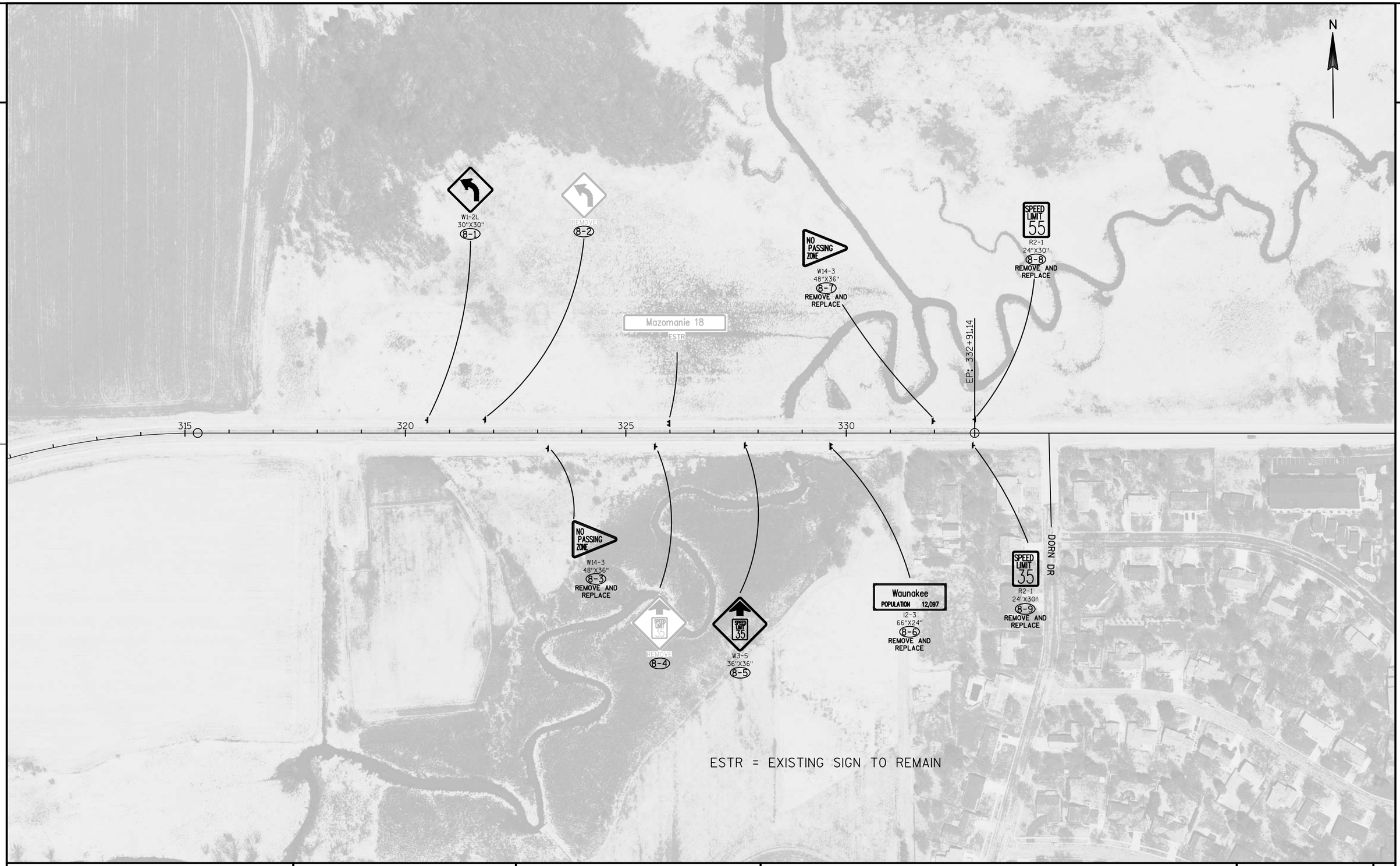
PROJECT NO: 5290-01-74	HWY: STH 19	COUNTY: DANE	PERMANENT SIGNING	SHEET 25	E

PROJECT NO: 5290-01-74	HWY: STH 19	COUNTY: DANE	PERMANENT SIGNING	SHEET 26	E

FILE NAME : N:\PDS\C3D\52900104\SHEETSPLAN\023201_PS.DWG
LAYOUT NAME - 023201-PS (7)

PLOT DATE : 8/17/2016 4:36 PM PLOT BY : FILLIPI, PETER L PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42



PROJECT NO: 5290-01-74	HWY: STH 19	COUNTY: DANE	PERMANENT SIGNING	SHEET 27	E

FILE NAME : N:\PDS\C3D\52900104\SHEETSPLAN\023201_PS.DWG
LAYOUT NAME - 023201-PS (8)

PLOT DATE : 8/17/2016 4:36 PM PLOT BY : FILLIPI, PETER L PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

ROAD WORK NEXT 4.5 MILES
G20-1
60" X 24"

ROAD WORK 500 FT
W20-1D

ROAD WORK 1000 FT
W20-1C

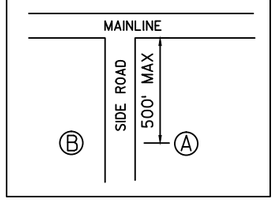
ROAD WORK AHEAD
W20-1A

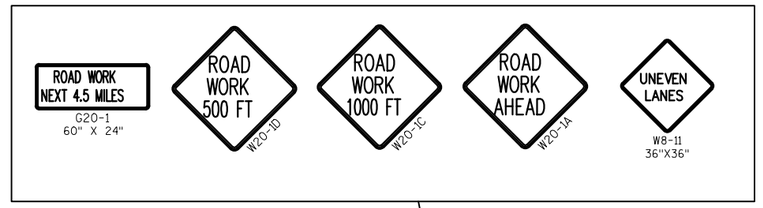
UNEVEN LANES
W8-11
36"X36"

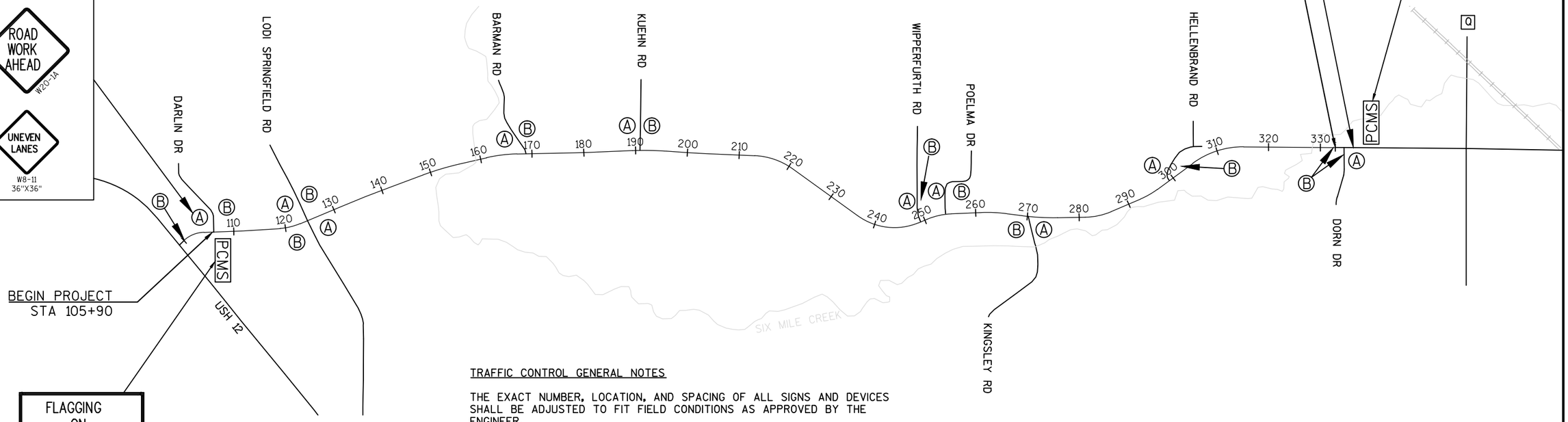
Ⓐ ROAD WORK AHEAD W20-1A

Ⓑ END ROAD WORK
G20-2A
48" X 24"

TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL







TRAFFIC CONTROL GENERAL NOTES

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

ALL "W" SIGNS SHALL BE 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.

N

FOR MOVING OPERATIONS SEE STANDARD DETAIL DRAWINGS "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)" AND "MOVING PAVEMENT MARKING OPERATIONS - TWO LANE TWO-WAY ROADWAY".
FOR SHOULDER CLOSURES SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, WORK ON SHOULDER OF PARKING LANE, UNDIVIDED ROADWAY".

5290-01-74

Line	Item	Item Description	Unit	Total	Qty
0010	203.0100	Removing Small Pipe Culverts	EACH	4.000	4.000
0020	203.0200	Removing Old Structure (station) 01. 72+45.86 NW Wing	LS	1.000	1.000
0030	204.0120	Removing Asphaltic Surface Milling	SY	91,135.000	91,135.000
0040	204.0150	Removing Curb & Gutter	LF	20.000	20.000
0050	204.0165	Removing Guardrail	LF	210.000	210.000
0060	205.0100	Excavation Common	CY	631.000	631.000
0070	206.2000	Excavation for Structures Culverts (structure) 01. C-13-110	LS	1.000	1.000
0080	206.5000	Cofferdams (structure) 01. C-13-110	LS	1.000	1.000
0090	210.0100	Backfill Structure	CY	50.000	50.000
0100	213.0100	Finishing Roadway (project) 01. 5290-01-74	EACH	1.000	1.000
0110	305.0110	Base Aggregate Dense 3/4-Inch	TON	2,230.000	2,230.000
0120	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	231.000	231.000
0130	440.4410	Incentive IRI Ride	DOL	17,640.000	17,640.000
0140	455.0605	Tack Coat	GAL	10,985.000	10,985.000
0150	460.2000	Incentive Density HMA Pavement	DOL	12,032.000	12,032.000
0160	460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF	22,700.000	22,700.000
0170	460.5224	HMA Pavement 4 LT 58-28 S	TON	18,800.000	18,800.000
0180	465.0425	Asphaltic Shoulder Rumble Strips 2-Lane Rural	LF	40,200.000	40,200.000
0190	465.0475	Asphalt Center Line Rumble Strips 2-Lane Rural	LF	19,500.000	19,500.000
0200	504.0100	Concrete Masonry Culverts	CY	4.000	4.000
0210	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	260.000	260.000
0220	511.1200	Temporary Shoring (structure) 01. C-13-110	SF	100.000	100.000
0230	516.0500	Rubberized Membrane Waterproofing	SY	3.000	3.000
0240	522.0324	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	149.000	149.000
0250	522.0330	Culvert Pipe Reinforced Concrete Class IV 30-Inch	LF	80.000	80.000
0260	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	4.000	4.000
0270	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	2.000	2.000
0280	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	20.000	20.000
0290	614.0010	Barrier System Grading Shaping Finishing	EACH	1.000	1.000
0300	614.2300	MGS Guardrail 3	LF	250.000	250.000
0310	614.2610	MGS Guardrail Terminal EAT	EACH	2.000	2.000
0320	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5290-01-74	EACH	1.000	1.000
0330	619.1000	Mobilization	EACH	1.000	1.000
0340	624.0100	Water	MGAL	10.000	10.000
0350	625.0500	Salvaged Topsoil	SY	1,000.000	1,000.000
0360	628.1104	Erosion Bales	EACH	12.000	12.000

5290-01-74

Line	Item	Item Description	Unit	Total	Qty
0370	628.1504	Silt Fence	LF	1,375.000	1,375.000
0380	628.1520	Silt Fence Maintenance	LF	1,375.000	1,375.000
0390	628.1905	Mobilizations Erosion Control	EACH	10.000	10.000
0400	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0410	628.2006	Erosion Mat Urban Class I Type A	SY	1,430.000	1,430.000
0420	628.7504	Temporary Ditch Checks	LF	60.000	60.000
0430	629.0210	Fertilizer Type B	CWT	0.630	0.630
0440	630.0120	Seeding Mixture No. 20	LB	18.000	18.000
0450	630.0200	Seeding Temporary	LB	27.000	27.000
0460	633.5200	Markers Culvert End	EACH	8.000	8.000
0470	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	53.000	53.000
0480	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	2.000	2.000
0490	634.0620	Posts Wood 4x6-Inch X 20-FT	EACH	2.000	2.000
0500	637.2210	Signs Type II Reflective H	SF	206.300	206.300
0510	637.2230	Signs Type II Reflective F	SF	190.250	190.250
0520	638.2602	Removing Signs Type II	EACH	47.000	47.000
0530	638.3000	Removing Small Sign Supports	EACH	43.000	43.000
0540	642.5001	Field Office Type B	EACH	1.000	1.000
0550	643.0100	Traffic Control (project) 01. 5290-01-74	EACH	1.000	1.000
0560	643.0300	Traffic Control Drums	DAY	450.000	450.000
0570	643.0900	Traffic Control Signs	DAY	1,000.000	1,000.000
0580	643.1050	Traffic Control Signs PCMS	DAY	20.000	20.000
0590	646.0106	Pavement Marking Epoxy 4-Inch	LF	76,047.000	76,047.000
0600	646.0406	Pavement Marking Same Day Epoxy 4-Inch	LF	33,316.000	33,316.000
0610	647.0166	Pavement Marking Arrows Epoxy Type 2	EACH	1.000	1.000
0620	647.0356	Pavement Marking Words Epoxy	EACH	1.000	1.000
0630	648.0100	Locating No-Passing Zones	MI	4.299	4.299
0640	649.0402	Temporary Pavement Marking Paint 4-Inch	LF	30,973.000	30,973.000
0650	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	20.000	20.000
0660	650.6000	Construction Staking Pipe Culverts	EACH	4.000	4.000
0670	650.8000	Construction Staking Resurfacing Reference	LF	22,698.000	22,698.000
0680	650.9910	Construction Staking Supplemental Control (project) 01. 5290-01-74	LS	1.000	1.000
0690	690.0150	Sawing Asphalt	LF	314.000	314.000
0700	690.0250	Sawing Concrete	LF	6.000	6.000
0710	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	300.000	300.000
0720	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	150.000	150.000
0730	SPV.0060	Special 02. APRON ENDWALLS FOR CULVERT PIPE RCPA CLASS IV 51X31-INCH	EACH	2.000	2.000
0740	SPV.0090	Special 01. REMOVING HMA PAVEMENT NOTCHED	LF	22,600.000	22,600.000

5290-01-74

Line	Item	Item Description	Unit	Total	Qty
		WEDGE LONGITUDINAL JOINT MILLIING			
0750	SPV.0090	Special 02. CULVERT PIPE REINFORCED CONCRETE PIPE ARCH CLASS IV 51X31-INCH	LF	69.000	69.000
0760	SPV.0105	Special 01. TEMPORARY PORTABLE RUMBLE STRIP ARRAY	LS	1.000	1.000
0770	SPV.0180	Special 01. REMOVING DISTRESSED PAVEMENT MILLING	SY	4,400.000	4,400.000

REMOVING SMALL PIPE CULVERTS

CATEGORY	STATION	LOCATION	203.0100 EACH	SIZE AND LENGTH
0010	232+70	CL	1	30" x 84'
0010	262+60	CL	1	33x49" X 76'
0010	289+35	CL	1	24" x 76'
0010	299+60	CL	1	24" x 80'
		TOTAL 0010	4	

REMOVING CURB & GUTTER

CATEGORY	STATION	TO	STATION	LOCATION	204.0150 LF
0010	299+55	-	299+70	LT	20
				TOTAL 0010	20

REMOVING GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	204.0165 LF
0010	289+12	-	291+13	RT	210
				TOTAL 0010	210

REMOVING HMA PAVEMENT NOTCHED WEDGE LONGITUDINAL JOINT MILLING

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0090.01 LF
0010	107+20	-	332+88	CL	22600
				TOTAL 0010	22600

REMOVING ASPHALTIC SURFACE MILLING

CATEGORY	STATION	TO	STATION	LOCATION	204.0120 SY	REMARKS
0010	105+90	-	107+20	CL	500	Mainline
0010	107+20	-	332+88	CL	85,500	Mainline
0010	122+90	-	125+75	LT	375	Springfield Lodi Road NORTH
0010	122+90	-	125+75	RT	450	Springfield Lodi Road SOUTH
0010	167+60	-	170+40	LT	450	Barman Road
0010	189+80	-	192+40	LT	1,400	Keuhn Road
0010	247+75	-	250+70	LT	450	Whipperfurth Road
0010	253+10	-	109+29	LT	400	Poelma Drive
0010	268+80	-	272+00	RT	450	Kingsley Road
0010	297+70	-	300+75	LT	760	Hellenbrand Road
0010			UNDISTRIBUTED		400	DRIVEWAYS
				TOTAL 0010	91,135	

REMOVING DISTRESSED PAVEMENT MILLING

CATEGORY	STATION	TO	STATION	SPV.0180.01 SY
0010	124+88	-	125+78	120
0010	131+00	-	131+40	100
0010	141+00	-	143+00	280
0010	273+82	-	274+82	150
0010	277+15	-	279+65	350
0010	288+57	-	290+32	250
0010	UNDISTRIBUTED			3150
			TOTAL 0010	4400

ROADWAY ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	REHEATING HMA PAVEMENT LONGITUDINAL JOINTS 460.4110.S LF	ASPHALTIC SHOULDER RUMBLE STRIPS 2-LANE RURAL 465.0425 LF	ASPHALT CENTER LINE RUMBLE STRIPS 2-LANE RURAL 465.0475 LF
0010	105+90	-	332+88	CL	22700	-	19500
0010	105+90	-	332+88	RT	-	21200	-
0010	105+90	-	332+88	LT	-	19000	-
				TOTAL 0010	22700	40200	19500

EXCAVATION COMMON

CATEGORY	STATION	TO	STATION	LOCATION	205.0100 CY
0010	232+70			CL	184
0010	262+60			CL	133
0010	289+35			CL	144
0010	299+60			CL	170
				TOTAL 0010	631

*APPROX 36 CY OF EXCAVATION COMMON IS ASPHALTIC PAVEMENT

BASE AGGREGATE DENSE ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	BASE AGGREGATE DENSE 3/4-INCH 305.0110 TON	BASE AGGREGATE DENSE 1 1/4-INCH 305.0120 TON
0010	100+00	-	332+88	RT & LT	2230	-
0010	232+64	-	232+76	CL	-	53
0010	262+54	-	262+66	CL	-	53
0010	289+22.75	-	289+34.75	CL	-	53
0010	299+56	-	299+68	CL	-	72
				TOTAL 0010	2230	231

HMA PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	TACK COAT 455.0605 GAL	HMA PAVEMENT 4 LT 58-28 S 460.5224 TON	REMARKS
0010	105+90	-	107+20	CL	60	100	Mainline
0010	107+20	-	332+88	CL	10,260	16,800	Mainline
0010	122+90	-	125+75	LT	50	75	Springfield Lodi Road
0010	122+90	-	125+75	RT	60	100	Springfield Lodi Road
0010	167+60	-	170+40	LT	60	100	Barman Road
0010	189+80	-	192+40	LT	175	300	Keuhn Road
0010	247+75	-	250+70	LT	60	100	Whipperfurth Road
0010	253+10	-	109+29	LT	50	100	Poelma Drive
0010	268+80	-	272+00	RT	60	100	Kingsley Road
0010	297+70	-	300+75	LT	100	150	Hellenbrand Road
0010		UNDISTRIBUTED			50	100	DRIVEWAY
0010		UNDISTRIBUTED				775	DISTRESSED PAVEMENT MILLING AND PIPE REPLACEMENT
				TOTAL 0010	10985	18800	

CULVERT PIPE SUMMARY

CATEGORY	STATION	LOCATION	CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH 522.0324 LF	CULVERT PIPE REINFORCED CONCRETE CLASS IV 30-INCH 522.0330 LF	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH 522.1024 EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH 522.1030 EACH	APRON ENDWALLS FOR CULVERT PIPE RCPA CLASS IV 51X31-INCH SPV.0060.02 EACH	CULVERT PIPE REINFORCED CONCRETE PIPE ARCH CLASS IV 51X31-INCH SPV.0090.02 LF
0010	232+70	CL	-	80	-	2	-	-
0010	262+60	CL	-	-	-	-	2	69
0010	289+30	CL	71	-	2	-	-	-
0010	299+60	CL	78	-	2	-	-	-
		TOTAL 0010	149	80	4	2	2	69

CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D

CATEGORY	STATION	TO	STATION	LOCATION	601.0557 LF
0010	299+55	-	299+70	LT	20
				TOTAL 0010	20

GUARDRAIL ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	MGS GUARDRAIL 3 614.2300 LF	MGS GUARDRAIL TERMINAL EAT 614.2610 EACH
0010	287+00	-	292+50	RT	-	-
0010	287+85	-	288+35	RT	-	1
0010	288+35	-	290+80	RT	250	-
0010	290+80	-	291+30	RT	-	1
				TOTAL 0010	250	2

BARRIER SYSTEM GRADING SHAPING FINISHING

CATEGORY	STATION	TO	STATION	LOCATION	614.0010 EACH	COMMON EXCAVATION* CY	SALVAGED TOPSOIL* SY	FERTILIZER TYPE B* CWT	SEEDING MIXTURE NO. 20* LB	SEEDING TEMPORARY* LB	CONSTRUCTION STAKING* LF
0010	287+00	-	292+50	RT	1	30	430	0.3	15	22	550
				TOTAL 0010	1	30	430	0.3	15	22	550

*FOR INFORMATION ONLY

3

FINISHING ITEMS

CATEGORY	STATION	LOCATION	SALVAGED TOPSOIL 625.0500 SY	EROSION MAT URBAN CLASS I TYPE A 628.2006 SY	FERTILIZER TYPE B 629.0210 CWT	SEEDING MIXTURE NO. 20 630.0120 LB	SEEDING TEMPORARY 630.0200 LB
0010	159+60	CL	200	200	0.13	3.60	5.40
0010	232+70	CL	200	200	0.13	3.60	5.40
0010	262+60	CL	200	200	0.13	3.60	5.40
0010	287+00 - 292+50	RT	*	430	*	*	*
0010	289+30	CL	200	200	0.13	3.60	5.40
0010	299+60	CL	200	200	0.13	3.60	5.40
		TOTAL 0010	1000	1430	0.63	18.00	27.00

* QTY FOR THESE ITEMS IS COVERED UNDER ITEM 614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING

WATER

CATEGORY	STATION TO	STATION	LOCATION	624.0100 MGAL
0010	105+90 -	332+88		10
			TOTAL 0010	10

SILT FENCE

CATEGORY	STATION	TO	STATION	LOCATION	SILT FENCE 628.1504 LF	SILT FENCE MAINTENANCE 628.1520 LF
0010	232+70			RT & LT	140	140
0010	262+60			RT & LT	140	140
0010	286+00	-	293+00	RT	680	680
0010	289+35			LT	70	70
0010	299+60			LT	70	70
				UNDISTRIBUTED	275	275
				TOTAL 0010	1375	1375

MARKERS CULVERT END

CATEGORY	STATION	LOCATION	633.5200 EACH
0010	232+70	RT & LT	2
0010	262+60	RT & LT	2
0010	289+35	RT & LT	2
0010	299+60	RT & LT	2
		TOTAL 0010	8

EROSION BALES

CATEGORY	STATION	TO	STATION	628.1104 EACH
0010	287+00	-	291+50	6
0010	UNDISTRIBUTED			6
			TOTAL 0010	12

TEMPORARY DITCH CHECKS

CATEGORY	LOCATION	628.7504 LF
0010	UNDISTRIBUTED	60
	TOTAL 0010	60

MOBILIZATIONS EROSION CONTROL

CATEGORY	DESCRIPTION	MOBILIZATIONS EROSION CONTROL 628.1905 EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL 628.1910 EACH
0010	PROJECT 5290-04-74	10	2
	TOTAL 0010	10	2

SIGNING SUMMARY

CATEGORY	SIGN NO.	STATION	LOCATION	SIGN CODE	SIGN MESSAGE	SIZE	POSTS WOOD 4X6-INCH X 16-FT 634.0616 EACH	POSTS WOOD 4X6-INCH X 18-FT 634.0618 EACH	POSTS WOOD 4X6-INCH X 20-FT 634.0620 EACH	SIGNS TYPE II REFLECTIVE H 637.2210 SF	SIGNS TYPE II REFLECTIVE F 637.2230 SF	REMOVING SIGNS TYPE II 638.2602 EACH	REMOVING SMALL SIGN SUPPORTS 638.3000 EACH	REMARKS
0010	1-1	100+61	LT	R6-2L	ONE WAY	24 X 30	-	-	-	28.50	-	-	-	ON SAME POST AS 1-2
0010	1-2	100+61	LT	-	-	-	-	1	1	-	-	1	2	
0010	1-3	100+83	RT	W11-15	BIKE/PED	30 X 30	1	-	-	-	6.25	-	-	
0010	1-4	100+83	RT	W16-7L	LEFT ARROW	24 X 12	-	-	-	-	2.00	-	-	ON SAME POST AS 1-3
0010	1-5	101+14	LT	W11-15	BIKE/PED	30 X 30	1	-	-	-	6.25	-	-	
0010	1-6	101+14	LT	W16-7L	LEFT ARROW	24 X 12	-	-	-	-	2.00	-	-	ON SAME POST AS 1-5
0010	1-7	101+61	RT	-	-	-	-	-	-	-	-	1	2	
0010	1-8	101+61	RT	D4-2R	PARK & RIDE	30 X 36	1	-	-	7.50	-	-	-	
0010	1-9	102+88	LT	D1-3	MADISON/MAZOMANIE/S UN PRAIRIE	78 X 36	2	-	-	19.50	-	-	-	
0010	1-10	102+88	LT	-	-	-	-	-	-	-	-	1	2	
0010	1-11	104+00	LT	J2-3	12E/12W/19W	72 X 57	-	1	1	28.50	-	-	-	
0010	1-12	104+68	RT	R1-1	STOP	30 X 30	1	-	-	5.18	-	1	1	
0010	1-13	104+86	RT	J4-1	19E	24 X 36	1	-	-	6.00	-	-	-	
0010	1-14	104+97	LT	-	-	-	-	-	-	-	-	1	2	
0010	1-15	105+10	LT	D4-2L	PARK & RIDE	30 X 36	1	-	-	7.50	-	-	-	
0010	1-16	105+90	LT	R1-1	STOP	30 X 30	1	-	-	5.18	-	1	1	
0010	1-17	107+18	RT	R2-1	SPEED LIMIT 55	24 X 30	1	-	-	6.00	-	-	-	
0010	1-18	107+22	LT	W3-3	SIGNAL AHEAD	30 X 30	1	-	-	-	9.00	-	-	
0010	1-20	108+57	LT	W16-9P	AHEAD	24 X 12	-	-	-	-	2.00	-	-	ON SAME POST AS 1-19
0010	1-19	108+57	LT	W11-15	BIKE/PED	30 X 30	1	-	-	-	6.25	-	-	
0010	1-21	108+84	RT	D2-2	WAUNAKEE/SUN PRAIRIE	84 X 24	2	-	-	14.00	-	-	-	
0010	1-22	109+57	LT	-	-	-	-	-	-	-	-	1	1	
0010	1-23	111+04	LT	-	-	-	-	-	-	-	-	1	1	
0010	1-24	111+04	LT	J1-1	JCT 12	24 X 39	1	-	-	6.50	-	-	-	
0010	1-25	112+59	RT	-	-	-	-	-	-	-	-	1	1	
0010	1-26	114+16	RT	W1-2L	LEFT CURVE	30 X 30	1	-	-	-	6.25	-	-	
0010	1-27	116+03	RT	W2-1	INTERSECTION	30 X 30	1	-	-	-	6.25	1	1	
0010	1-28	119+58	LT	-	-	-	-	-	-	-	-	1	1	
0010	1-29	124+27	LT	R1-1	STOP	30 X 30	1	-	-	5.18	-	1	1	
0010	1-30	124+85	RT	R1-1	STOP	30 X 30	1	-	-	5.18	-	1	1	
0010	1-31	127+57	LT	W1-2R	RIGHT CURVE	30 X 30	1	-	-	-	6.25	-	-	
0010	1-32	129+80	LT	-	-	-	-	-	-	-	-	1	1	
0010	1-33	130+56	RT	W14-3	NO PASSING ZONE	48 X 48 X 36	1	-	-	-	6.00	1	1	
0010	2-1	136+26	LT	W14-3	NO PASSING ZONE	48 X 48 X 36	1	-	-	-	6.00	1	1	
0010	2-2	161+56	RT	W14-3	NO PASSING ZONE	48 X 48 X 36	1	-	-	-	6.00	1	1	
SUBTOTAL 0010							23	2	2	144.72	70.50	17	21	

(CONTINUED)

SIGNING SUMMARY (CONTINUED)

CATEGORY	SIGN NO.	STATION	LOCATION	SIGN CODE	SIGN MESSAGE	SIZE	POSTS WOOD 4X6-INCH X 16-FT 634.0616 EACH	POSTS WOOD 4X6-INCH X 18-FT 634.0618 EACH	POSTS WOOD 4X6-INCH X 20-FT 634.0620 EACH	SIGNS TYPE II REFLECTIVE H 637.2210 SF	SIGNS TYPE II REFLECTIVE F 637.2230 SF	REMOVING SIGNS TYPE II 638.2602 EACH	REMOVING SMALL SIGN SUPPORTS 638.3000 EACH	REMARKS
0010	3-1	167+38	LT	I55-56	ADOPT A HIGHWAY	30 X 36	1	-	-	7.50	-	1	1	
0010	3-2	168+48	LT	R1-1	STOP	30 X 30	1	-	-	5.18	-	1	1	
0010	3-3	170+87	LT	W14-3	NO PASSING ZONE	48 X 48 X 36	1	-	-	-	6.00	1	1	
0010	3-4	187+12	RT	S3-1	SCHOOL BUS	36 X 36	1	-	-	-	6.25	1	1	
0010	3-5	190+69	LT	R1-1	STOP	30 X 30	1	-	-	5.18	-	1	1	
0010	4-1	201+37	RT	W14-3	NO PASSING ZONE	48 X 48 X 36	1	-	-	-	6.00	1	1	
0010	4-2	205+19	LT	W14-3	NO PASSING ZONE	48 X 48 X 36	-	-	-	-	6.00	1	1	
0010	4-3	206+15	RT	-	-	-	1	-	-	-	-	1	1	
0010	4-4	207+92	RT	W1-2R	RIGHT CURVE	30 X 30	1	-	-	-	6.25	-	-	
0010	5-1	225+58	LT	W1-2L	LEFT CURVE	30 X 30	1	-	-	-	6.25	-	-	
0010	5-2	226+87	LT	-	-	-	-	-	-	-	-	1	1	
0010	5-3	227+84	RT	W14-3	NO PASSING ZONE	48 X 48 X 36	1	-	-	-	6.00	1	1	
0010	5-4	229+27	LT	W14-3	NO PASSING ZONE	48 X 48 X 36	1	-	-	-	6.00	1	1	
0010	5-5	229+48	RT	-	-	-	-	-	-	-	-	1	1	
0010	5-6	231+73	RT	W1-4L	LEFT/RIGHT REVERSE CURVE	30 X 30	1	-	-	-	6.25	-	-	
0010	5-7	248+95	LT	R1-1	STOP	30 X 30	1	-	-	5.18	-	1	1	
0010	5-8	251+10	RT	I55-56	ADOPT A HIGHWAY	30 X 36	-	-	-	-	-	1	1	
0010	5-9	251+10	LT	-	SIGN SUPPORT	-	-	-	-	-	-	-	1	
0010	5-10	254+03	LT	R1-1	STOP	30 X 30	1	-	-	5.18	-	1	1	
0010	6-1	260+97	LT	W1-4L	LEFT/RIGHT REVERSE CURVE	30 X 30	1	-	-	-	6.25	1	1	
0010	6-2	270+70	RT	R1-1	STOP	30 X 30	1	-	-	5.18	-	1	1	
0010	6-3	275+11	RT	-	-	-	-	-	-	-	-	1	1	
0010	6-4	275+83	RT	W1-2L	LEFT CURVE	30 X 30	1	-	-	-	6.25	-	-	
0010	6-5	286+17	RT	W1-2L	LEFT CURVE	30 X 30	1	-	-	-	6.25	1	1	
0010	7-1	291+41	LT	W1-2R	RIGHT CURVE	30 X 30	1	-	-	-	6.25	-	-	
0010	7-2	292+38	LT	-	-	-	-	-	-	-	-	1	1	
0010	7-3	298+82	LT	R1-1	STOP	30 X 30	1	-	-	5.18	-	1	1	
0010	7-4	299+99	RT	W1-2R	RIGHT CURVE	30 X 30	1	-	-	-	6.25	1	1	
0010	7-5	301+45	LT	W1-2R	RIGHT CURVE	30 X 30	1	-	-	-	6.25	-	-	
0010	7-6	302+24	LT	-	-	-	-	-	-	-	-	1	1	
0010	8-1	320+47	LT	W1-2L	LEFT CURVE	30 X 30	1	-	-	-	6.25	-	-	
0010	8-2	321+78	LT	-	-	-	-	-	-	-	-	1	1	
0010	8-3	323+21	RT	W14-3	NO PASSING ZONE	48 X 48 X 36	1	-	-	-	6.00	1	1	
0010	8-4	325+69	RT	-	-	-	-	-	-	-	-	1	1	
0010	8-5	327+72	RT	W3-5	SPEED LIMIT 35 AHEAD	36 X 36	1	-	-	-	9.00	-	-	
0010	8-6	329+67	RT	I2-3	WAUNAKEE POPULATION	66 X 24	2	-	-	11.00	-	1	2	
0010	8-7	331+98	LT	W14-3	NO PASSING ZONE	48 X 48 X 36	1	-	-	-	6.00	1	1	
0010	8-8	332+89	LT	R2-1	SPEED LIMIT 55	24 X 30	1	-	-	6.00	-	1	1	
0010	8-9	332+89	RT	R2-1	SPEED LIMIT 55	24 X 30	1	-	-	6.00	-	1	1	
SUBTOTAL 0010							30	0	0	61.58	119.75	30	32	
TOTAL 0010							53	2	2	206.30	190.25	47	53	

3

PAVEMENT MARKING SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	PAVEMENT MARKING EPOXY 4-INCH 646.0106 YELLOW LF	PAVEMENT MARKING EPOXY 4-INCH 646.0106 WHITE LF	PAVEMENT MARKING SAME DAY EPOXY 4-INCH 646.0406 YELLOW LF	PAVEMENT MARKING ARROWS EPOXY TYPE 2 647.0166 EACH	PAVEMENT MARKING WORDS EPOXY 647.0356 EACH	TEMPORARY PAVEMENT MARKING 4-INCH 649.0402 YELLOW LF	REMARKS
0010	105+90		332+88	RT & LT	-	46000	-	-	-	-	Fog Lines
0010	102+70			20' RT	-	-	-	1	-	-	
0010	103+05			20' RT	-	-	-	-	1	-	"ONLY"
0010	105+90	-	120+00	CL	3000	-	2820	-	-	2560	DY
0010	120+00	-	130+55	CL	819	-	1319	-	-	1139	SY + Skips
0010	130+55	-	136+25	CL	143	-	143	-	-	46	Skips
0010	136+25	-	146+45	CL	1275	-	1275	-	-	1102	SY + Skips
0010	146+45	-	150+46	CL	802	-	802	-	-	802	DY
0010	150+46	-	161+55	CL	1386	-	1386	-	-	1198	SY + Skips
0010	161+55	-	170+85	CL	136	-	233	-	-	74	Skips
0010	170+85	-	181+20	CL	1560	-	1294	-	-	1118	SY + Skips
0010	181+20	-	190+07	CL	1057	-	1774	-	-	1774	DY
0010	190+07	-	201+45	CL	1423	-	1423	-	-	1229	SY + Skips
0010	201+45	-	205+18	CL	93	-	93	-	-	30	Skips
0010	205+18	-	214+55	CL	1171	-	1171	-	-	1012	SY + Skips
0010	214+55	-	217+06	CL	502	-	502	-	-	502	DY
0010	217+06	-	227+80	CL	1343	-	1343	-	-	1160	SY + Skips
0010	227+80	-	229+25	CL	36	-	36	-	-	12	Skips
0010	229+25	-	238+68	CL	1179	-	1179	-	-	1019	SY + Skips
0010	238+68	-	313+68	CL	12600	-	15000	-	-	15000	DY
0010	313+68	-	323+18	CL	1188	-	1188	-	-	1026	SY + Skips
0010	323+18	-	331+95	CL	219	-	219	-	-	70	Skips
0010	331+95	-	332+88	CL	116	-	116	-	-	100	SY + Skips
				TOTAL 0010	30047	46000	33316	1	1	30973	

3

SAWING ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	SAWING ASPHALT 690.0150 LF	SAWING CONCRETE 690.0250 LF
0010	232+64	-	232+76	CL	68	-
0010	262+54	-	2662+66	CL	68	-
0010	289+23	-	289+35	CL	78	-
0010	299+55	-	299+70	CL	100	6
				TOTAL 0010	314	6

TRAFFIC CONTROL ITEMS

CATEGORY	LOCATION	TRAFFIC CONTROL (5290-01-74) 643.0100 EACH	TRAFFIC CONTROL DRUMS 643.0300 DAY	TRAFFIC CONTROL SIGNS 643.0900 DAY	TRAFFIC CONTROL SIGNS PCMS 643.1050 DAY	TEMPORARY PORTABLE RUMBLE STRIP ARRAY SPV.0105.01 EACH
0010	UNDISTRIBUTED	1	450	1000	20	4
	TOTAL 0010	1	450	1000	20	4

STAKING ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER 650.5500 LF	CONSTRUCTION STAKING PIPE CULVERTS 650.6000 EACH	CONSTRUCTION STAKING RESURFACING REFERENCE 650.8000 LF	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (5290-01-74) 650.9910 EACH
0010	105+90	-	332+88		-	-	22698	-
0010	105+90	-	332+88		-	-	-	1
0010	232+70				-	1	-	-
0010	262+60				-	1	-	-
0010	289+30				-	1	-	-
0010	299+55	-	299+70	LT	20	-	-	-
0010	299+60				-	1	-	-
				TOTAL 0010	20	4	22698	1

5 5

PROJECT NO: 5290-01-74	HWY: STH 19	COUNTY: DANE	PLAN SHEETS	SHEET 40	E

CONTROL POINTS					
NO.	STATION	OFFSET	Y	X	DESCRIPTION
2u13	157+19	39' LT	525375.70	781152.68	SURVEY DISK

N

STA. 159+15
EXISTING 2 SPAN 8'X5' x 75' BOX CULVERT, C-13-110
NORTH WINGWALL REPAIR SEE STRUCTURE PLANS
ALL INSTREAM WORK SHOULD BE COMPLETED BETWEEN
JUNE 15 AND MARCH 1

PT: 141+63.13

REMOVING DISTRESSED
PAVEMENT MILLING

PC: 148+51.19

PT: 155+81.35

TDS FACILITY (T)
2 LINES

PC: 161+21.17

WETLANDS

2u13

140

150

160

PI STA = 136+55.47
Y = 524682.30
X = 779206.87
DELTA = 2°32'19"
D = 0°15'00"
T = 507.82'
L = 1015.48'
R = 22918.31'
PC STA = 131+47.65
PT STA = 141+63.13

PI STA = 152+16.77
Y = 525224.40
X = 780671.21
DELTA = 7°18'06"
D = 1°00'00"
T = 365.58'
L = 730.16'
R = 5729.58'
PC STA = 148+51.19
PT STA = 155+81.35

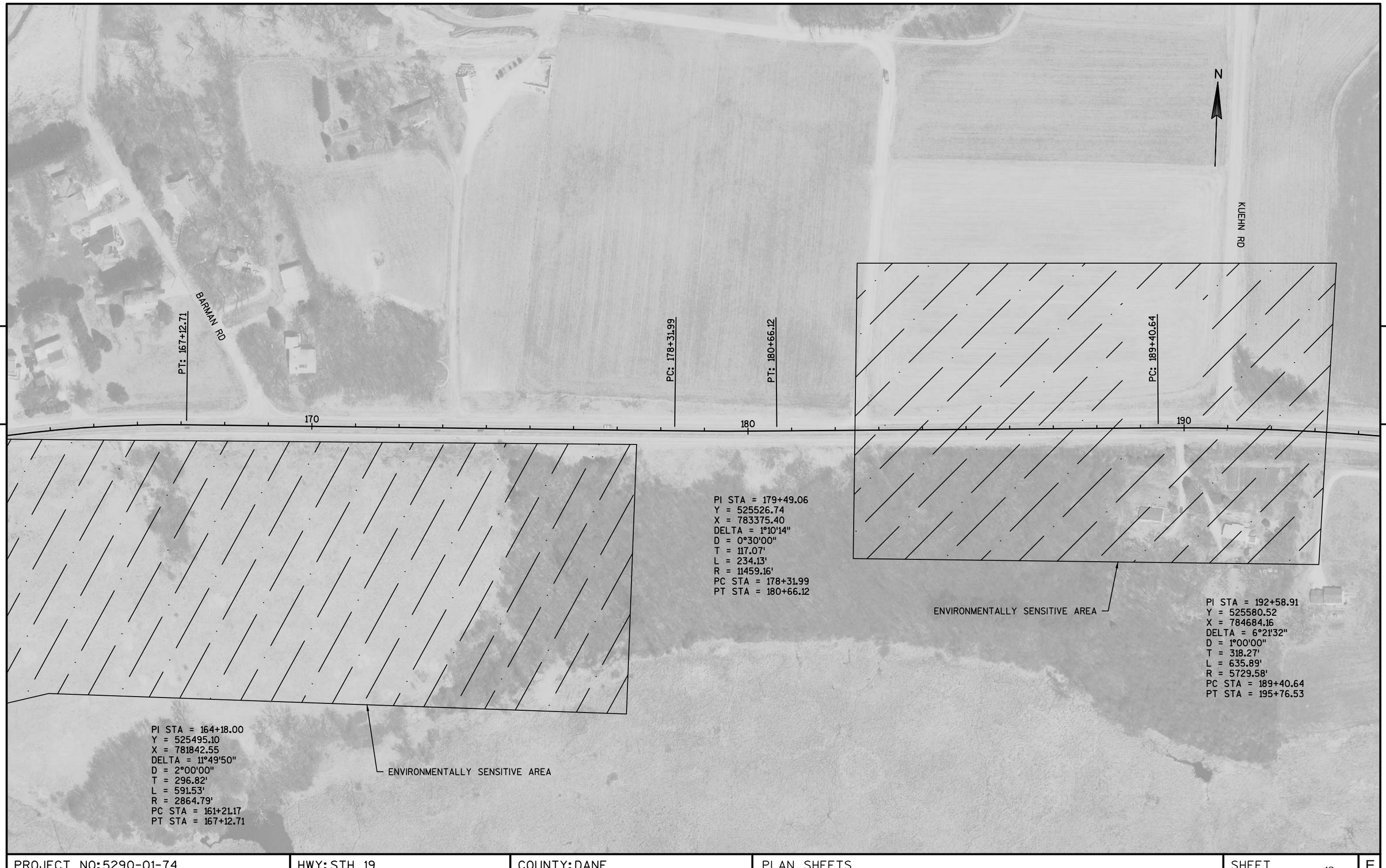
EXISTING R/W

ENVIRONMENTALLY SENSITIVE AREA

5

5

PROJECT NO: 5290-01-74	HWY: STH 19	COUNTY: DANE	PLAN SHEETS	SHEET 41	E



5 5

PROJECT NO:5290-01-74	HWY: STH 19	COUNTY: DANE	PLAN SHEETS	SHEET 42	E

5 5

PROJECT NO: 5290-01-74	HWY: STH 19	COUNTY: DANE	PLAN SHEETS	SHEET 43	E

BENCH MARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEVATION
2174	233+78	43' LT	CHIS "X" W.END OF DRIVEWAY PIPE	924.27

CONTROL POINTS					
NO.	STATION	OFFSET	Y	X	DESCRIPTION
2u14	225+58	43' LT	524973.00	787863.00	SURVEY DISK

STA. 232+70.41
EXISTING 30" X 84' CSCP
TO BE REMOVED
I-30" X 80' RCCP REQ'D
AE1
STA: 232+69.54
OFFSET: 43' LT
ELE: 921.2'
AE2
STA: 232+71.30
OFFSET: 48.7' RT
ELEVATION: 921.7'

2U14

230

AE1

CAUTION

MG&E FACILITY (G)

2174

PC: 236+35.96

AE2

EXISTING R/W

240

WIPPERFURTH RD

PT: 248+67.02

PC: 250+51.64

250

POELMA DR

PT: 255+27.15

N

PI STA = 252+91.89
Y = 524335.88
X = 790274.69
DELTA = 20°12'33"
D = 4°15'00"
T = 240.25'
L = 475.51'
R = 1348.14'
PC STA = 250+51.64
PT STA = 255+27.15

PI STA = 243+11.14
Y = 523912.02
X = 789259.58
DELTA = 58°28'31"
D = 4°45'00"
T = 675.18'
L = 1231.06'
R = 1206.23'
PC STA = 236+35.96
PT STA = 248+67.02

5

5

PROJECT NO:5290-01-74	HWY: STH 19	COUNTY: DANE	PLAN SHEETS	SHEET 44	E

BENCH MARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEVATION
2H45	270+87	233' RT	SURVEY DISK	923.69
2173	263+27	50' LT	NAIL IN P.P.	927.13

CONTROL POINTS					
NO.	STATION	OFFSET	Y	X	DESCRIPTION
900	287+33	26' LT	524452.41	793681.89	REBAR

N

ENVIRONMENTALLY SENSITIVE AREA

TDS FACILITY (T)
CHARTER FACILITY UNDERGROUND (FO)
MG&E (G)

PC: 261+06.88
AE3
2173
PT: 266+05.49
PC: 268+97.76
PT: 275+85.59
PC: 281+17.73
PT: 286+34.32
900
260
270
280
AE4
EXISTING R/W
KINGSLEY RD
2H45
REMOVING DISTRESSED PAVEMENT MILLING
ALLIANT ENERGY (E)
SLOPE INTERCEPT

STA: 262+60
EXISTING 33"X49" X 76' CSPA
TO BE REMOVED
I-51"X31" X 69' RCPA CLASS IV REQ'D
AE3
STA: 262+59.70
OFF: 38.0'
ELE: 923.00'
AE4
STA: 262+60.31
OFF: 459.9'
ELE: 919.72'

PI STA = 263+56.82
Y = 524381.68
X = 791343.63
DELTA = 9°58'20"
D = 2°00'00"
T = 249.94'
L = 498.62'
R = 2864.79'
PC STA = 261+06.88
PT STA = 266+05.49

PI STA = 272+42.32
Y = 524265.65
X = 792222.77
DELTA = 8°35'53"
D = 1°15'00"
T = 344.56'
L = 687.83'
R = 4583.66'
PC STA = 268+97.76
PT STA = 275+85.59

PI STA = 283+79.27
Y = 524287.09
X = 793360.81
DELTA = 22°05'19"
D = 4°16'33"
T = 261.54'
L = 516.59'
R = 1340.00'
PC STA = 281+17.73
PT STA = 286+34.32

5 5

PROJECT NO: 5290-01-74	HWY: STH 19	COUNTY: DANE	PLAN SHEETS	SHEET 45	E

BENCH MARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEVATION
2172	299+49	111' LT	CHIS "□" FLAG OF CURB N. END	932.07

CONTROL POINTS					
NO.	STATION	OFFSET	Y	X	DESCRIPTION
901	292+50	27' RT	524607.51	794177.70	REBAR

PI STA = 310+16.91
Y = 525639.96
X = 795615.39
DELTA = 36°32'40"
D = 3°30'00"
T = 540.51'
L = 1044.12'
R = 1637.02'
PC STA = 304+76.40
PT STA = 315+20.52

MG&E FACILITY (G)
TDS TELECOM/WAUNAKEE TELEPHONE FACILITY (T)
ALLIANT ENERGY (E)
HELLENBRAND RD
PC: 304+76.40
PT: 315+20.52
PC: 292+48.62
PT: 296+20.76
AE7
SAW CUTS REQUIRED
299+51 - 299+71, 32' LT
20 LF
2172
310
300
320
290
AE5
DISTRESS AREA TO BE REMOVED
901
AE8
AE6
SLOPE INTERCEPT
EXISTING R/W
EXISTING R/W
ENVIRONMENTALLY SENSITIVE AREA

STA. 289+28.75
EXISTING 24" X 71' CSCP
TO BE REMOVED
1-24" X 76' RCCP REQ'D
AE5
STA: 289+27.36'
OFF: 36.6'
ELE: 920.60
AE6
STA: 289+29.28
OFF: 45.9'
ELE: 917.02'

PI STA = 294+35.50
Y = 524705.19
X = 794337.83
DELTA = 13°01'30"
D = 3°30'00"
T = 186.88'
L = 372.14'
R = 1637.02'
PC STA = 292+48.62
PT STA = 296+20.76

STA. 299+62.17
EXISTING 24" X 80' CSCP
TO BE REMOVED
1-24" X 78' RCCP REQ'D
AE
STA: 299+61.96
OFF: 43.8' LT
ELE: 924.19'
AE
STA: 299+62.23
OFF: 43.3' RT
ELE: 921.02'

PROJECT NO:5290-01-74	HWY: STH 19	COUNTY: DANE	PLAN SHEETS	SHEET 46	E

CONTROL POINTS					
NO.	STATION	OFFSET	Y	X	DESCRIPTION
2h46	326+59	27' RT	525603.00	797294.00	SURVEY DISK

N

PT: 315+20.52

EXISTING R/W

EP: 332+88.16

END PROJECT
STA 332+88
X=797923.4975
Y=525625.8003

320

330

2H46

DORN DR

ENVIRONMENTALLY SENSITIVE AREA

ENVIRONMENTALLY SENSITIVE AREA

PROJECT NO: 5290-01-74	HWY: STH 19	COUNTY: DANE	PLAN SHEETS	SHEET 47	E

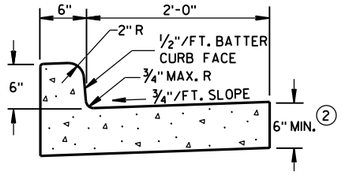
FILE NAME : N:\PDS\C3D\52900104\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050201_PN - 050201 - (8)

PLOT DATE : 8/17/2016 4:40 PM PLOT BY : FILLIPI, PETER L PLOT NAME : PLOT SCALE : 1 IN:200 FT

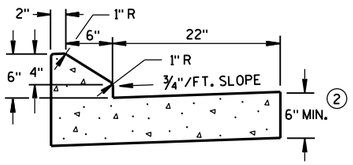
Standard Detail Drawing List

08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
13A10-01A	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01B	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01C	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01D	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A11-02A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-02B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
14B42-04A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C04-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-13B	PAVEMENT MARKING WORDS
15C07-13C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-03A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D38-01A	TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS
15D38-01B	ATTACHMENT OF SIGNS TO POSTS

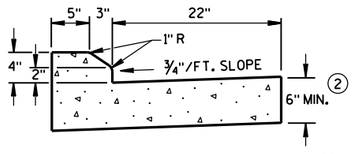
6



TYPES A & D ①

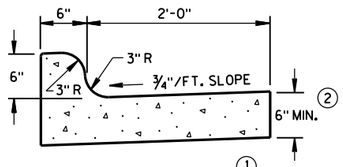


6" SLOPED CURB TYPES G & J ①

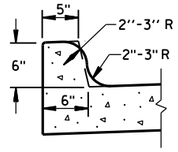


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

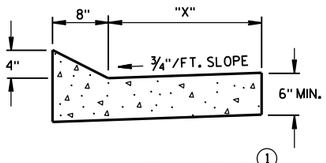


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

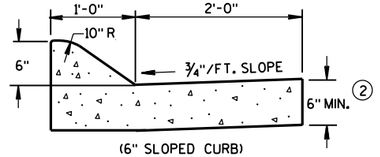
CONCRETE CURB & GUTTER 30"



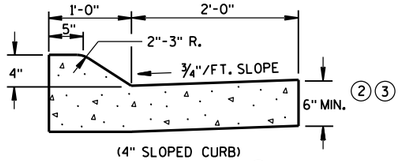
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

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

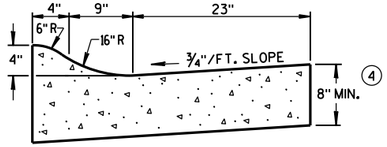


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ①⑤

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.

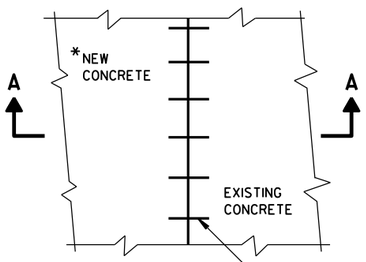
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

④ 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.

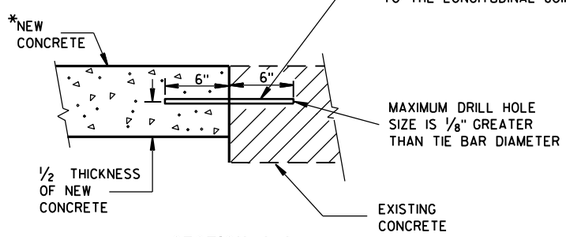
⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



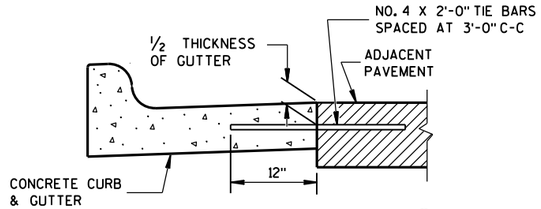
PLAN VIEW

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

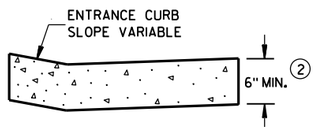


SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

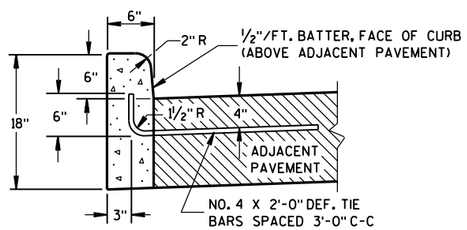


TYPICAL TIE BAR LOCATION ①

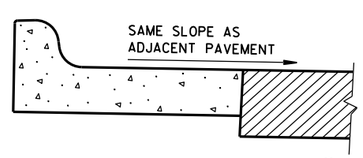


DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

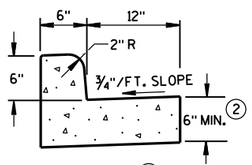


① TYPES A & D



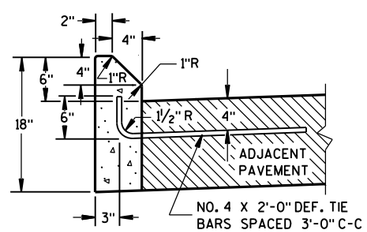
⑥ REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)



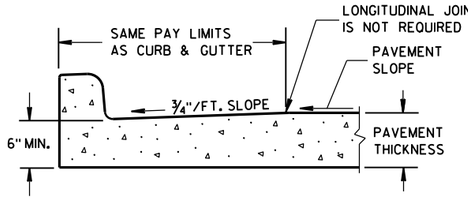
① TYPES A & D

CONCRETE CURB & GUTTER 18"

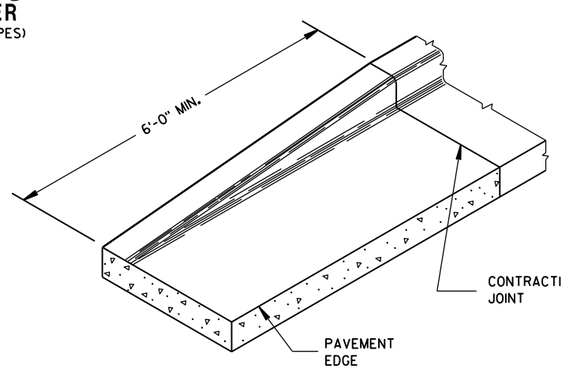


① TYPES G & J

CONCRETE CURB



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

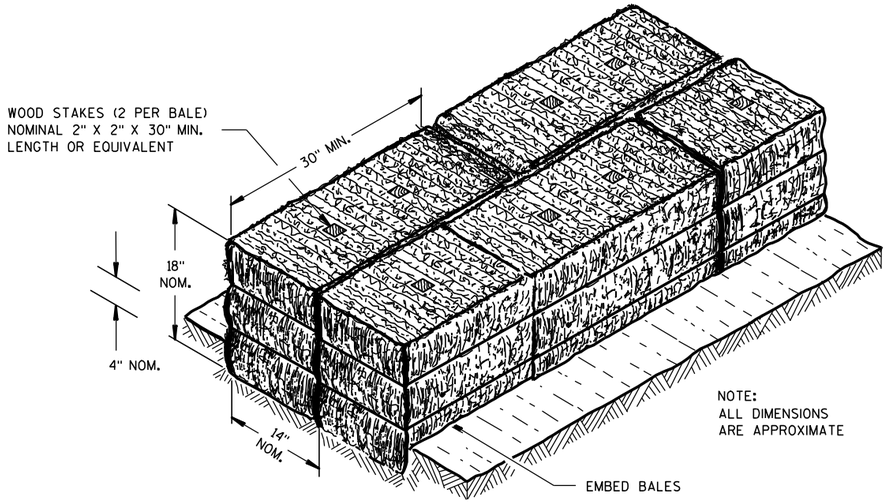
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

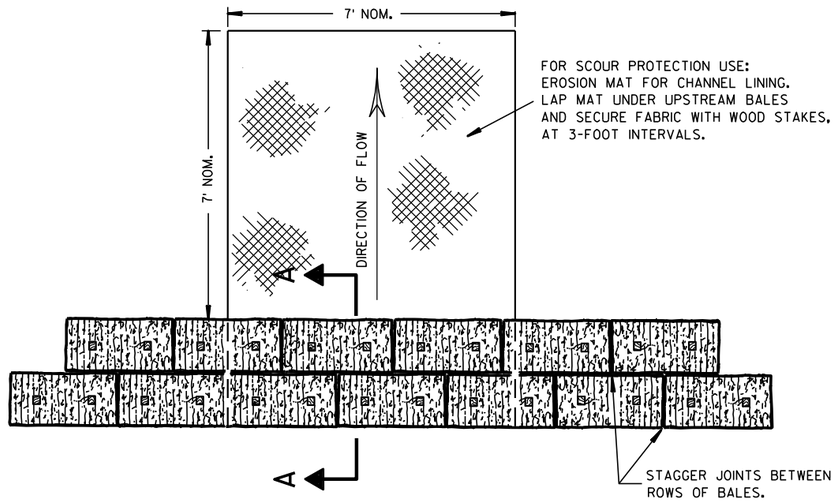
APPROVED
June, 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

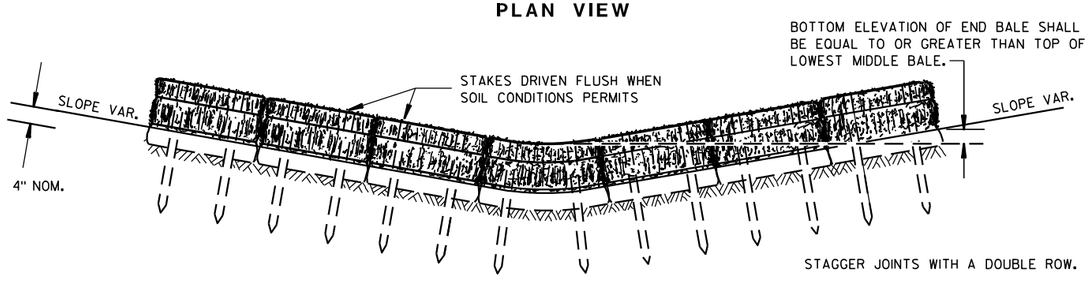
S.D.D. 8 D 1-19



SECTION A-A



PLAN VIEW



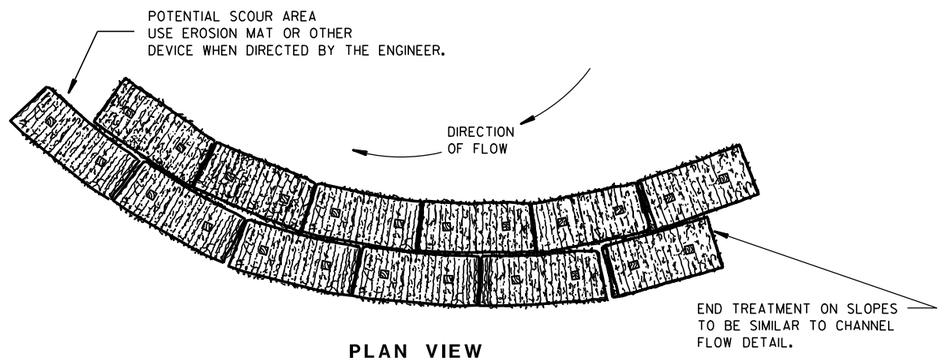
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

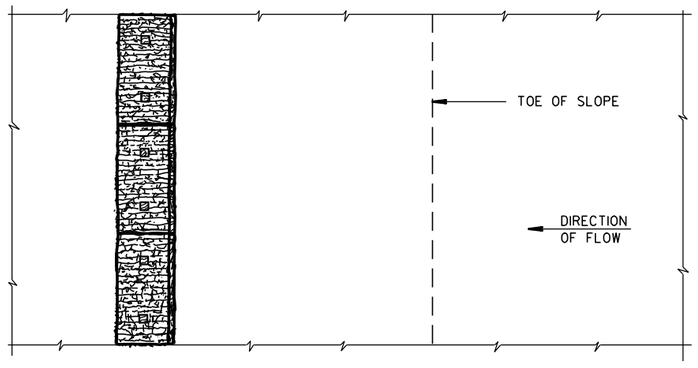
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

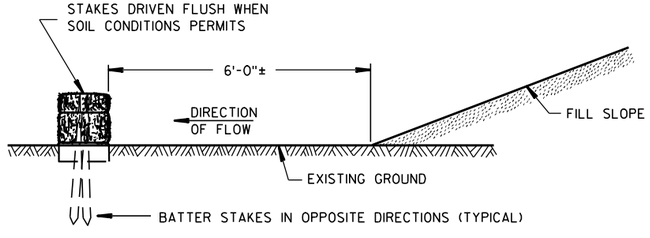


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

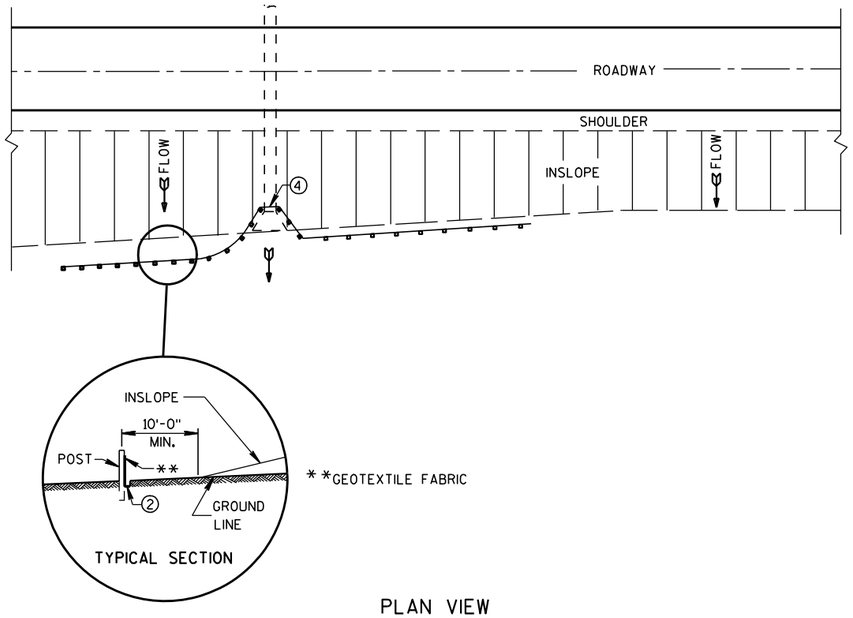
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

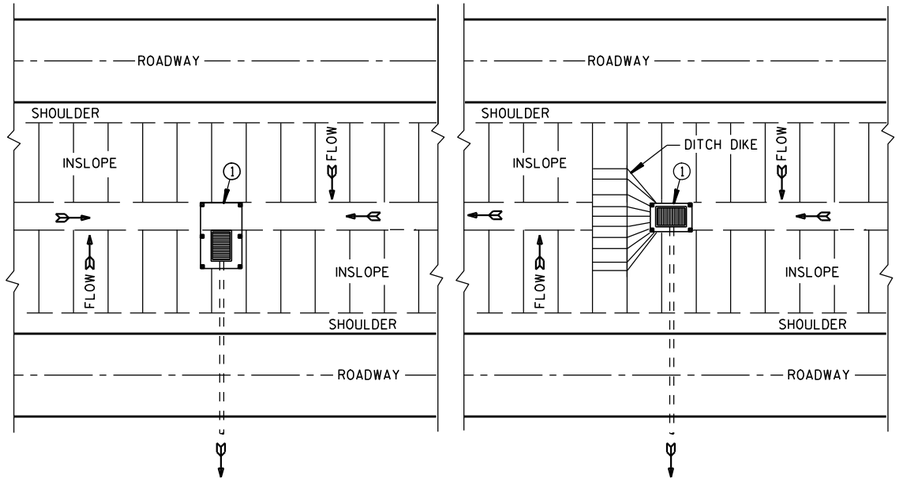
6

S.D.D. 8 E 8-3



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.

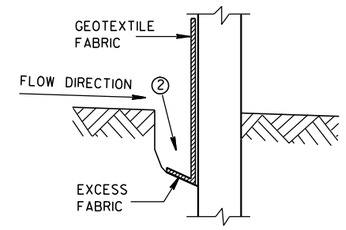
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

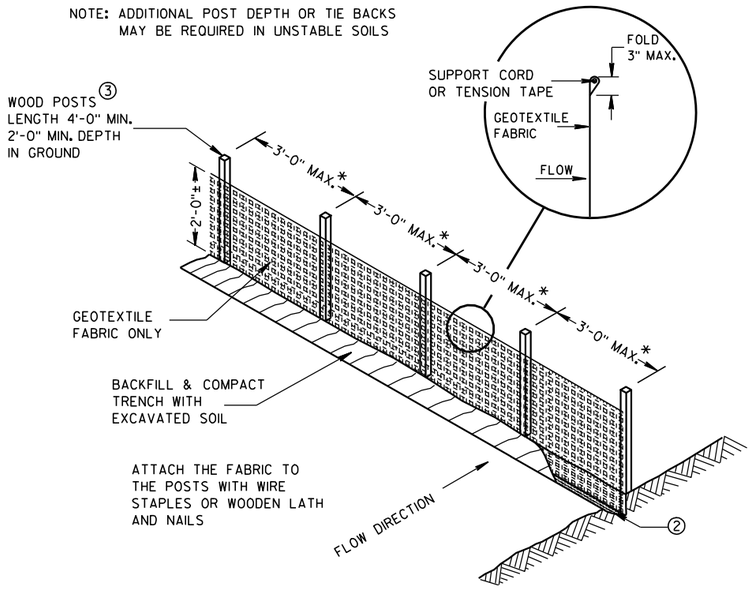
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

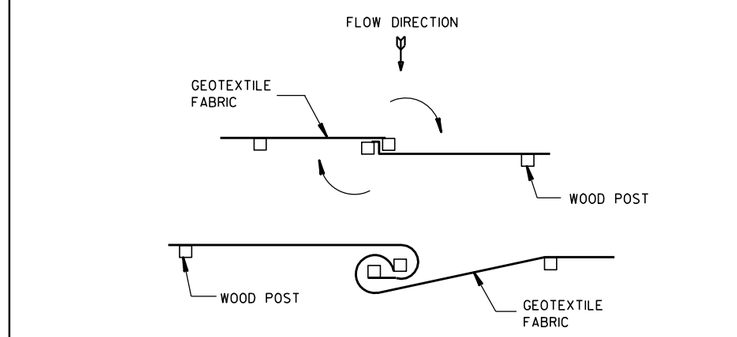
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



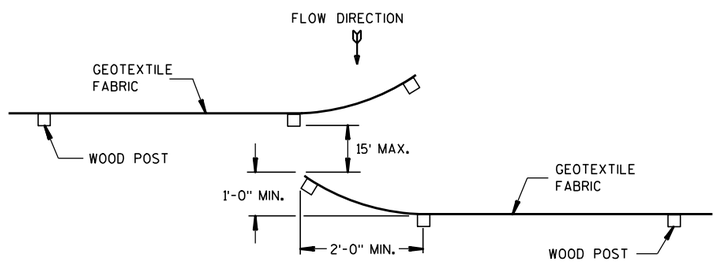
TRENCH DETAIL



SILT FENCE

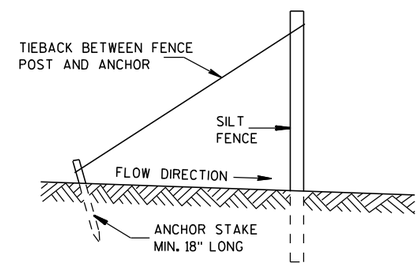


TWIST METHOD



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

METAL APRON ENDWALLS

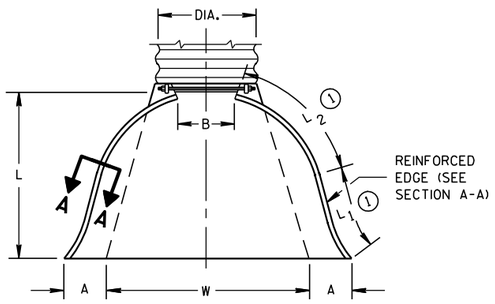
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

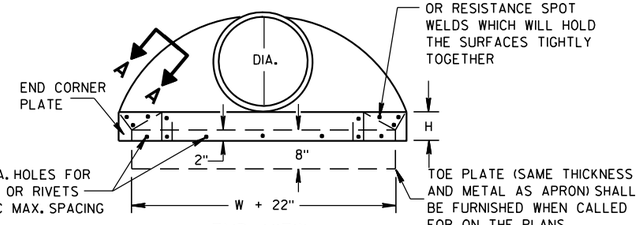
REINFORCED CONCRETE APRON ENDWALLS

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

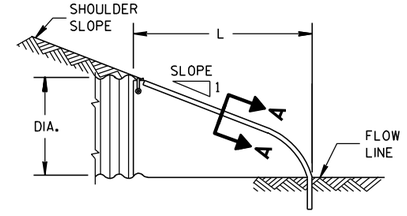
*MINIMUM
**MAXIMUM



PLAN VIEW

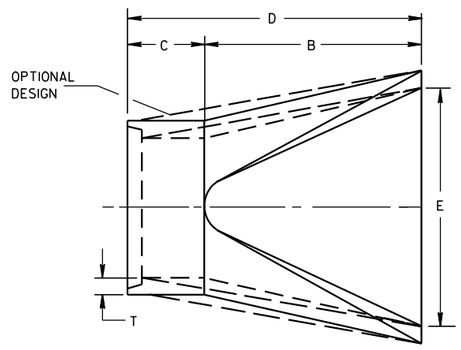


END VIEW

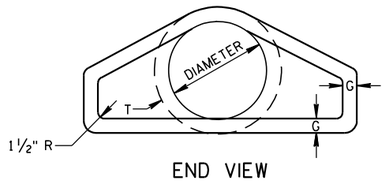


SIDE ELEVATION

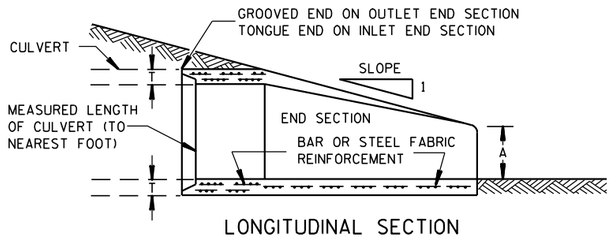
METAL ENDWALLS



PLAN

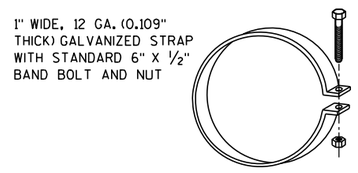


END VIEW



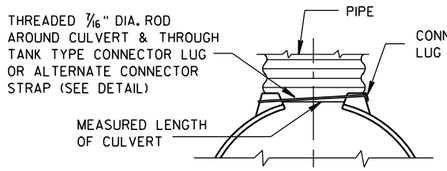
LONGITUDINAL SECTION

CONCRETE ENDWALLS

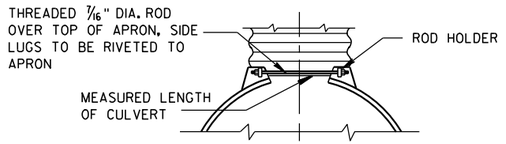


ALTERNATE FOR TYPE 1 CONNECTION

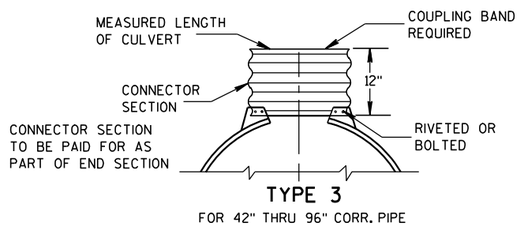
END SECTION CONNECTOR STRAP



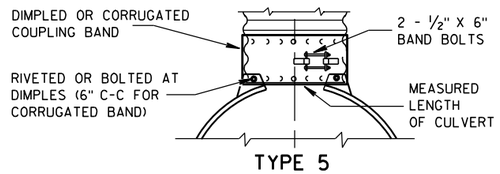
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

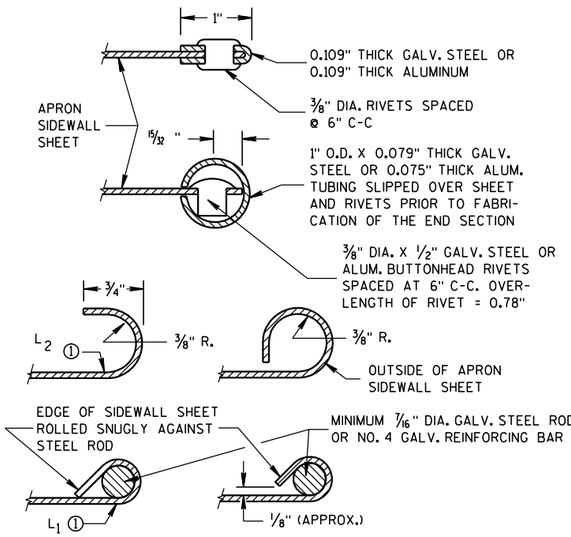
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

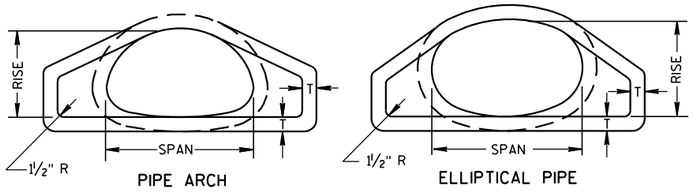
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

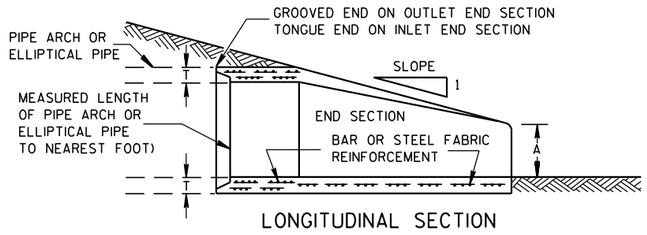
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

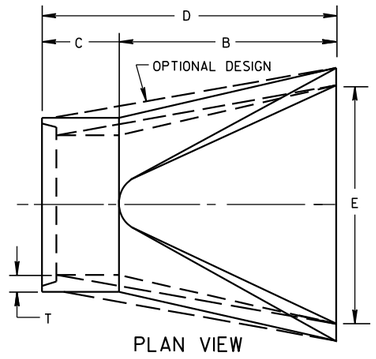
6
S.D.D. 8 F 1-11



END VIEW

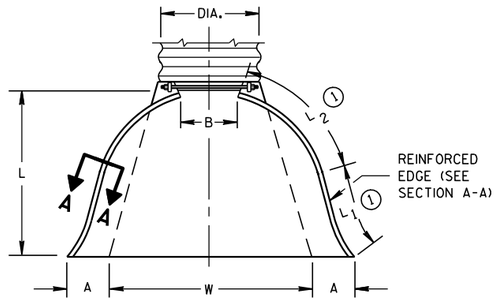


LONGITUDINAL SECTION

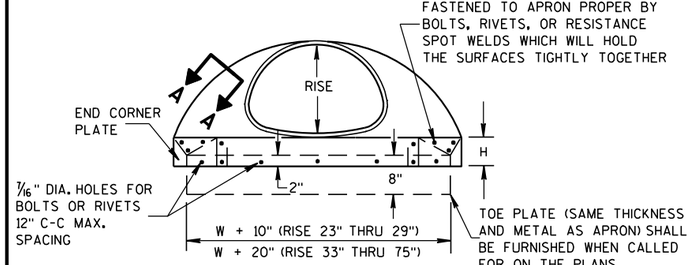


PLAN VIEW

CONCRETE ENDWALLS



PLAN VIEW



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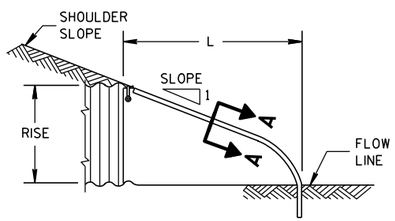
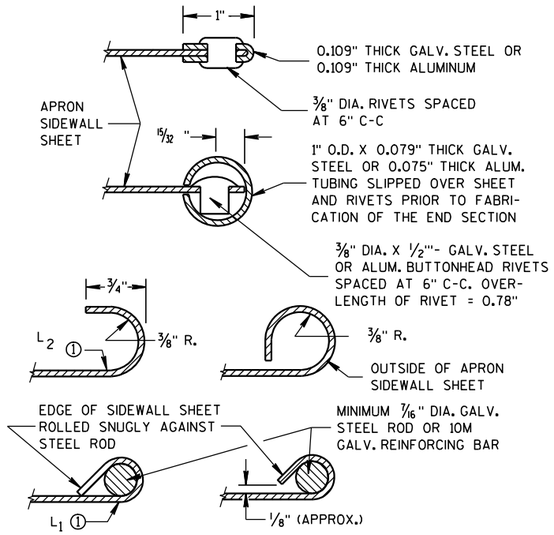


SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

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

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

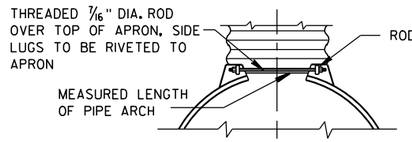
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

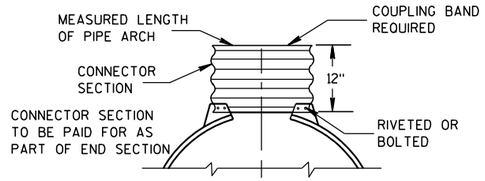
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48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

**NOMINAL SIZE



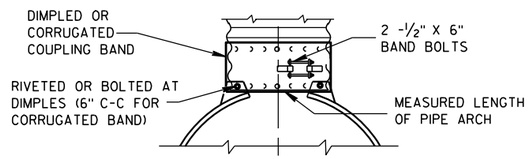
TYPE 2

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



TYPE 3

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



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

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

CONNECTION DETAILS

GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

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

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

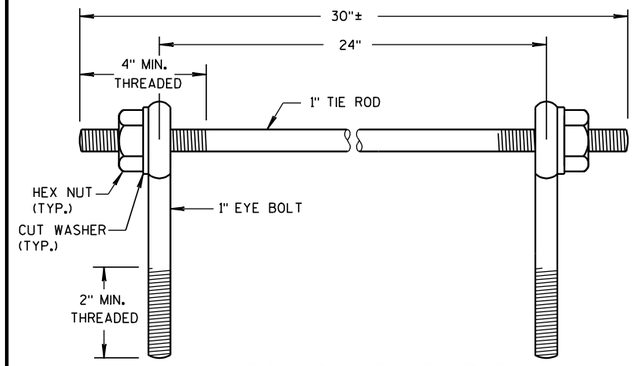
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

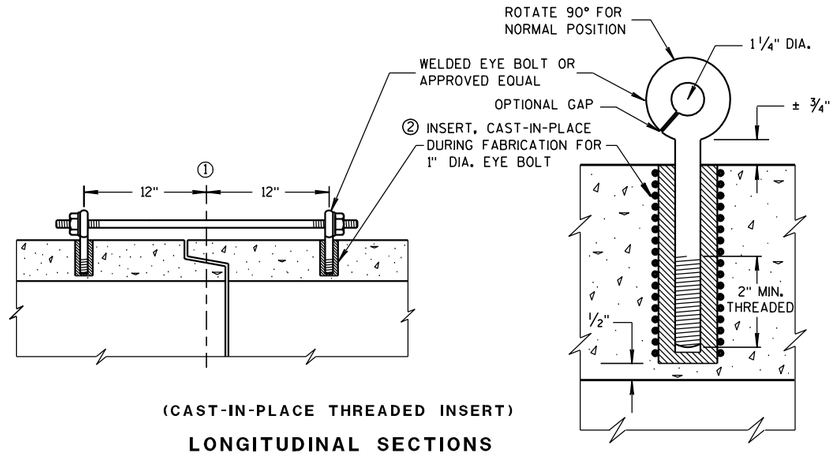
11/30/94 — DATE

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

FHWA



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

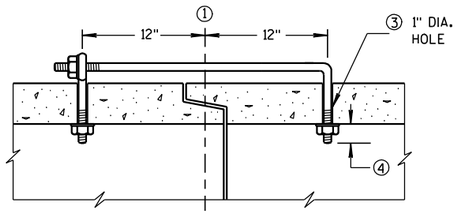
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

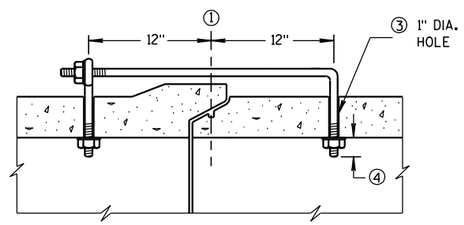
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

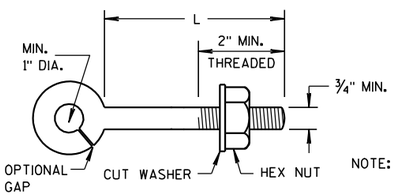


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

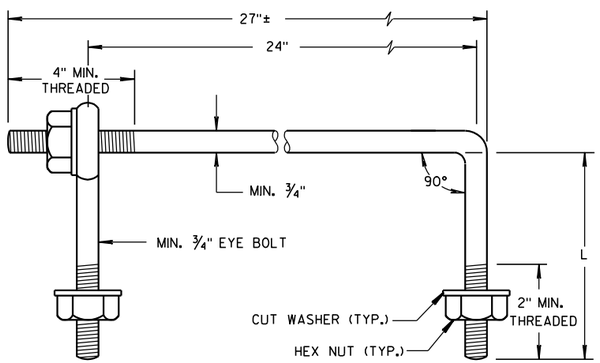
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

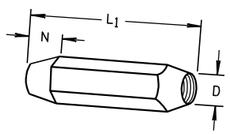
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

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

DIMENSIONS SHOWN ARE IN INCHES



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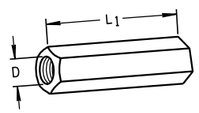
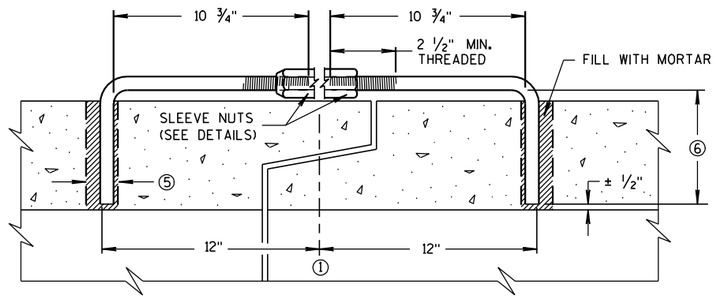


PLAIN

RIGHT AND LEFT THREADS

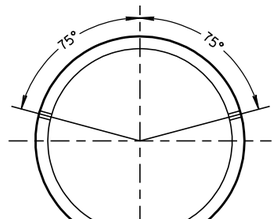
SLEEVE NUTS



LONGITUDINAL SECTION

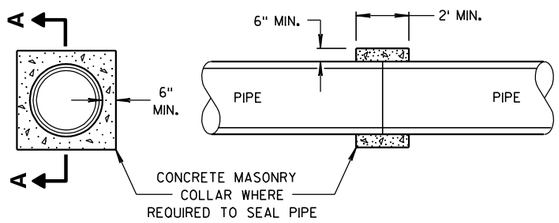
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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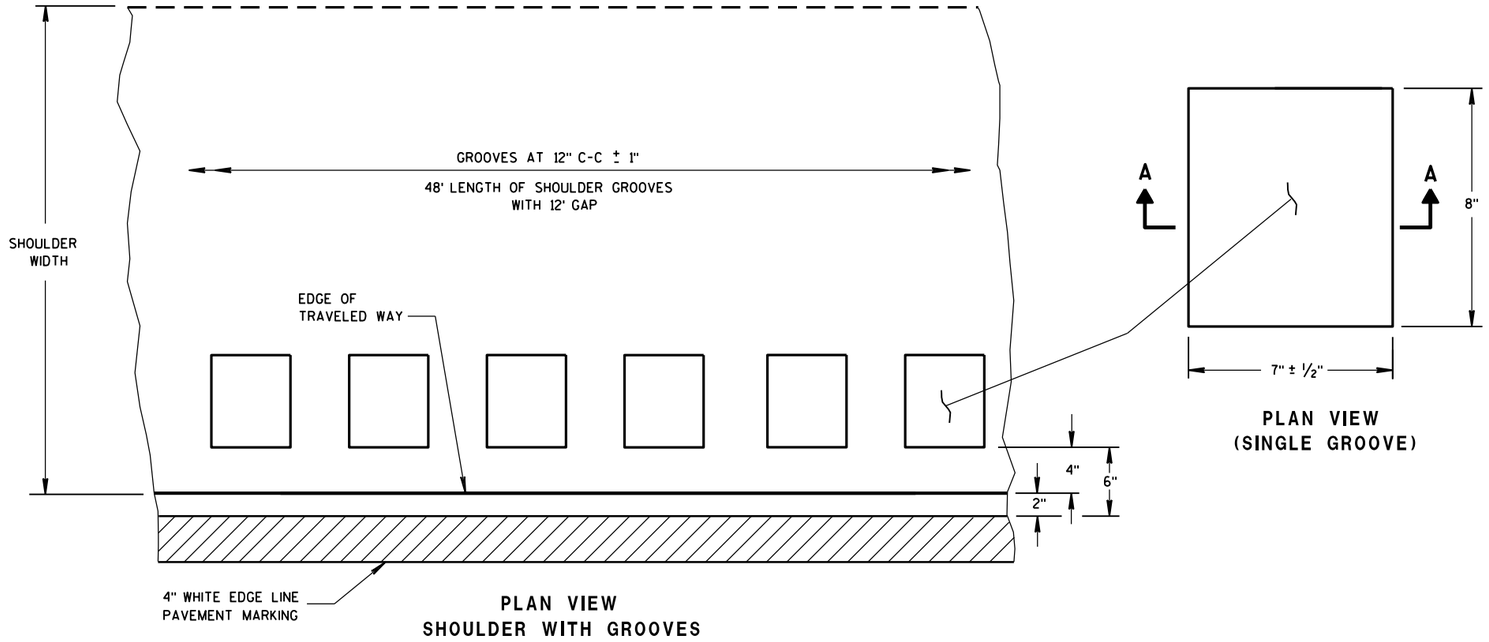
S.D.D. 8 F 4-7

6

S.D.D. 8 F 4-7



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

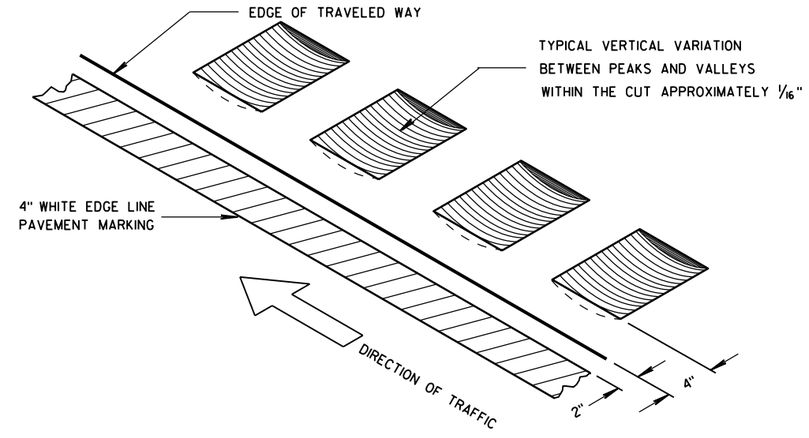
PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP

GENERAL NOTES

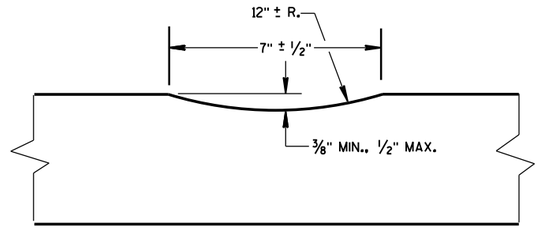
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

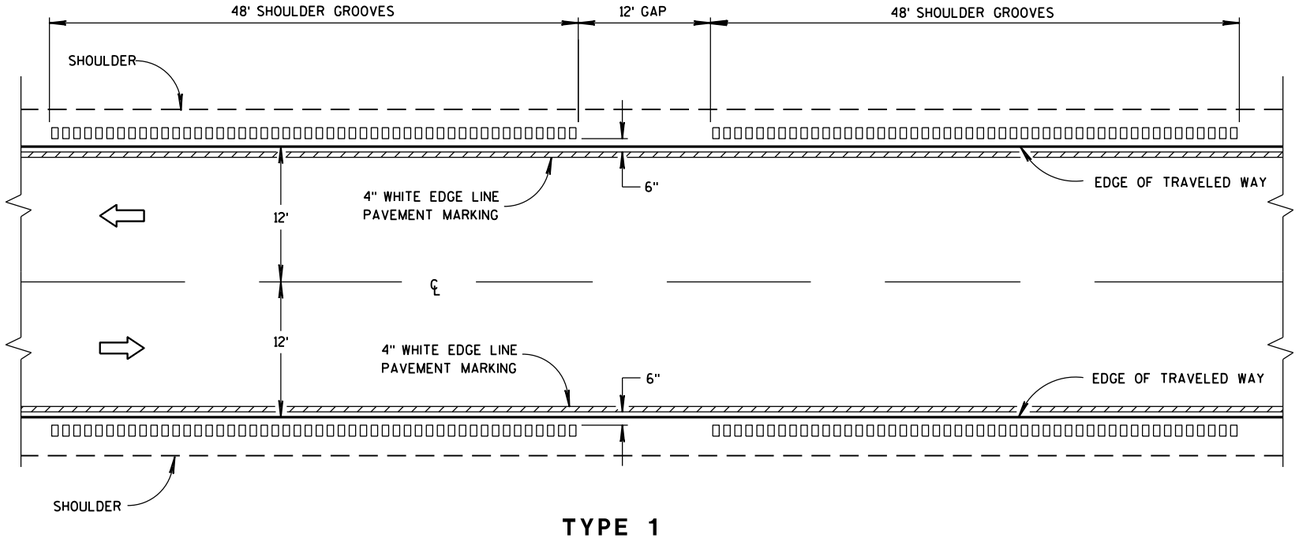
(1) SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



ISOMETRIC



SECTION A-A



TYPE 1
2-LANE SHOULDER RUMBLE STRIP

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

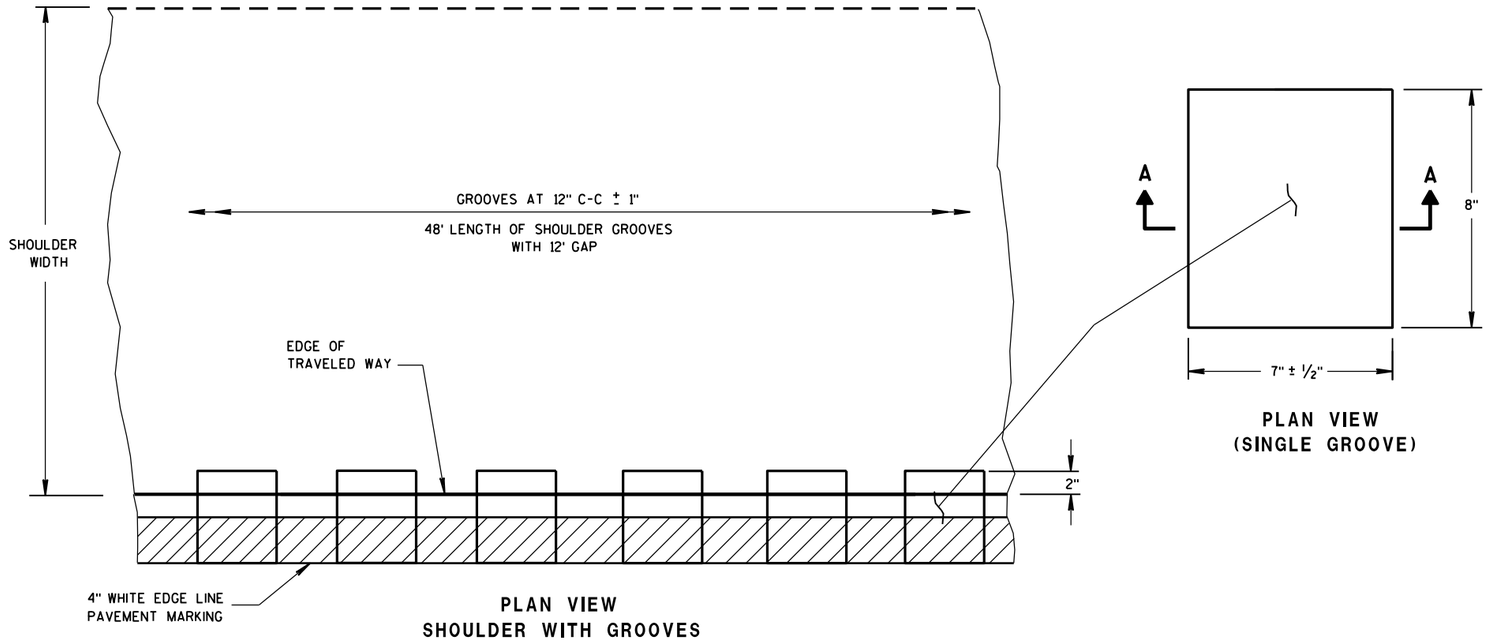
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

S.D.D. 13 A 10-1a

6

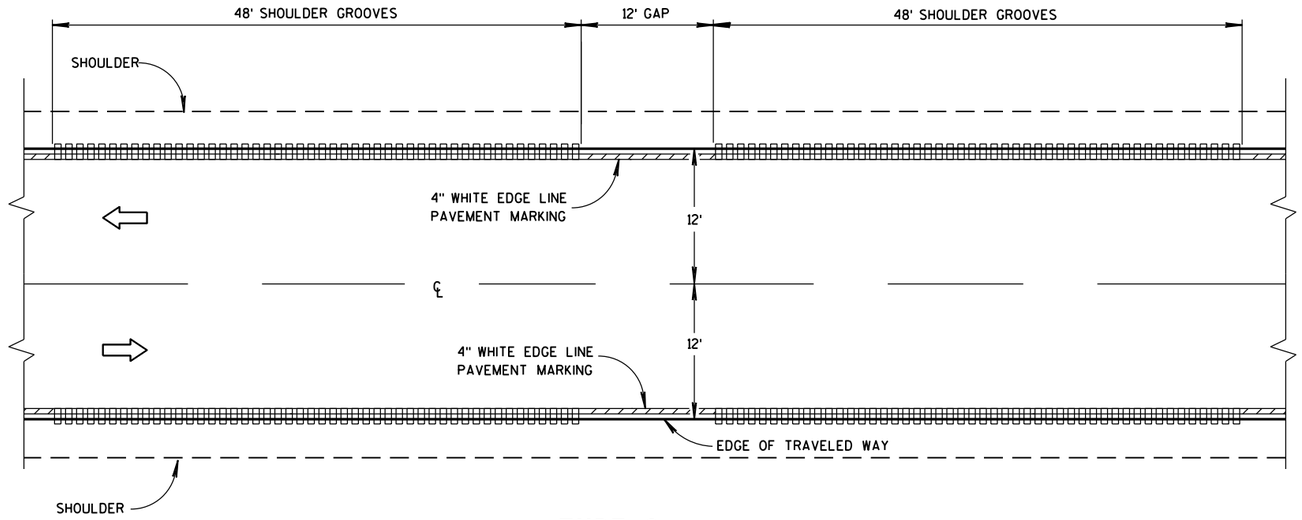
S.D.D. 13 A 10-1a



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR TYPE 2 MILLED RUMBLE STRIP



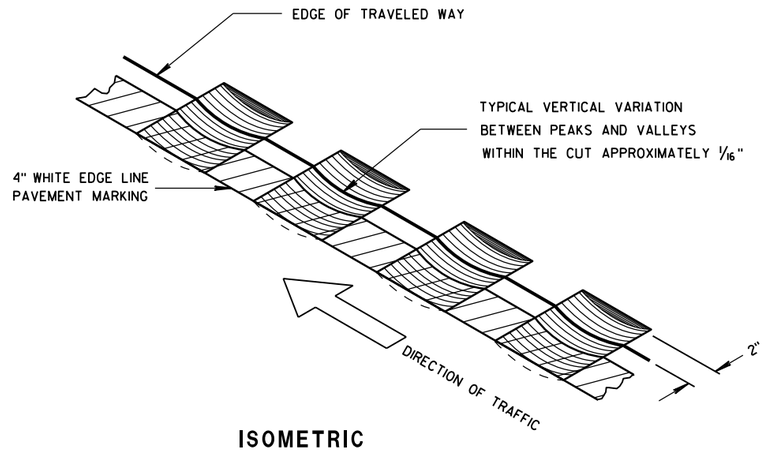
TYPE 2
2-LANE SHOULDER RUMBLE STRIP

GENERAL NOTES

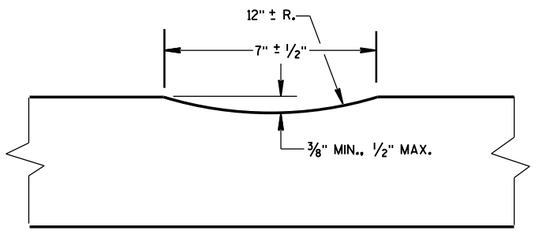
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

(1) SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



ISOMETRIC



SECTION A-A

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

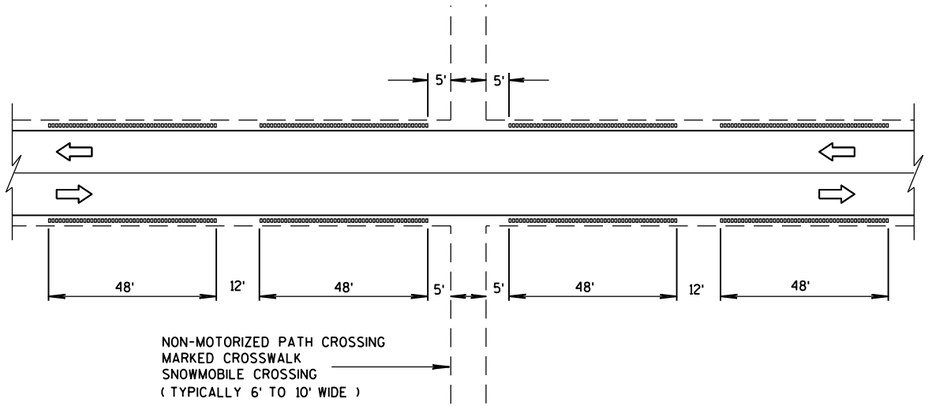
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

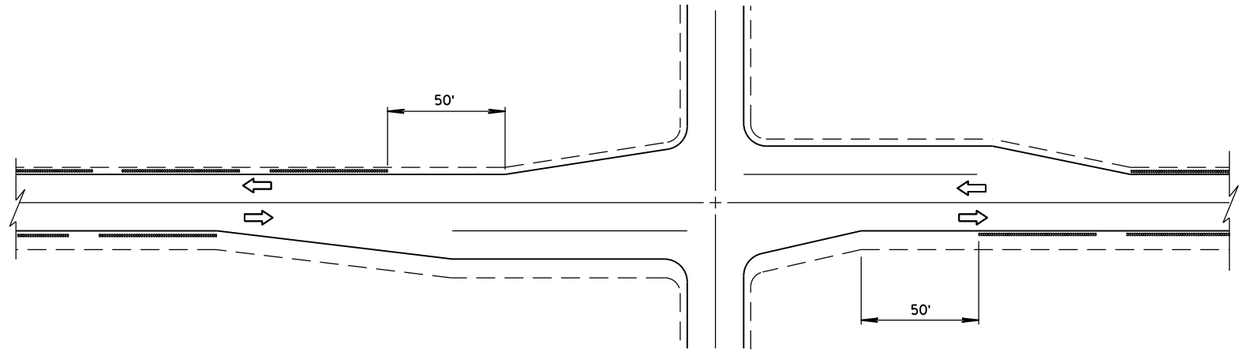
S.D.D. 13 A 10-1b

6

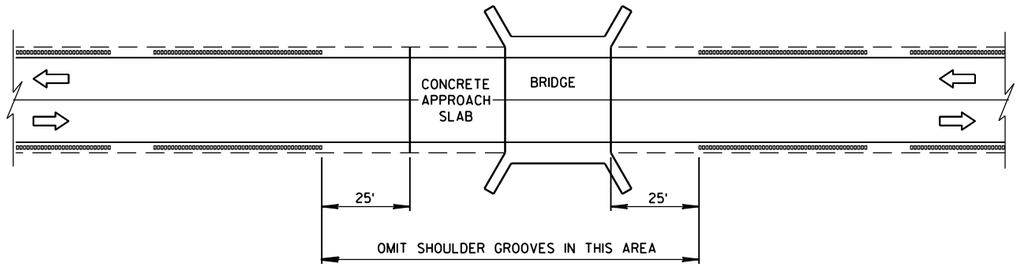
S.D.D. 13 A 10-1b



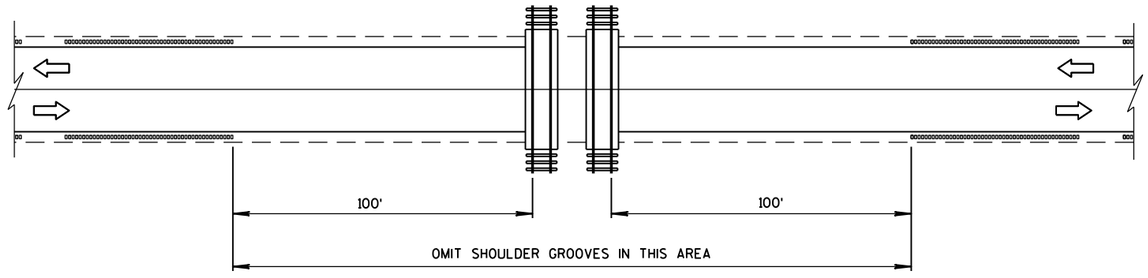
SHOULDER GROOVES AT MISCELLANEOUS CROSSINGS



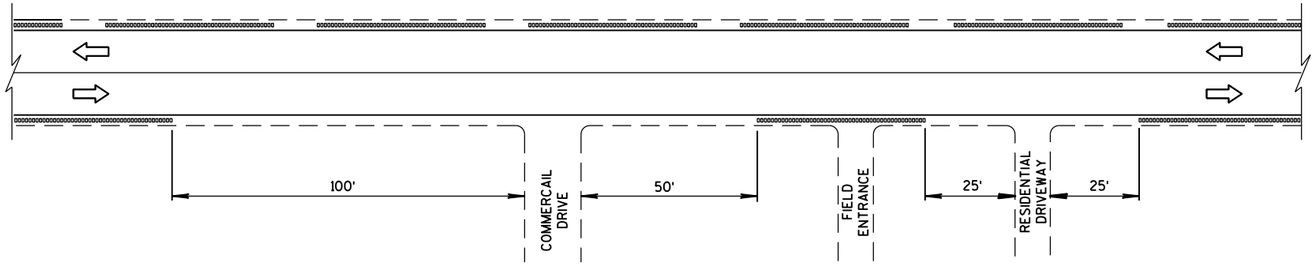
SHOULDER GROOVES AT INTERSECTIONS



SHOULDER GROOVES AT BRIDGES



SHOULDER GROOVES AT RAILROADS

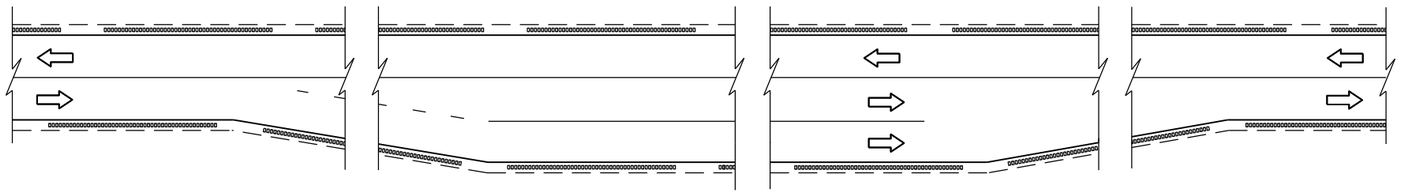


SHOULDER GROOVES AT DRIVEWAYS (1)

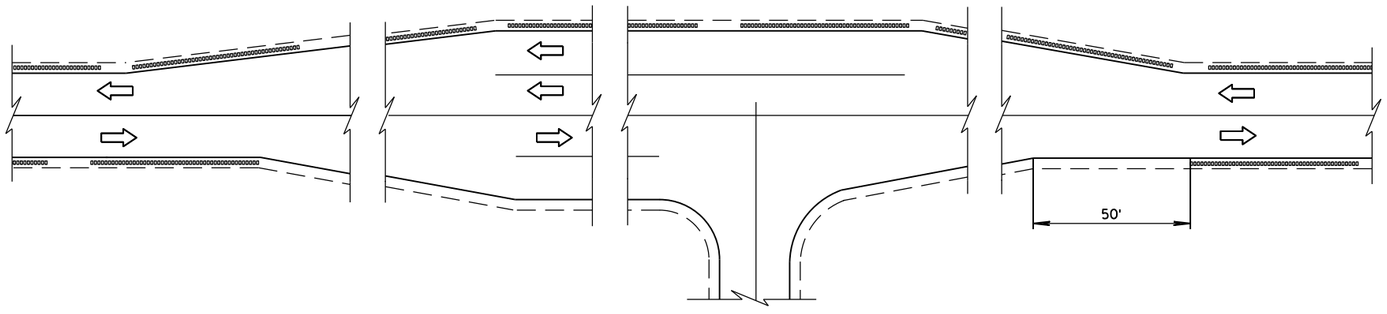
2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 13 A 10-1c



SHOULDER GROOVES AT PASSING AND CLIMBING LANES



SHOULDER GROOVES AT BYPASS LANES

6

6

S.D.D. 13 A 10-1d

S.D.D. 13 A 10-1d

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

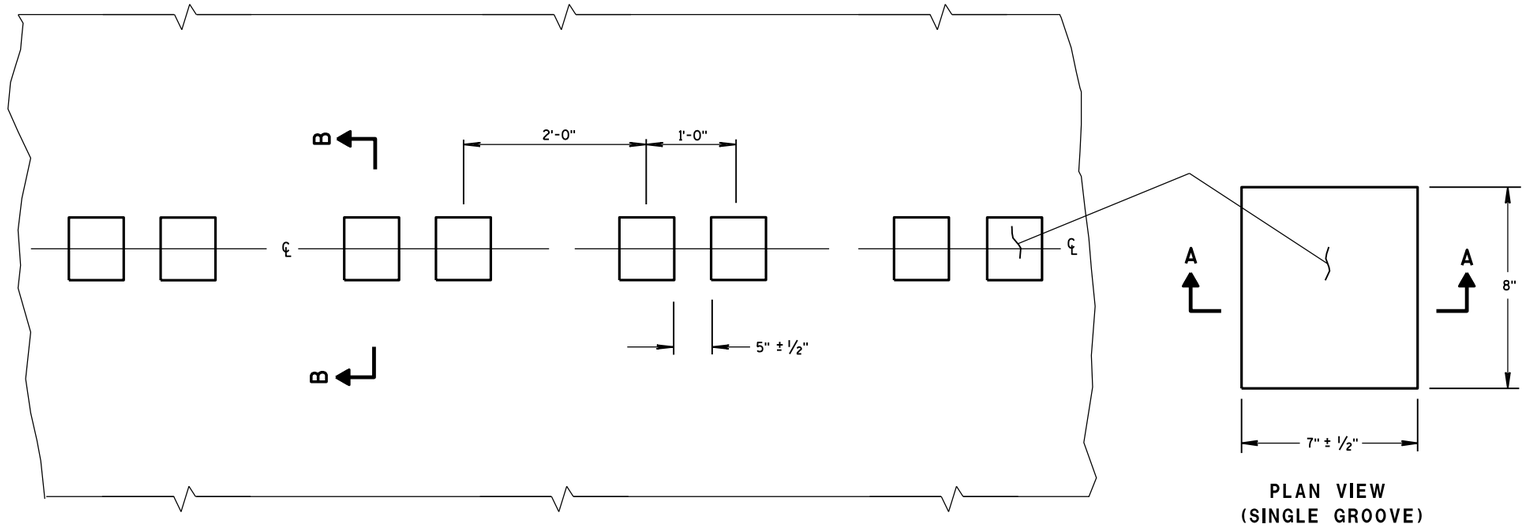
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12/17/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA



PLAN VIEW
CENTER LINE WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

GENERAL NOTES

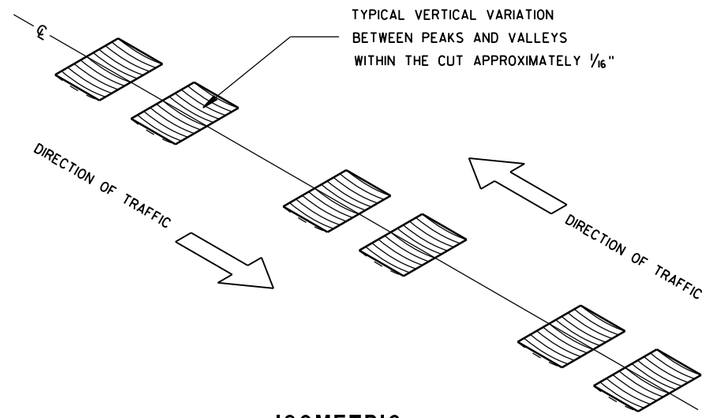
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTER LINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

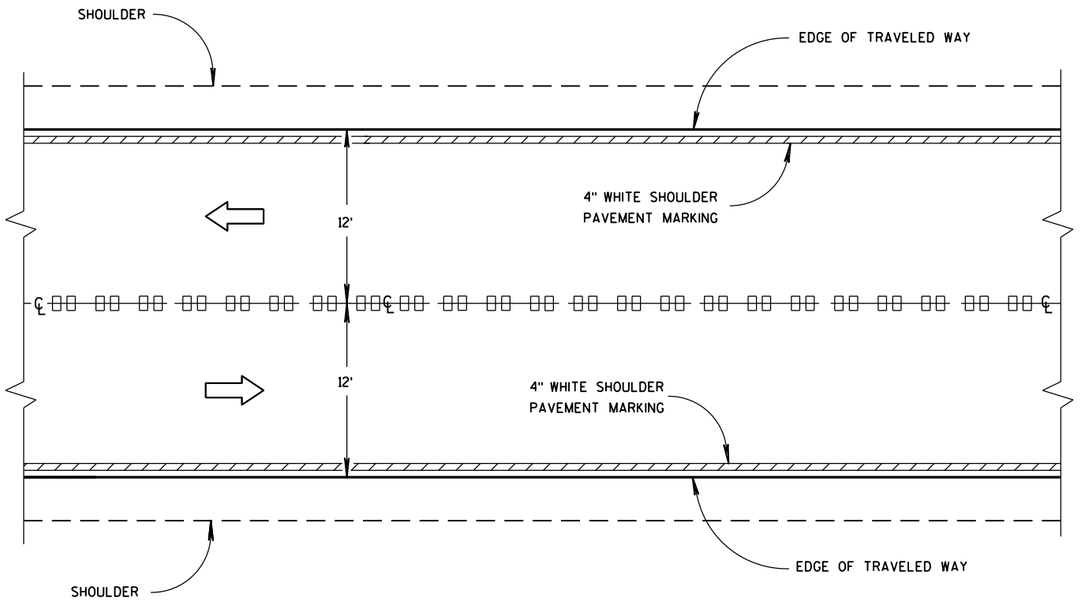
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

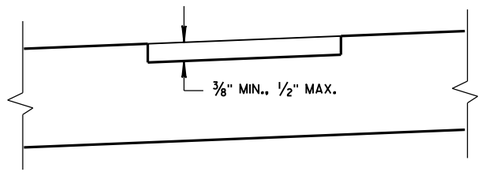
(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



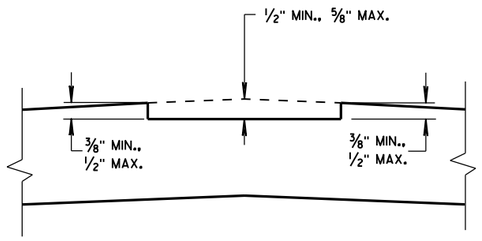
ISOMETRIC



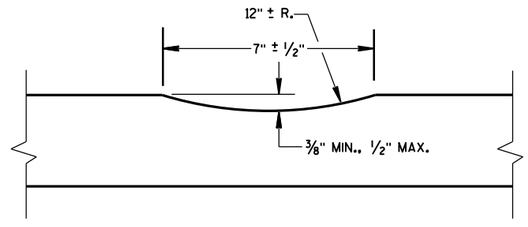
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



SECTION B-B
CROWNED ROADWAY



SECTION A-A

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

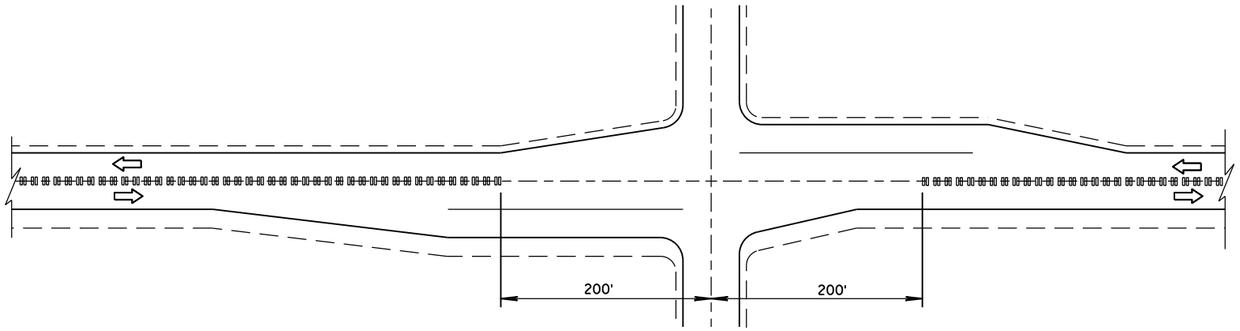
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

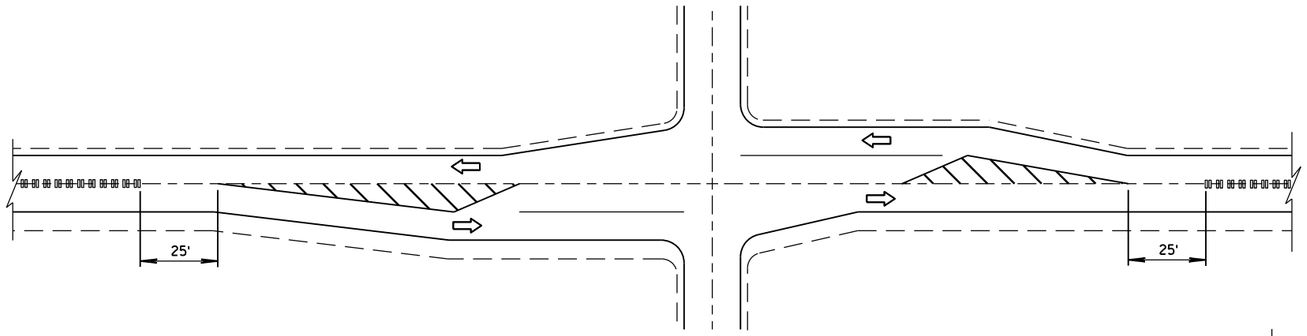
S.D.D. 13 A 11-2a

6

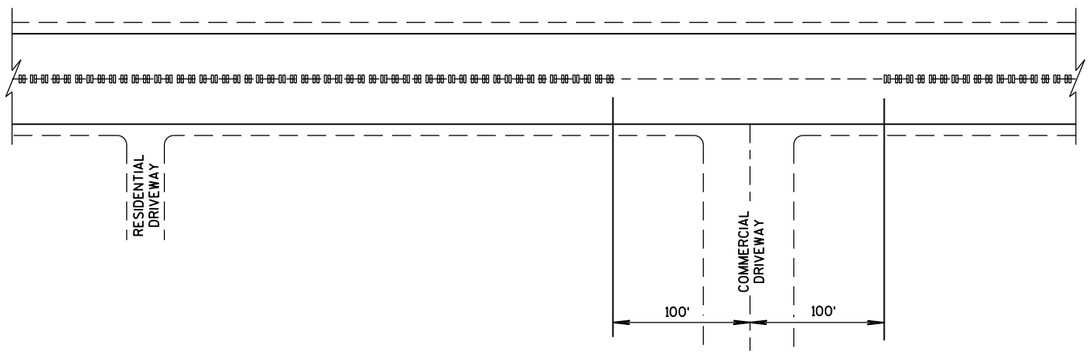
S.D.D. 13 A 11-2a



CENTER LINE GROOVES AT INTERSECTIONS

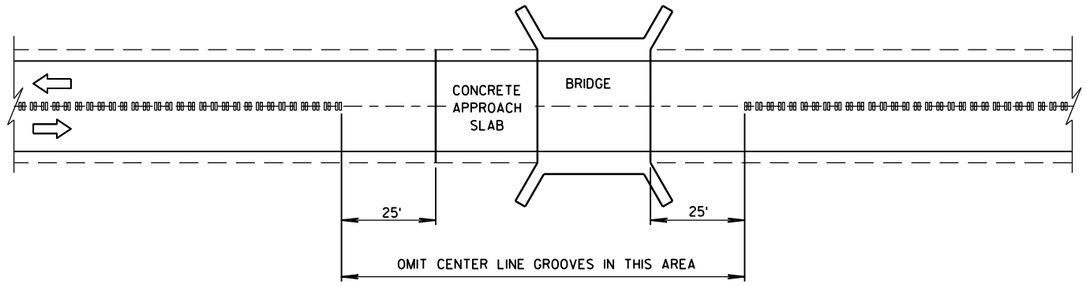


CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)

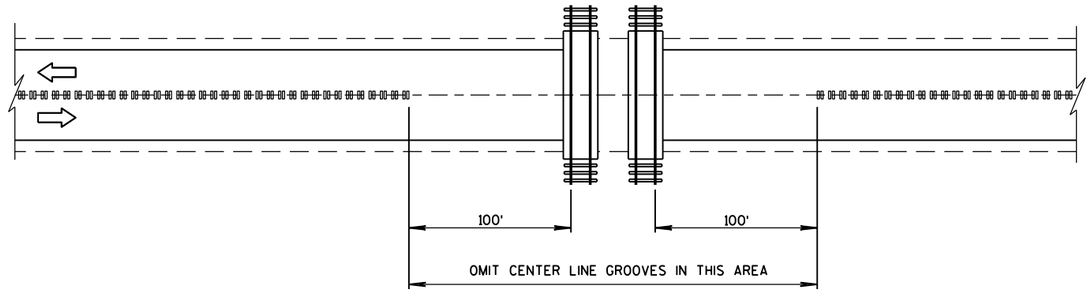


CENTER LINE GROOVES AT DRIVEWAYS (1)

(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



CENTER LINE GROOVES AT BRIDGES



CENTER LINE GROOVES AT RAILROADS

6

S.D.D. 13 A 11-2b

6

S.D.D. 13 A 11-2b

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/15/2013
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

NT

FHWA

① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

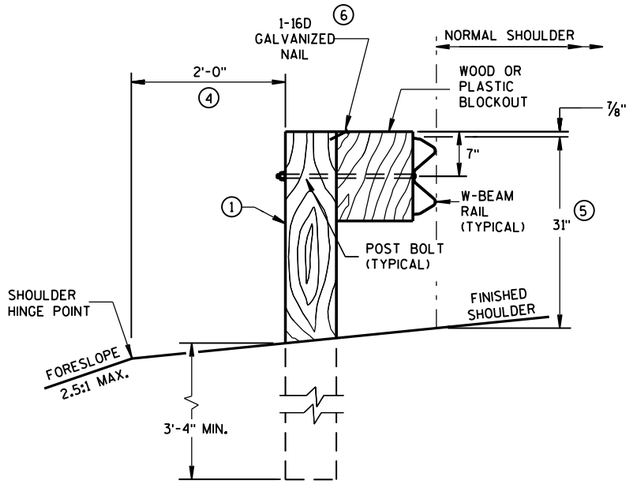
② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

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

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

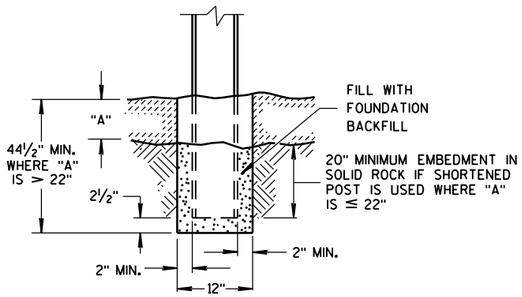
⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



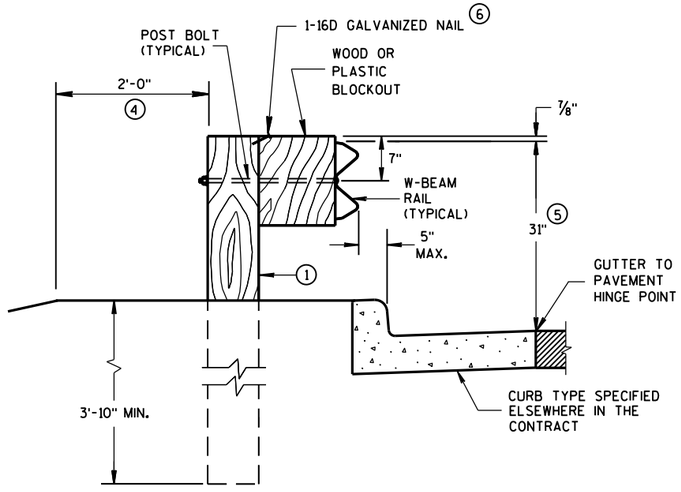
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



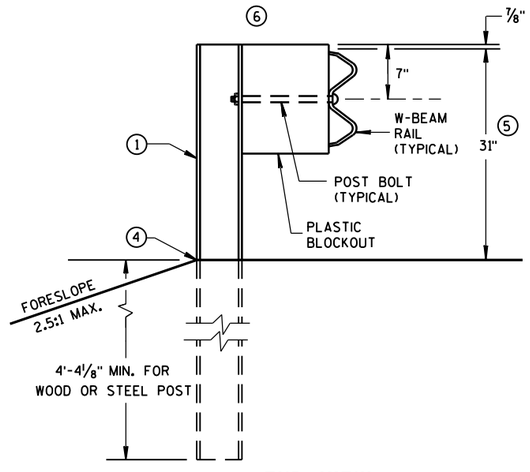
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



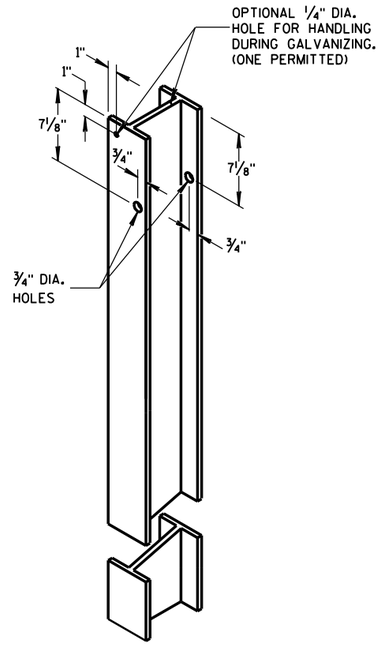
END VIEW

LOCATED ALONG A CURBED ROADWAY

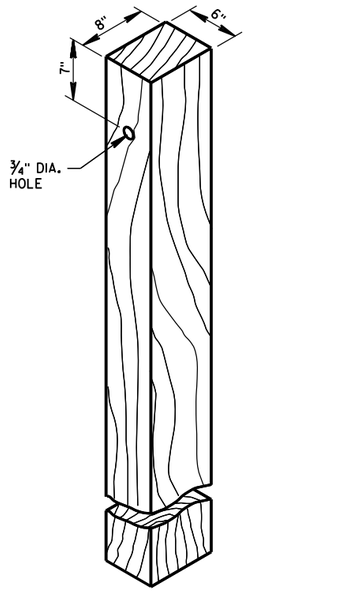


END VIEW

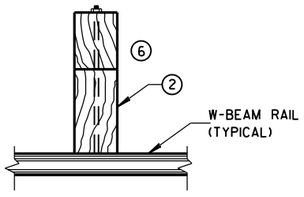
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



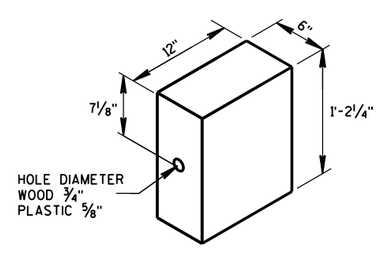
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



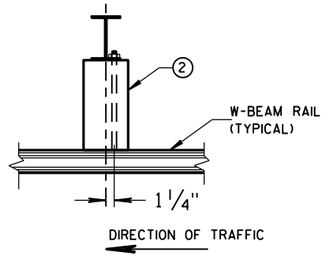
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②



PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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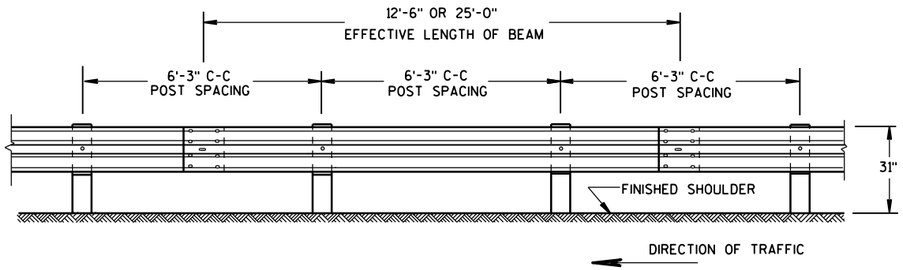
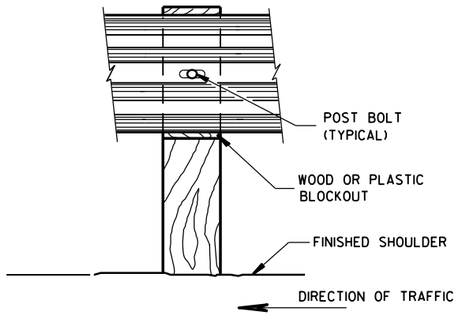


FRONT VIEW

POST SPACING STANDARD INSTALLATION



FRONT VIEW AT WOOD POST

7. PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

8. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

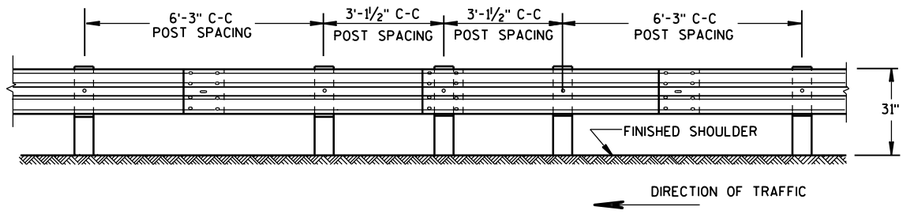
9. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

10. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

11. 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

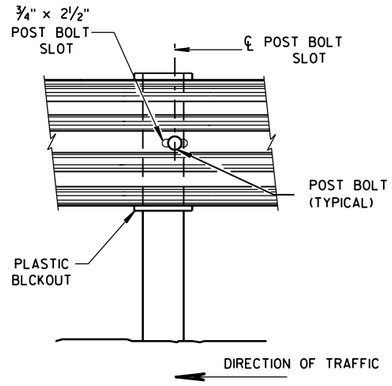
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

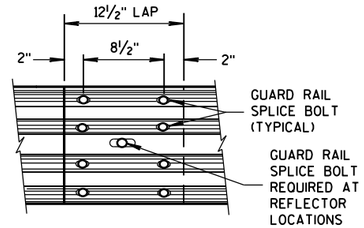


FRONT VIEW

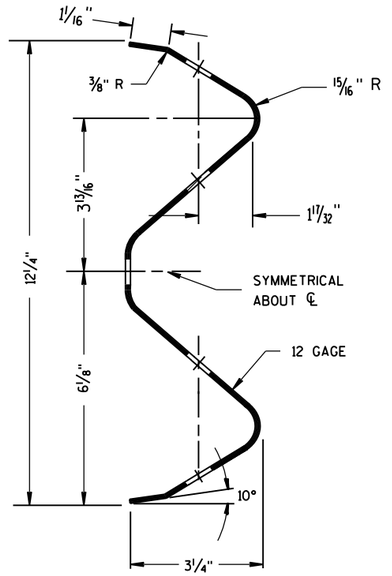
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



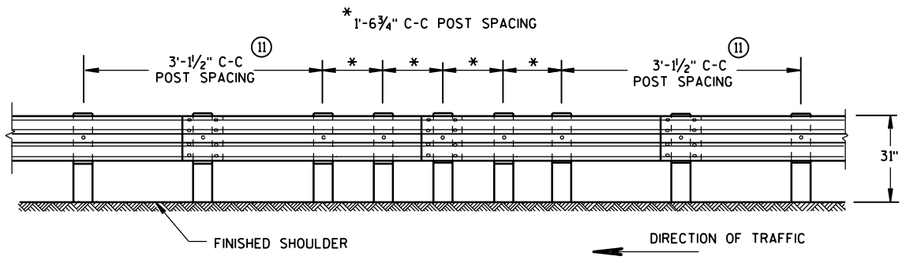
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE

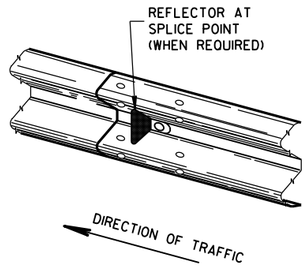


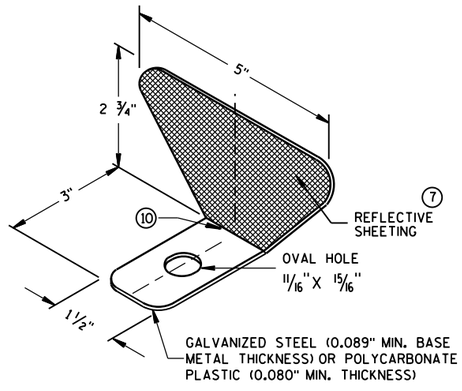
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





REFLECTOR SPACING 8

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 9	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 10	

ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION 7

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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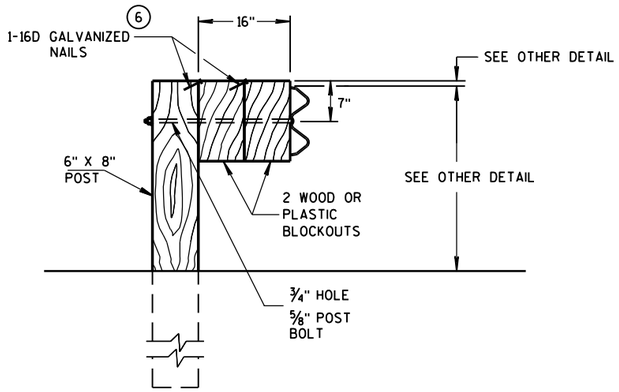
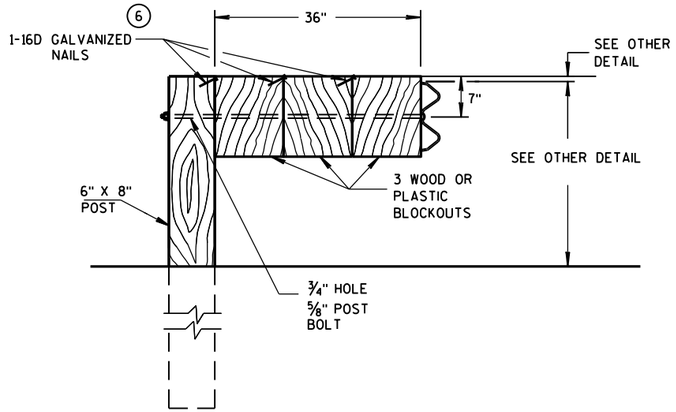


DETAIL FOR 16" BLOCKOUT DEPTH

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

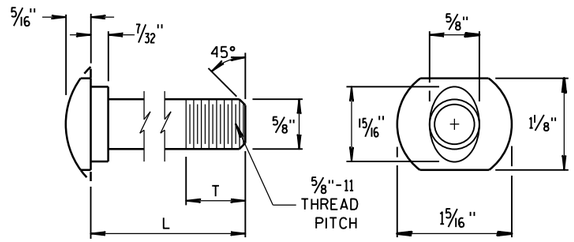


DETAIL FOR 36" BLOCKOUT DEPTH

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

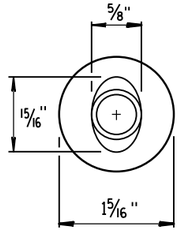
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

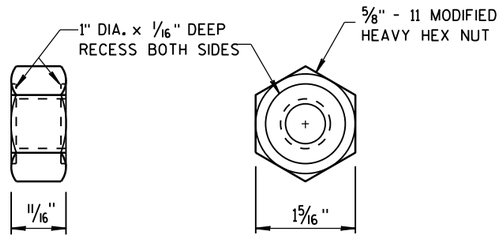


POST BOLT TABLE

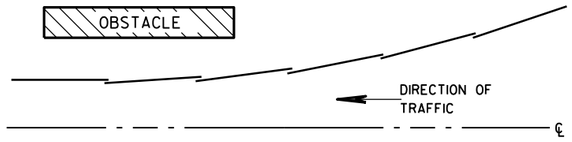
L	T (MIN.)
1¼"	1⅛"
2"	1¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

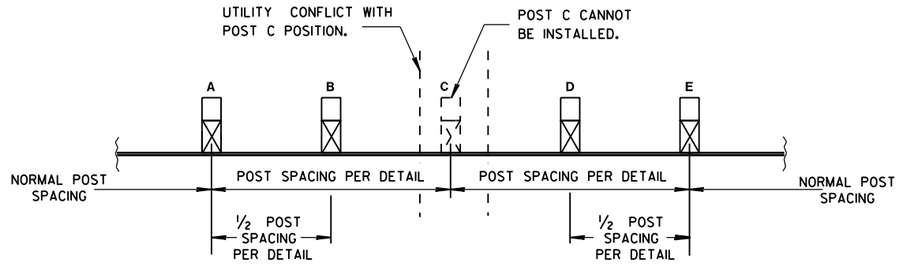


POST BOLT, SPLICE BOLT AND RECESS NUT

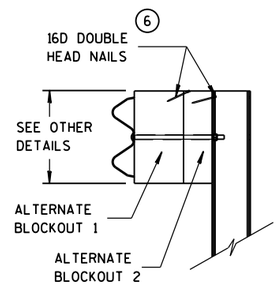


PLAN VIEW

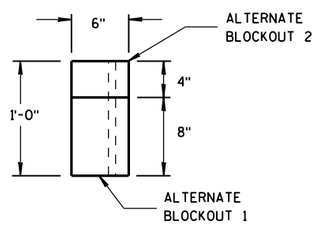
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 14 B 42-4c

GENERAL NOTES

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

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

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

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

(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

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

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

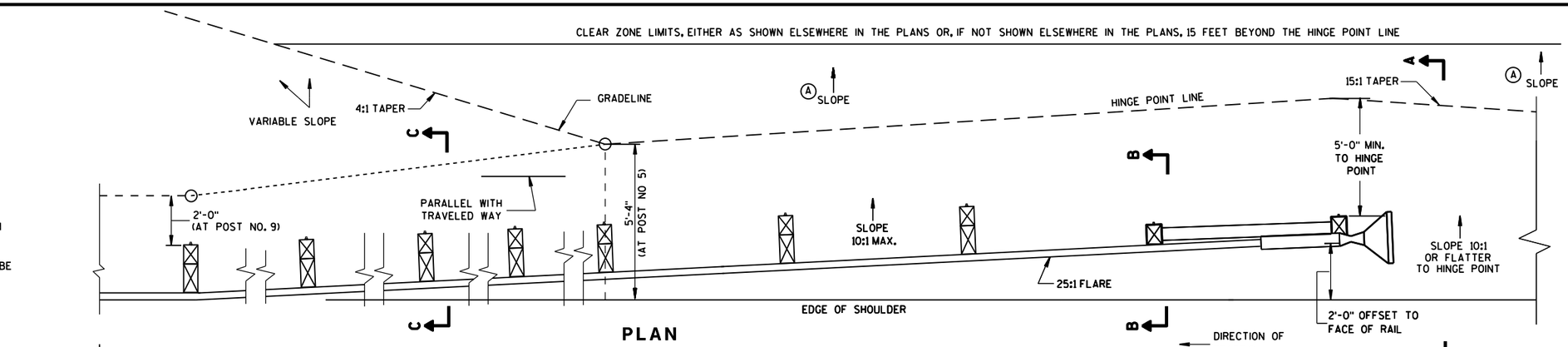
SEE SDD 14B42 FOR MORE INFORMATION.

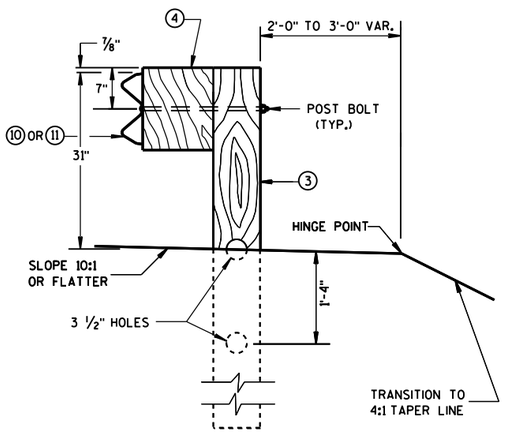
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

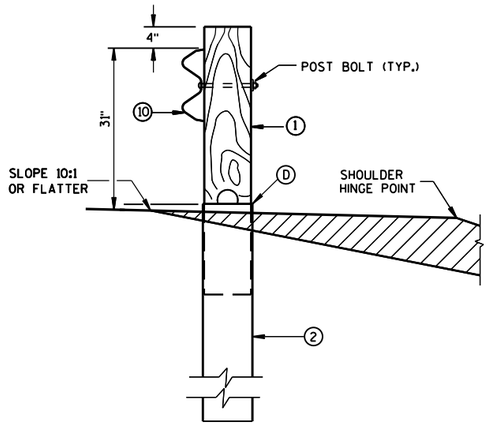
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

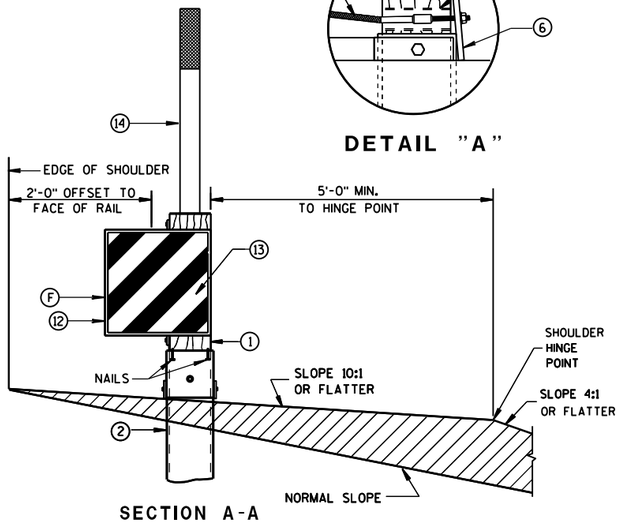




SECTION C-C
TYPICAL AT POST NOS. 3-9

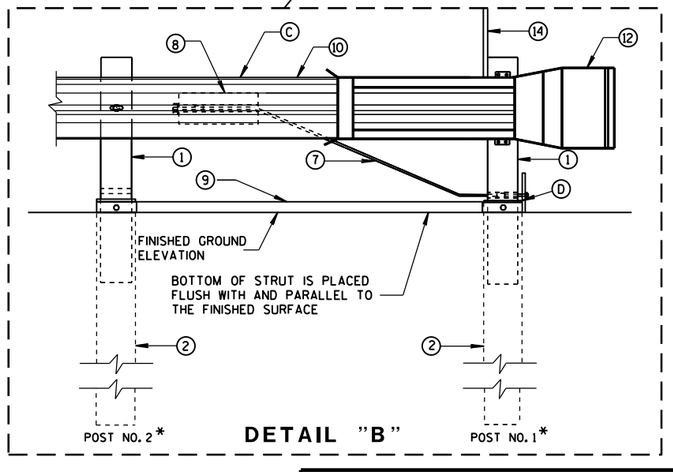


SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*

DETAIL "A"



DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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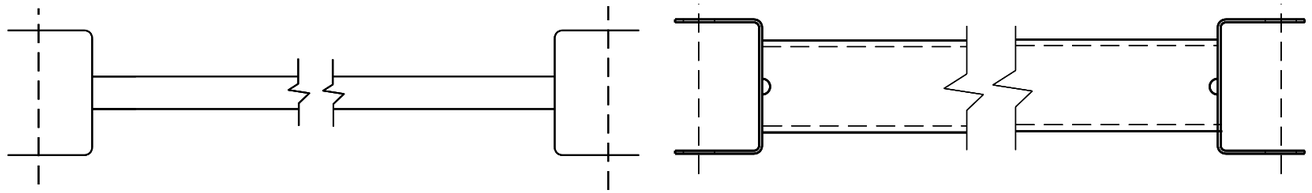
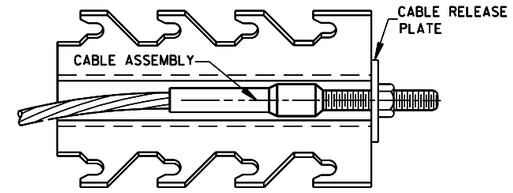


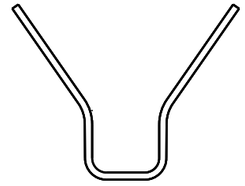
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

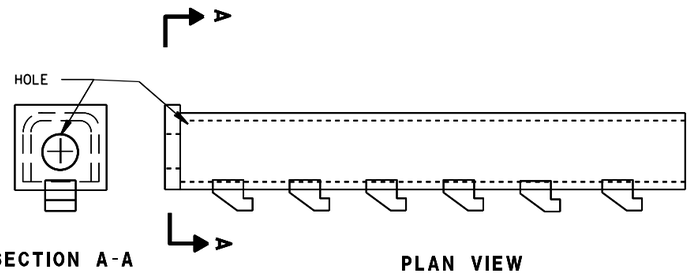
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



FRONT VIEW



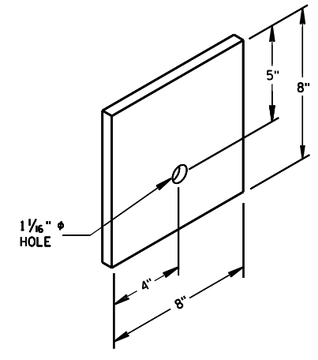
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)

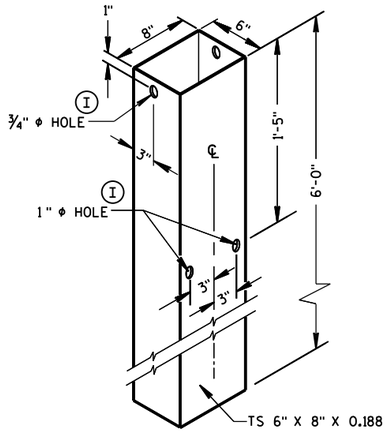


BEARING PLATE (6)

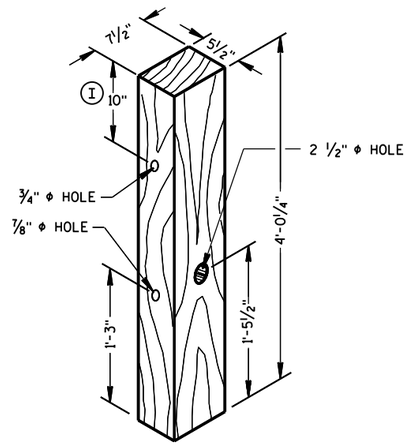
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 44-2b

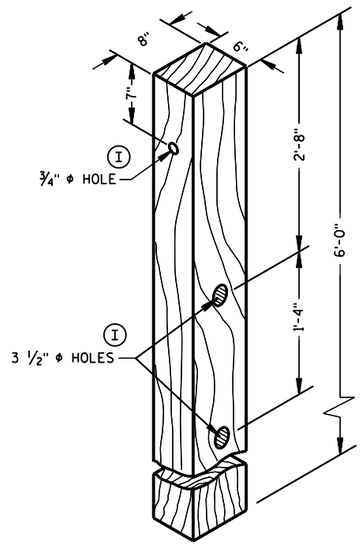


FOUNDATION TUBE (2)



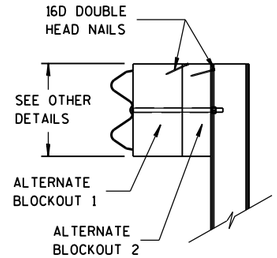
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

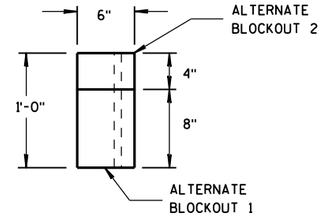


POSTS NUMBER 3-9

WOOD CRT POST (3)

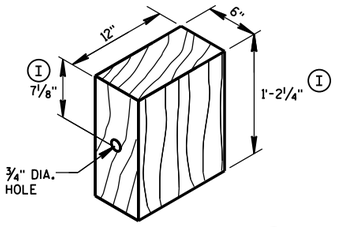


SIDE VIEW



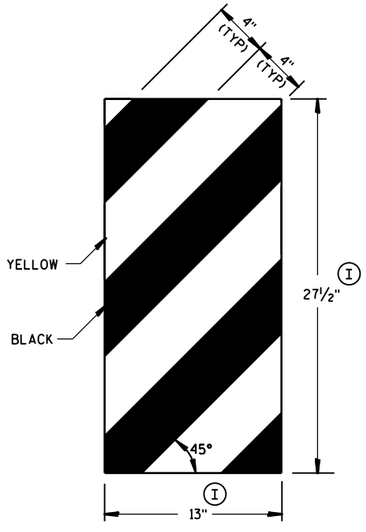
TOP VIEW

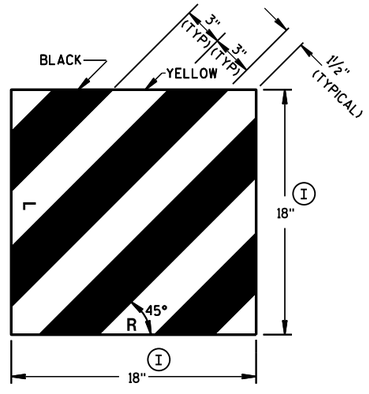
ALTERNATE WOOD BLOCKOUT DETAIL



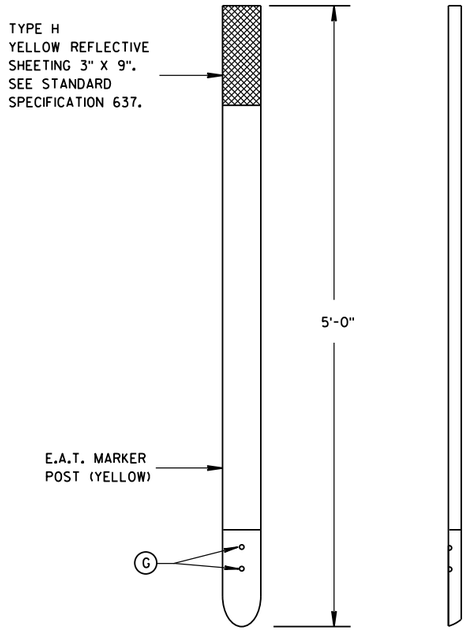
WOOD BLOCKOUT (4)

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





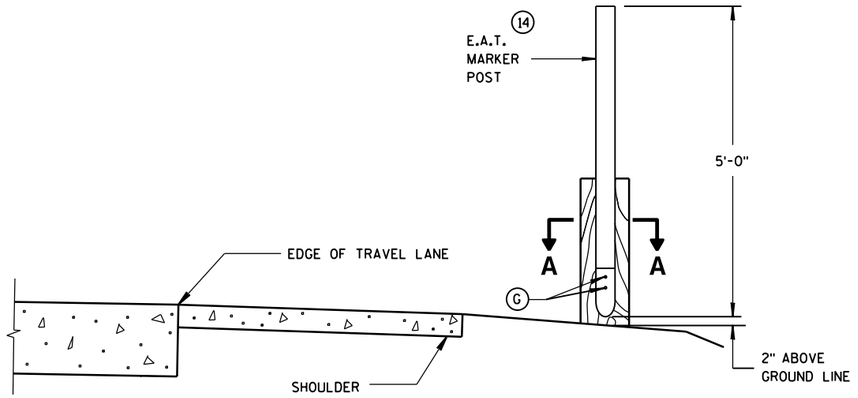
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

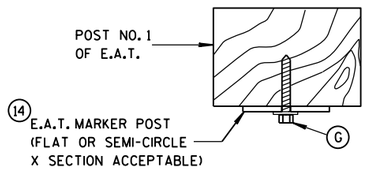
SIDE VIEW

E.A.T. MARKER POST (14)



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

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



SECTION A-A

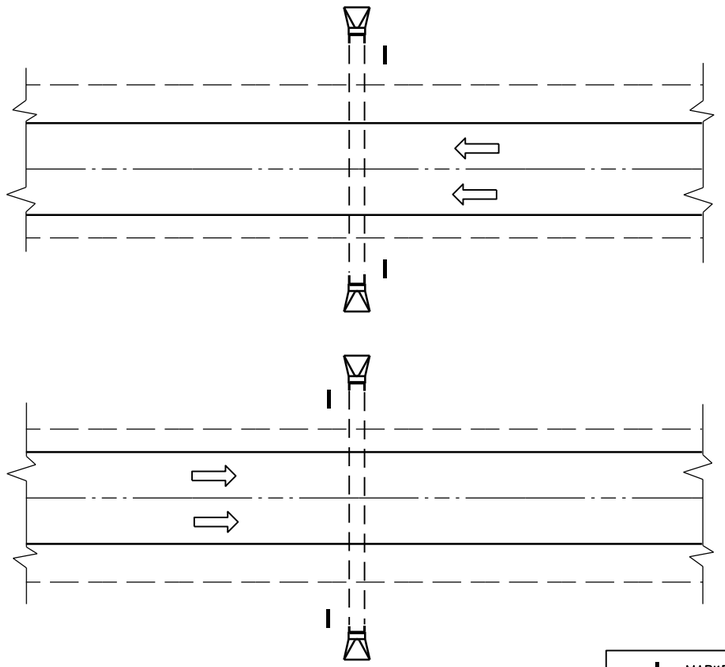
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

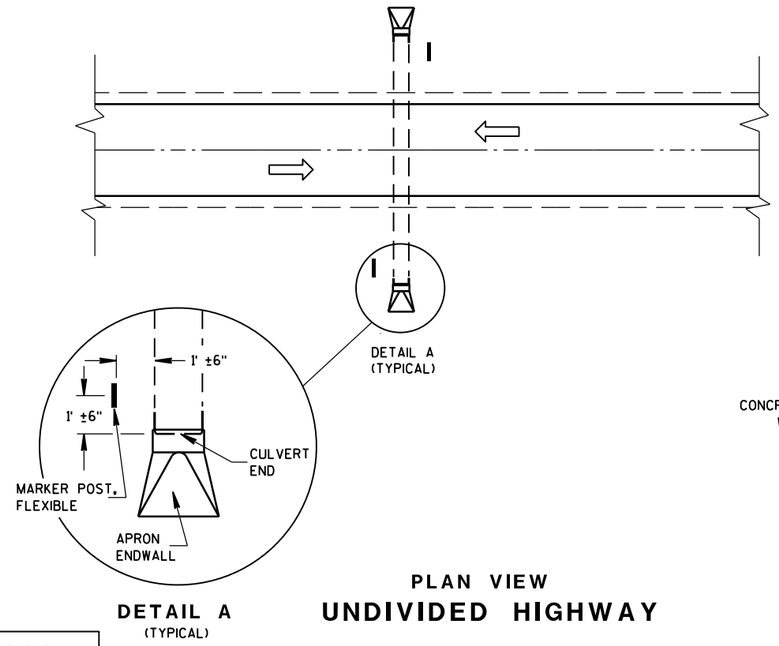
6

S.D.D. 14 B 44-2c



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

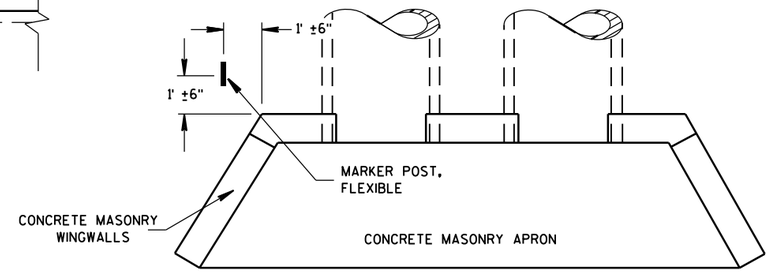
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

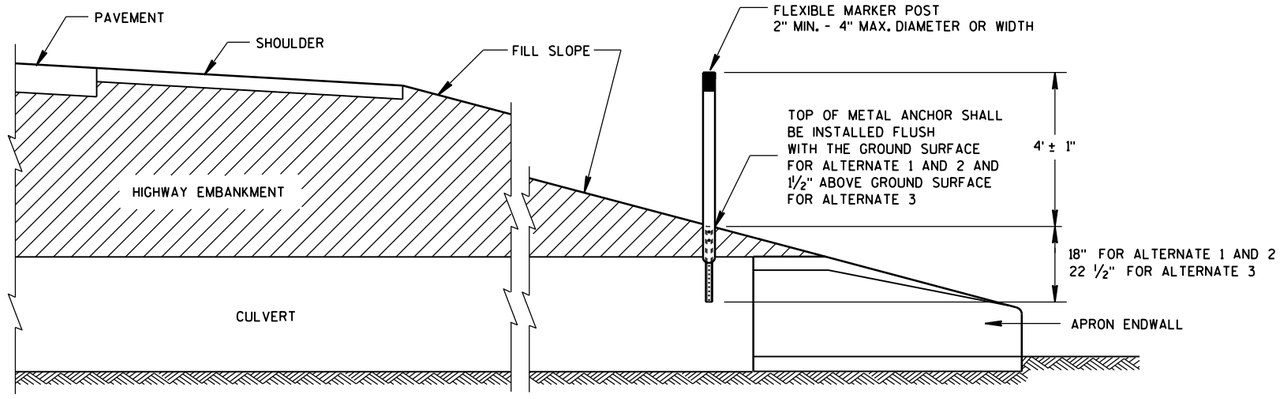
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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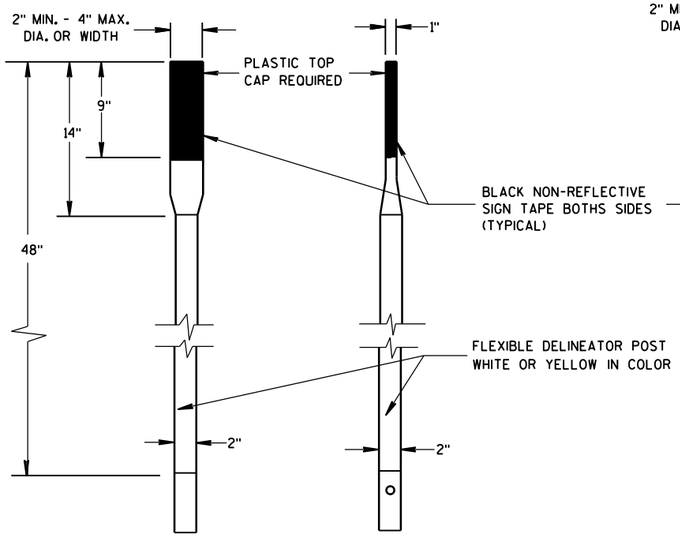
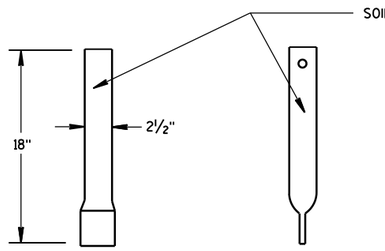
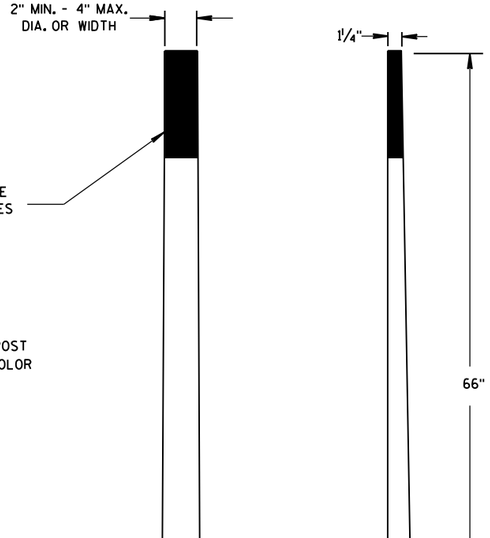
S.D.D. 15 A 3-2a





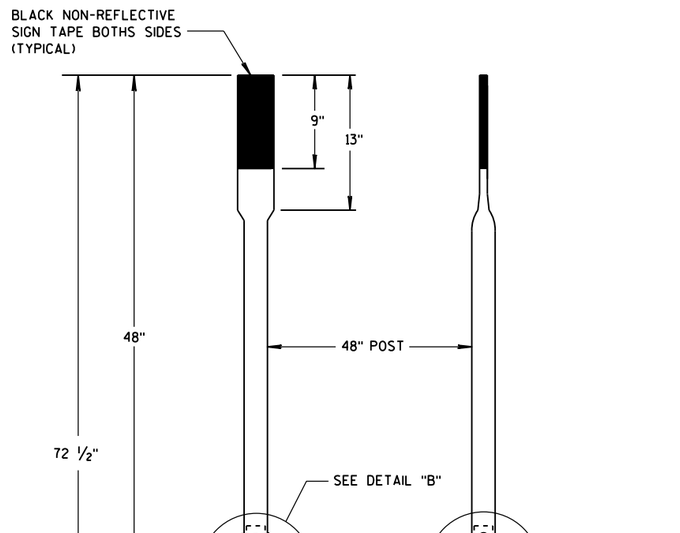
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

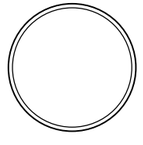
ALTERNATE 2



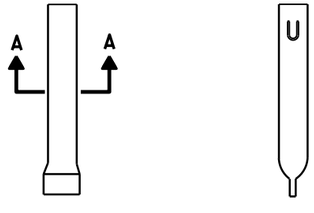
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

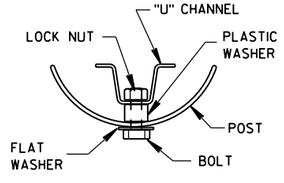


SECTION A-A

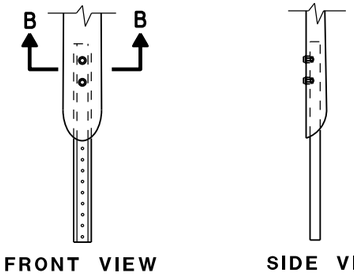


FRONT VIEW SIDE VIEW

ALTERNATE 1

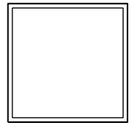


SECTION B-B

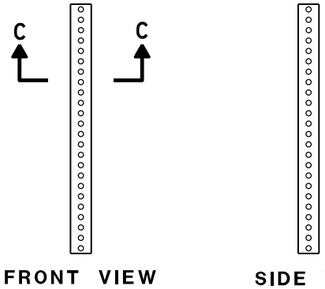


FRONT VIEW SIDE VIEW

ALTERNATE 2



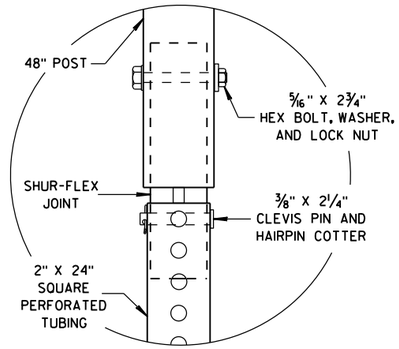
SECTION C-C



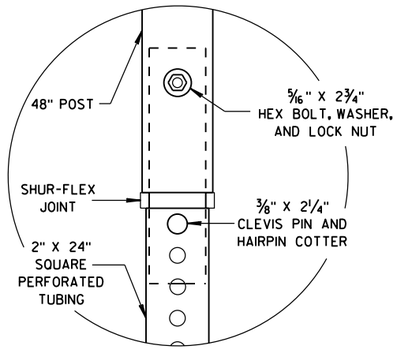
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



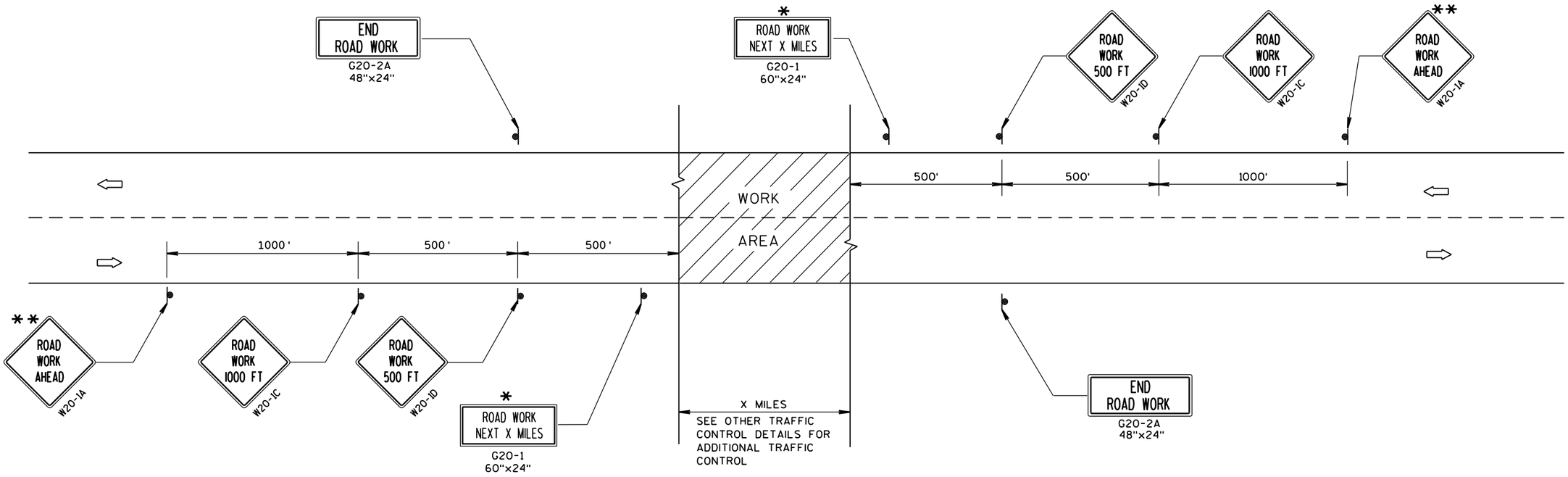
DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 15 A 3-2b



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.

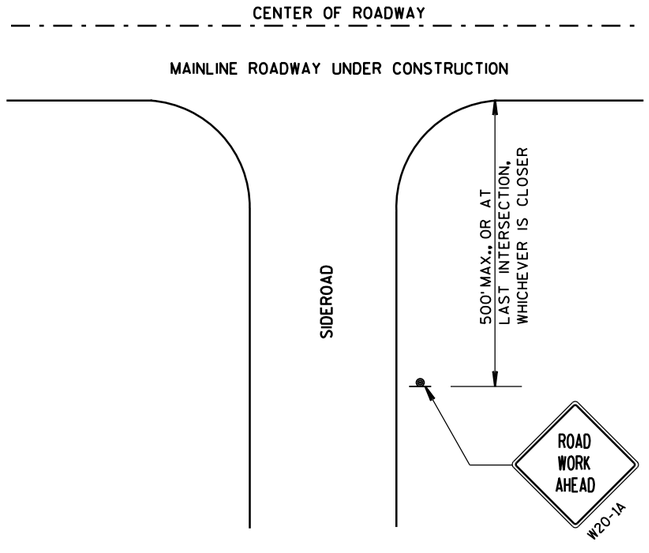
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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 W20-1A "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

Sept. 2015	/S/ Peter Amakobe Atepe
DATE	STATEWIDE WORK ZONE SAFETY ENGINEER

FHWA

6

S.D.D. 15 C 4-3

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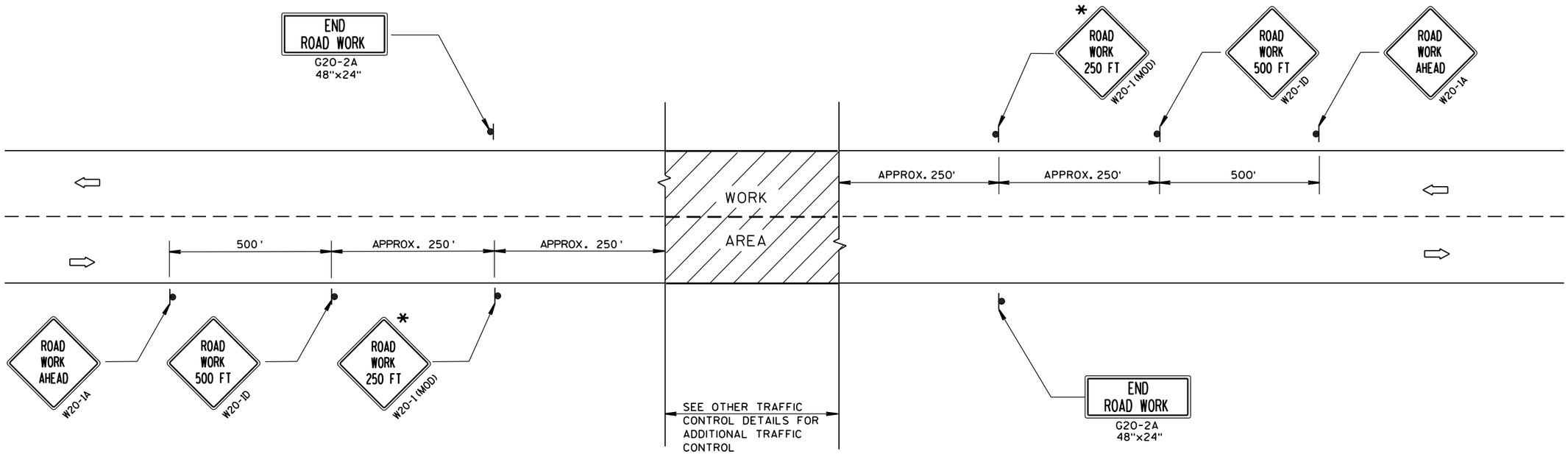
S.D.D. 15 C 4-3

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.

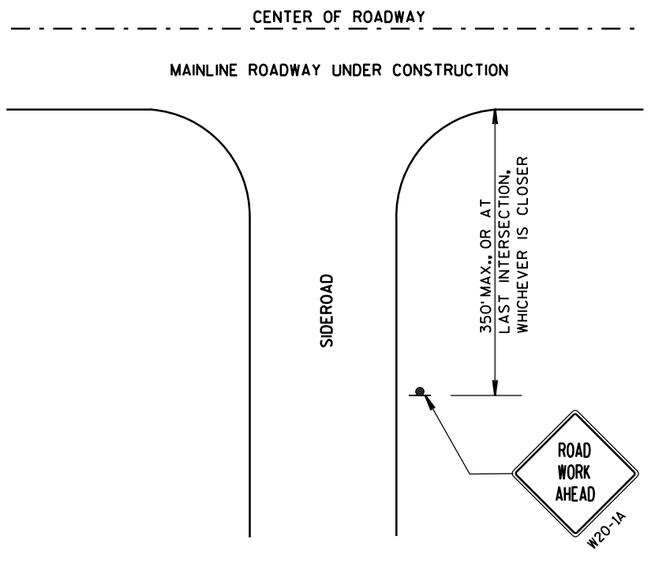
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

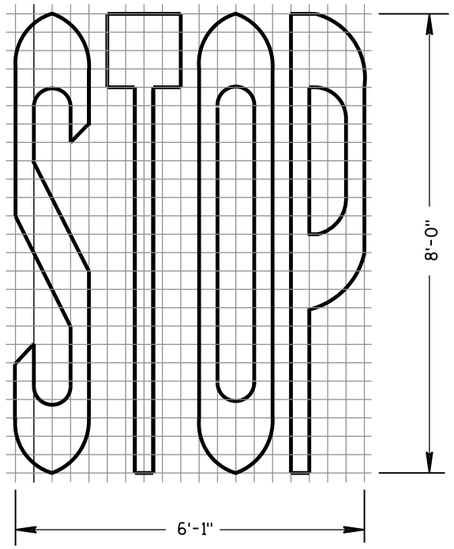
APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

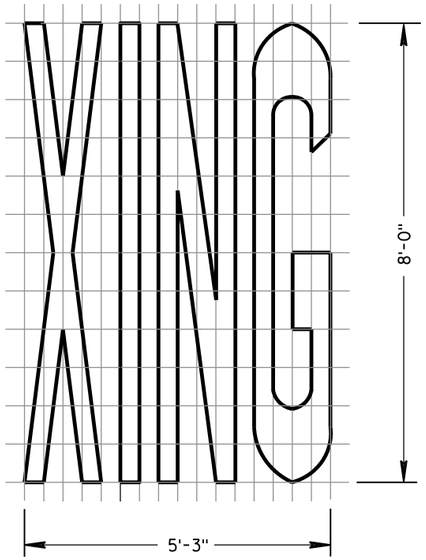
6

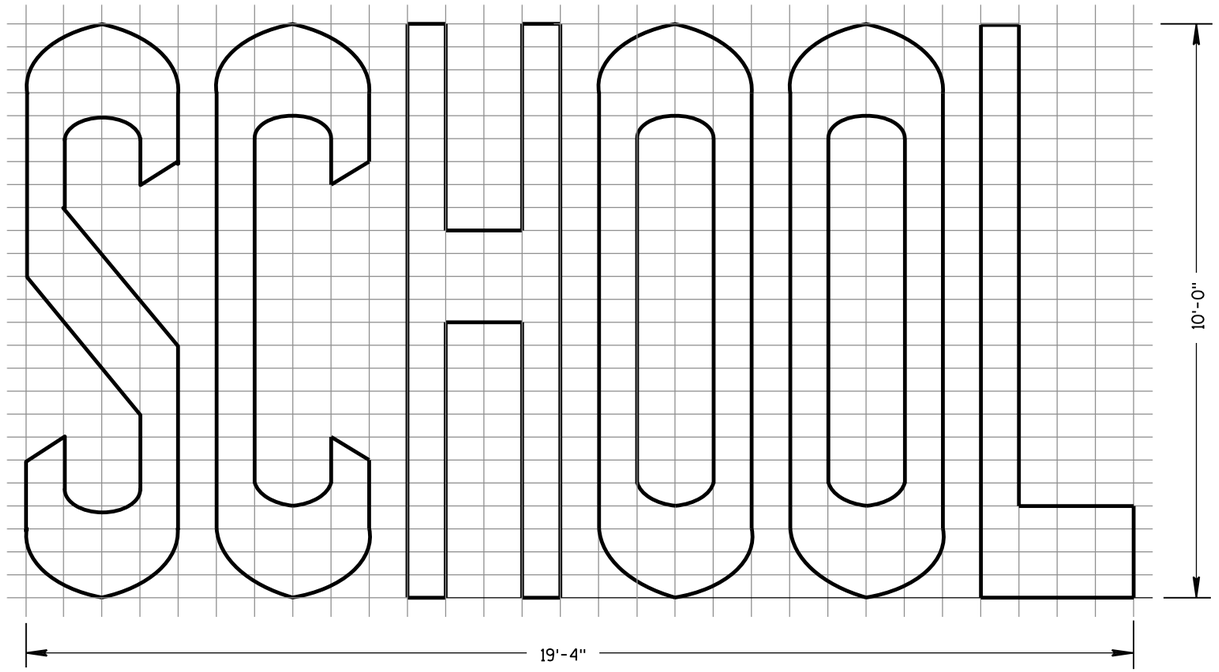
S.D.D. 15 C 5-3

GENERAL NOTES

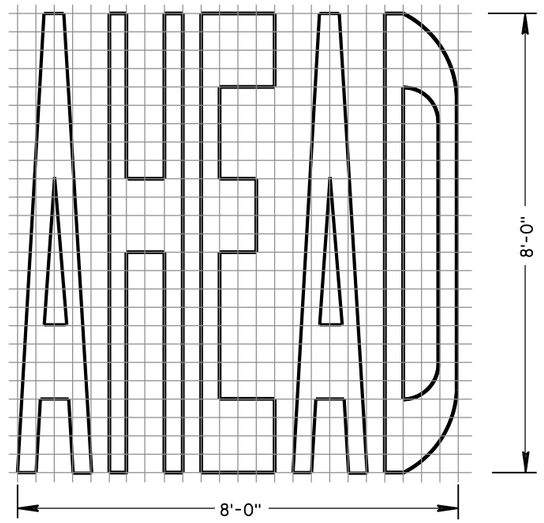
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

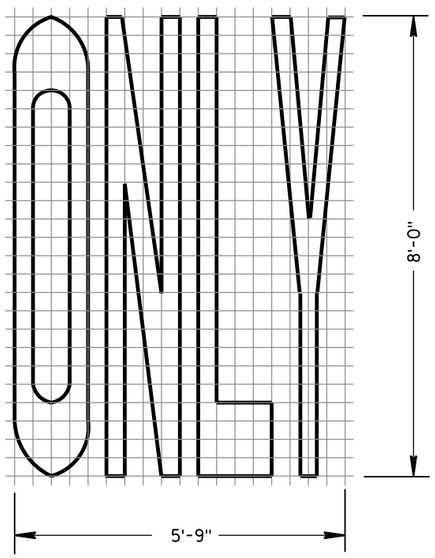


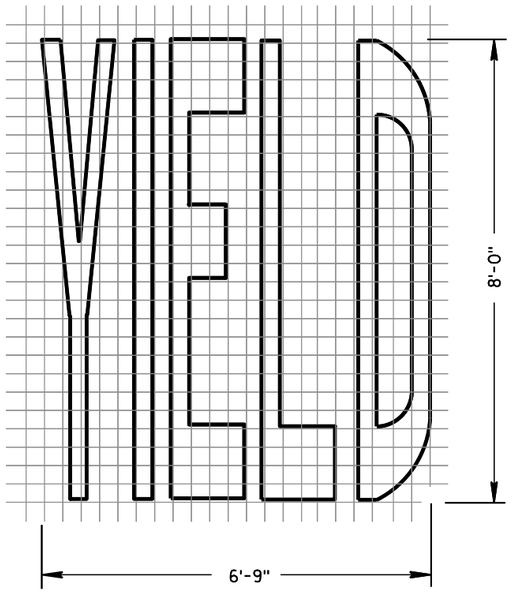


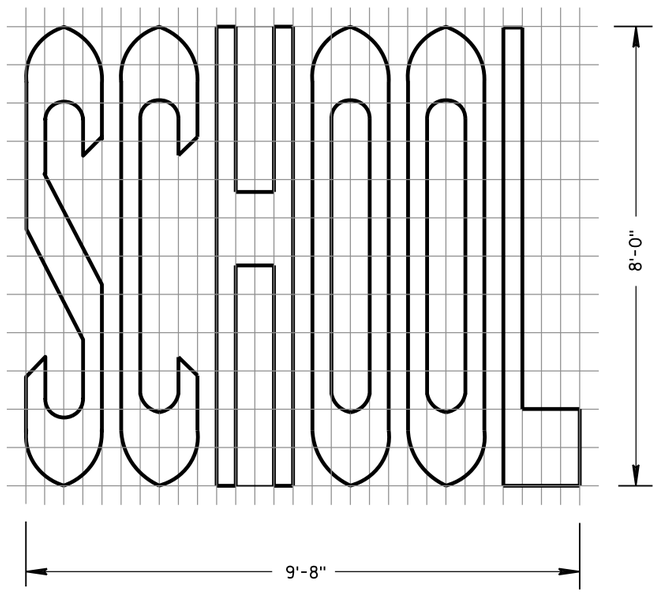


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-16	/S/ Matthew R. Rauch	
DATE	STATE SIGNING AND MARK	EER

FHWA

6

S.D.D. 15 C 7-13b

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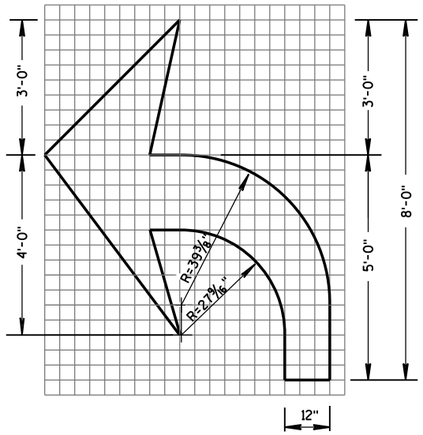
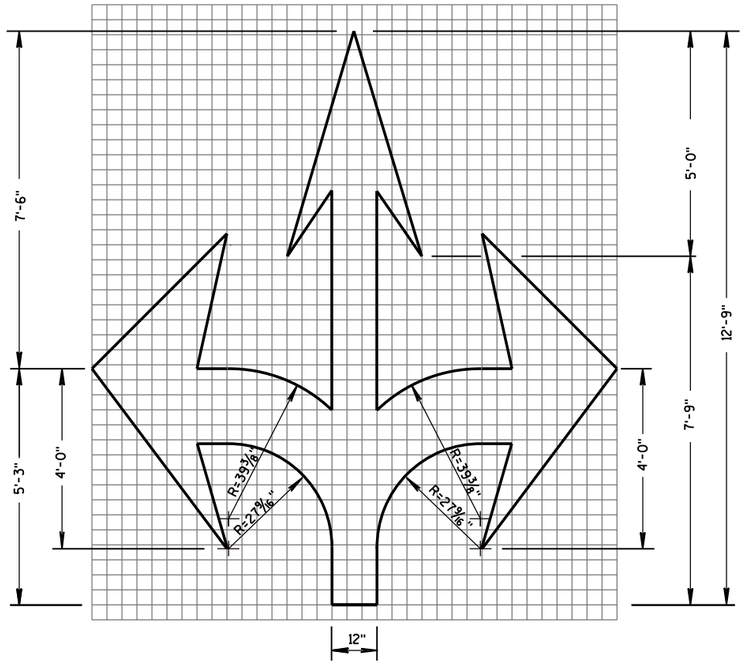
S.D.D. 15 C 7-13b

GENERAL NOTES

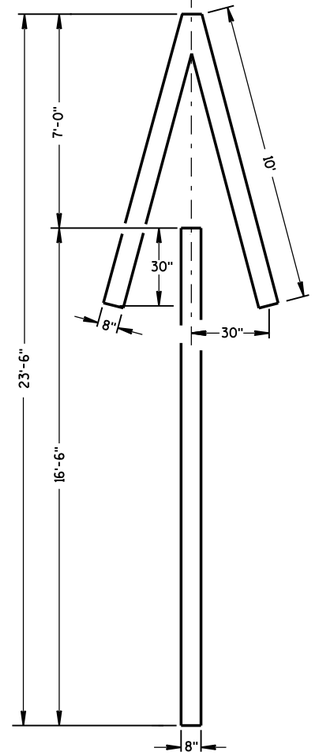
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



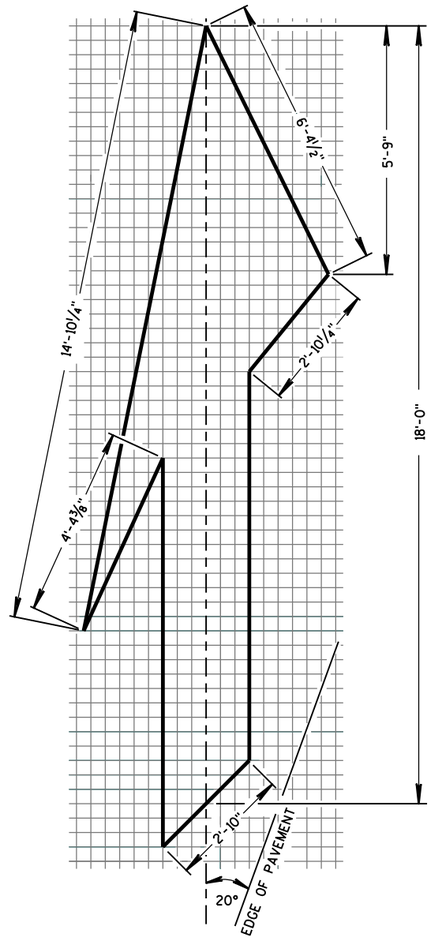
TYPE 2



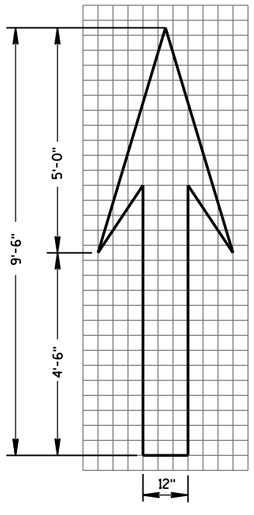
TYPE 6



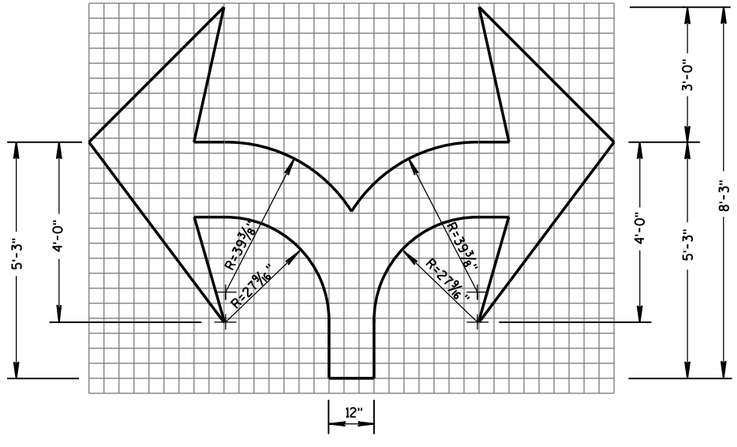
TYPE 4



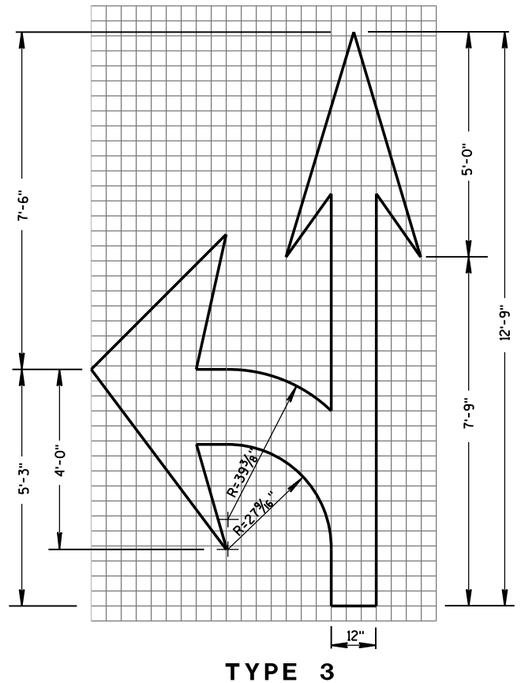
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-16 DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR ENGINEER
FHWA

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S.D.D. 15 C 7-13c

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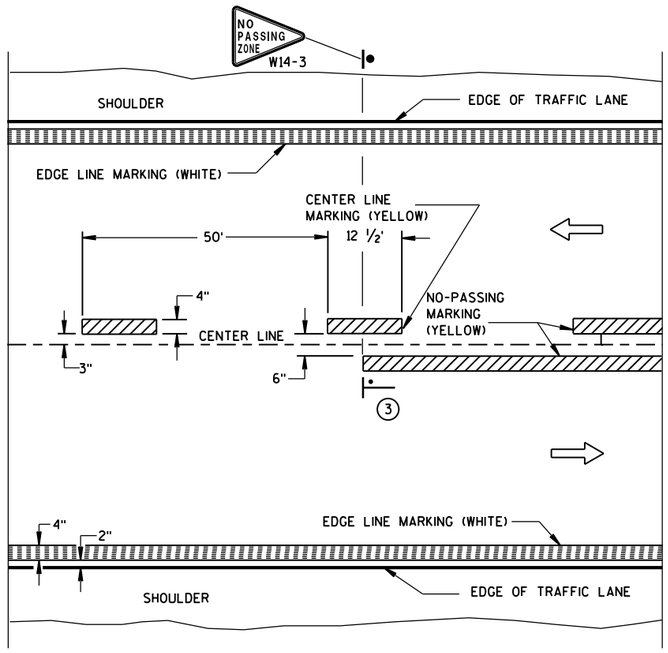
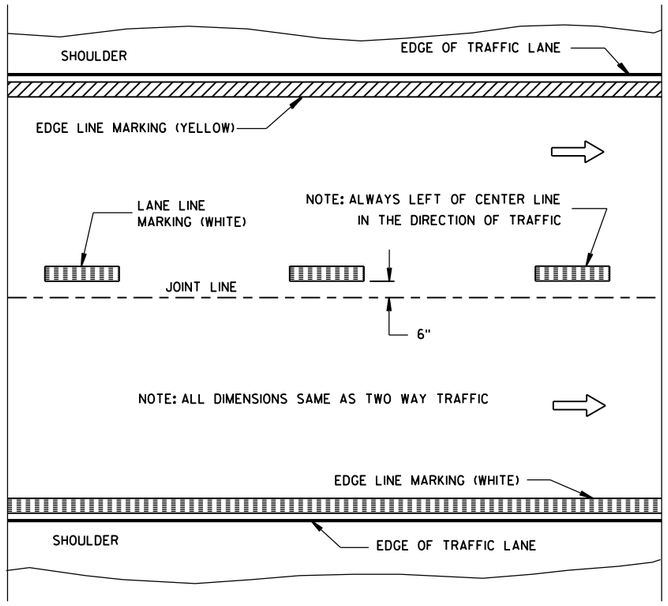
S.D.D. 15 C 7-13c

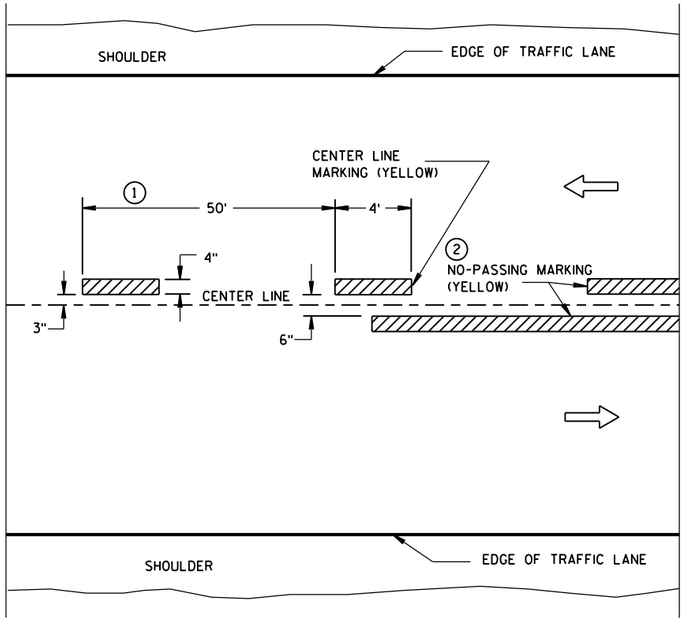


TWO WAY TRAFFIC

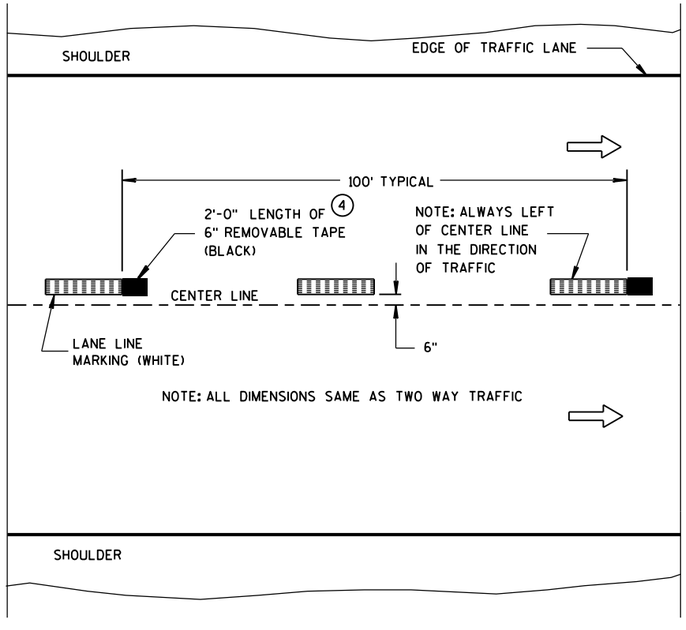


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

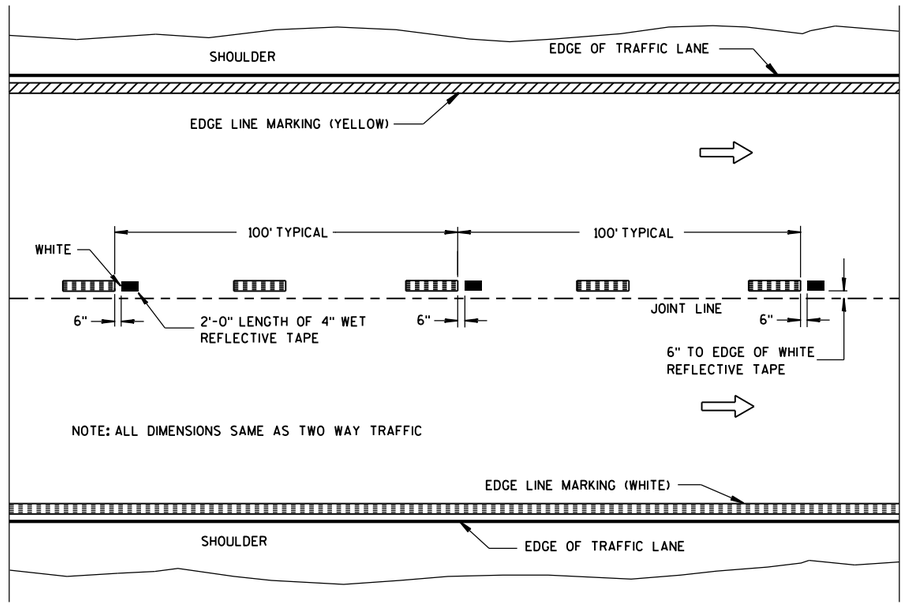
GENERAL NOTES

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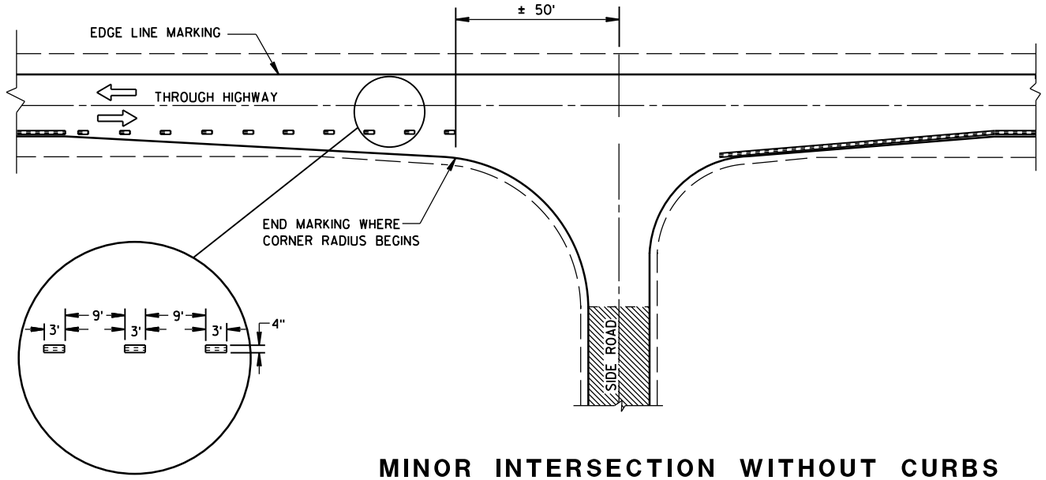
S.D.D. 15 C 8-16a

6

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



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

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

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

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

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

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

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

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

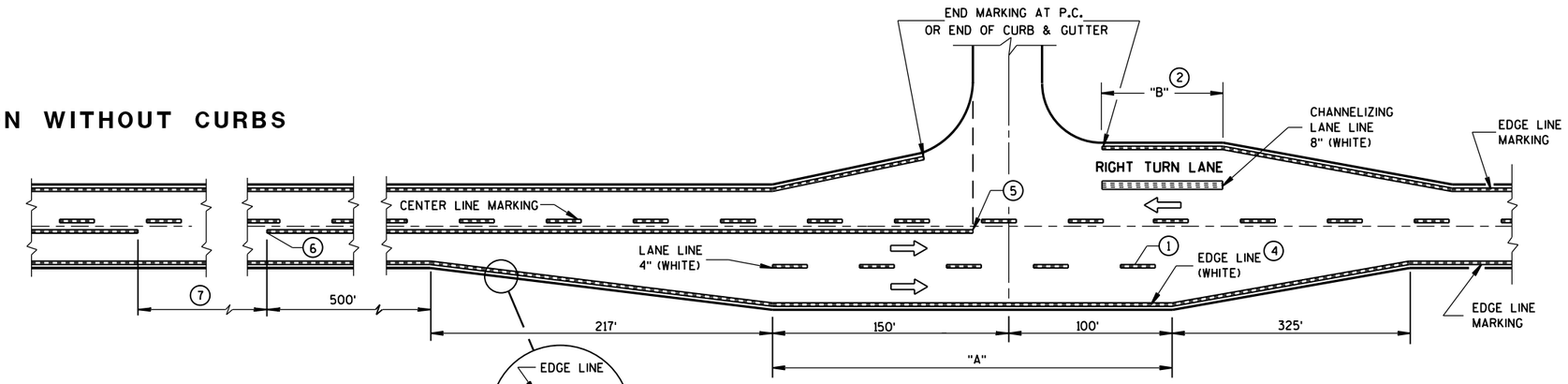
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

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

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

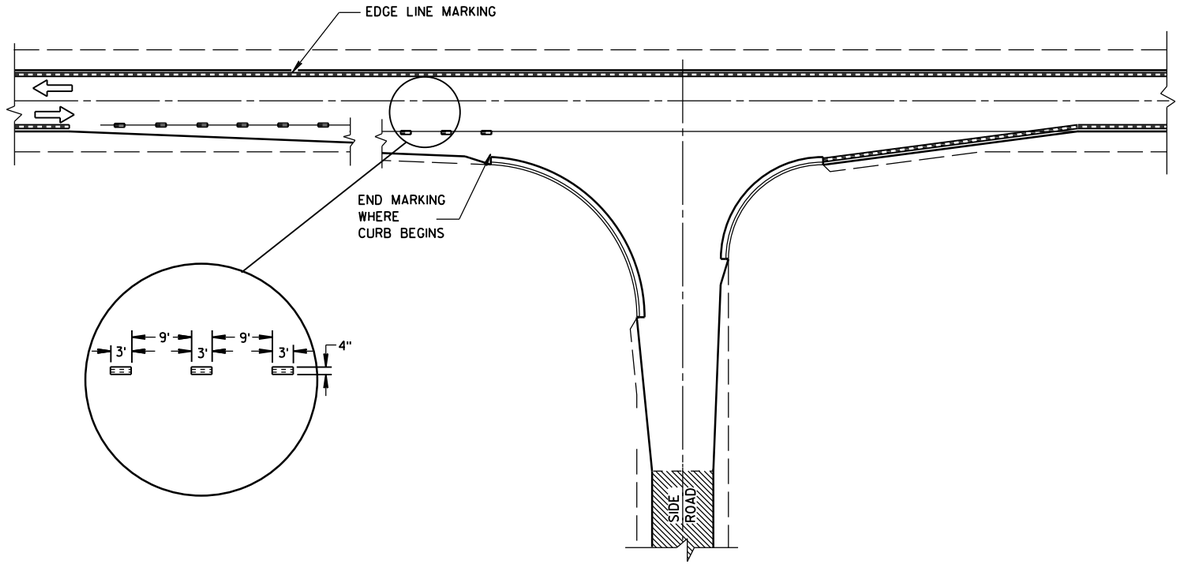
(7)

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



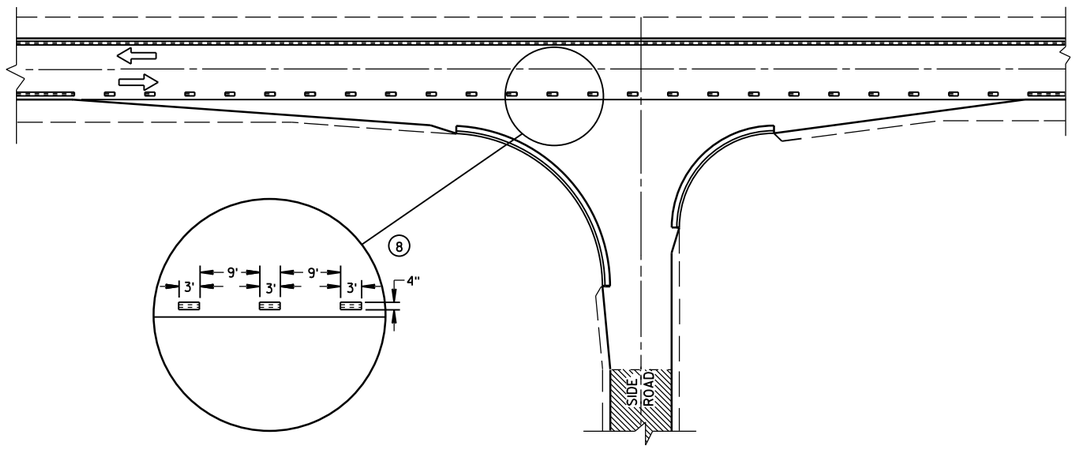
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

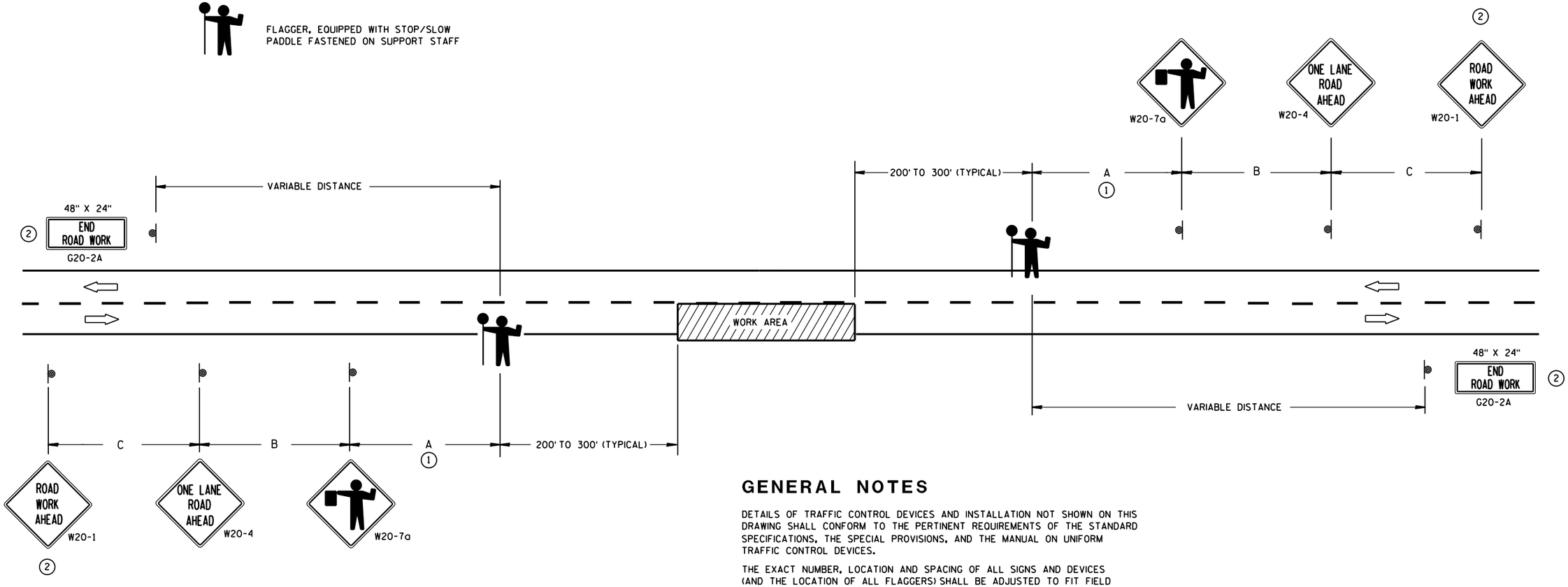
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

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

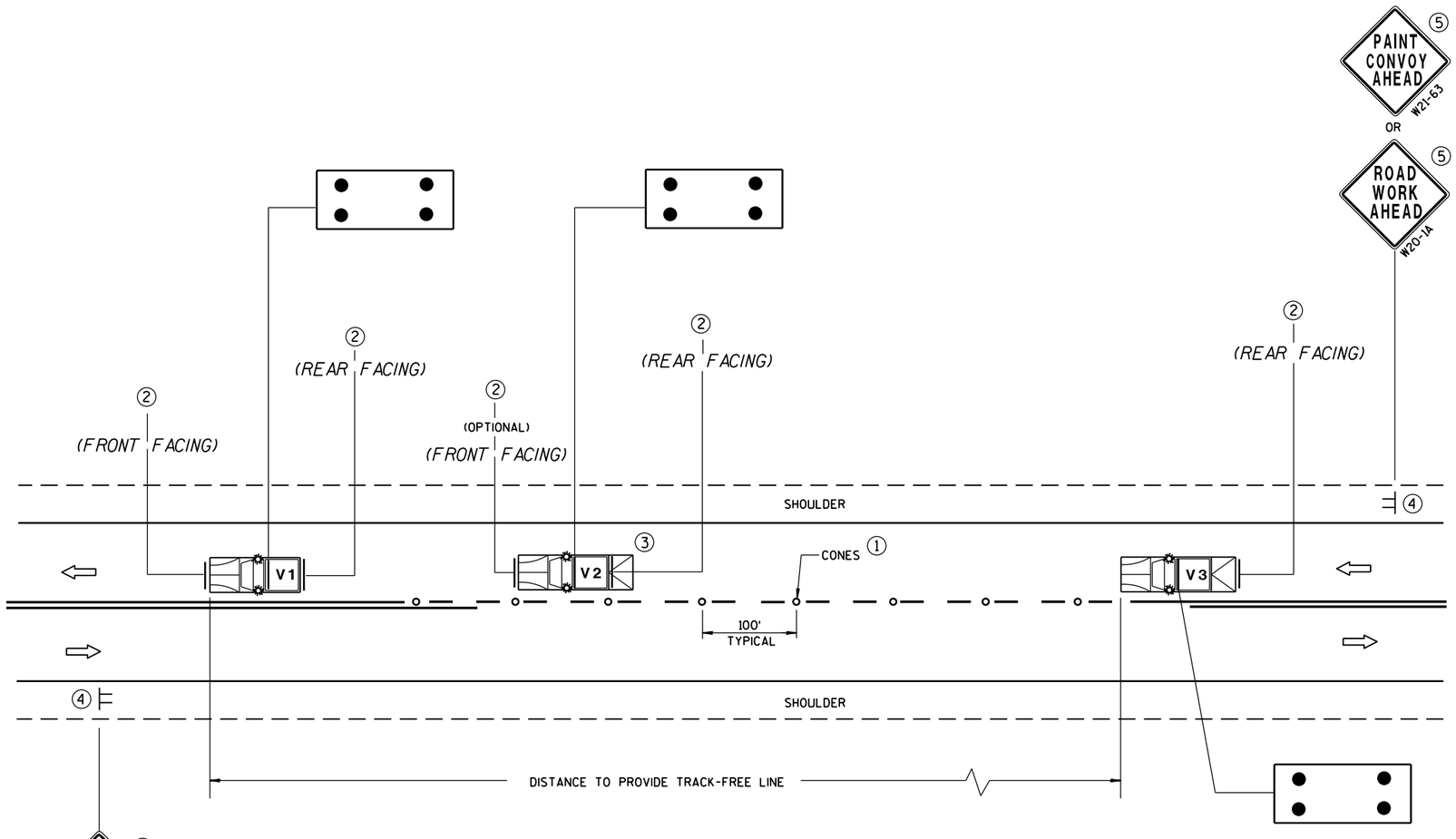
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
DESIGN
FHWA

6

S.D.D. 15 C 12-4

6

S.D.D. 15 C 12-4



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

(4) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(5) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1	LEAD VEHICLE
V2	SHADOW VEHICLE
V3	TRAIL VEHICLE WITH TMA
TMA	TRUCK-MOUNTED ATTENUATOR
⊨	SIGN ON TEMPORARY SUPPORT
⇨	DIRECTION OF TRAFFIC
o	CONES
⁘	FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	/S/ Peter Amakobe Atepe
DATE	STATEWIDE WORK ZOI SAFETY ENGIN
FHWA	

GENERAL NOTES

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

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

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

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

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

W20-1A 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

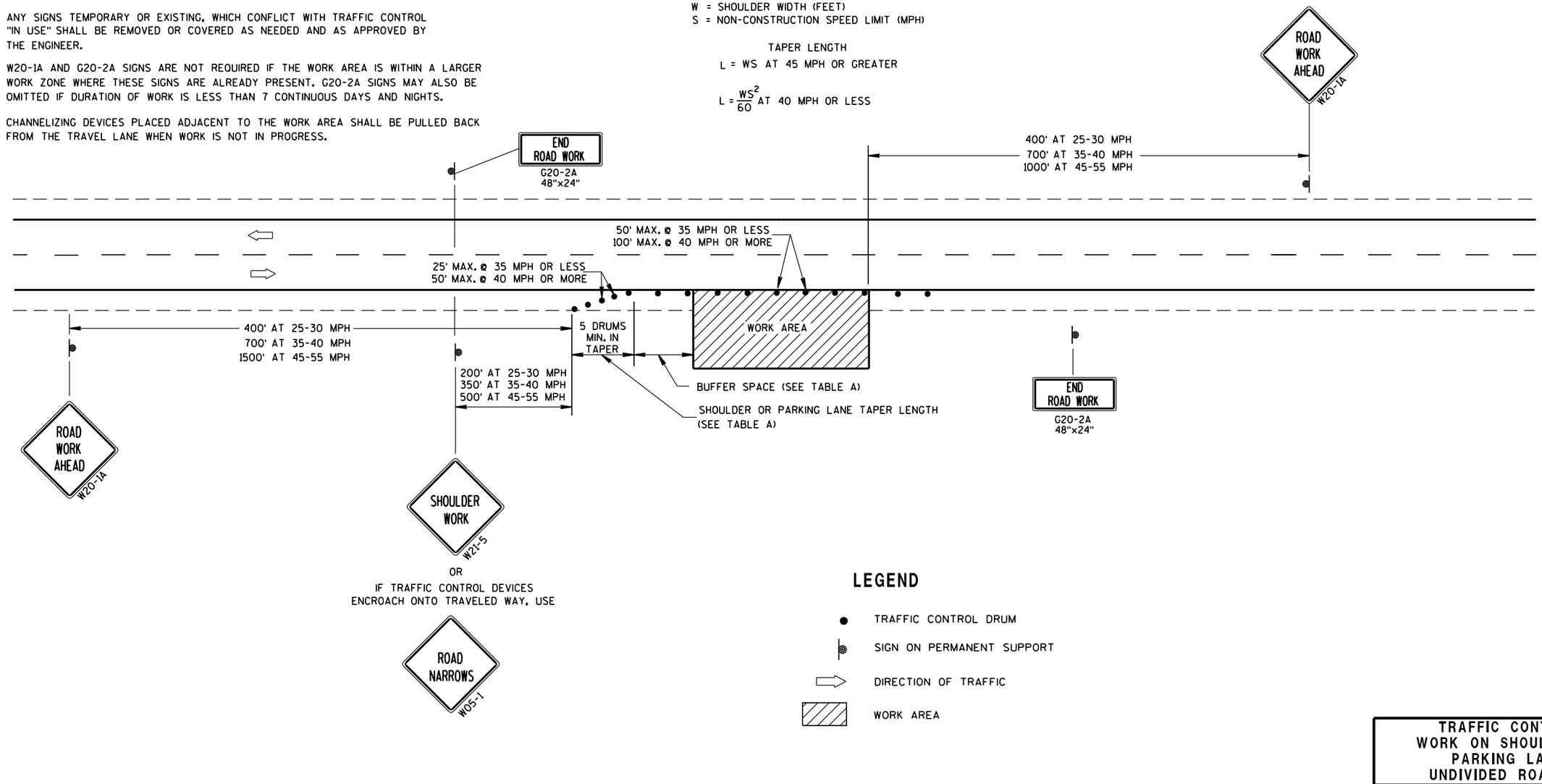
W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

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

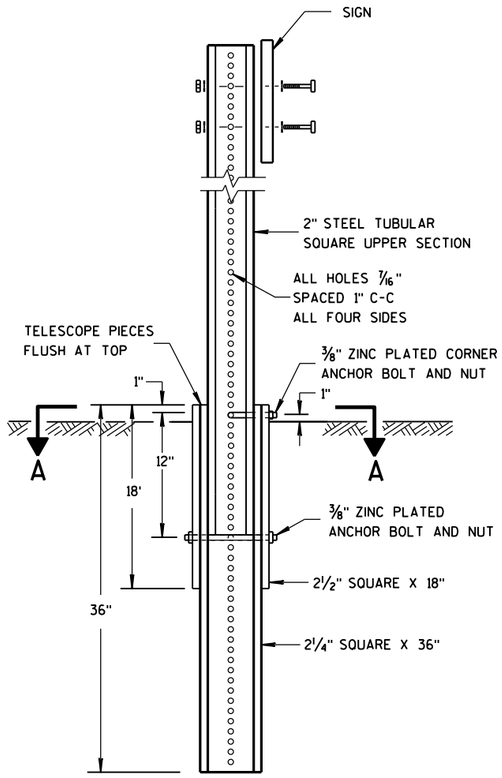
FHWA

6

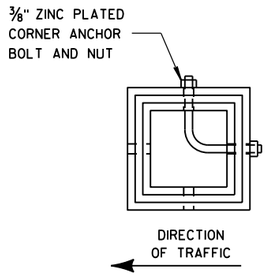
S.D.D. 15 D 28-3

6

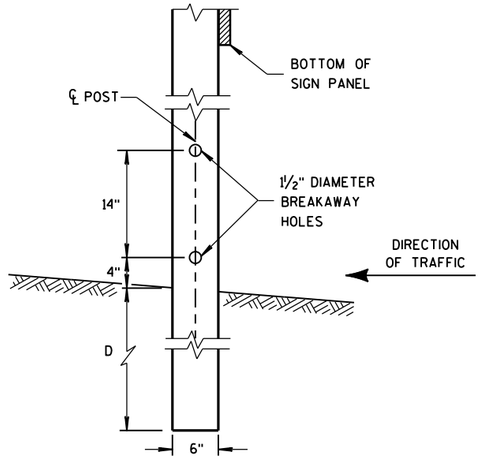
S.D.D. 15 D 28-3



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



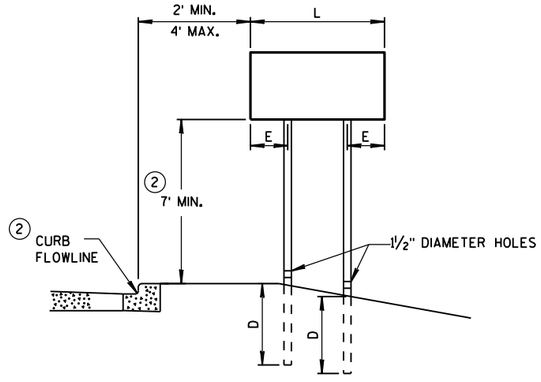
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

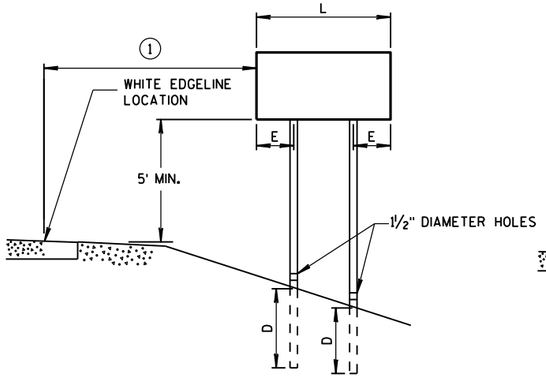
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

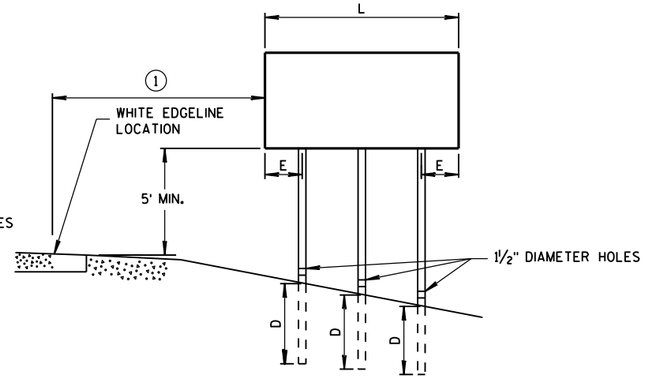
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

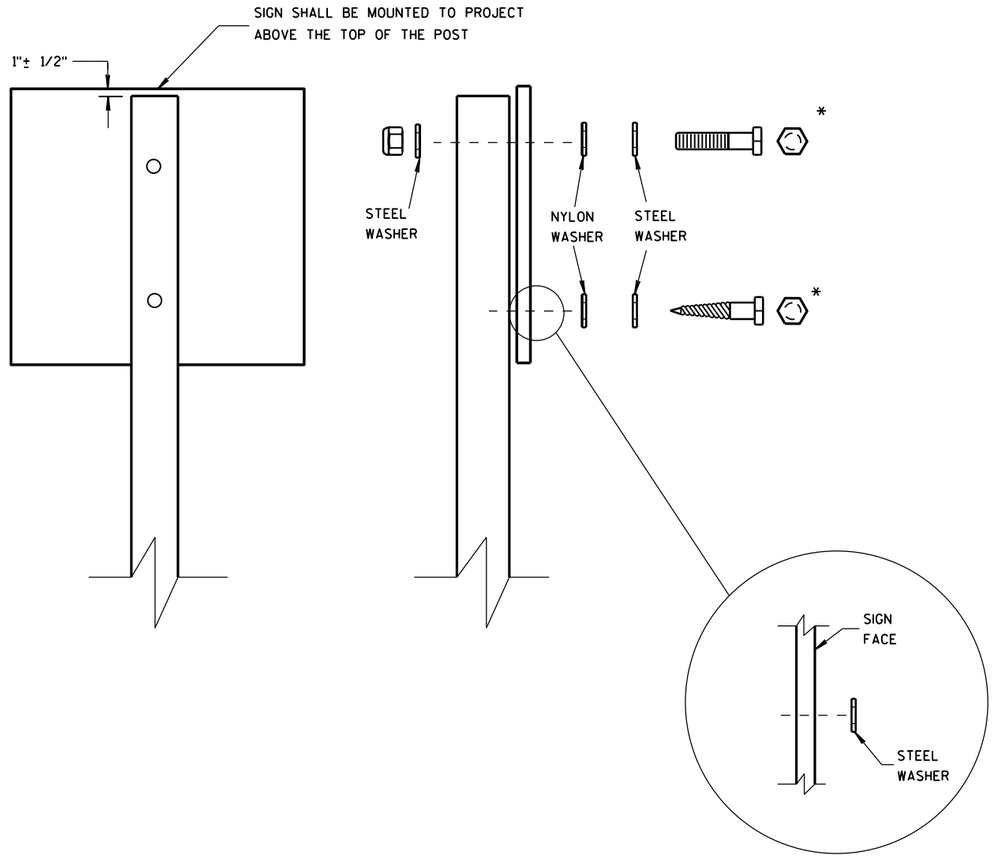
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

STATE OF WISCONSIN DEPARTMENT OF TRANSPOR

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

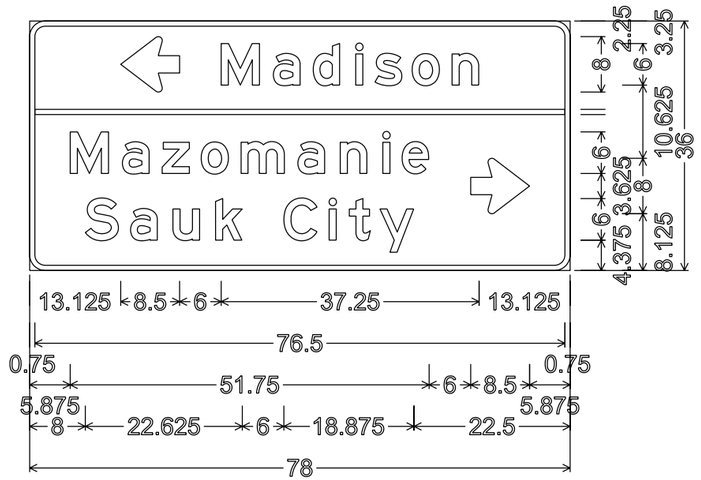
/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

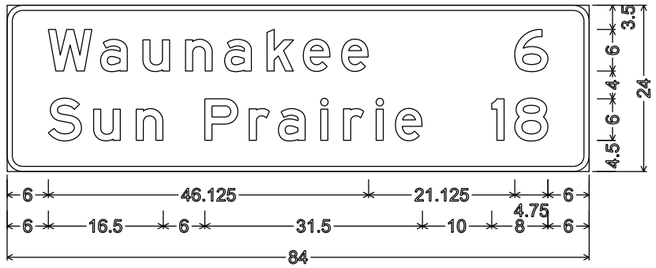
SIGN

NOTES

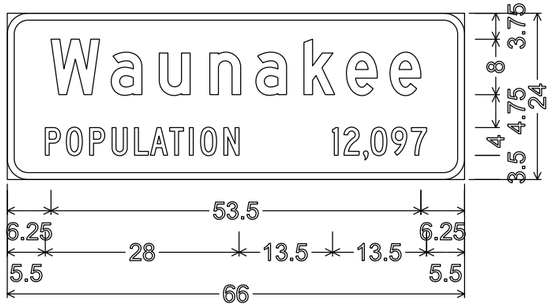
1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E except as noted



D1-3;
2.250" Radius, 0.750" Border



D2-2; 2.250" Radius, 0.750" Border



I2-3;
3.000" Radius, 1.000" Border,
"Waunakee" D; "POPULATION" C; "12,097" C

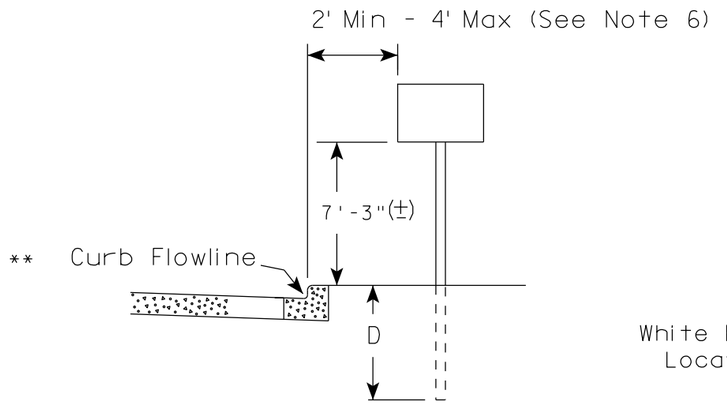
7

7

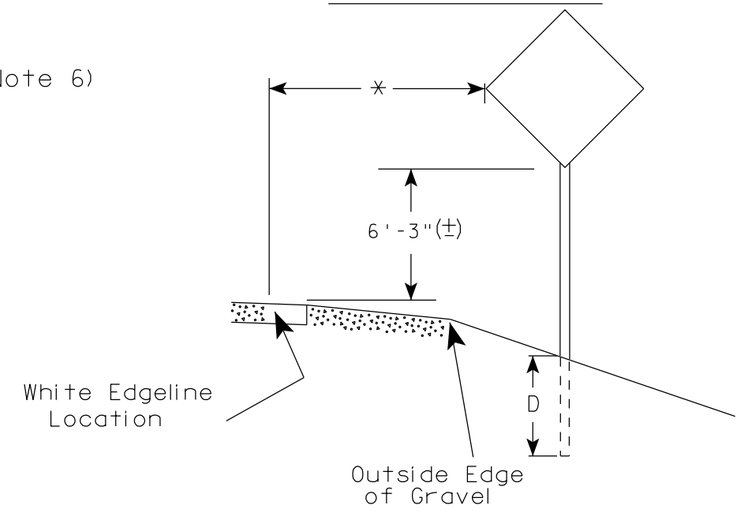
PROJECT NO: 5290-01-74	HWY: STH 19	COUNTY: DANE	PERMANENT SIGNING	SHEET NO:	E

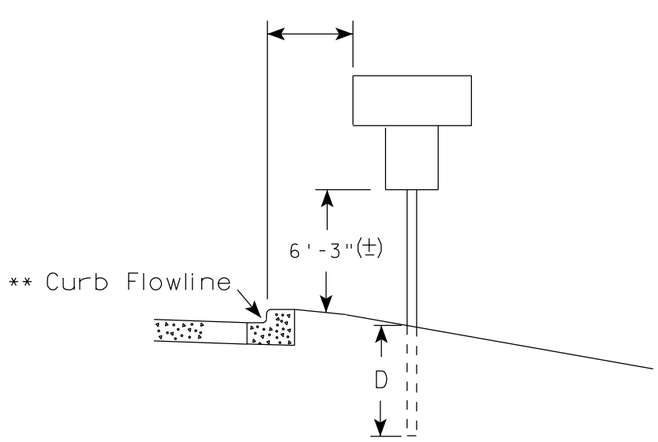
FILE NAME : C:\CAEfiles\Projects\tr_d1\1135a316.DGN PLOT DATE : 05-APR-2016 13:01 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 21.866168:1.000000
WISDOT/CADDS SHEET 42

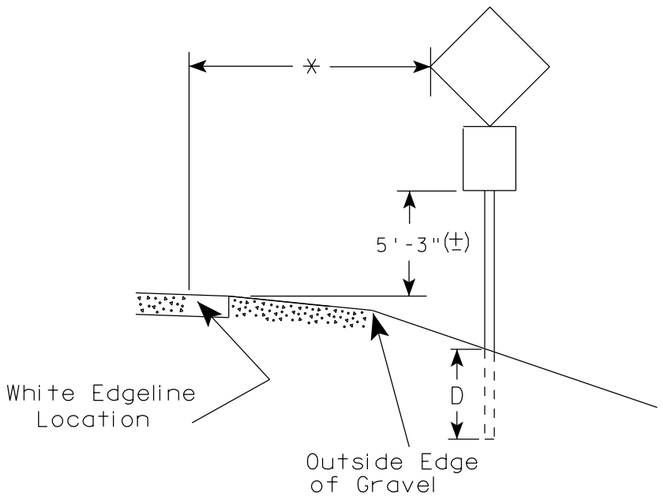
URBAN AREA



RURAL AREA (See Note 2)







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" (±).

POST EMBEDMENT DEPTH

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

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

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

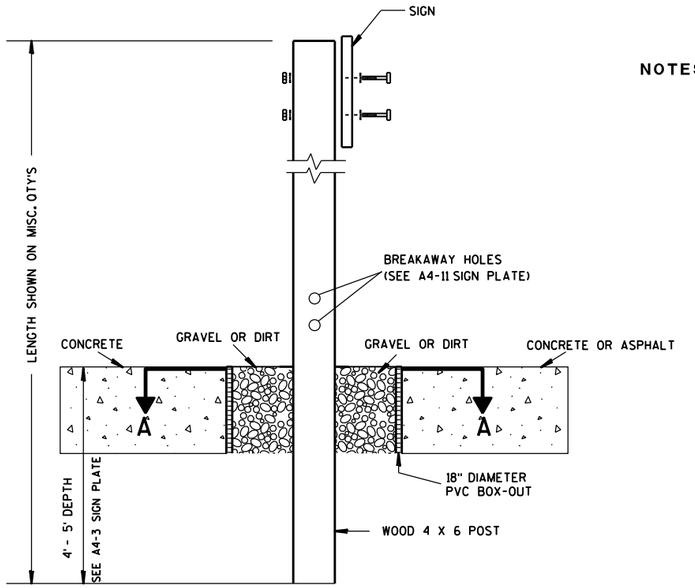
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

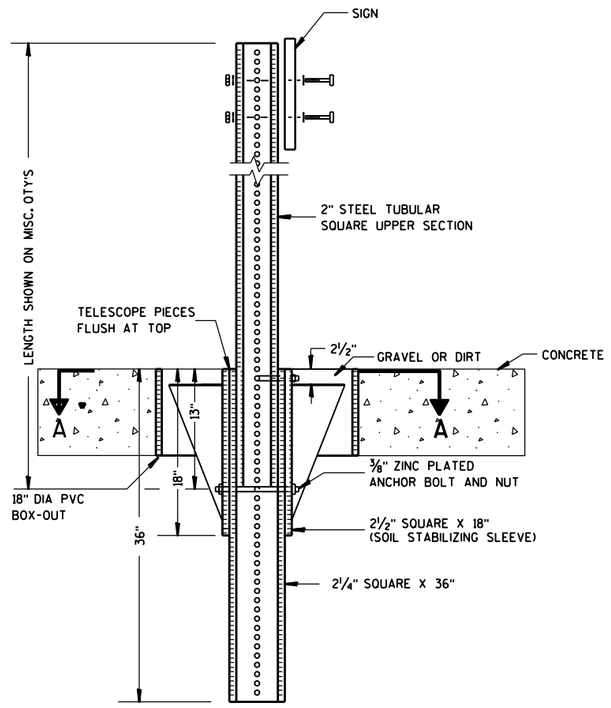
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

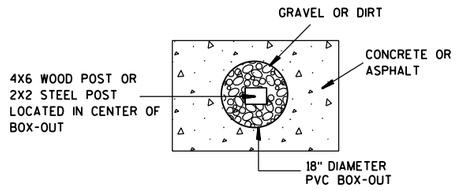
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

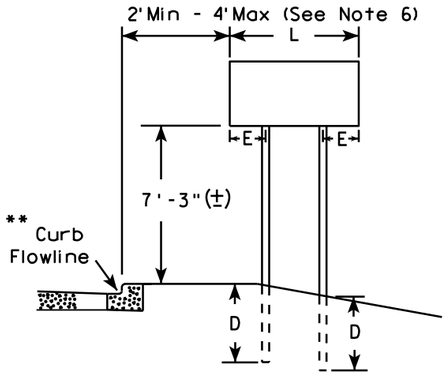
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

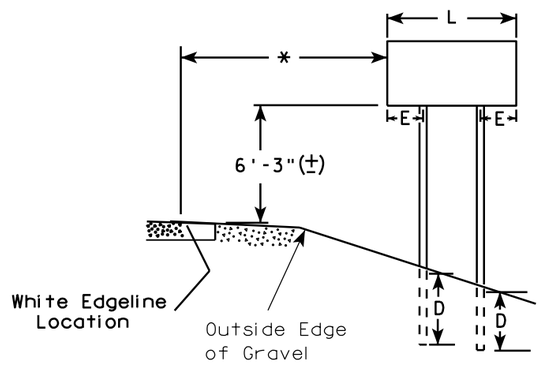
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

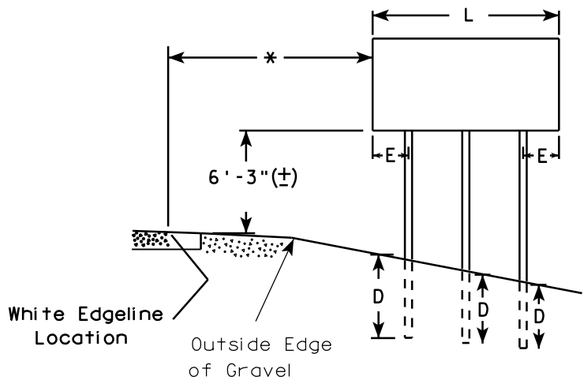
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

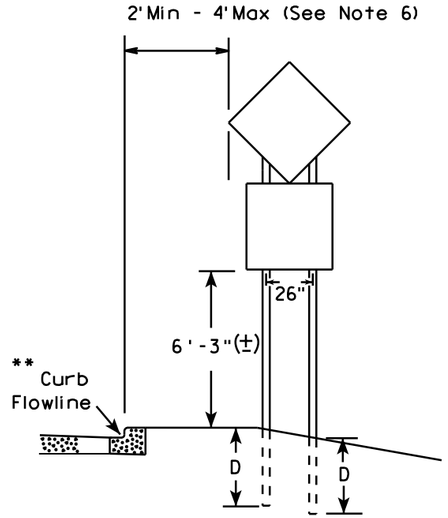
URBAN AREA



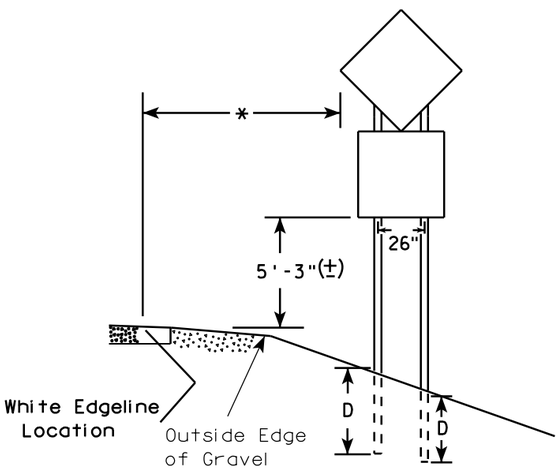
RURAL AREA (See Note 3)







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

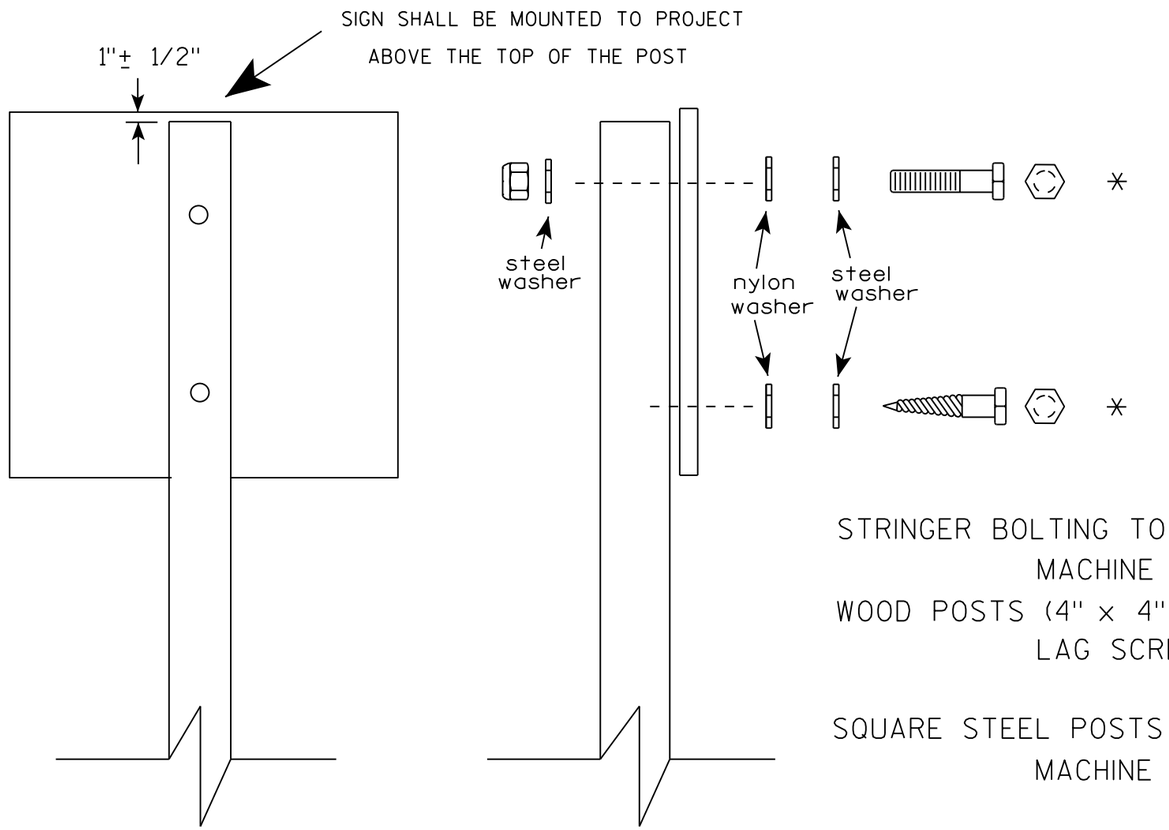
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-4 14
83

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 23-JUL-2015 15:23 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 107.021305:1.000000

WISDOT/CADDS SHEET 42



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

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

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

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)

3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)

3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

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

* 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

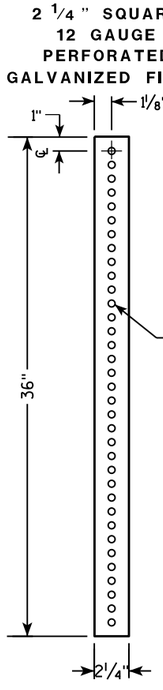
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8

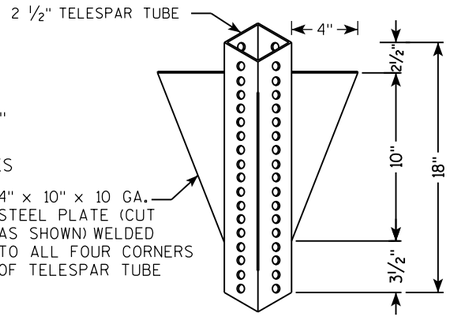
PROJECT NO: SHEET NO: E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

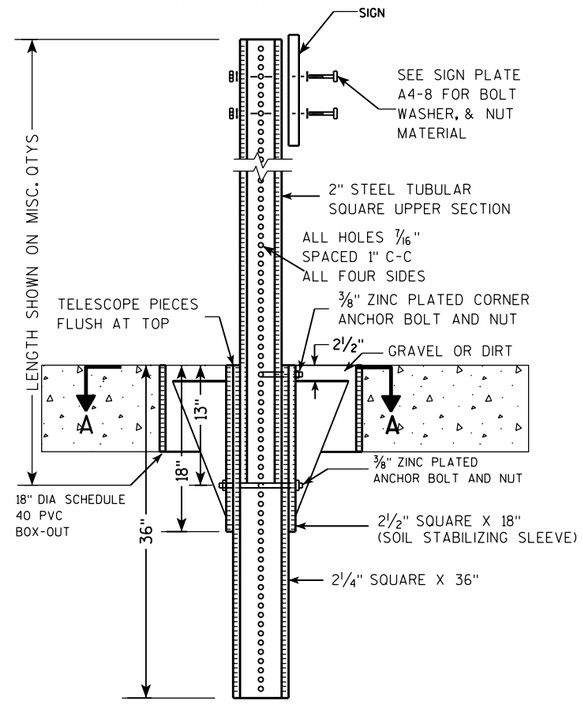
2 ¼ " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



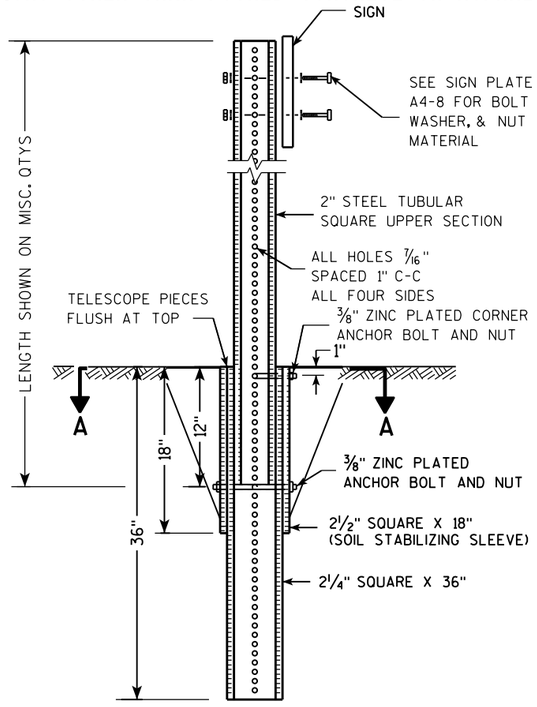
2 ½ " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

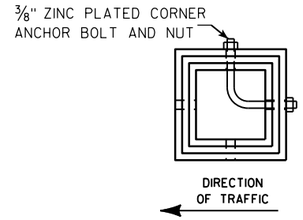


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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

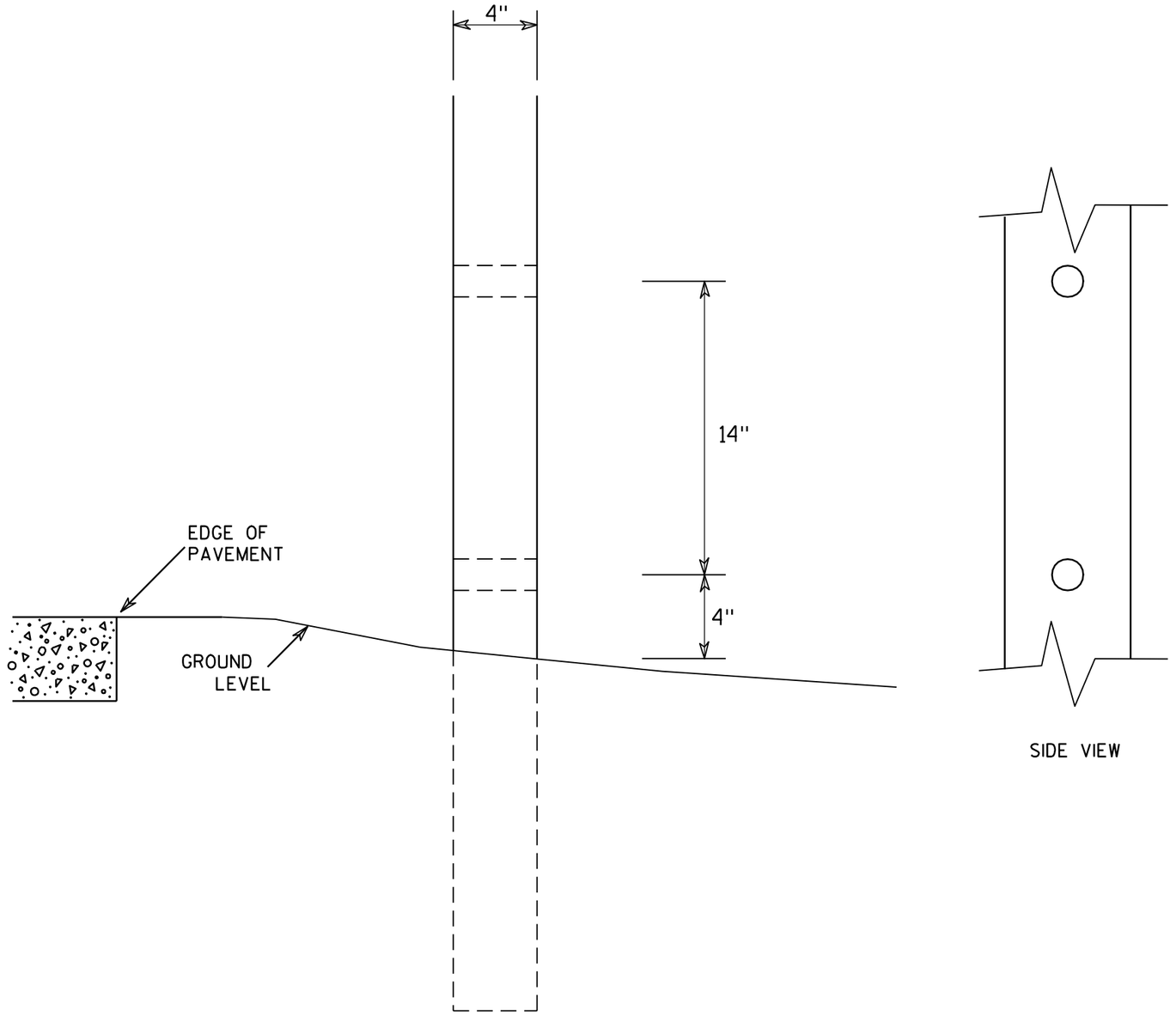
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 85 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000

WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

7

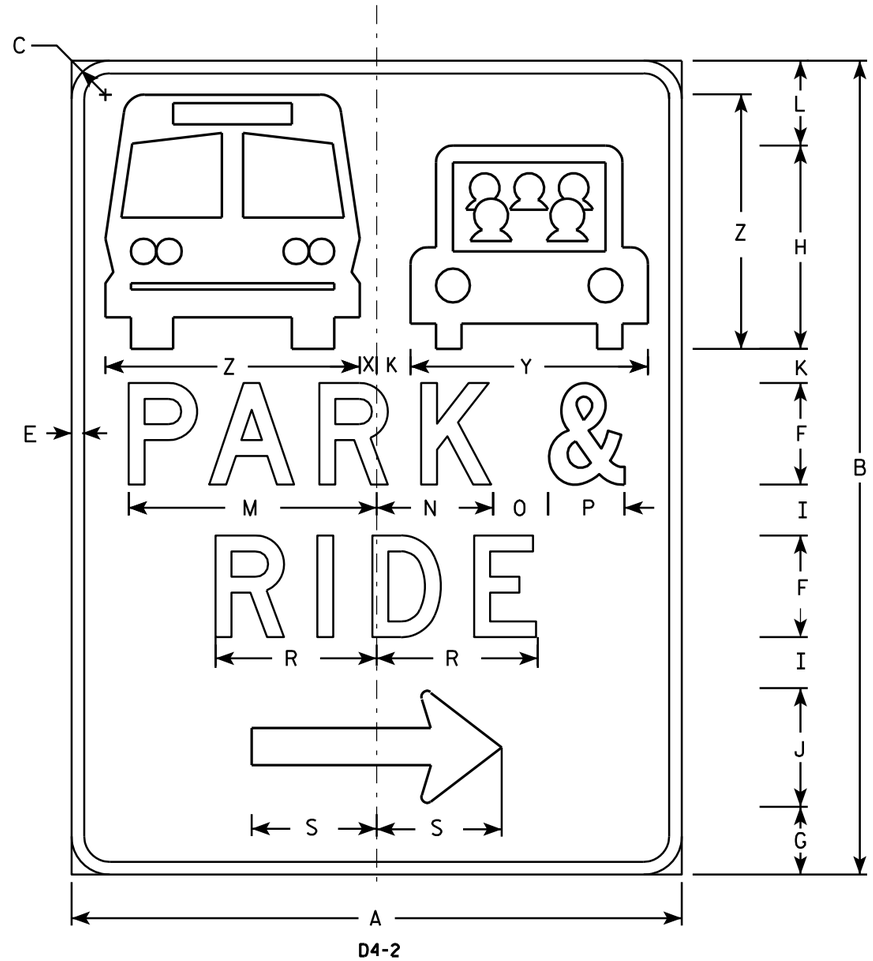
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

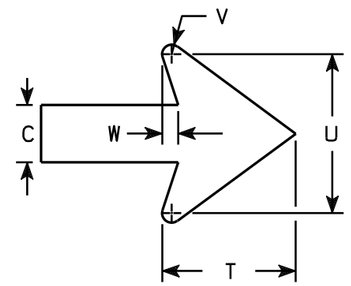
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 86	E



D4-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White - Type H Reflective
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. The D4-2L is the same as a D4-2R except the arrow is reversed.
6. The D4-2 sign may have either symbol or both symbols at the same time.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	30	1 1/8		1/2	4	1 5/8	7 1/2	1 1/2	4 5/8	1 3/8	3 7/8	9 3/4	4	2 3/4	3		6 3/8	4 7/8	3 1/2	4 1/8	1/4	3/8	5/8	9 3/8	10	5.0
2	30	36	1 3/8		5/8	5	2	9	1 5/8	5 1/2	1 5/8	4 5/8	12 1/4	5 1/8	3 3/8	3 3/4		8	6 1/8	4 3/8	5 1/4	3/8	1/2	7/8	11 3/4	12 1/2	7.50
3	36	48	2 1/4		3/4	6	4	12	3	7	2	5	14 5/8	6 7/8	3 1/4	4 1/2		9 1/2	7 1/2	5 1/4	6 1/4	3/8	5/8	1	14	15	12.0
4																											
5																											

STANDARD SIGN
D4-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/20/10 PLATE NO. D4-2.5

PROJECT NO:

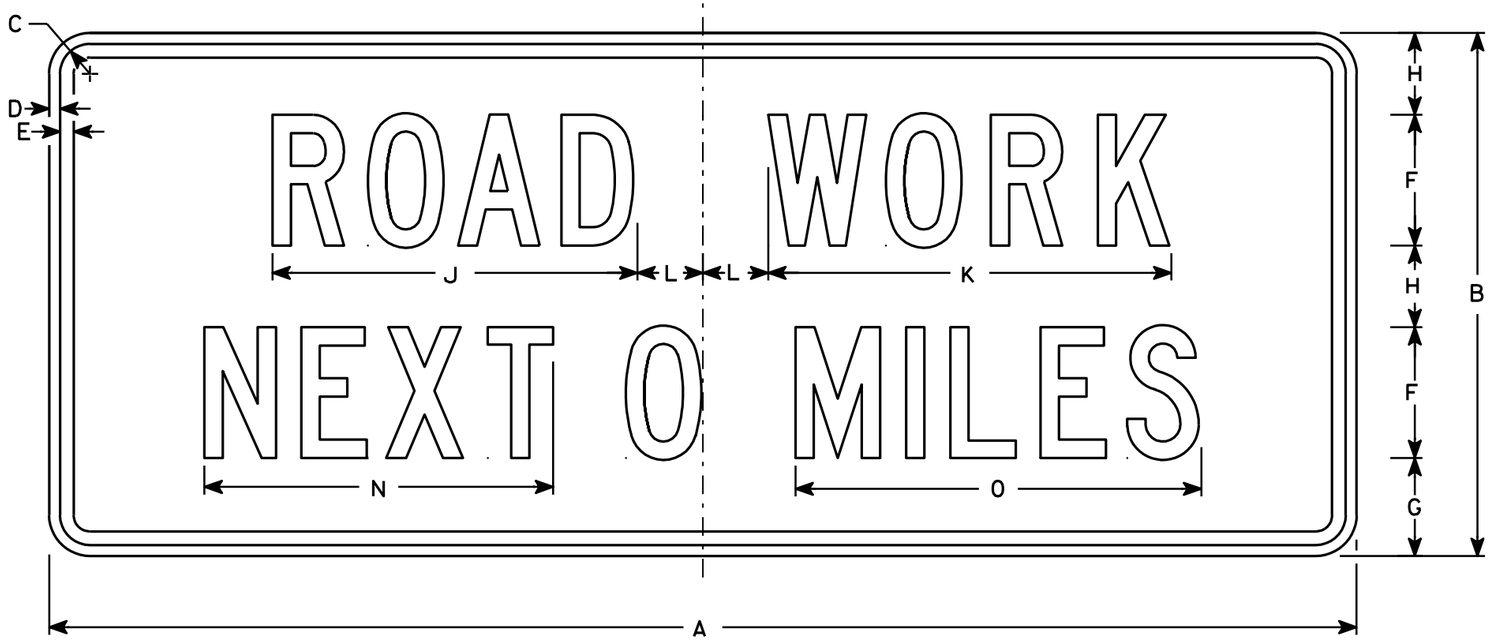
SHEET NO: 87 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\D42.dgn PLOT DATE : 10-FEB-2011 14:21 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

7

7



G20-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

Metric equivalent for this sign is:

SIZE	
1	
2	1500 mm X 600 mm
3	
4	1500 mm X 600 mm
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10	.90
3																												
4	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10	.90
5																												

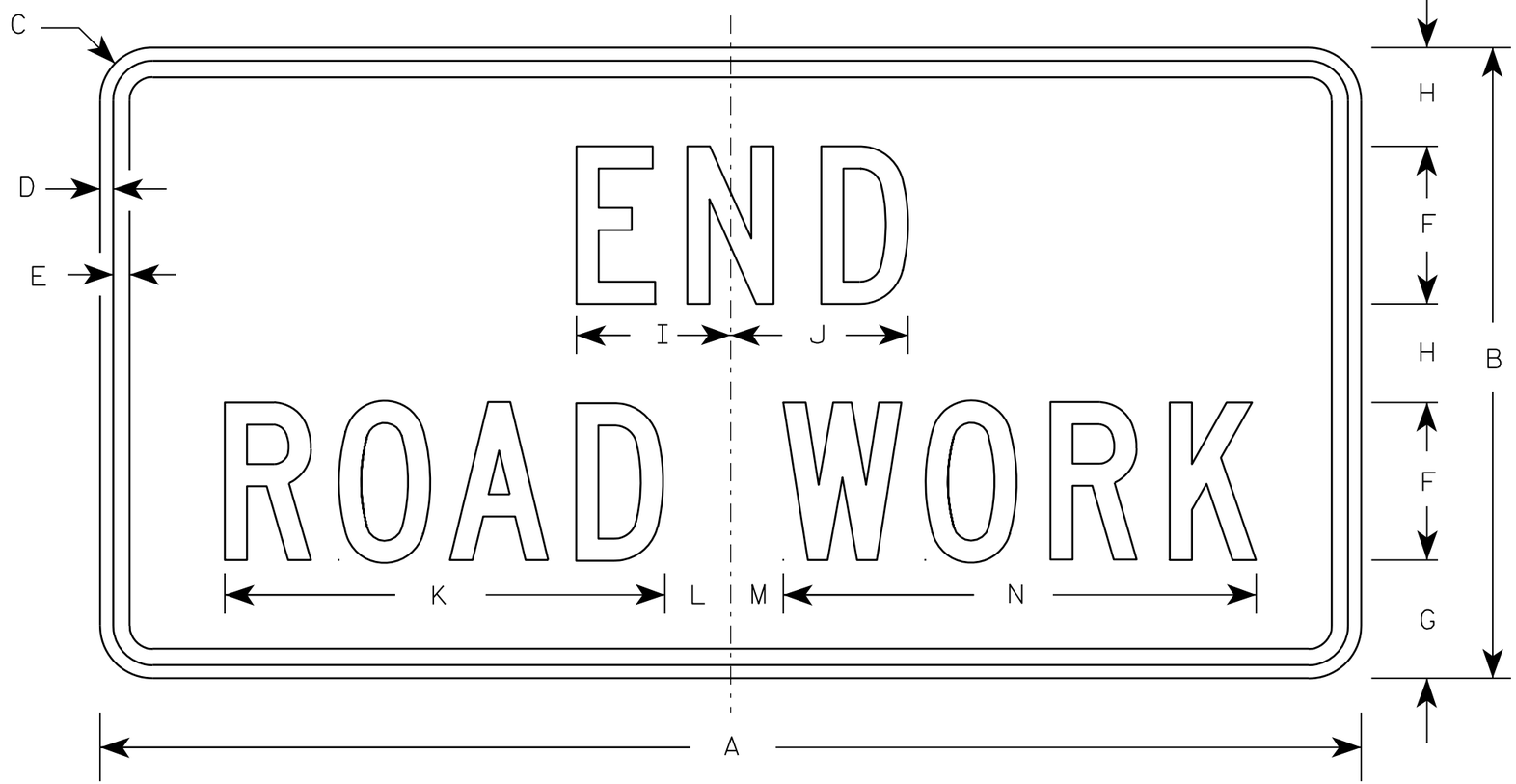
STANDARD SIGN
G20-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spray for State Traffic Engineer

DATE 4/8/97 PLATE NO. G20-1.7

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



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

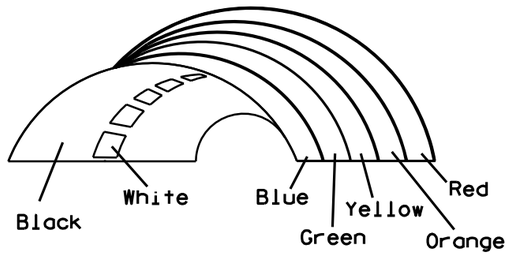
DATE 9/30/09 PLATE NO. G20-2A.8

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

NOTES

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

Background Colors of Symbol*



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

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

STANDARD SIGN
I55-56

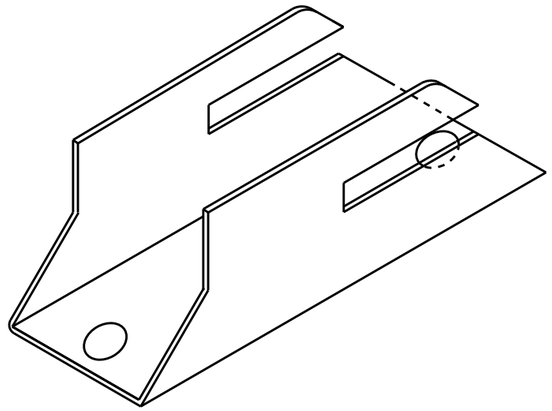
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/27/11 PLATE NO. 155-56.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 90

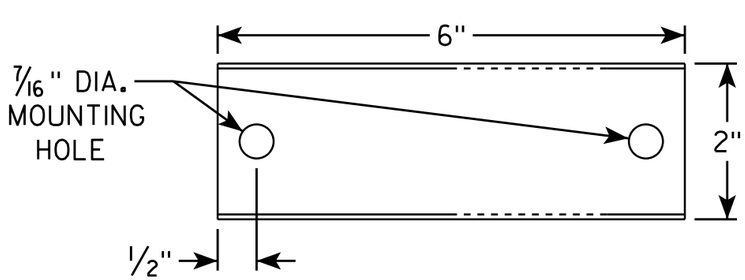
ISOMETRIC VIEW



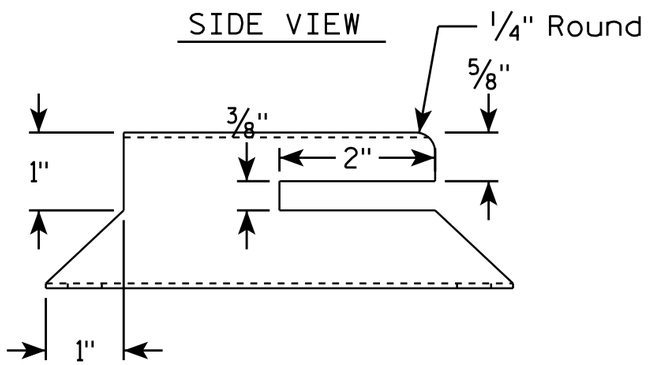
NOTES

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

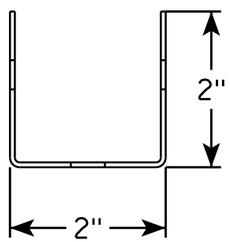
TOP VIEW



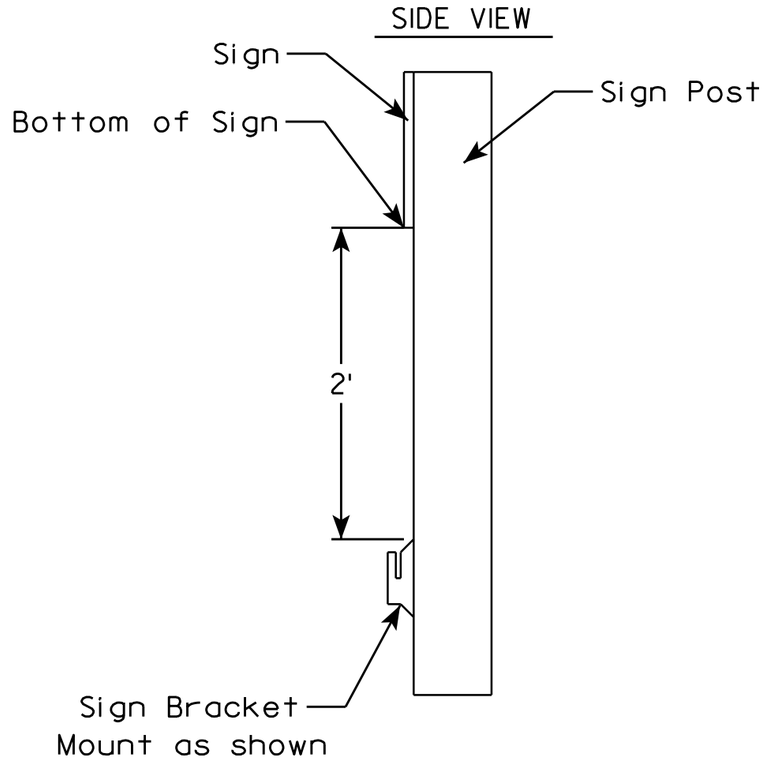
SIDE VIEW



END VIEW



SIDE VIEW



ROLLUP SIGN BRACKET
I55-56B

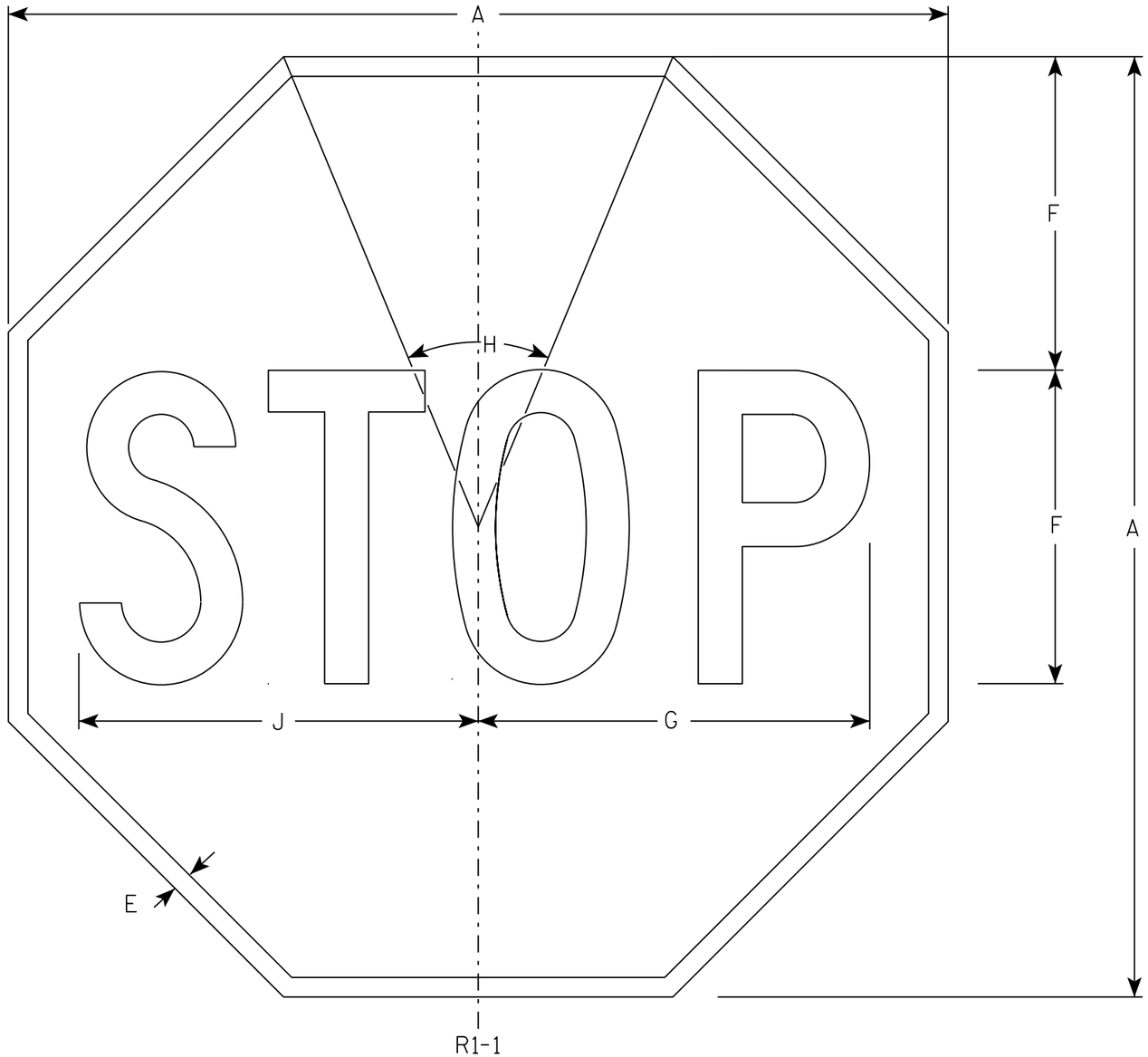
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/26/16 PLATE I55-56B.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\I5556B.DGN PLOT DATE : 26-APR-2016 17:29 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 1.945842:1.000000



NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
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

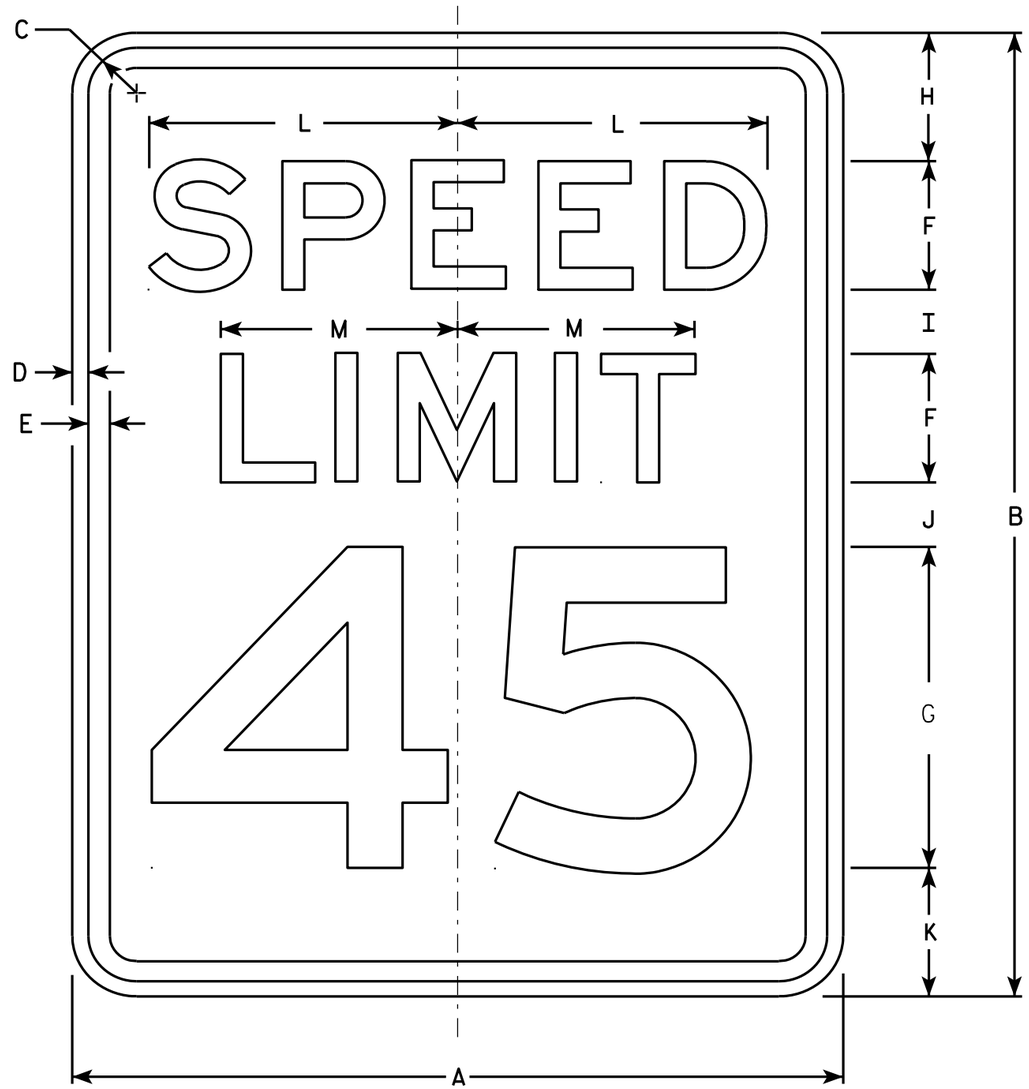
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE 92 R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 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

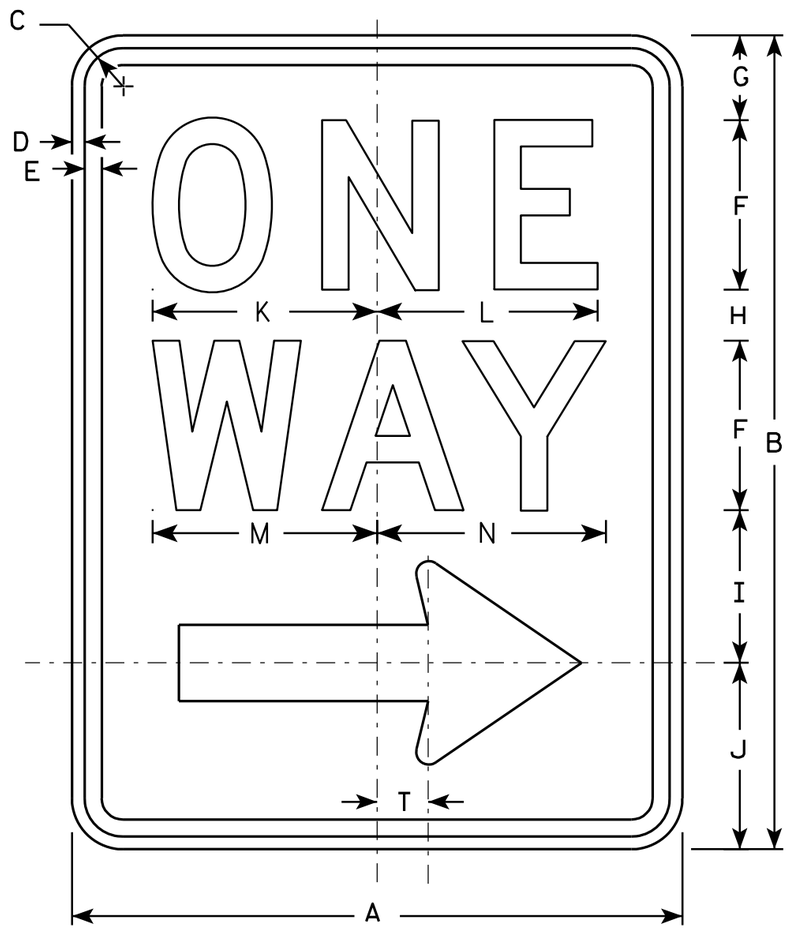
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

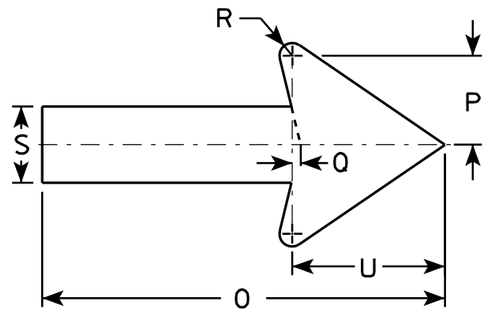
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 93 | E



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	Q	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

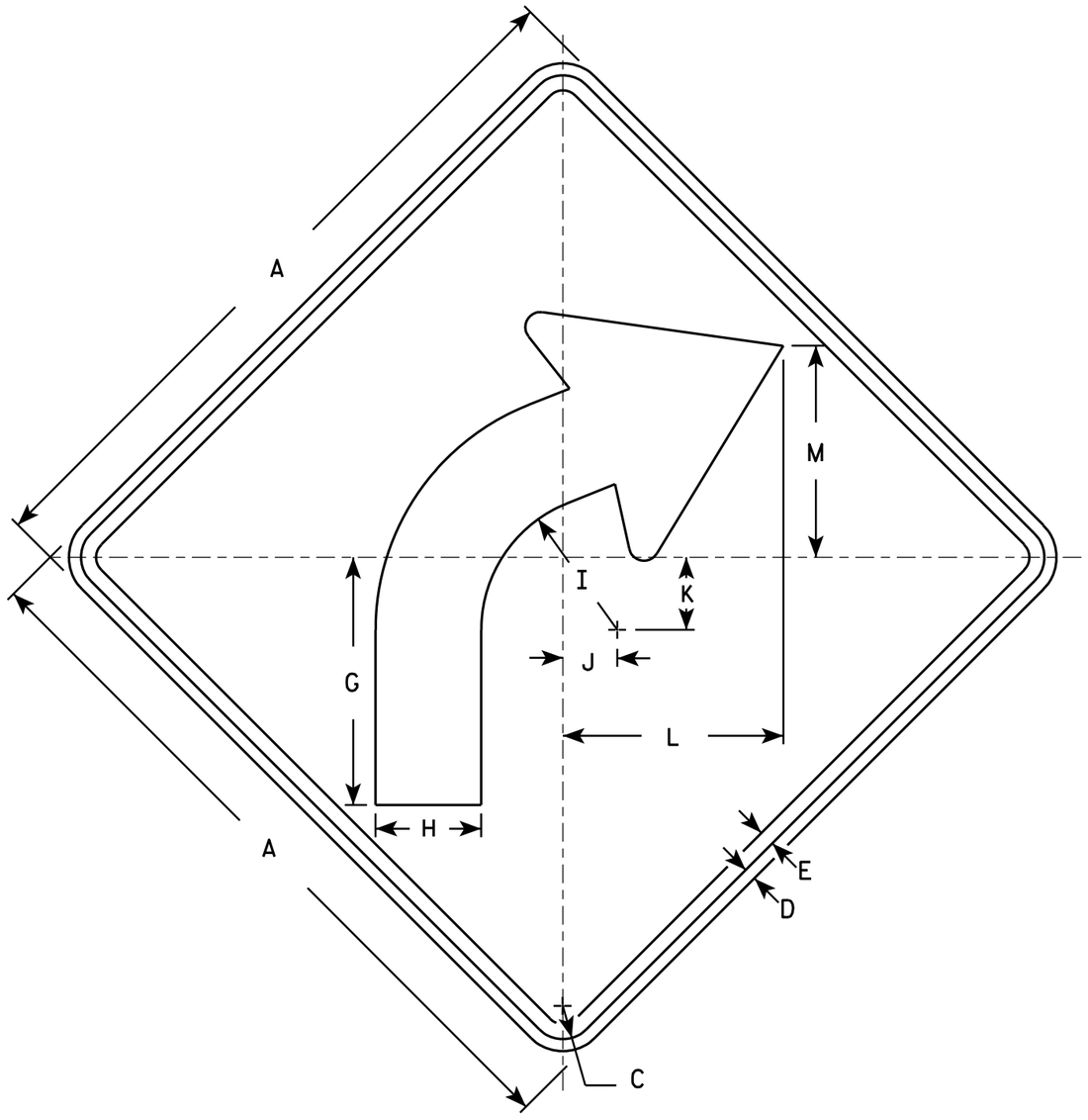
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

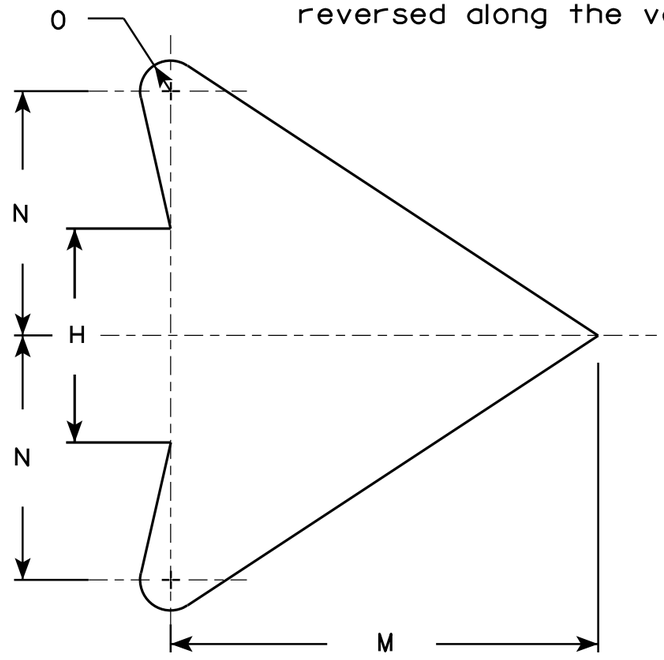
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 94	E

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.
4. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



W1-2R



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

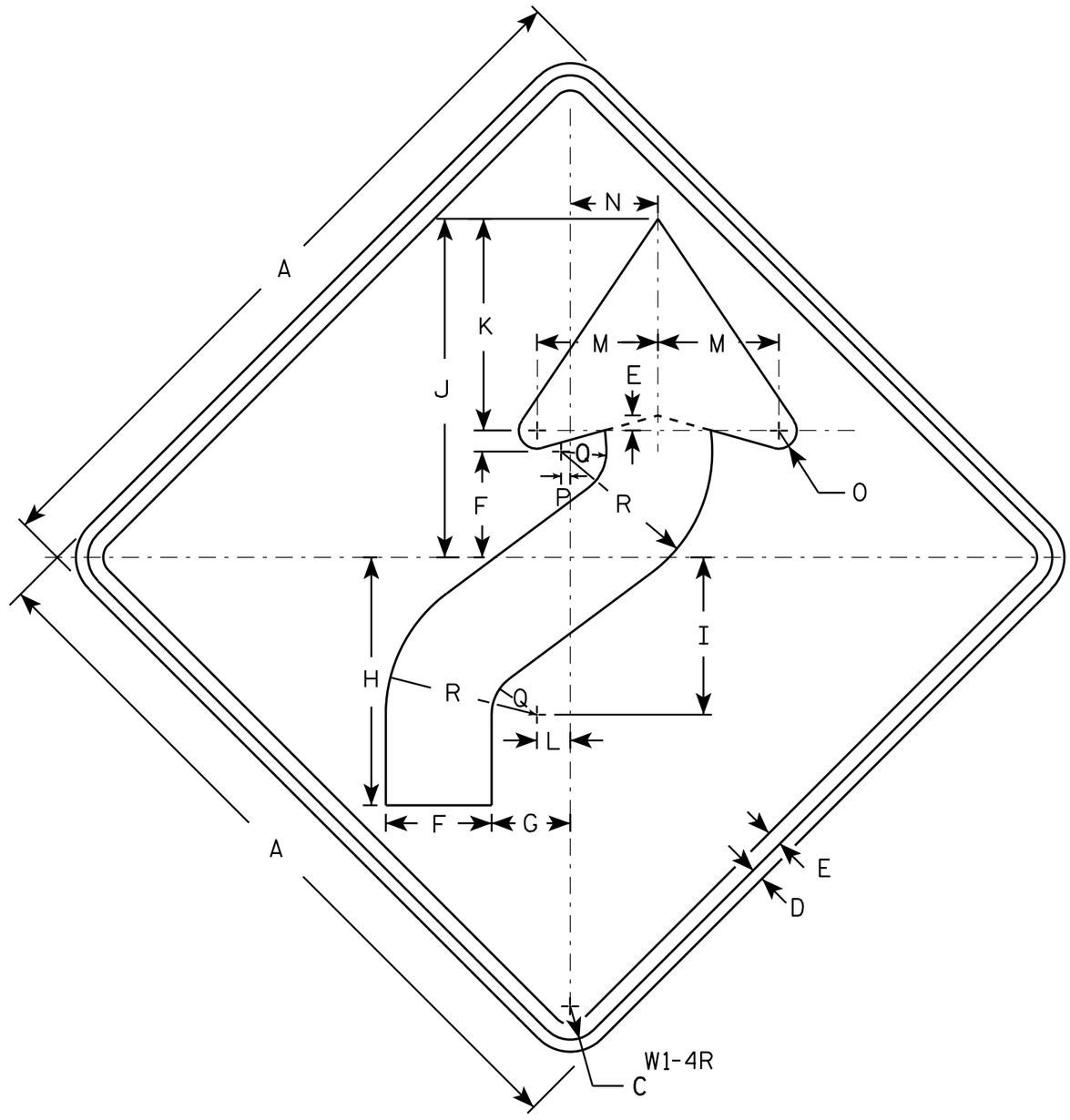
STANDARD SIGN
W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 95	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.
4. W1-4L is the same as W1-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	3 1/2	2 5/8	8 1/4	5 1/4	11 1/4	7	1 1/8	4	3	5/8	1/4	1 1/2	5									4.0
2S	30		1 3/8	1/2	5/8	4 3/8	3 1/4	10 1/4	6 1/2	14	8 3/4	1 3/8	5	3 5/8	3/4	3/8	1 7/8	6 1/4									6.25
2M	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
3	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
4	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

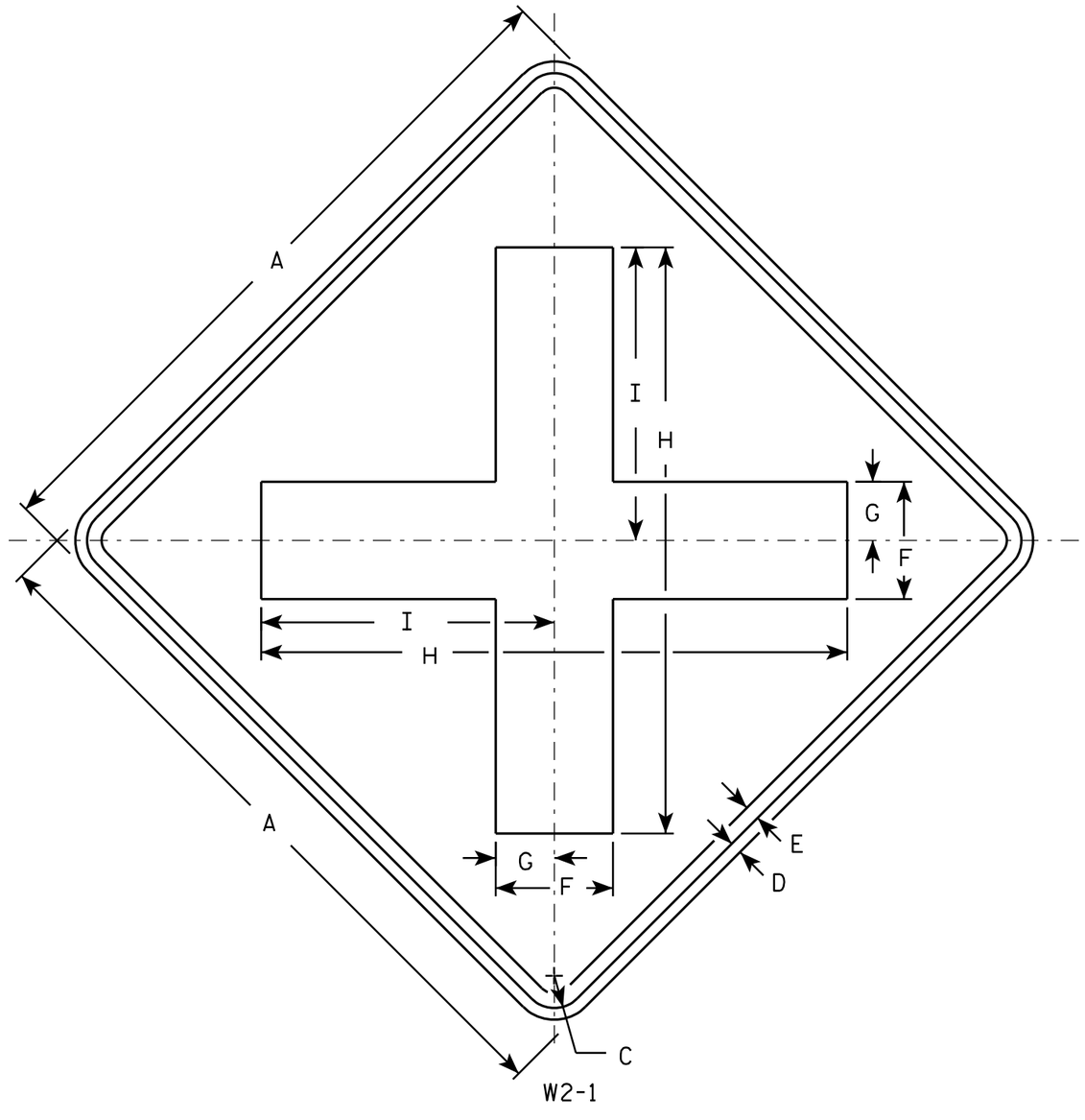
STANDARD SIGN
W1-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 5/17/12 PLATE NO. W1-4.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 96 | 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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	4	2	20	10																		4.0
2S	30		1 3/8	1/2	5/8	5	2 1/2	25	12 1/2																		6.25
2M	30		1 3/8	1/2	5/8	5	2 1/2	25	12 1/2																		6.25
3	36		1 5/8	5/8	3/4	6	3	30	15																		9.0
4	48		2 1/4	3/4	1	8	4	40	20																		16.0
5																											

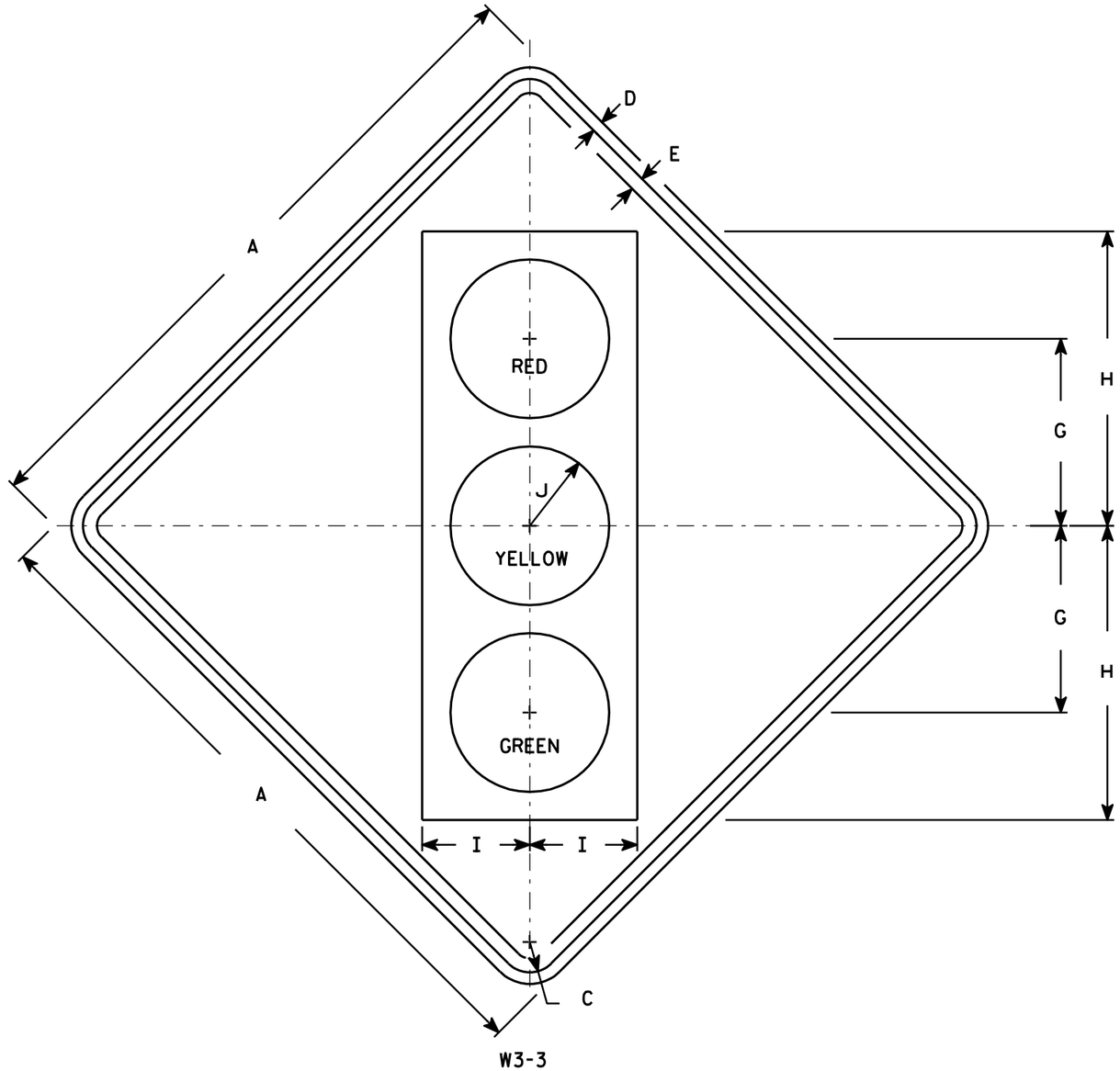
STANDARD SIGN
W2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W2-1.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 97	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 - 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. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

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		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

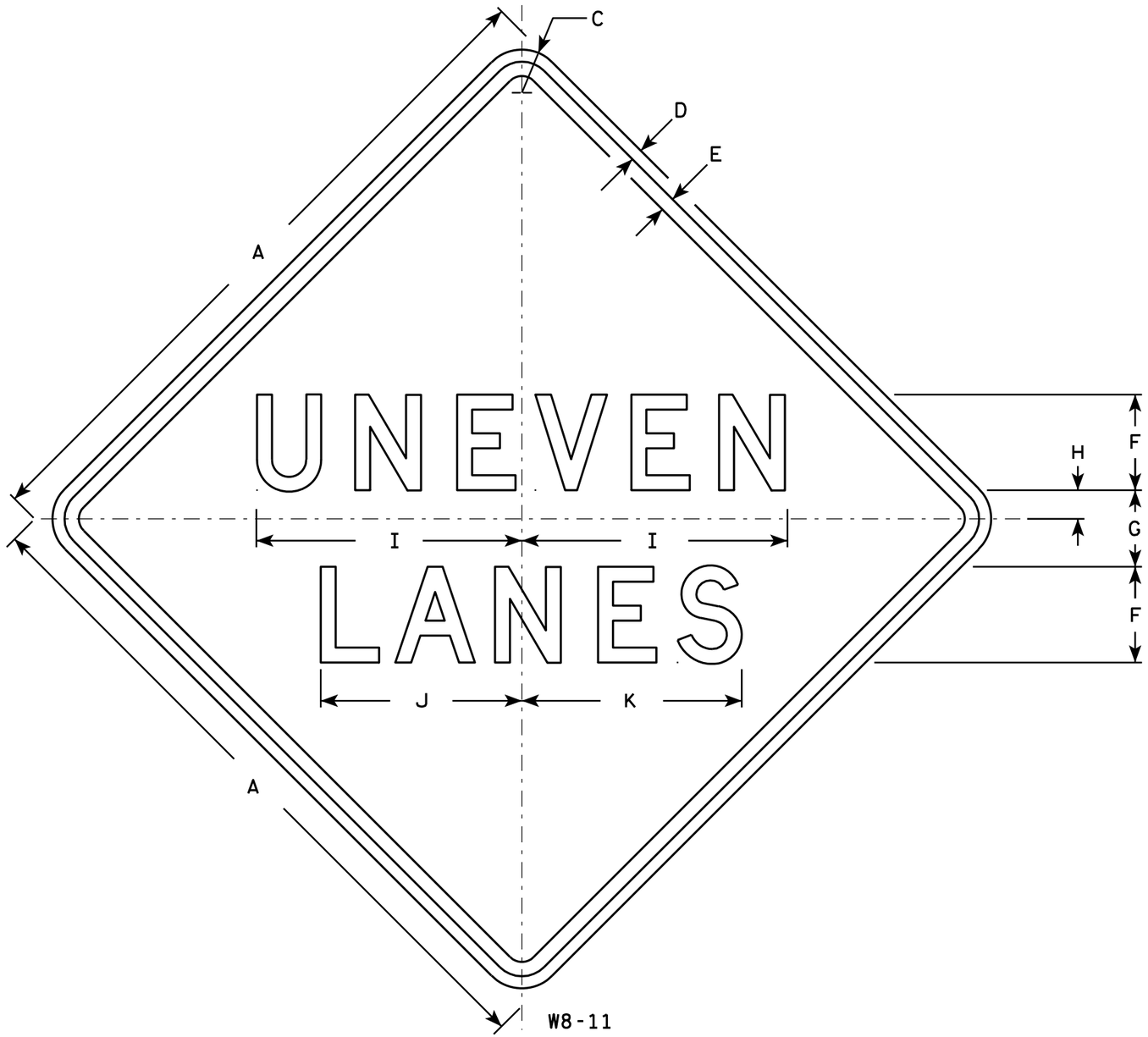
STANDARD SIGN
W3-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 98 | 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 - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 5/8	5/8	3/4	5	4	1 1/2	13 7/8	10 1/2	11 1/2																9.0
2M	36		1 5/8	5/8	3/4	5	4	1 1/2	13 7/8	10 1/2	11 1/2																9.0
3																											
4	36		1 5/8	5/8	3/4	5	4	1 1/2	13 7/8	10 1/2	11 1/2																9.0
5	48		2 1/4	3/4	1	7	5	2	18 1/2	14	15 3/8																16.0

STANDARD SIGN
W8-11

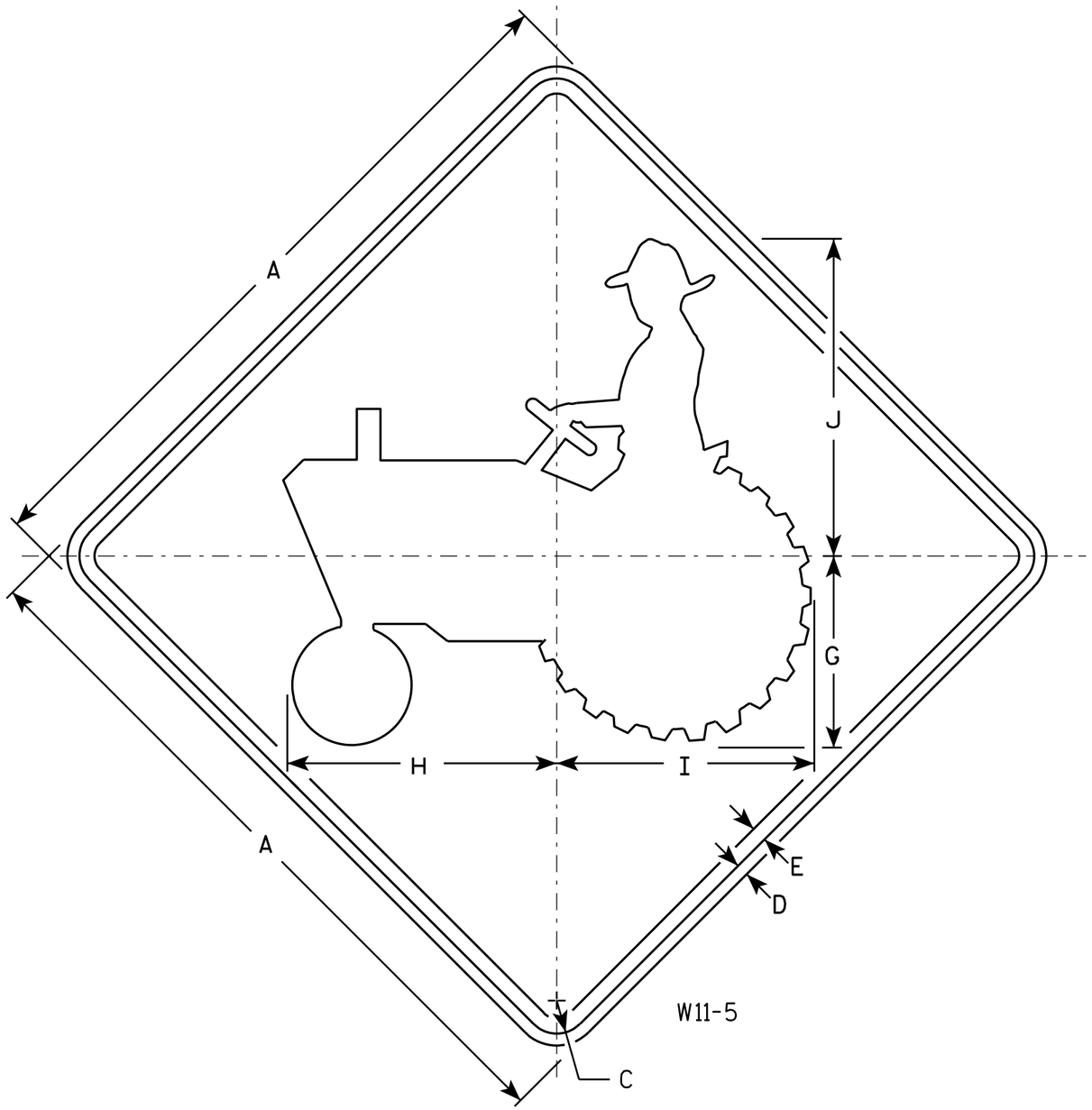
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/22/11 PLATE NO. W8-11.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 99 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W811.DGN PLOT DATE : 22-MAR-2011 14:12 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.703924:1.000000
WISDOT/CADDS SHEET 42



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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		6 3/8	9	8 5/8	10 5/8																	4.0
2S	30		1 3/8	1/2	5/8		8	11 1/4	10 3/4	13 1/4																	6.25
2M	30		1 3/8	1/2	5/8		8	11 1/4	10 3/4	13 1/4																	6.25
3																											
4	36		1 5/8	5/8	3/4		9 5/8	13 1/2	12 7/8	16																	9.0
5	48		2 1/4	3/4	1		12 3/4	18	17 1/4	21 1/8																	16.0

STANDARD SIGN
W11-5

WISCONSIN DEPT OF TRANSPORTATION

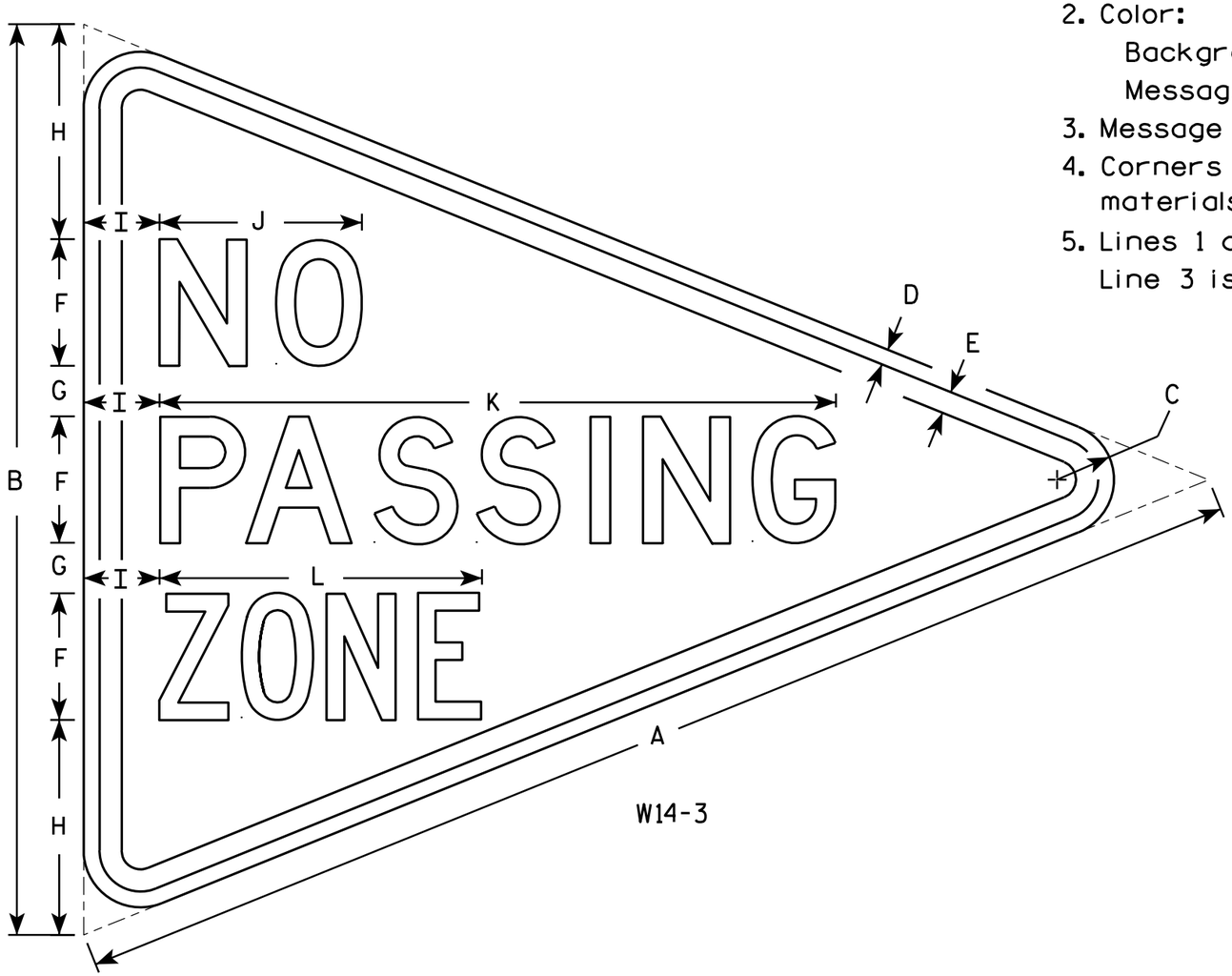
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/13/15 PLATE NO. W11-5.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 100	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. Message Series - See note 5
4. Corners and borders shall be rounded on all base materials for this sign.
5. Lines 1 and 2 are Series D.
   Line 3 is series C.



W14-3

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																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
2M	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
3	64	48	3	3/4	1 1/4	6	3	12	4	10 3/4	33 5/8	16 1/2															10.7
4																											
5																											

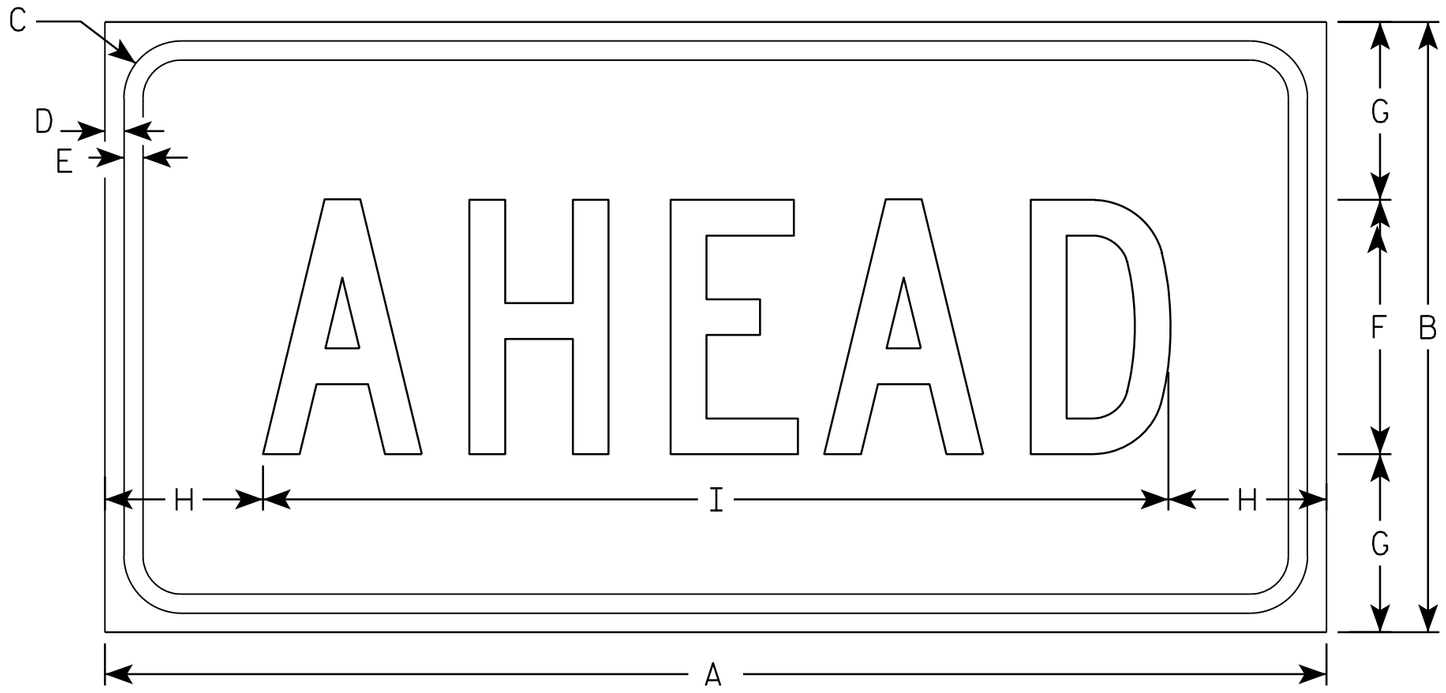
STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 101	E



W16-9P

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 - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

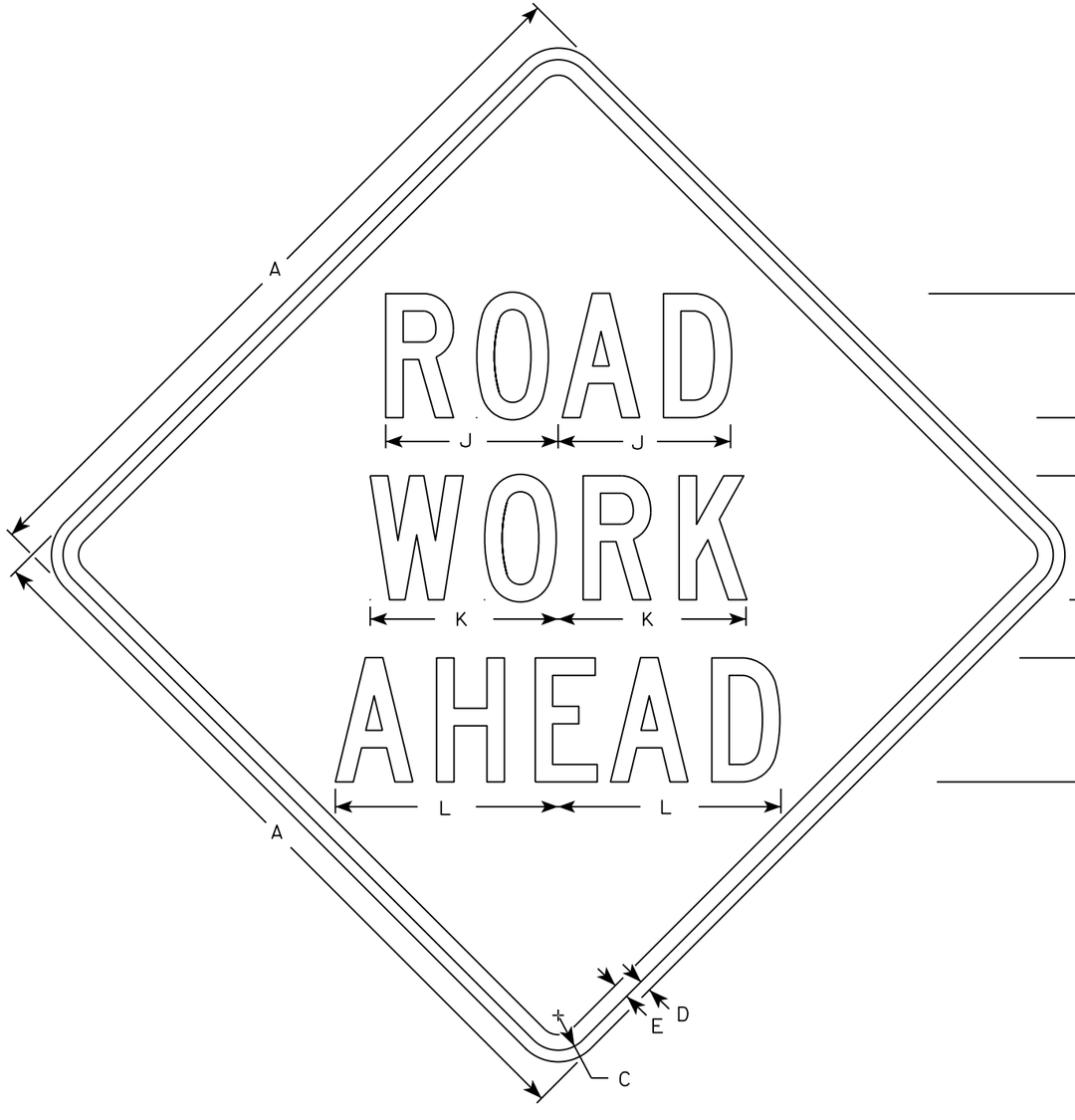
STANDARD SIGN
W16-9P

WISCONSIN DEPT OF TRANSPORTATION

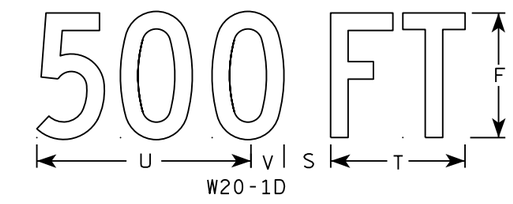
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/28/10 PLATE NO. W16-9P.6

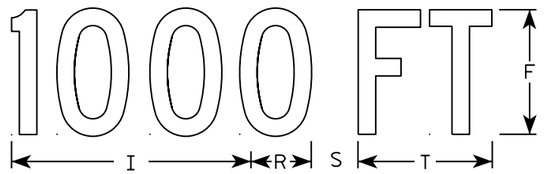
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 102 | E



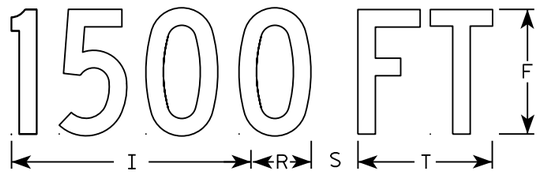
W20-1A



W20-1D

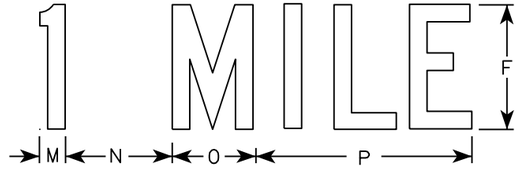


W20-1C

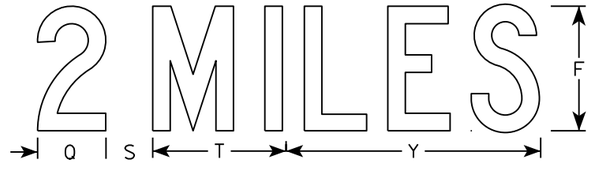


W20-1B

W20-1G



W20-1F



W20-1E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

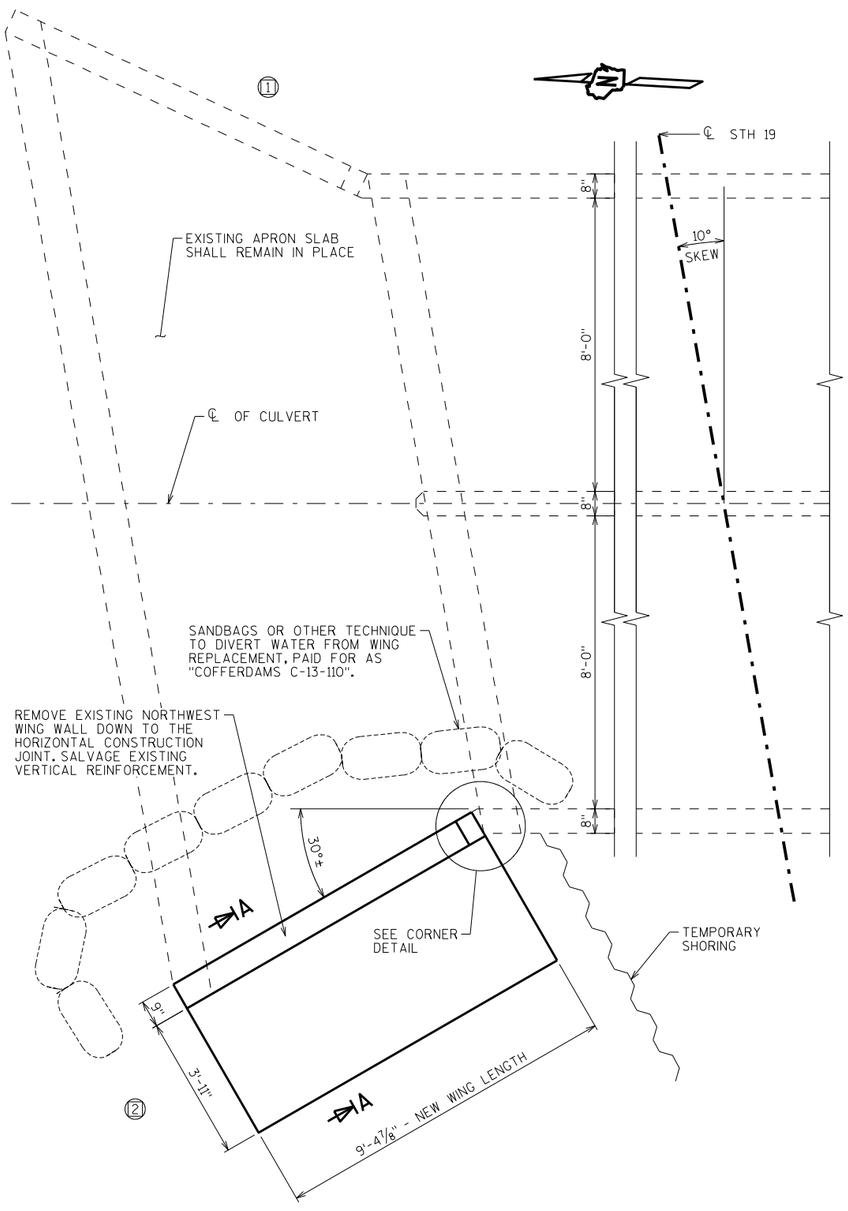
DATE 5/07/15 PLATE NO. W20-1.10

PROJECT NO:

SHEET NO: E

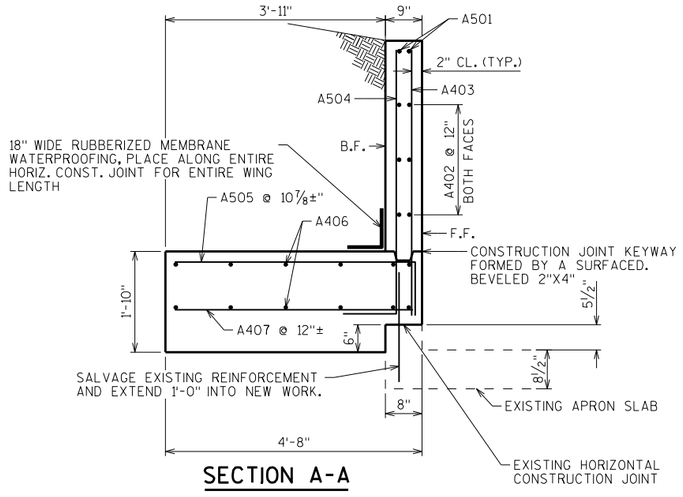
7

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$

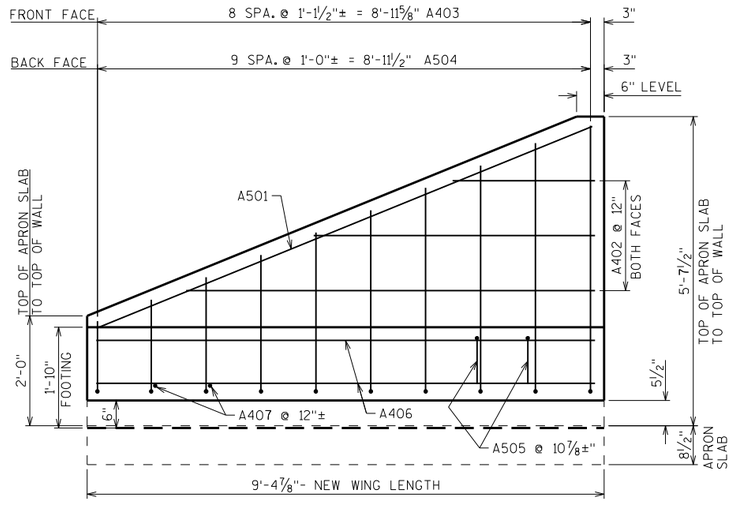


PLAN OF WING REPLACEMENT

(1) INDICATES WING NUMBER



SECTION A-A



SECTION THRU WING

BILL OF BARS

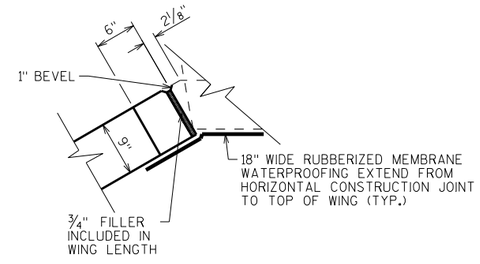
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501	X	2	9'-6"	NO		WING HORIZ. BOTH FACES
A402	X	6	5'-3"	NO	⚠	WING HORIZ. BOTH FACES
A403	X	9	3'-1"	NO	⚠	WING VERT. FRONT FACE
A504	X	10	3'-9"	0'-10"	⚠	WING VERT. BACK FACE
A505	X	11	5'-0"	0'-10"		WING FOOTING
A406	X	12	9'-0"	NO		WING FOOTING
A407	X	10	4'-4"	NO		WING FOOTING

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTHS FOR EACH SERIES
A402	2 SERIES OF 3	2'-9" TO 7'-8"
A403	1 SERIES OF 9	1'-3" TO 4'-10"
A504	1 SERIES OF 10	1'-11" TO 5'-6"

BUNDLE AND TAG EACH SERIES SEPARATELY



CORNER DETAIL

TOTAL ESTIMATED QUANTITIES

BID ITEMS

203.0200	REMOVING OLD STRUCTURE STA. 72+45.86 NORTHWEST WING	1	LS
206.2000	EXCAVATION FOR STRUCTURES CULVERTS C-13-110 NORTHWEST WING	1	LS
206.5000	COFFERDAMS C-13-110	1	LS
210.2500	BACKFILL STRUCTURE TYPE B	50	TONS
504.0100	CONCRETE MASONRY CULVERTS	4	CY
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	260	LB
511.1200	TEMPORARY SHORING C-13-110	100	SF
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	3	SY

NON-BID ITEMS

FILLER	3/4"	SIZE

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TO THE TOP OF THE WING WITHIN THE LENGTH OF THE WING WALL.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS C-13-110 NORTHWEST WING" SHALL BE THE EXISTING GROUND LINE.

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY, GRADE A-FA — f'_c = 3,500 P.S.I.

HIGH STRENGTH BAR STEEL REINFORCEMENT — f_y = 60,000 P.S.I.

STATE PROJECT NUMBER

5290-01-74

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE MARK SIGNIFIES THE BAR SIZE.

THE DIMENSION IN THE BENT COLUMN IS THE OUT TO OUT HORIZONTAL LEG OF A "L" SHAPED BAR.

STRUCTURE DESIGN CONTACTS:

MAXWELL KULICK (608) 261-6108

AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY

Plans Prepared By WISDOT
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher 7/21/16
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE C-13-110

STH 19 OVER DRAINAGE WAY

COUNTY: DANE — TOWN/CITY/VILLAGE: SPRINGFIELD

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MJK	ABS	MJK	ABS

WING 2 REPLACEMENT

SHEET 1 OF 1

104

I.D. 5290-01-04A

DATE: APRIL 2016

SCALE = 2.0

8

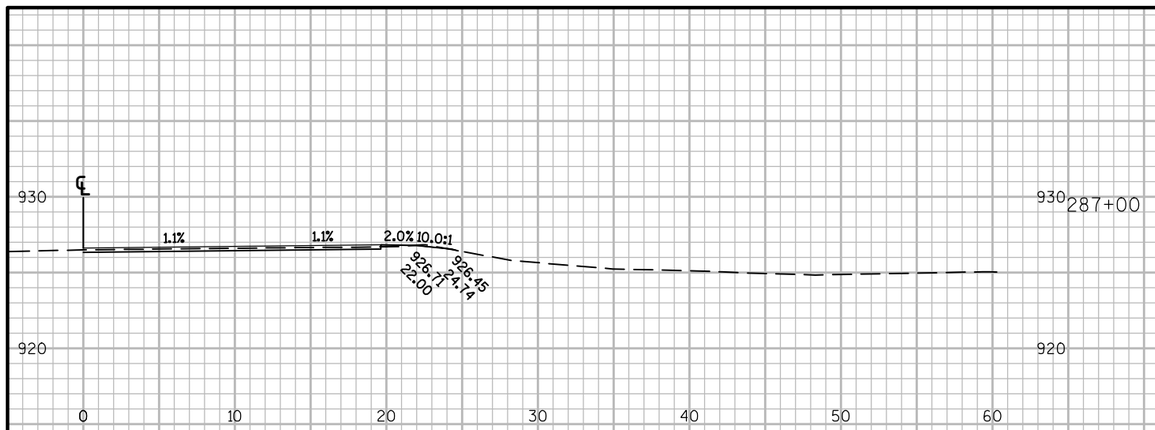
8

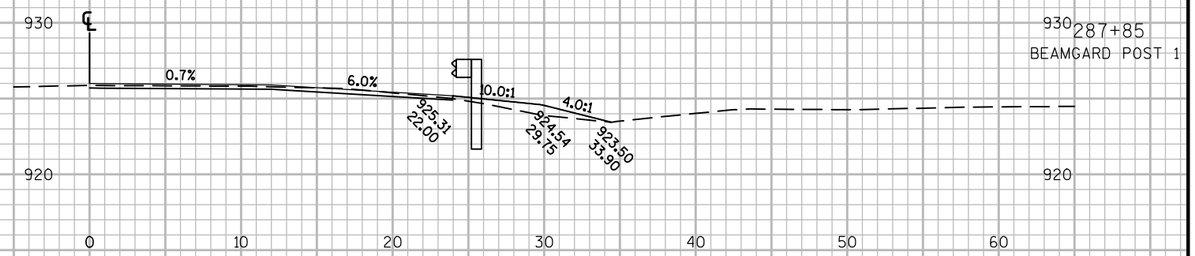
EARTHWORK SUMMARY TABLE

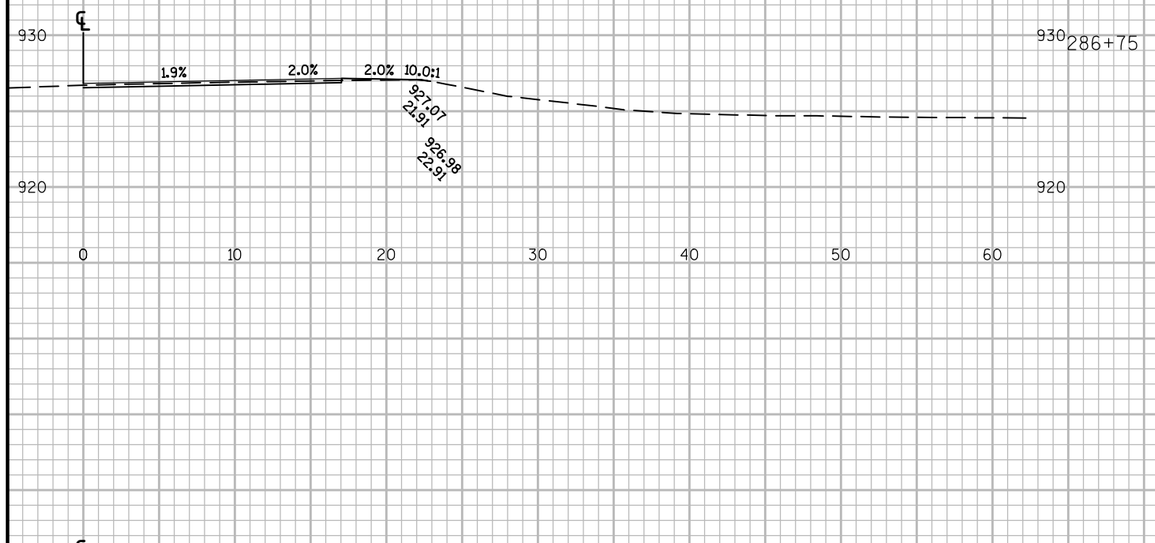
GROUP CODE	STATION	TO	STATION	#20503 UNCLASSIFIED EXCAVATION CY	(1) ASPHALTIC PAVEMENT CY	(2) USEABLE MATERIAL CY	EXPANDED FILL CY
010	232+60	-	232+80	184	8	176	176
010	262+50	-	262+70	133	8	125	125
010	289+25	-	289+45	144	9	135	135
010	299+50	-	299+60	170	10	160	160
			Total	631	35	596	596

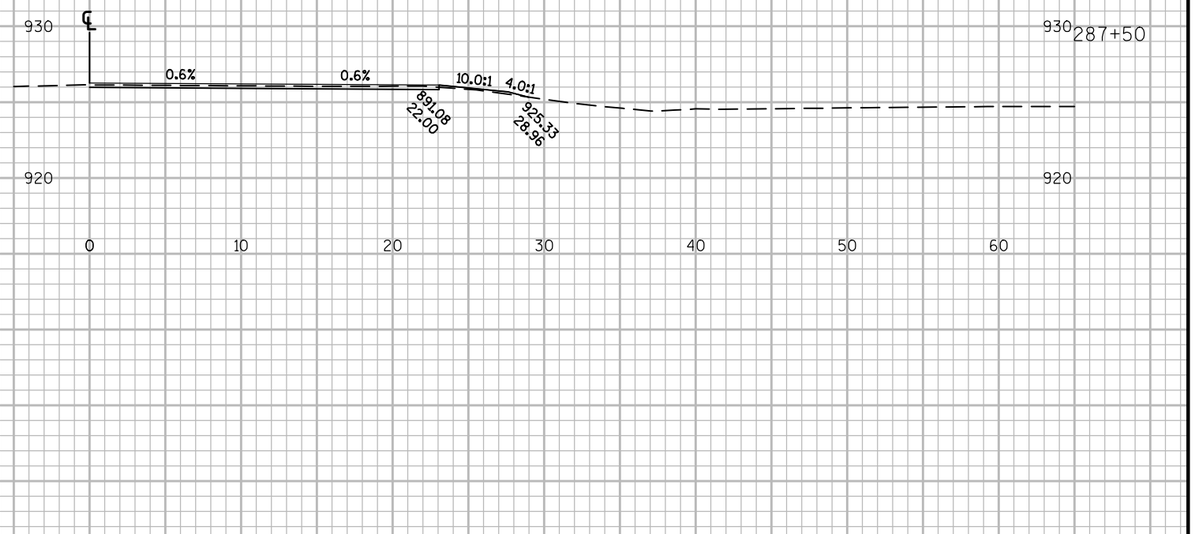
(1) ASPHALTIC PAVEMENT IS INCLUDED IN THE QUANTITY OF UNCLASSIFIED EXCAVATION. ASPHALTIC

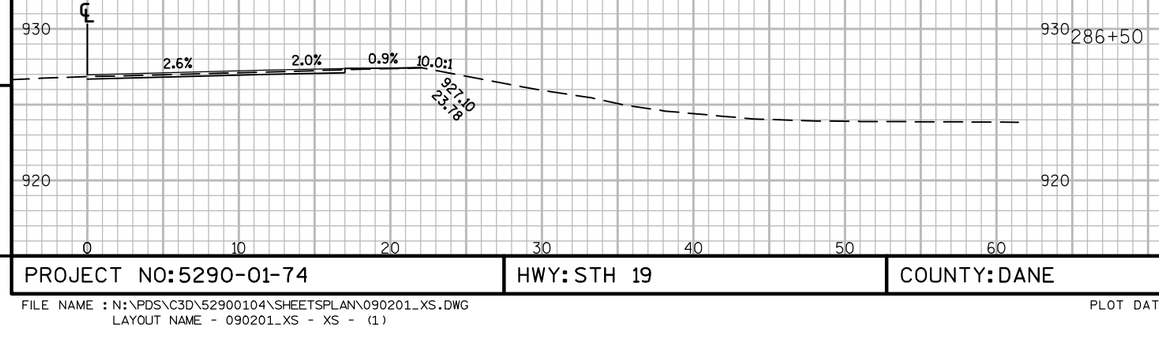
(2) USEABLE MATERIAL = UNCLASSIFIED EXCAVATION - SALVAGED ASPHALT

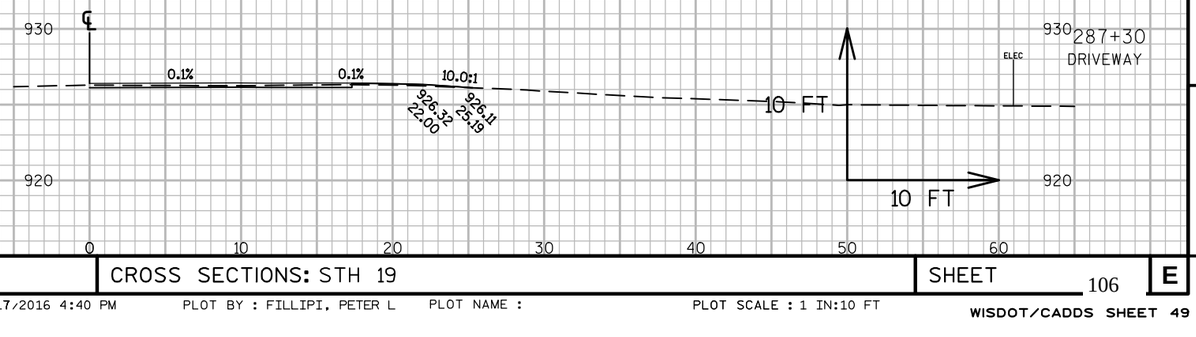












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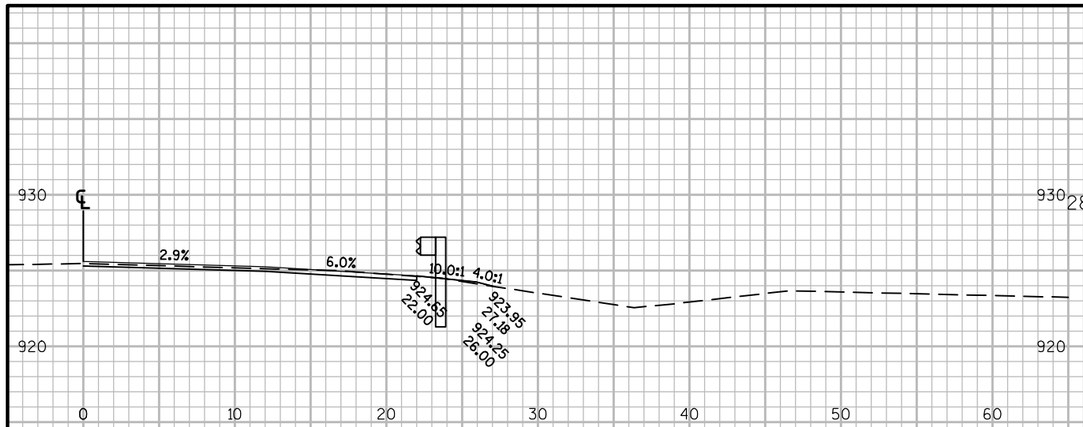
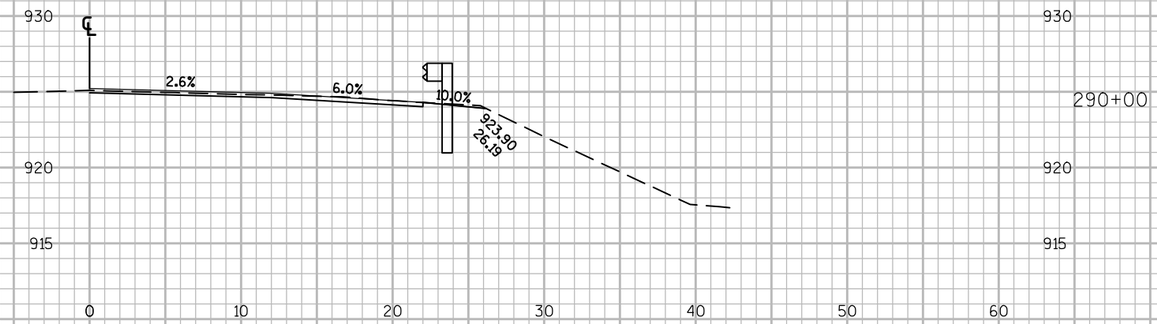
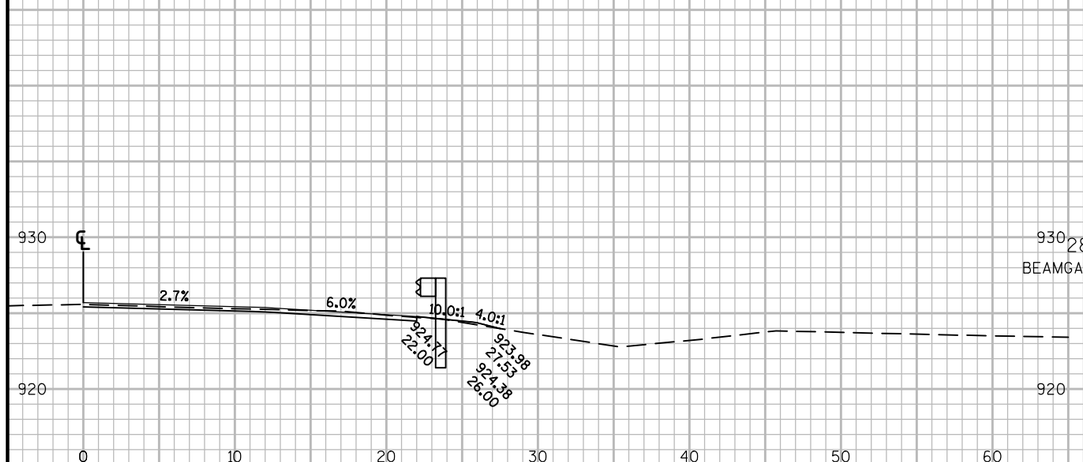
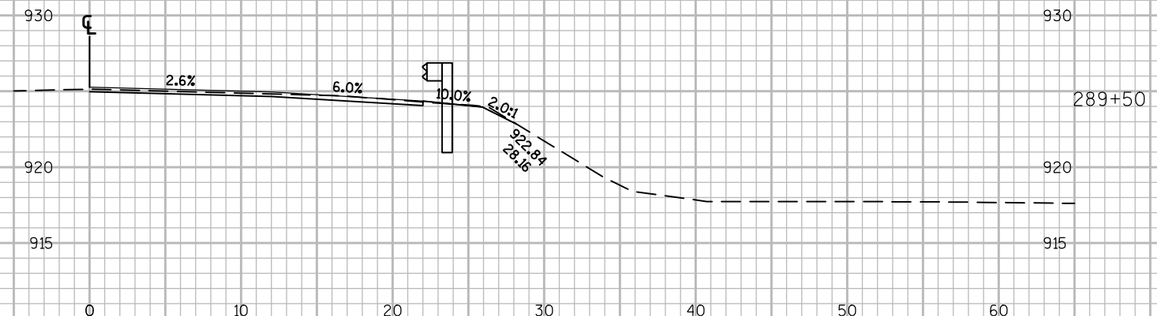
9

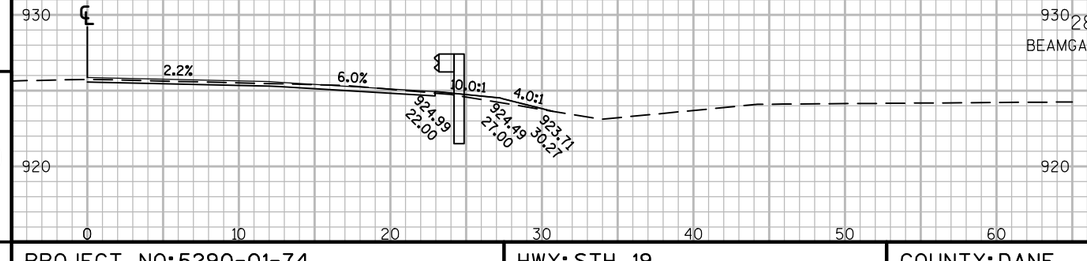
PROJECT NO: 5290-01-74	HWY: STH 19	COUNTY: DANE	CROSS SECTIONS: STH 19	SHEET 106	E

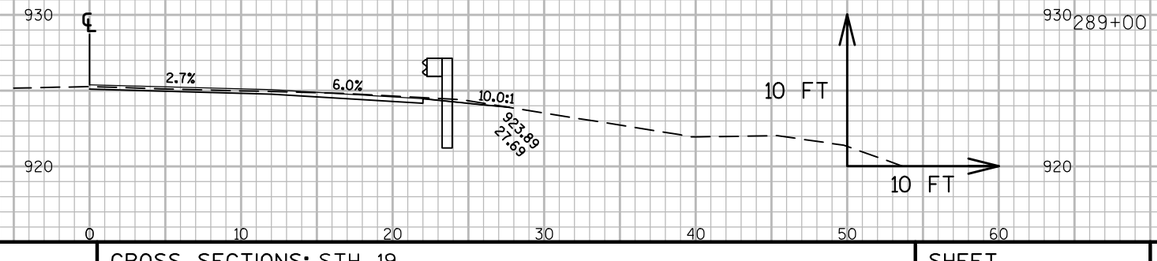












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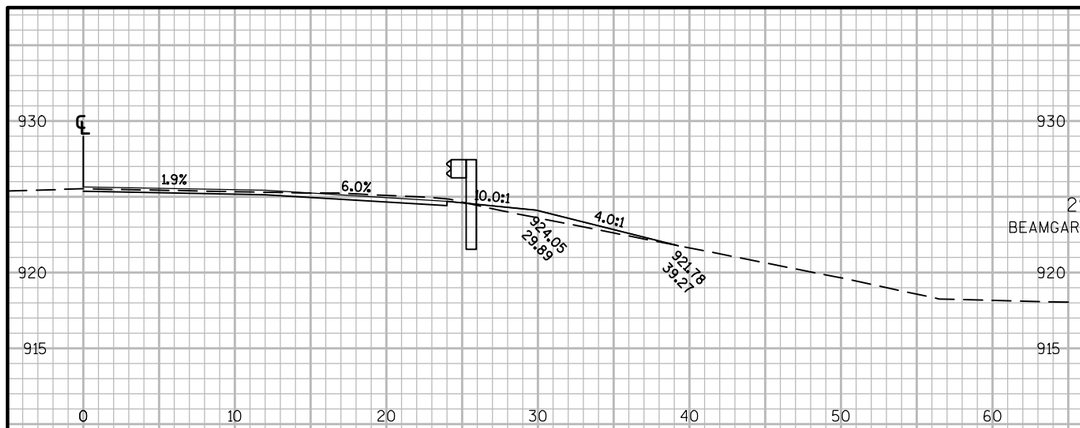

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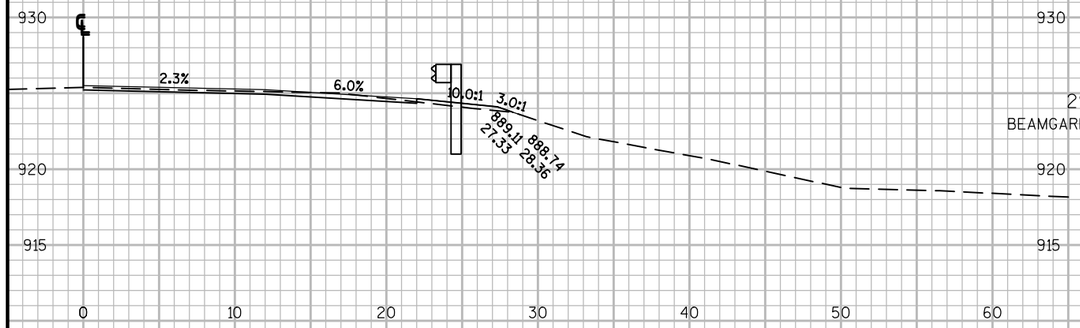
BEAMGARD POST 1

292+25



291+05
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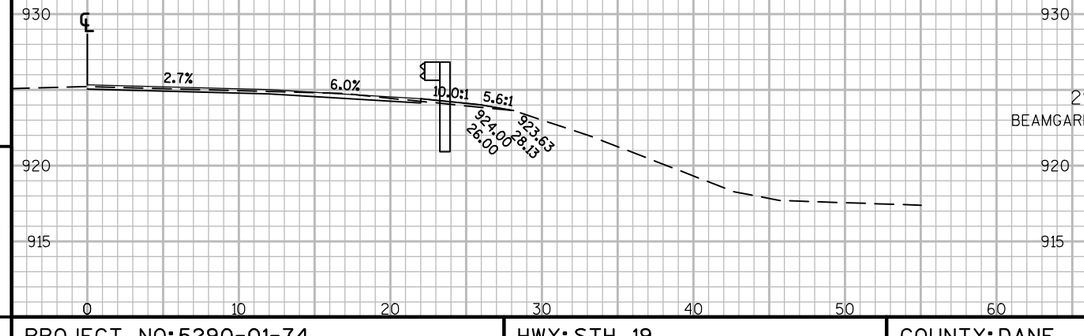
292+00



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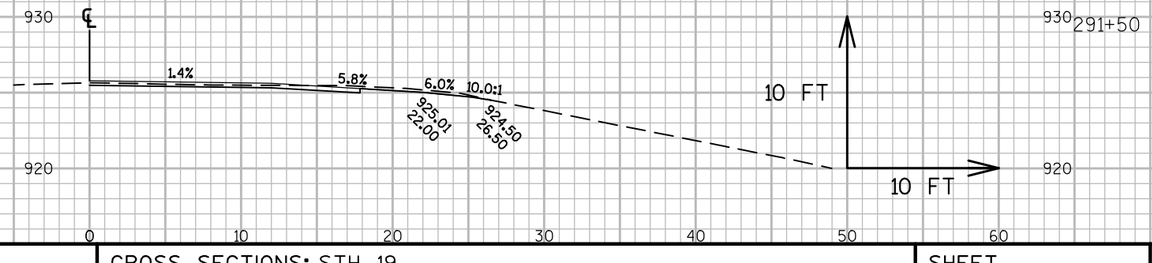

291+50

9

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PROJECT NO:5290-01-74	HWY: STH 19	COUNTY: DANE	CROSS SECTIONS: STH 19	SHEET	E

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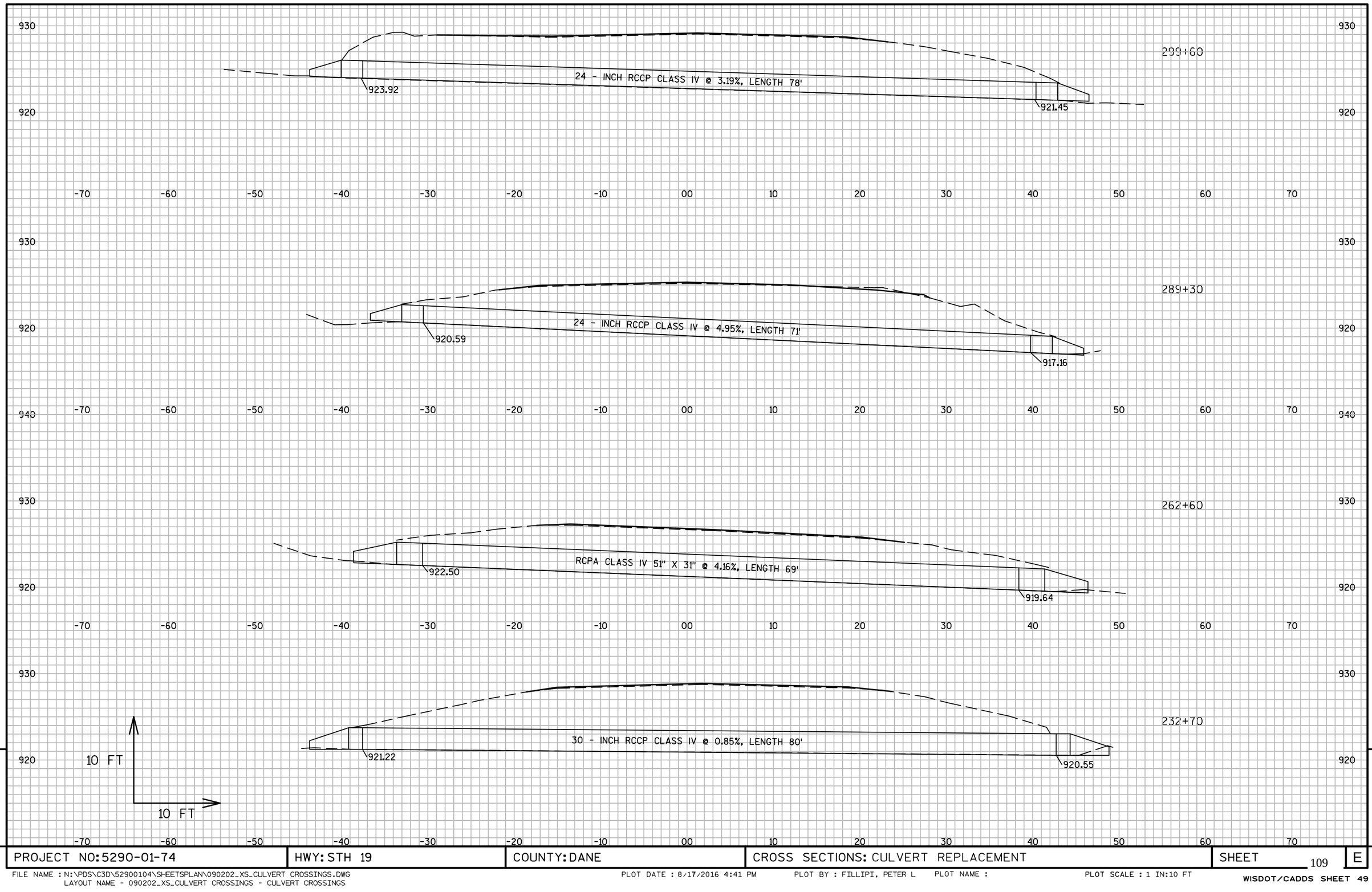
WISDOT/CADDS SHEET 49



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PLOT DATE : 8/17/2016 4:41 PM PLOT BY : FILLIPI, PETER L PLOT NAME : PLOT SCALE : 1 IN:10 FT

Wisconsin Department of Transportation

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