WKE

PROJECT ID: 1410-12-70

COUNTY: WASHINGTON

DEC 2013

ORDER OF SHEETS

TOTAL SHEETS = 130

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1410-12-70		

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

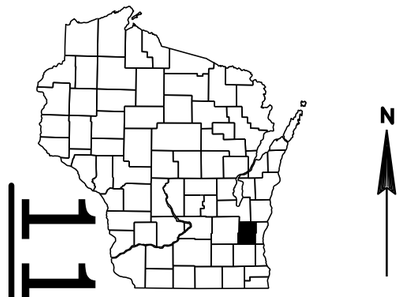
WASHINGTON STREET, CITY OF WEST BEND

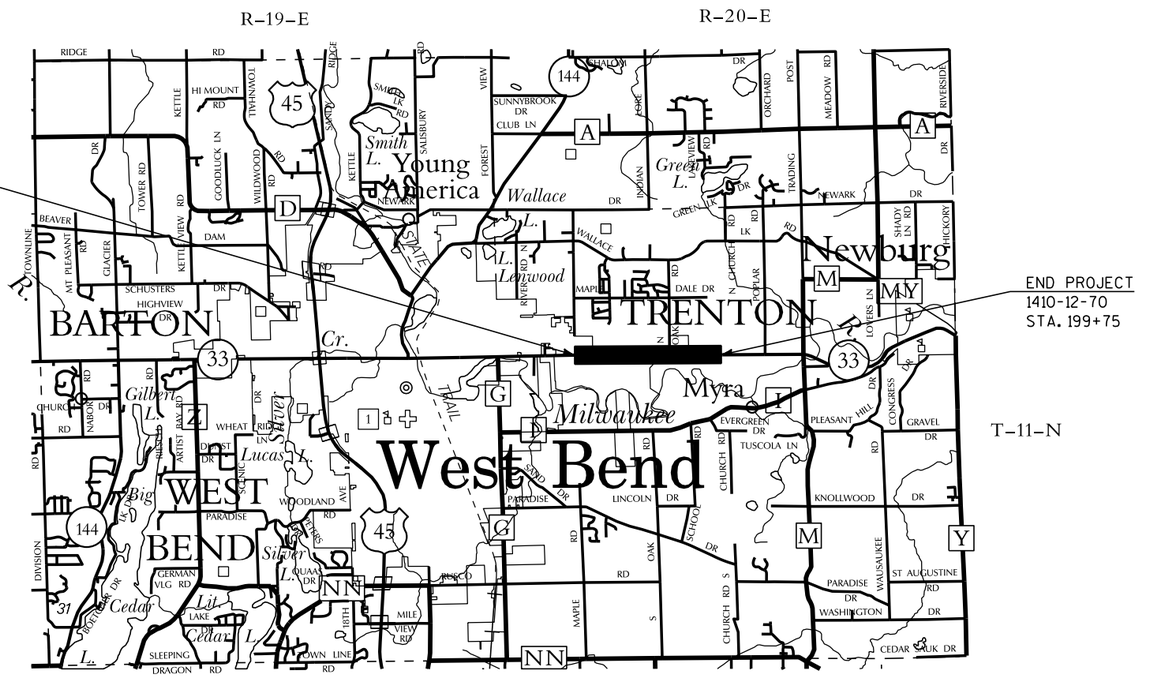
TRENTON ROAD TO 4000' E OF OAK ROAD

STH 33

WASHINGTON COUNTY

STATE PROJECT NUMBER
1410-12-70





LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 1.987 MI.

-"COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), WASHINGTON COUNTY NAD 83 (2007)."
-"ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF NAVD 88 (2007)."

DESIGN DESIGNATION

A.A.D.T. (2014)	=	8,200
A.A.D.T. (2034)	=	9,400
D.H.V.	=	6.2%
D.D.	=	58/42
T.	=	7.8%
DESIGN SPEED	=	60
ESALS	=	1,627,900

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

PREPARED BY

Surveyor	WISDOT/ RA SMITH
Designer	PRIYA MITRA
Project Manager	JOHN KANZENBACH
Regional Examiner	RICHARD HERRICK
Regional Supervisor	BENEDICT ERUCHALU
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 8-01-2013 (Signature)

E

GENERAL NOTES

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 NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK.

THE EXISTING MAIL BOXES AND SIGNS SHALL REMAIN IN PLACE. CONTRACTOR SHALL PROTECT FROM DAMAGE AND COMPLETE HIS SHOULDER WORK AROUND THESE ITEMS.

STATIONING, DISTANCES AND OFFSETS FOR SIGNS ARE APPROXIMATE AND THE EXACT LOCATIONS OF SIGNS ARE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

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

THE EXISTING DRIVEWAY AND FIELD ENTRANCES WILL BE RESTORED IN KIND, EXCEPT AS NOTED OR AS DIRECTED BY THE ENGINEER.

RETOPSOIL OF GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. SEED, FERTILIZE, AND MULCH/EROSION MAT TOP-SOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDER DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED FOR MORE THAN (14) CALENDER DAYD, SEED THOSE AREAS WITH TEMPORARY SEED.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDER DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED.

EROSION CONTROL BMP'S ARE SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTIOS ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINESTHAT THE BMP IS NO LONGER REQUIRED.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

PAVED SHOULDERS SHALL BE EXPANDED TO FIVE FEET TO ACCOMMODATE BICYCLES.

CONTRACTOR MUST CONTACT THE PROJECT ENGINEER AND THE WASHINGTON COUNTY SURVEYOR , SCOTT SCHMIDT, AT LEAST TWO WEEKS PRIOR TO WORK NEAR ANY PUBLICSURVEY MONUMENT.

PAVEMENT TYPE	TOTAL PAVEMENT THICKNESS	LAYERS	NOMINAL MAXIUM GRADATION	ASPHALTIC MATERIAL
E-3	5"	1 3/4" LOWER 3 1/4" UPPER	12.5 mm 12.5 mm	PG58-28 PG58-28
E-3	4"	1 3/4" LOWER 2 1/4" UPPER	12.5 mm 12.5 mm	PG58-28 PG58-28

UTILITIES CONTACTS

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Fax: (414) 221-2336
dan.sande@we-energies.com

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Fax: (414) 221-2336
dan.sande@we-energies.com

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Mr. Tom Harycki
Charter Communications
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West Bend, WI 53095
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Cell: (920) 375-6194
Fax: (262) 306-9021
tharycki@chartercom.com

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c/o Northwind Technical Services
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Ms, Karin Ewold, Area Manager
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ke3543@att.com

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Eden, WI 53019
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Fax: (920) 477-2240
lawrence.huber@elpaso.com

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Ms. Barbara Davies, Clerk
Trenton, Town of
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PO Box 259
Newburg, WI 53060 0259
Phone: (262) 675-6009

Monica Diaz
Scenic Drive Sanitary District
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West Bend, WI 53095
Phone (262) 675-6009

Mr. Mike Olsen
ATC Management, Inc.
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Phone: (920) 338-6582
molsen@atcllc.com

Mr. Michael Norris, Right of Way Agent
West Shore Pipeline Company
C/O Buckeye Partners, L.P.
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East Chicago, IN 46312
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Fax: (219) 397-6138
mrnorris@buckeye.com

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wbwu@ci.west-bend.wi.us

OTHER CONTACTS

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West Bend Municipal Airport
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Fax: (262) 335-5182
retzlaffj@ci.west-bend.wi.us

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Wisconsin Dept. of Natural Resources
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West Bend, WI 53095-2003
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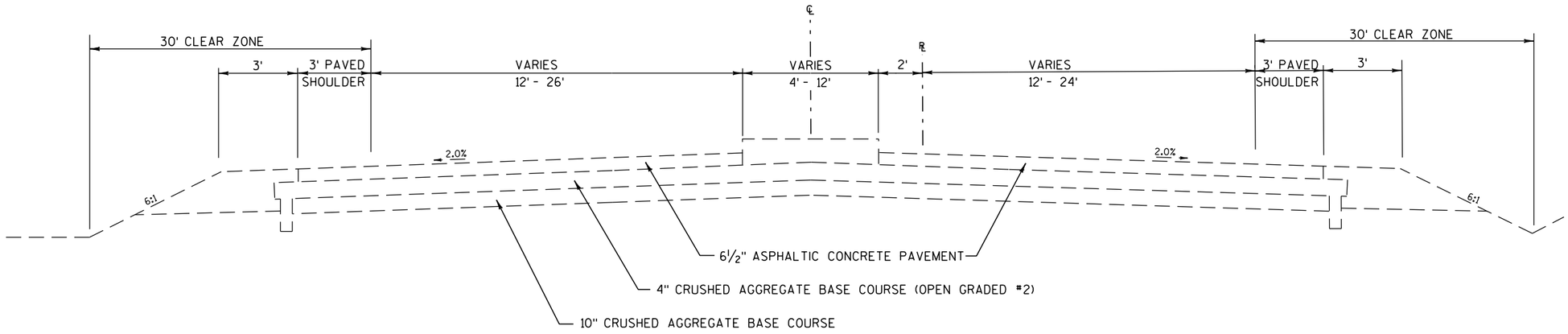
Fax: (262) 335-4171
scott.schmidt@co.washington.wi.us

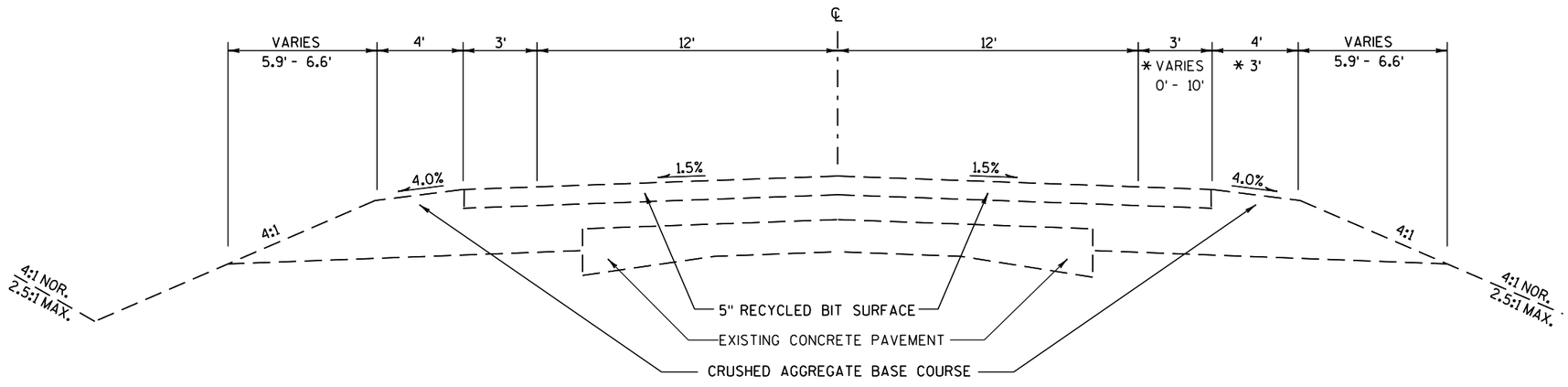
Mr. John Kanzenbach,P.E
Wisconsin Department of Transportation
141 NW Barstow street,
Waukesha,WI-53188
Phone:262-548-6467
John.kanzenbach@wi.dot.gov
DOT PROJECT MANAGER

2



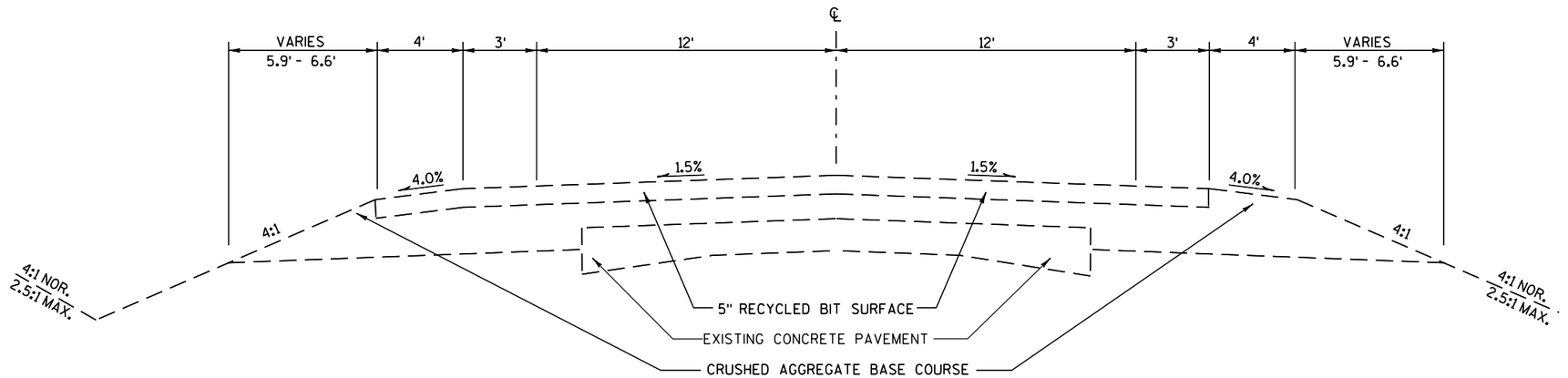
EXISTING TYPICAL SECTION
STH 33

STA. 94+60 - 96+26



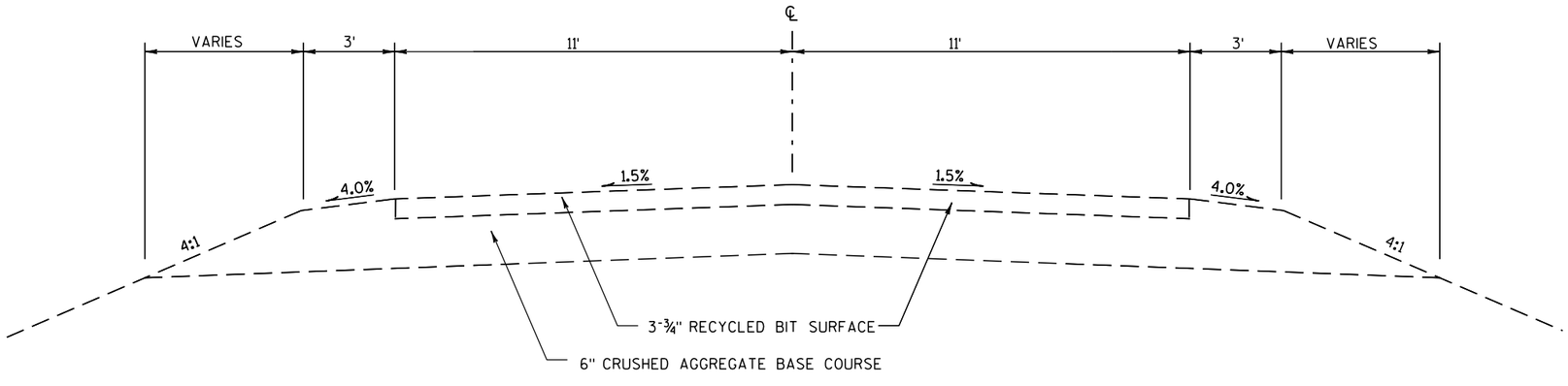
EXISTING TYPICAL SECTION
STH 33

STA. 96+26 - 108+70
STA. 121+25 - 156+30
* STA. 156+30 - 162+40
STA. 162+40 - 199+75 NOTE: STA. 161+30 - 199+75 (1.5" ADDITIONAL OVERLAY)



EXISTING TYPICAL SECTION
STH 33

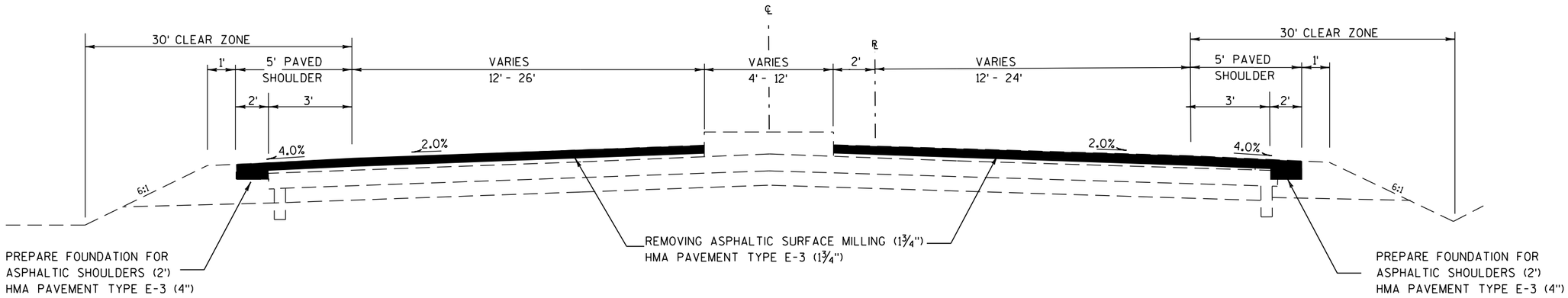
STA. 108+70 - 121+25



EXISTING TYPICAL SECTION
OAK ROAD

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	TYPICAL SECTIONS	SHEET 4	E

2



FINISHED TYPICAL SECTION
STH 33

STA. 94+60 - 96+26

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	TYPICAL SECTIONS	SHEET 5	E

FILE NAME : J:\projects\D2_14101233\020301_TS.dgn PLOT DATE : 30-JUL-2013 12:54 PLOT BY : ditj3s PLOT NAME : PLOT SCALE : 200:1

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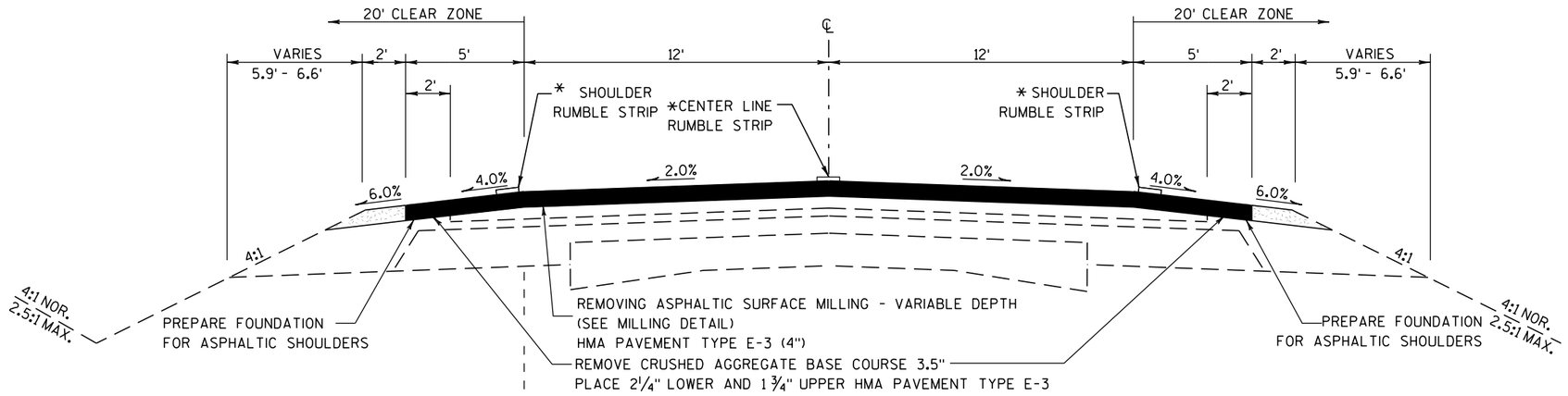
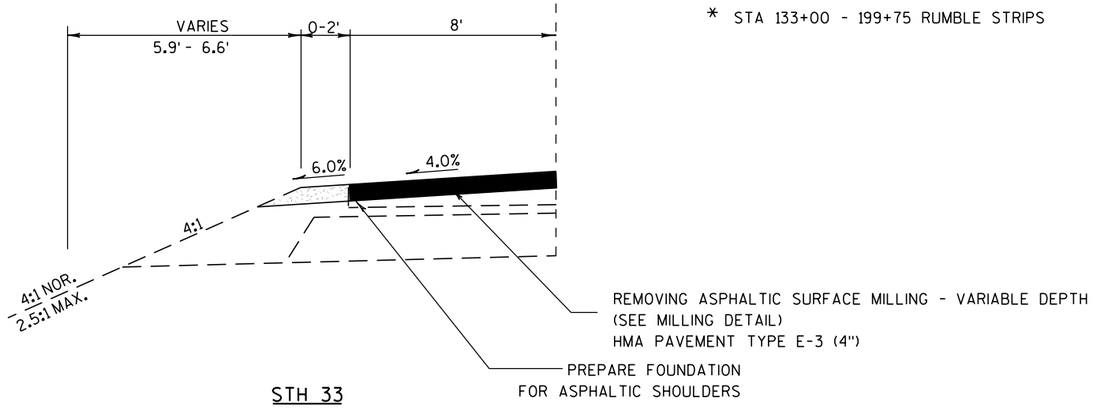


FINISHED TYPICAL SECTION
STH 33

STA. 96+26 - 155+56

STA. 163+48 - 199+75

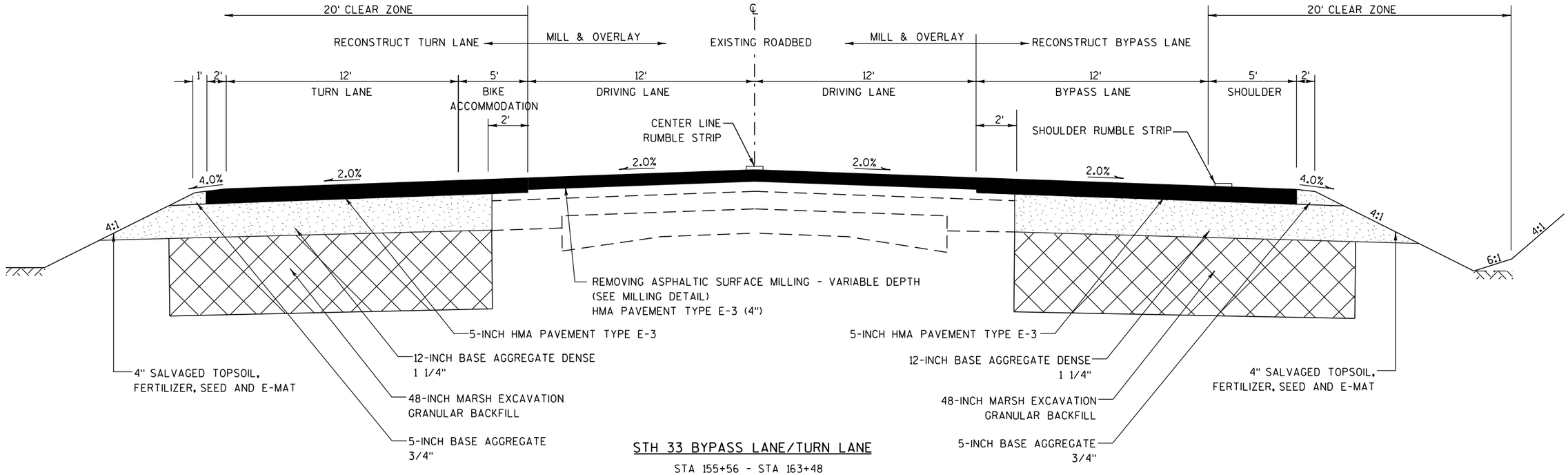
* STA 133+00 - 199+75 RUMBLE STRIPS



STH 33

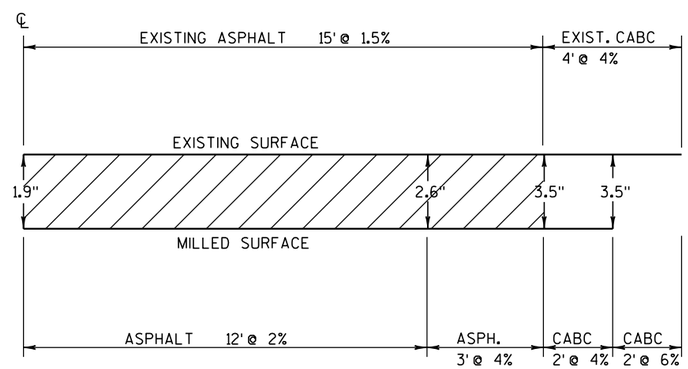
STA. 102+25 - 130+05, LT

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	TYPICAL SECTIONS	SHEET 6	E



STH 33 BYPASS LANE/TURN LANE

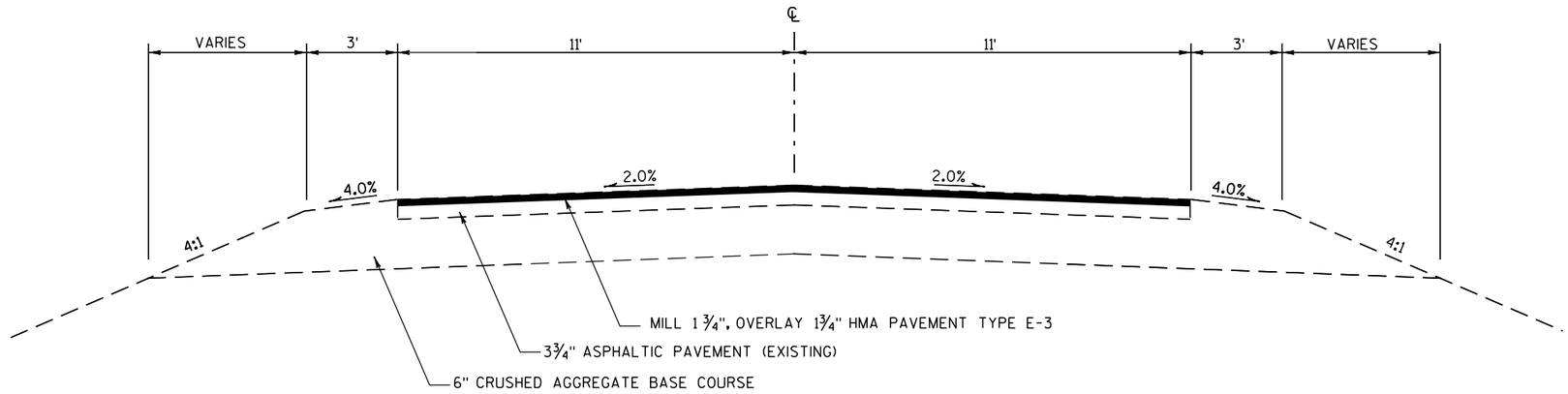
STA 155+56 - STA 163+48



MILLING DETAIL

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	TYPICAL SECTIONS	SHEET 7	E

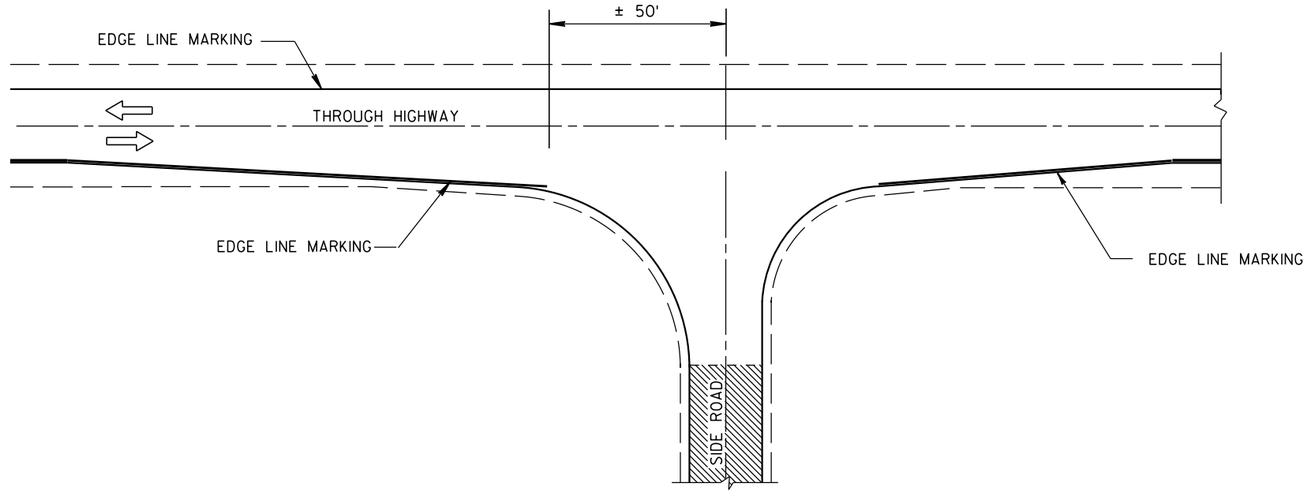
2



PROPOSED TYPICAL SECTION
OAK ROAD

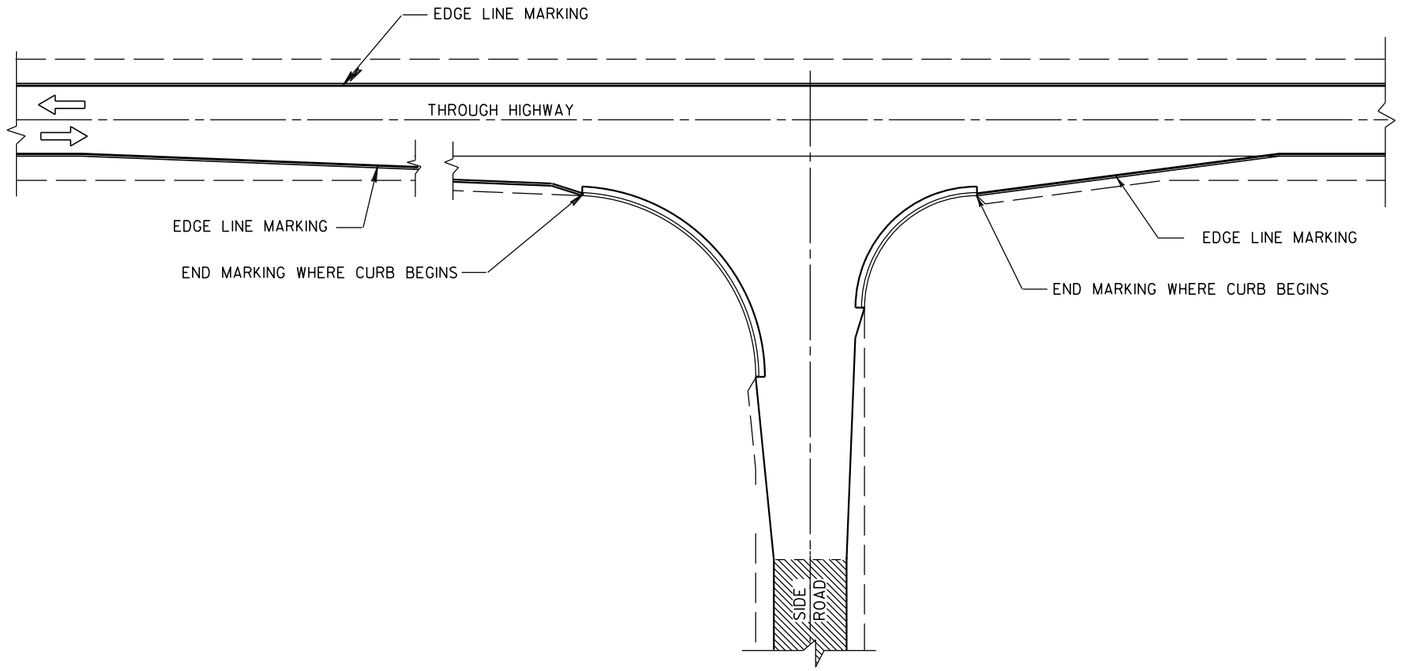
PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	TYPICAL SECTIONS	SHEET 8	E

2



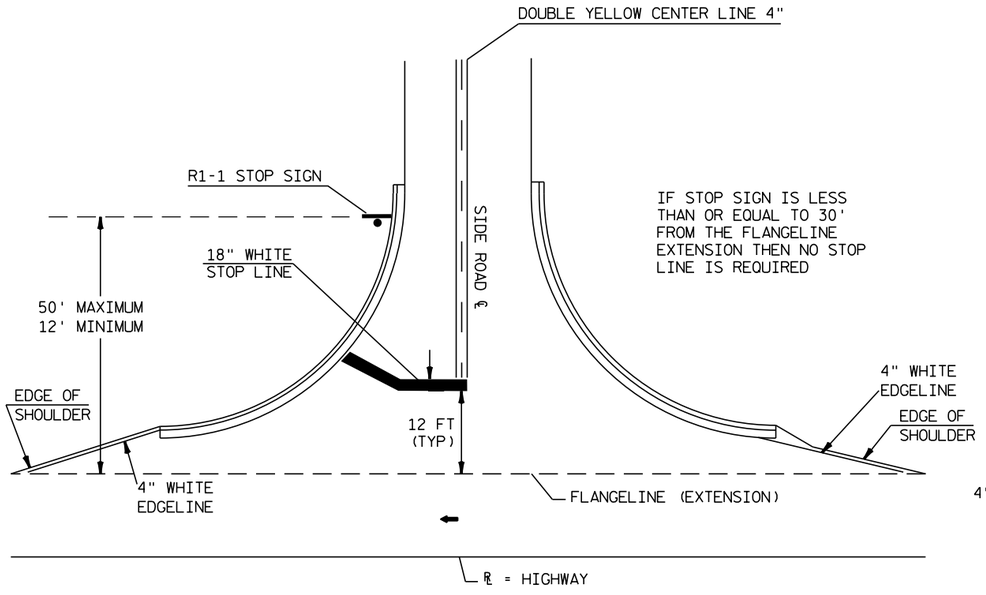
MINOR INTERSECTION WITHOUT CURBS

(TYPICAL MARKING)

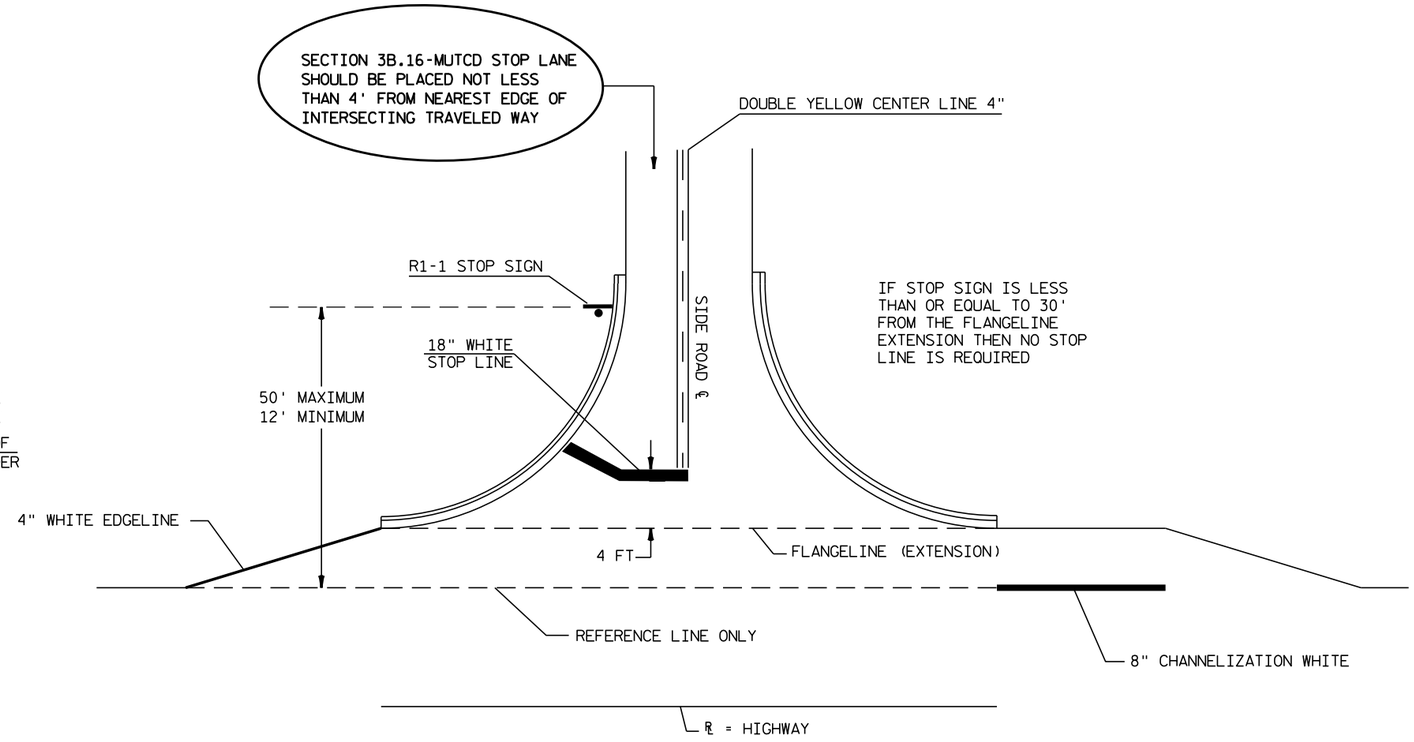


MINOR INTERSECTION WITH CURBS

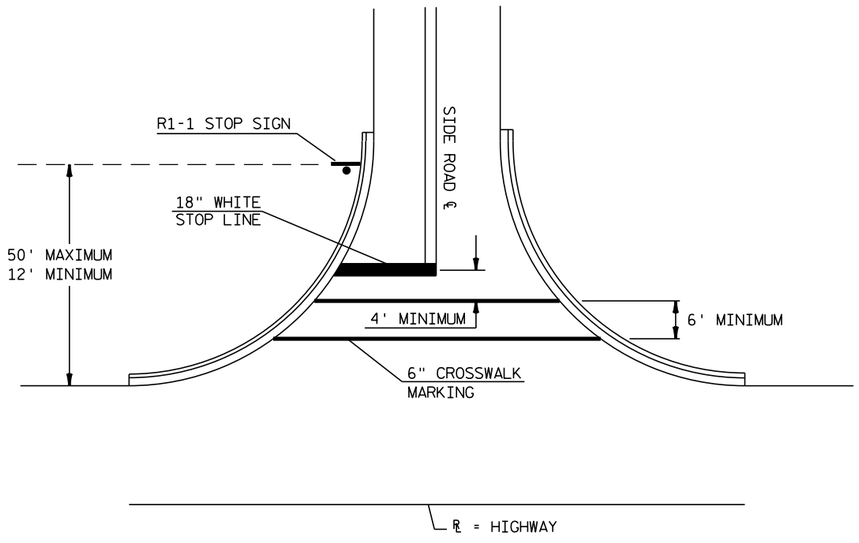
(TYPICAL MARKING)



TYPICAL PAVEMENT MARKING FOR SIDEROADS



TYPICAL PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



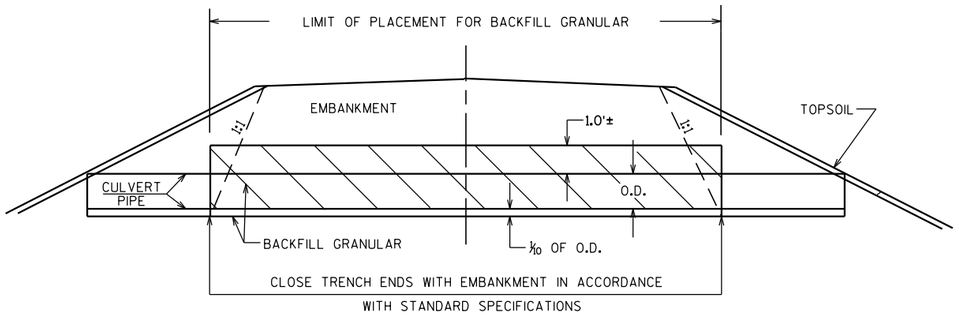
TYPICAL PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

NOTES:

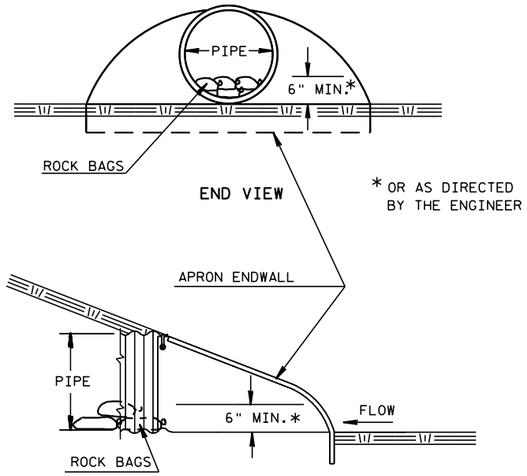
18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.

STOP LINES REQUIRED WHERE:

- CROSSWALK MARKINGS EXIST OR BEING PROVIDED
- LARGE RADII
- OFFSET LEFT TURNS WHERE STOP BAR FOR LEFT TURN IS SET BACK FROM THRU MOVEMENT.



CULVERT BACKFILL DETAIL

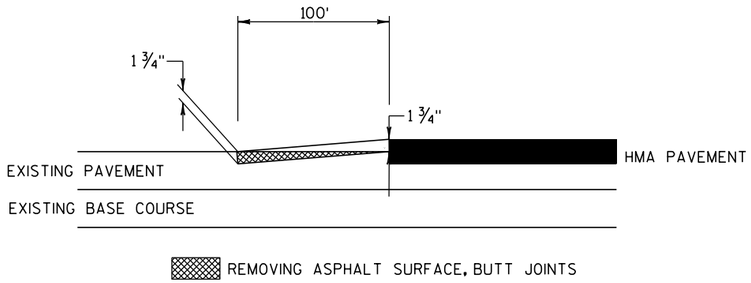


SIDE VIEW

CULVERT PIPE DITCH CHECK

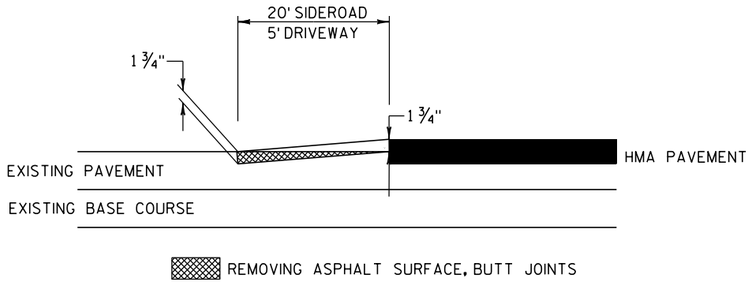
(INSTALL ON INLET END ONLY)
SEE EROSION CONTROL PLAN FOR LOCATIONS

2



BUTT JOINT DETAIL - MAINLINE

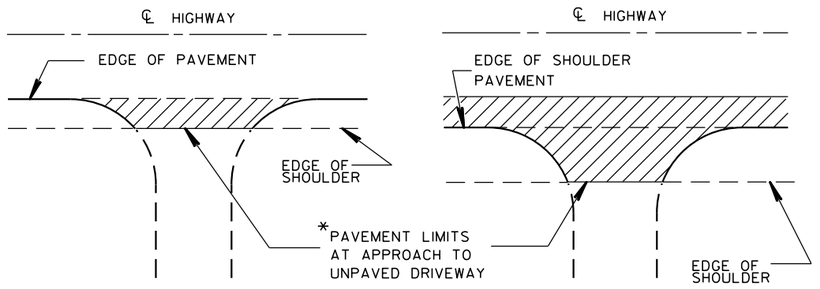
(SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS)



BUTT JOINT DETAIL

SIDEROADS & DRIVEWAYS

(SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS)



RURAL DRIVEWAY INTERSECTION DETAIL

2

2

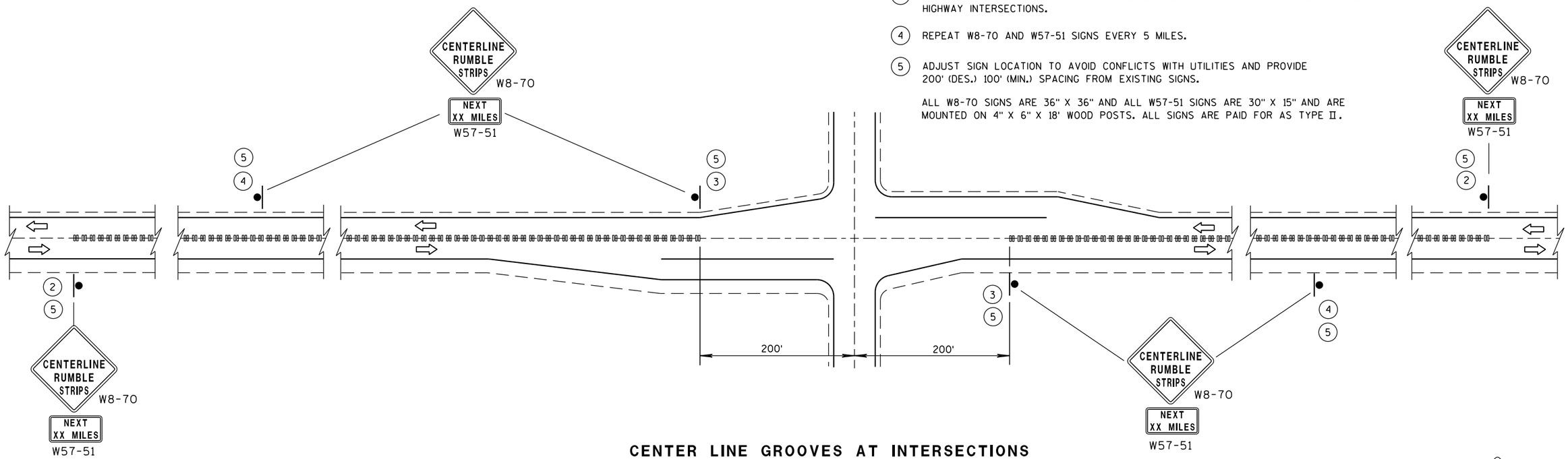
(2) INSTALL W8-70 AND W57-51 SIGNS AT BEGINNING OF CENTERLINE RUMBLE STRIP SEGMENT.

(3) REPEAT W8-70 AND W57-51 SIGNS AFTER STATE TRUNK HIGHWAY AND COUNTY TRUNK HIGHWAY INTERSECTIONS.

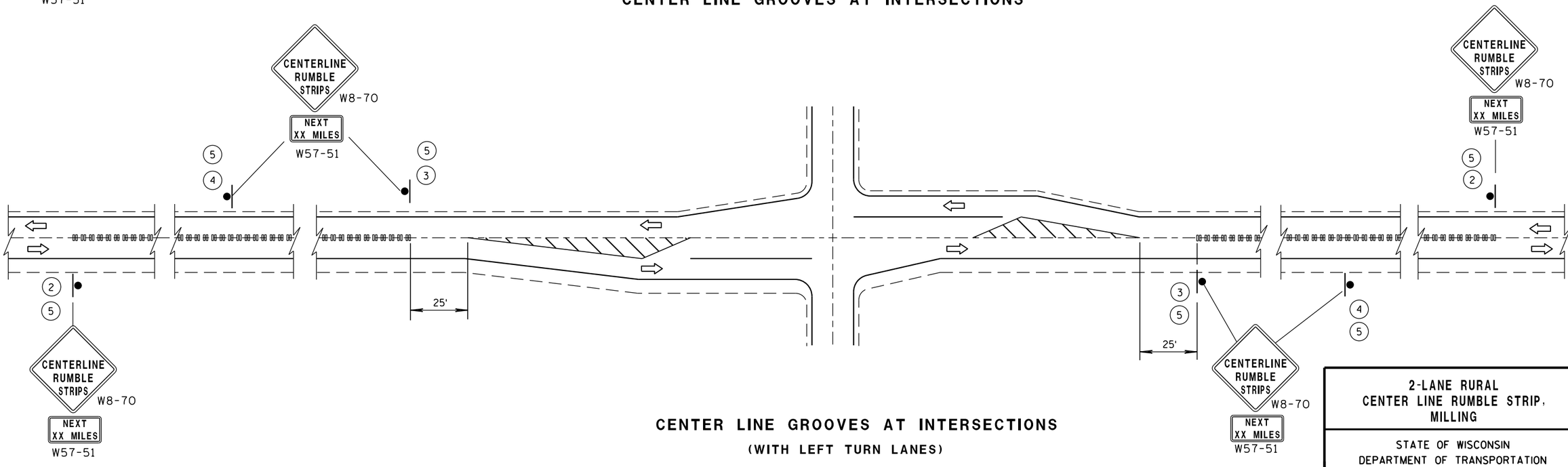
(4) REPEAT W8-70 AND W57-51 SIGNS EVERY 5 MILES.

(5) ADJUST SIGN LOCATION TO AVOID CONFLICTS WITH UTILITIES AND PROVIDE 200' (DES.) 100' (MIN.) SPACING FROM EXISTING SIGNS.

ALL W8-70 SIGNS ARE 36" X 36" AND ALL W57-51 SIGNS ARE 30" X 15" AND ARE MOUNTED ON 4" X 6" X 18' WOOD POSTS. ALL SIGNS ARE PAID FOR AS TYPE II.



CENTER LINE GROOVES AT INTERSECTIONS



CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)

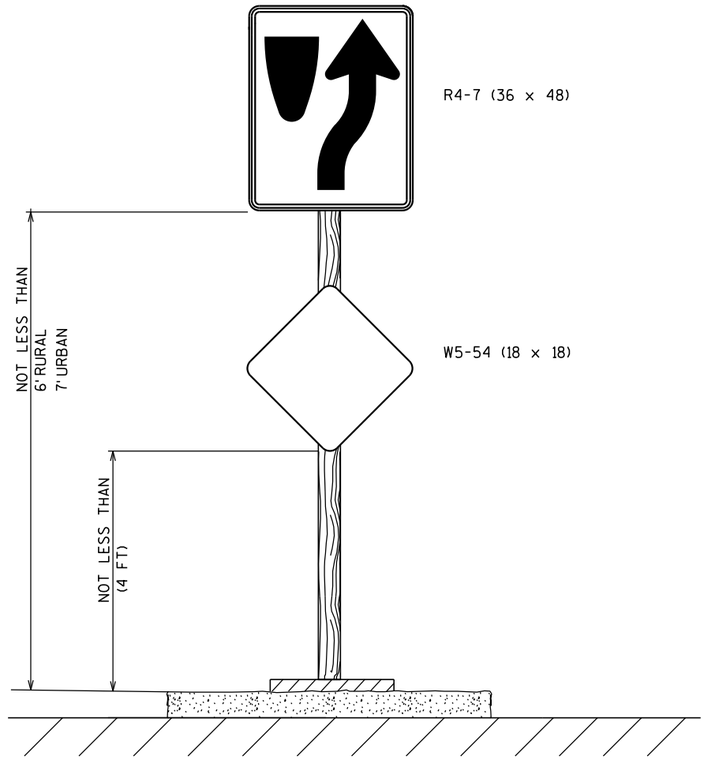
2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	RUMBLE STRIP DETAIL	SHEET 13	E

FILE NAME : J:\projects\D2_14101233\Sign\SIGN_DETAIL.DGN PLOT DATE : 22-JUL-2013 10:30 PLOT BY : dotbgw PLOT NAME : PLOT SCALE : 1.666667:1

2



TYPICAL INSTALLATION FOR
TRANSITION TO DIVIDED HIGHWAY
OR OTHER SPECIAL NEEDS AREAS

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	TYPICAL DETAIL - SIGN ON MEDIAN NOSE	SHEET 14	E

2

N

100'

157+73

158+73

2'

5'

155

153+00

154+00

155+00

STH 33

156+00

157+00

158+00

159

12'

14'

14'

12'

12'

5'

STH 33

SIGN

R/W

SLOPE INTERCEPT

155+56

157+73

217'

250'

LEGEND

X X X SAWING ASPHALT

BUTT JOINT

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	INTERSECTION DETAIL	SHEET 15	E

2

HEIGHT MOD

OAK RD

STA 158+73
OFFSET 69.00' LT

36" CURB
& GUTTER
TYPE D

36" CURB & GUTTER TYPE D
STA 160+03.5
OFFSET 91.00' LT

R/W

40'R FLANGE

60'R FLANGE

SLOPE INTERCEPT

N

11+00

10+00

BP: 10+00.00

160+00

161+00

162+00

163+00

164+00

160+03

161+03

162+53

100'

150'

15'

12'

14'

9'

5'

STH 33

R/W

SLOPE INTERCEPT

160+23

163+48

250'

325'

OAK ROAD FLANGE GRADES

FLANGE GRADES LT	
STATION	ELEV.
10+30	862.32
10+40	862.20
10+50	861.93
10+60	861.61
10+70	861.87

FLANGE GRADES RT	
STATION	ELEV.
10+30	862.26
10+40	862.00
10+50	861.79 (LP)
10+60	861.84
10+70	861.89
10+88	862.11

LEGEND

X X X SAWING ASPHALT

BUTT JOINT

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	INTERSECTION DETAIL	SHEET 16	E

2

N

R/W

SLOPE INTERCEPT

155

153+00

STH 33

154+00

155+00

156+00

157+00

158+00

159

STH 33

R/W

SLOPE INTERCEPT

SIGN

EROSION CONTROL LEGEND

SILT FENCE

EROSION CONTROL MAT CLASS I, TYPE B

EROSION CONTROL MAT CLASS II, TYPE B (DITCH BOTTOM)

CULVERT PIPE CHECKS

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	EROSION CONTROL	SHEET 17	E

2

2

HEIGHT MOD

OAK RD

N

R/W

INVERT
859.31

OUTFALL
858.91

SLOPE INTERCEPT

0.50%
19X30

11+00

10+00

BP: 10+00.00

159+00

160+00

161+00

162+00

163+00

164+00

STH 33

0.64%
18" CMP

OUTFALL
859.82

R/W

SLOPE INTERCEPT

INVERT
860.04

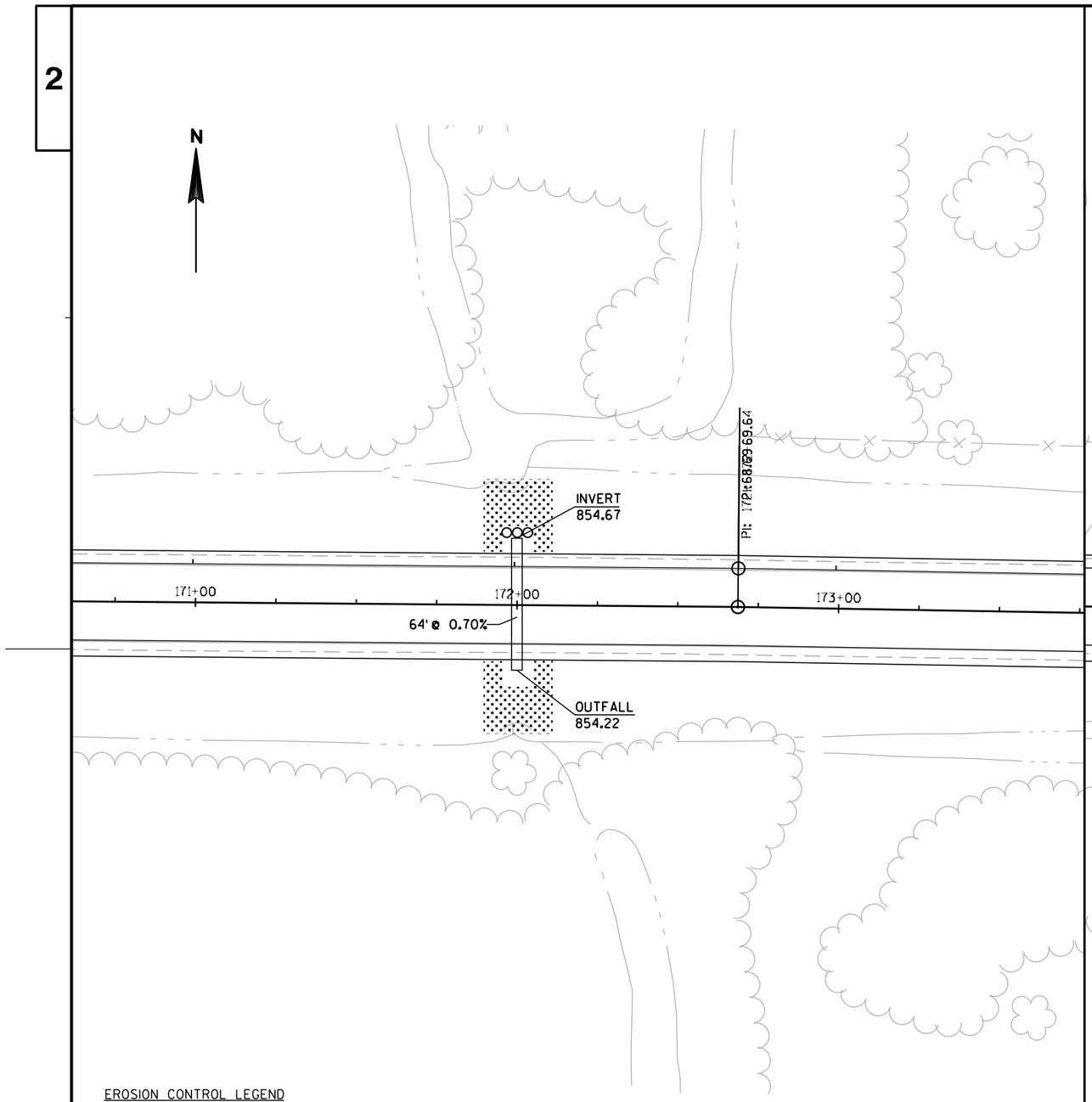
EROSION CONTROL LEGEND

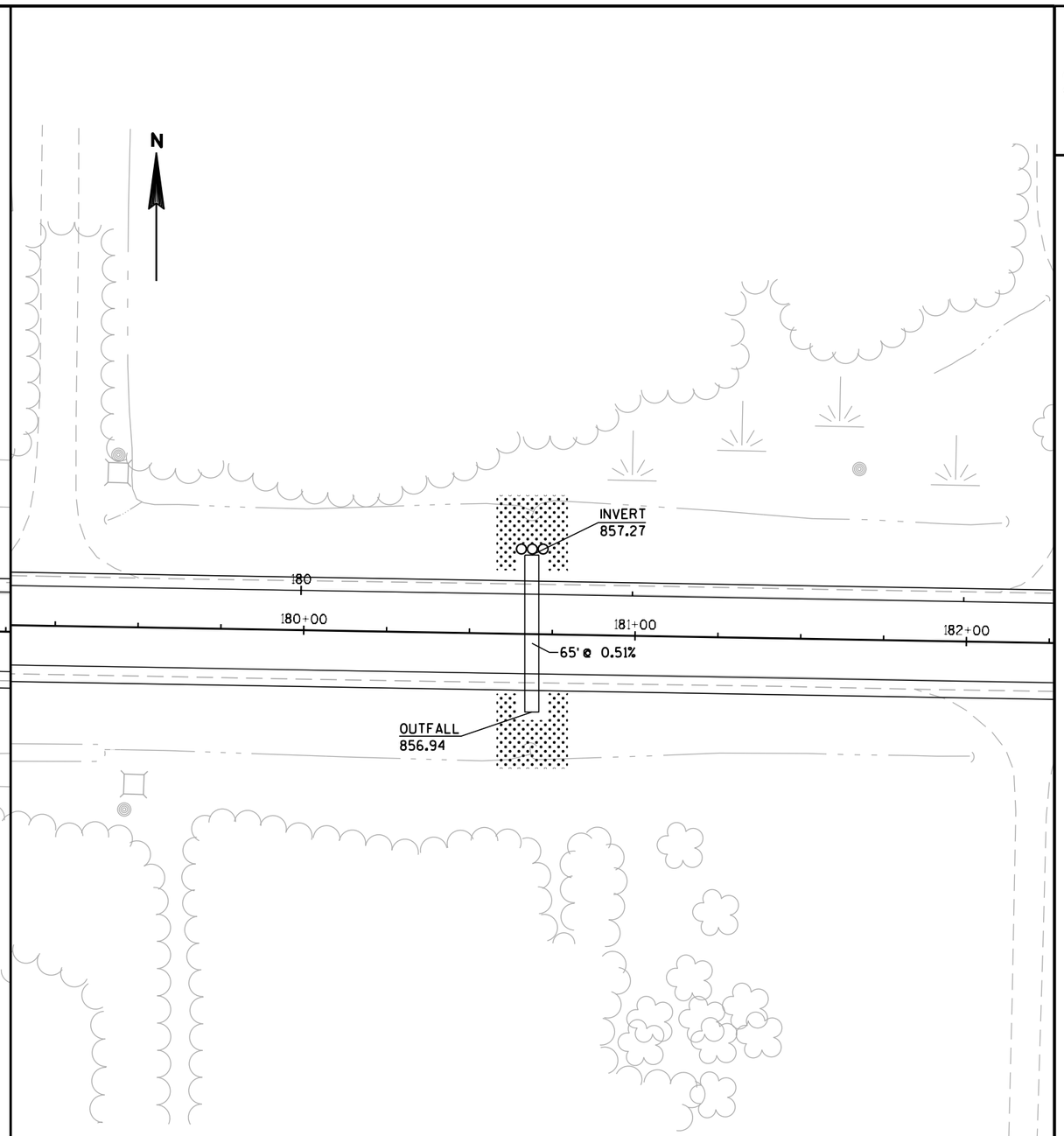
- SILT FENCE
- EROSION CONTROL MAT CLASS I, TYPE B
- EROSION CONTROL MAT CLASS II, TYPE B (DITCH BOTTOM)
- CULVERT PIPE CHECKS

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	EROSION CONTROL	SHEET 18	E

FILE NAME : J:\projects\D2_14101233\022002_EC.dgn PLOT DATE : 24-SEP-2013 12:30 PLOT BY : ditj3s PLOT NAME : PLOT SCALE : 40:1

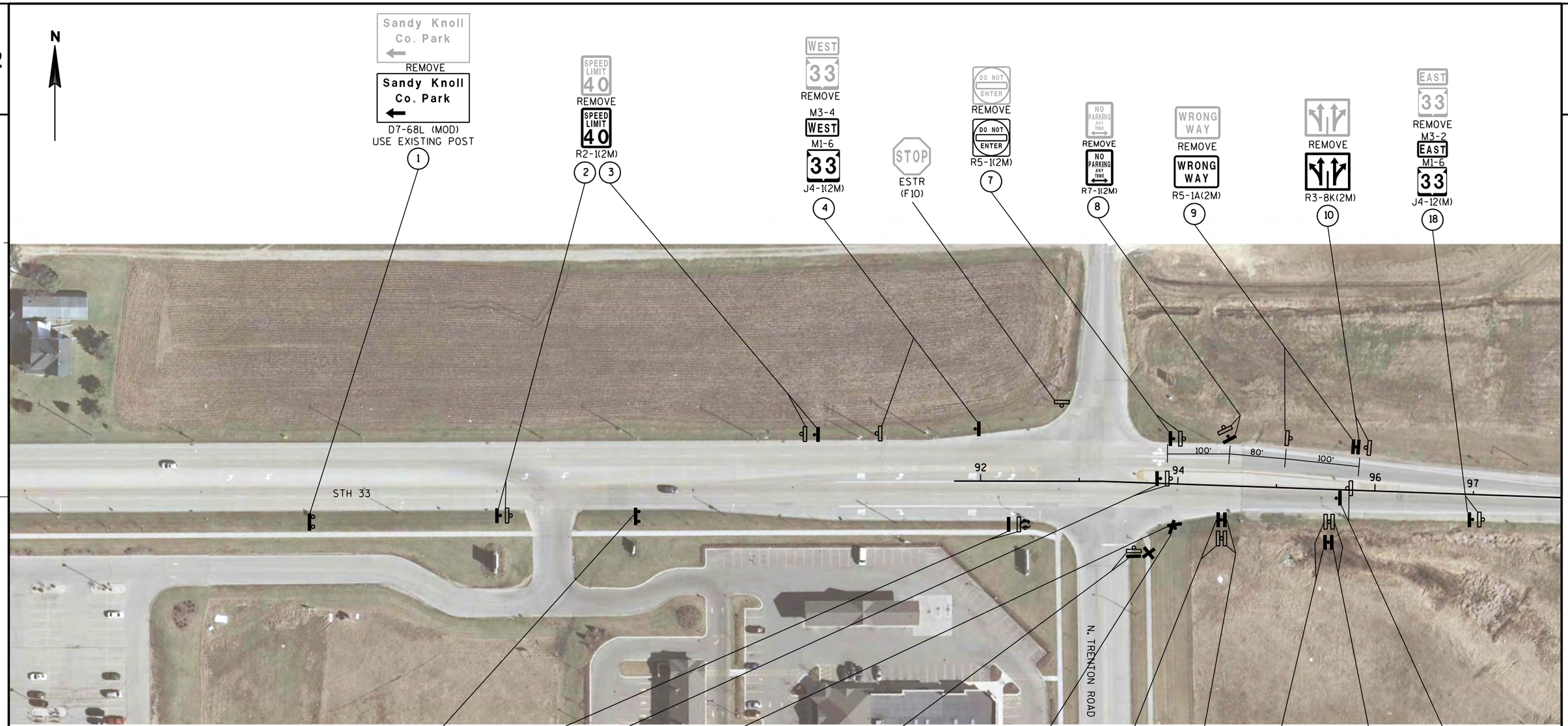
WISDOT/CADDS SHEET 42





EROSION CONTROL LEGEND

- SILT FENCE
- EROSION CONTROL MAT CLASS I, TYPE B
- EROSION CONTROL MAT CLASS II, TYPE B (DITCH BOTTOM)
- CULVERT PIPE CHECKS



LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- ESTR EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- EXISTING (LIGHT OR SIGNAL) POLE
- (XXX) DENOTES SIGN NUMBER
- ( ) DENOTES DATE STICKER

SHEET 1 OF 9

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 20	E

FILE NAME : J:\projects\D2_14101233\Sign\023201_PS.dgn PLOT DATE : 22-JUL-2013 10:29 PLOT BY : dotbgw PLOT NAME : PLOT SCALE : 100:1

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- ESTR EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- EXISTING (LIGHT OR SIGNAL) POLE
- (XXX) DENOTES SIGN NUMBER
- ( ) DENOTES DATE STICKER

N

2

19 — SPEED LIMIT 40 — REMOVE
19 — SPEED LIMIT 40 — R2-1(3)

21 — REMOVE
21 — W6-1(2M)

22 — Sandy Knoll Co. Park — REMOVE
22 — Sandy Knoll Co. Park — D7-68R (MOD)

28 — National Guard Armory — REMOVE
28 — National Guard Armory — D1-55R

60 — CENTERLINE RUMBLE STRIPS — W8-70(2M)
61 — NEXT 2 MILES — W57-51(2M)
NOTE: SEE ATTACHED DETAIL

23 — SPEED LIMIT 50 — R2-1(2M)
INSTALL ON LIGHT POLE
SPEED LIMIT 50 — REMOVE

20 — NO PARKING ANY TIME — R7-1R(2M)

24 — Newburg 5 / Saukville 11 / Port Washington 13 — D2-3
Newburg 5 / Saukville 13 / Port Washington 16 — REMOVE
NOTE: NEW SIGN IS DIFFERENT DISTANCE, IT'S BASE ON STATEWIDE POLICY

25 — W6-3(2M)

ESTR

26 — NO PASSING ZONE — W14-3(2M)
NO PASSING ZONE — REMOVE

STOP — ESTR (F10)

29 — National Guard Armory — D1-55L
National Guard Armory — REMOVE

NOTE: PLACE NO PASSING PENNANTS PER "NO PASSING ZONE" ESTABLISHED.

SHEET 2 OF 9

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 21	E

FILE NAME : J:\projects\D2_14101233\Sign\023202_PS.dgn PLOT DATE : 22-JUL-2013 10:29 PLOT BY : dotbgw PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

N

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- ESTR EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- EXISTING (LIGHT OR SIGNAL) POLE
- (XXX) DENOTES SIGN NUMBER
- ( ) DENOTES DATE STICKER

SPEED LIMIT 50

West Bend Airport →

REMOVE

West Bend Airport →

D1-2

33

SPEED LIMIT 50

REMOVE

SPEED LIMIT 50

R2-1(2M)

31

← WEST BEND AIRPORT

D1-2

32

12 114 116 118 120 122 124 126

STH 33

EARL STTER DRIVE

AERIAL DRIVE

30

SPEED LIMIT 50

R2-1(2M)

STOP

ESTR (F11)

EXISTING STREET NAME SIGN INSTALL ON SEPERATE POST (BY TOWN OR CITY)

EXISTING STREET NAME SIGN INSTALL ON SEPERATE POST (BY TOWN OR CITY)

STOP

ESTR (F10)

SHEET 3 OF 9

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 22	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- ESTR EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- EXISTING (LIGHT OR SIGNAL) POLE
- (XXX) DENOTES SIGN NUMBER
- ( ) DENOTES DATE STICKER

N

2

SPEED LIMIT 50
REMOVE
SPEED LIMIT 50
R2-1(3)
35

SPEED LIMIT 50
ESTR
(F13)

34
SPEED LIMIT 55
R2-1(2S)
SPEED LIMIT 55
REMOVE

SHEET 4 OF 9

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 23	E

FILE NAME : J:\projects\D2_14101233\Sign\023204_PS.dgn PLOT DATE : 22-JUL-2013 10:29 PLOT BY : dotbgw PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

NOTE: NO SIGNS ON THIS SHEET

N

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- ESTR EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- EXISTING (LIGHT OR SIGNAL) POLE
- (XXX) DENOTES SIGN NUMBER
- ( ) DENOTES DATE STICKER

SHEET 5 OF 9

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 24	E

FILE NAME : J:\projects\D2_14101233\Sign\023205_PS.dgn PLOT DATE : 22-JUL-2013 10:29 PLOT BY : dotbgw PLOT NAME : PLOT SCALE : 100:1

2

N

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- ESTR EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- EXISTING (LIGHT OR SIGNAL) POLE
- (XXX) DENOTES SIGN NUMBER
- ( ) DENOTES DATE STICKER

2

SHEET 6 OF 9

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 25	E

FILE NAME : J:\projects\D2_14101233\Sign\023206_PS.dgn PLOT DATE : 22-JUL-2013 10:29 PLOT BY : dotbgw PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

NOTE: NO SIGNS ON THIS SHEET

N

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- ESTR EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- EXISTING (LIGHT OR SIGNAL) POLE
- (XXX) DENOTES SIGN NUMBER
- ( ) DENOTES DATE STICKER

SHEET 7 OF 9

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 26	E

FILE NAME : J:\projects\D2_14101233\Sign\023207_PS.dgn PLOT DATE : 22-JUL-2013 10:30 PLOT BY : dotbgw PLOT NAME : PLOT SCALE : 100:1

NOTE: PLACE NO PASSING PENNANTS
PER "NO PASSING ZONE" ESTABLISHED.

N

NO PASSING ZONE
REMOVE

NO PASSING ZONE
W14-3(2M)
38

W6-3(2M)
39

END PROJECT 1410-12-70
STA. 199+75

62
CENTERLINE RUMBLE STRIPS
W8-7O(2M)
63 NEXT 2 MILES
W57-51(2M)
NOTE: SEE ATTACHED DETAIL

40
W6-1(2M)
REUSE EXISTING POST
REMOVE

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- ESTR EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- EXISTING (LIGHT OR SIGNAL) POLE
- (XXX) DENOTES SIGN NUMBER
- ( ) DENOTES DATE STICKER

SHEET 8 OF 9

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 27	E

2

N

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

ESTR EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

PROPOSED SIGN MOUNTED ON POST(S)

EXISTING (LIGHT OR SIGNAL) POLE

(XXX) DENOTES SIGN NUMBER

( ) DENOTES DATE STICKER

41 REMOVE DO NOT ENTER — R5-1(2M) DO NOT ENTER

42 REMOVE — W6-2(2M)

57 REMOVE WRONG WAY — R5-1A WRONG WAY

53 REMOVE ONE WAY — R6-2L(2S) ONE WAY

51 R5-1A(2M) WRONG WAY

49 REMOVE BEGIN LEFT TURN LANE — R3-20L(2M) BEGIN LEFT TURN LANE

46 REMOVE — W6-1(2M)

200 202 204 206 208 210 212 214 515' 250'

STH 33

43 ESTR (A12) — W5-54(2M) "ADD" — NOTE: SEE ATTACHED DETAIL

56 R3-20L(2M) BEGIN LEFT TURN LANE — REMOVE BEGIN LEFT TURN LANE

58 R5-1A(2M) WRONG WAY

54 55 R5-1(2M) DO NOT ENTER — REMOVE DO NOT ENTER

R4-7(2M) ESTR (F11)

52 R6-2L(2S) ONE WAY — REMOVE ONE WAY

50 R5-1A(2M) WRONG WAY — REMOVE WRONG WAY

44 ESTR (A12) — W5-54(2M) "ADD" — NOTE: SEE ATTACHED DETAIL

48 W6-1(2M) — REMOVE

47 R5-1(2M) DO NOT ENTER — REMOVE DO NOT ENTER

45 W6-3(2M)

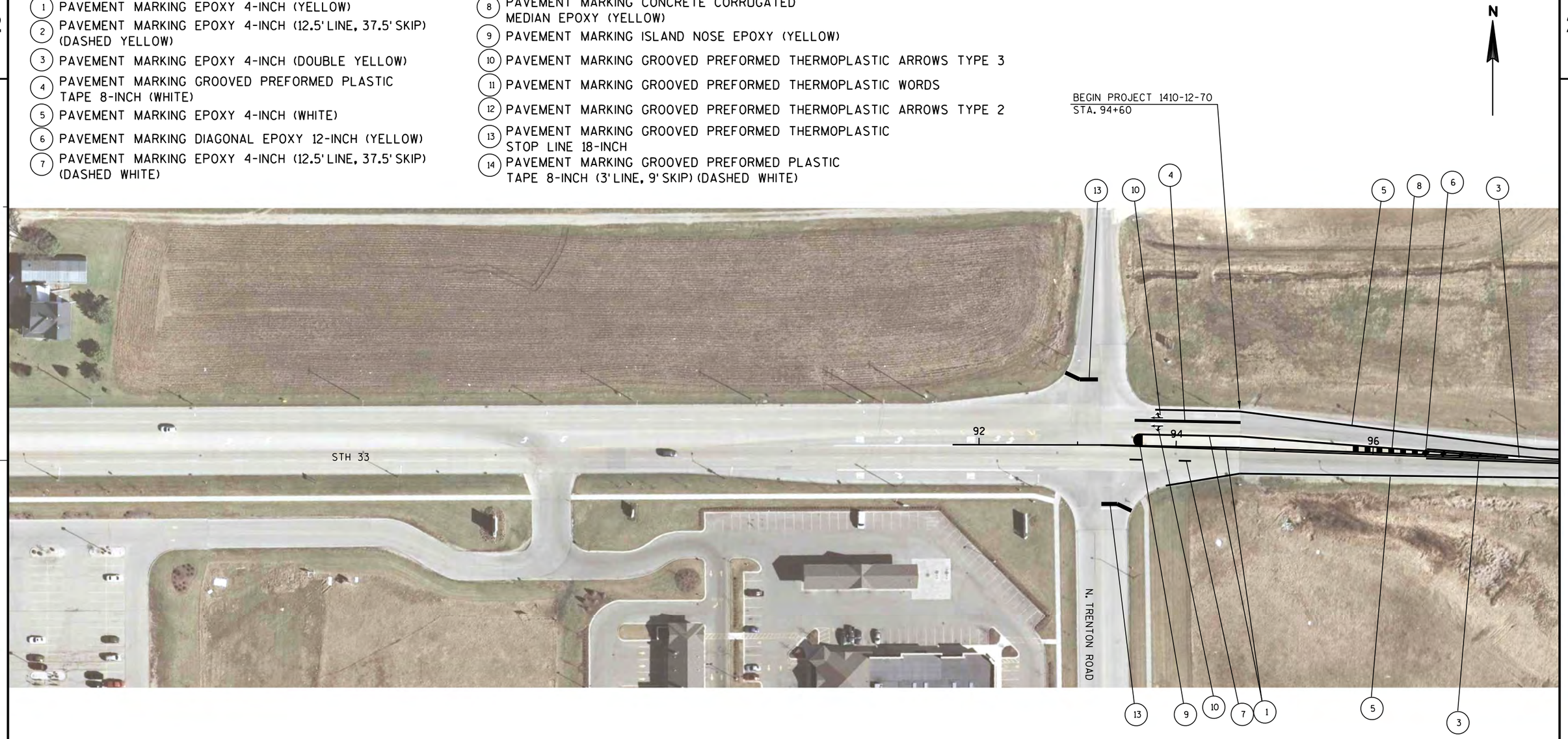
SHEET 9 OF 9

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 28	E

2

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (12.5' LINE, 37.5' SKIP) (DASHED YELLOW)
3. PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
4. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (WHITE)
5. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
6. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
7. PAVEMENT MARKING EPOXY 4-INCH (12.5' LINE, 37.5' SKIP) (DASHED WHITE)
8. PAVEMENT MARKING CONCRETE CORRUGATED MEDIAN EPOXY (YELLOW)
9. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
10. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3
11. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
12. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
13. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH
14. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (3' LINE, 9' SKIP) (DASHED WHITE)



2

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET 29	E

2

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (12.5' LINE, 37.5' SKIP) (DASHED YELLOW)
3. PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
4. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (WHITE)
5. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
6. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
7. PAVEMENT MARKING EPOXY 4-INCH (12.5' LINE, 37.5' SKIP) (DASHED WHITE)
8. PAVEMENT MARKING CONCRETE CORRUGATED MEDIAN EPOXY (YELLOW)
9. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
10. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3
11. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
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13. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH
14. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (3' LINE, 9' SKIP) (DASHED WHITE)

N

NOTE: EXACT LOCATION OF PASSING ZONES TO BE PER LOCATING NO PASSING ZONES ITEM

*500' MIN. BARRIER LINE WB APPROACHING DIVIDED SECTION

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET 30	E

2

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (12.5' LINE, 37.5' SKIP) (DASHED YELLOW)
3. PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
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N

NOTE: EXACT LOACTION OF PASSING ZONES TO BE PER LOACTING NO PASSING ZONES ITEM

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET 31	E

2

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (12.5' LINE, 37.5' SKIP) (DASHED YELLOW)
3. PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
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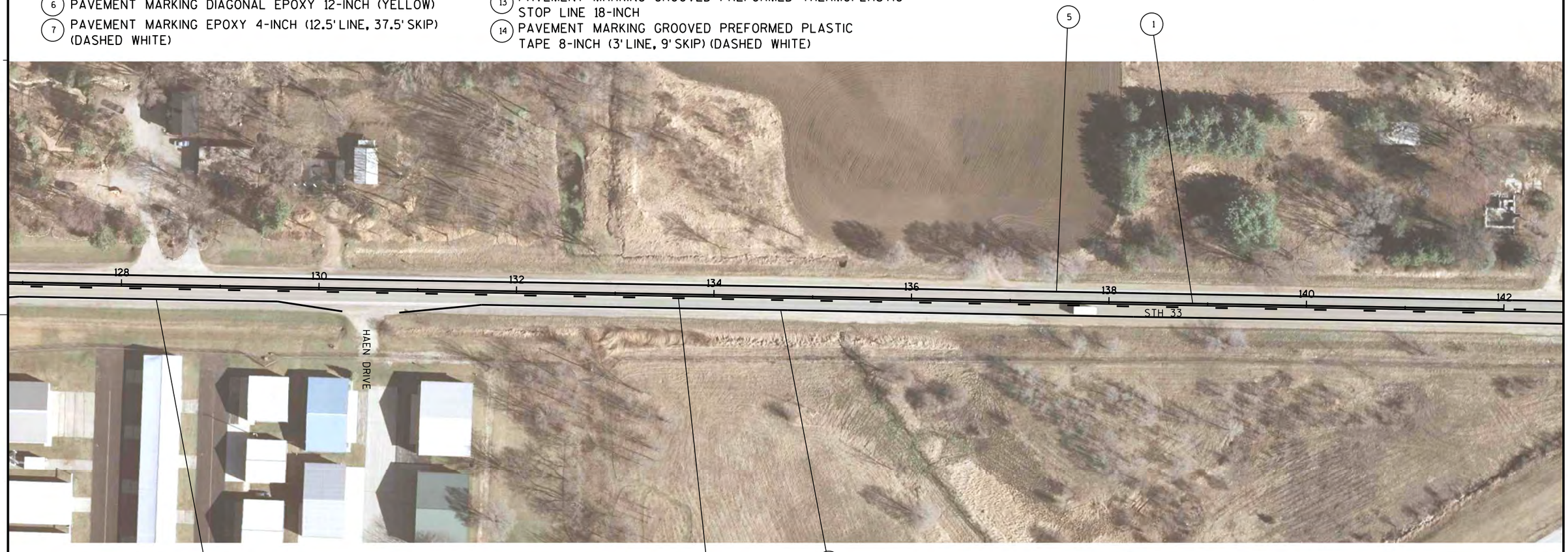
14. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (3' LINE, 9' SKIP) (DASHED WHITE)

N



NOTE: EXACT LOCATION OF PASSING ZONES TO BE PER LOCATING NO PASSING ZONES ITEM

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET 32	E

2

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (12.5' LINE, 37.5' SKIP) (DASHED YELLOW)
3. PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
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14. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (3' LINE, 9' SKIP) (DASHED WHITE)

N

NOTE: EXACT LOCATION OF PASSING ZONES TO BE PER LOCATING NO PASSING ZONES ITEM

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET 33	E

2

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (12.5' LINE, 37.5' SKIP) (DASHED YELLOW)
3. PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
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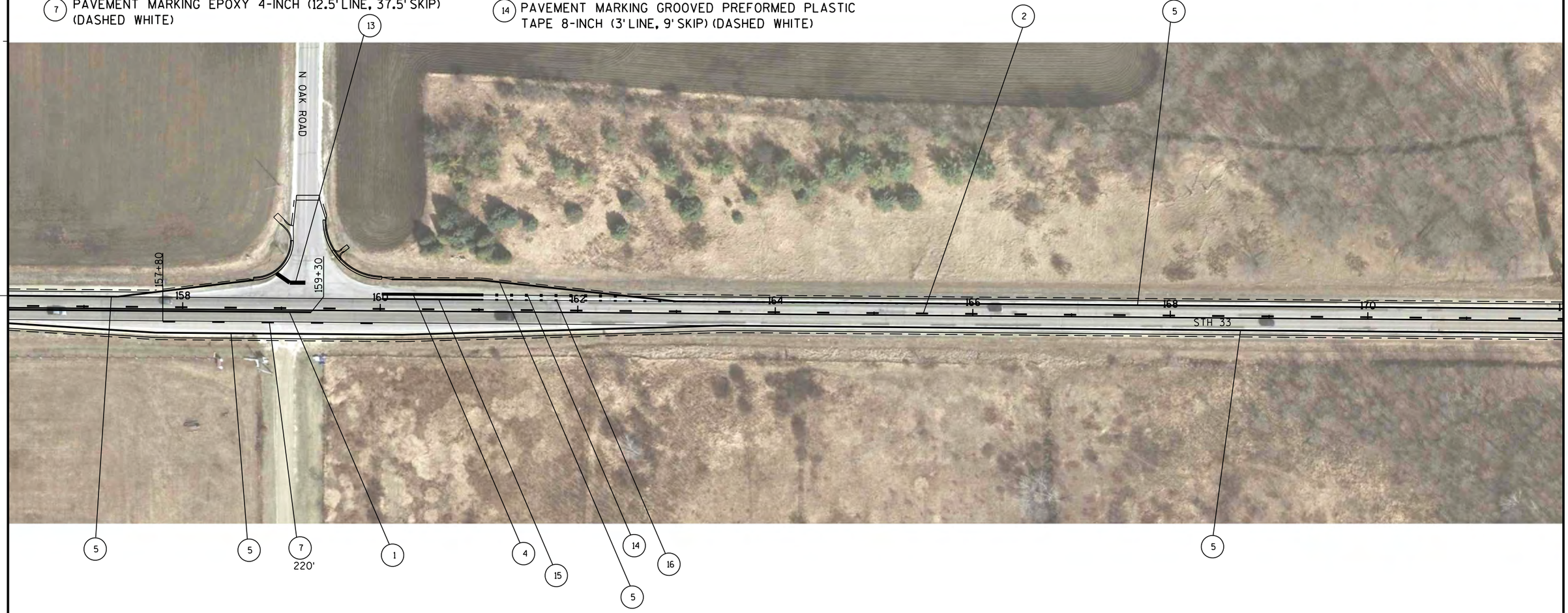
15. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 4-INCH (WHITE)
16. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 4-INCH (3' LINE, 9' SKIP) (DASHED WHITE)

N



NOTE: EXACT LOCATION OF PASSING ZONES TO BE PER LOCATING NO PASSING ZONES ITEM

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET 34	E

2

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (12.5' LINE, 37.5' SKIP) (DASHED YELLOW)
3. PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
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14. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (3' LINE, 9' SKIP) (DASHED WHITE)

N

NOTE: EXACT LOCATION OF PASSING ZONES TO BE PER LOCATING NO PASSING ZONES ITEM

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET 35	E

2

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (12.5' LINE, 37.5' SKIP) (DASHED YELLOW)
3. PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
4. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (WHITE)
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12. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
13. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH
14. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (3' LINE, 9' SKIP) (DASHED WHITE)

N

2

NOTE: EXACT LOCATION OF PASSING ZONES TO BE PER LOCATING NO PASSING ZONES ITEM

*500' MIN. BARRIER LINE EB APPROACHING DIVIDED SECTION

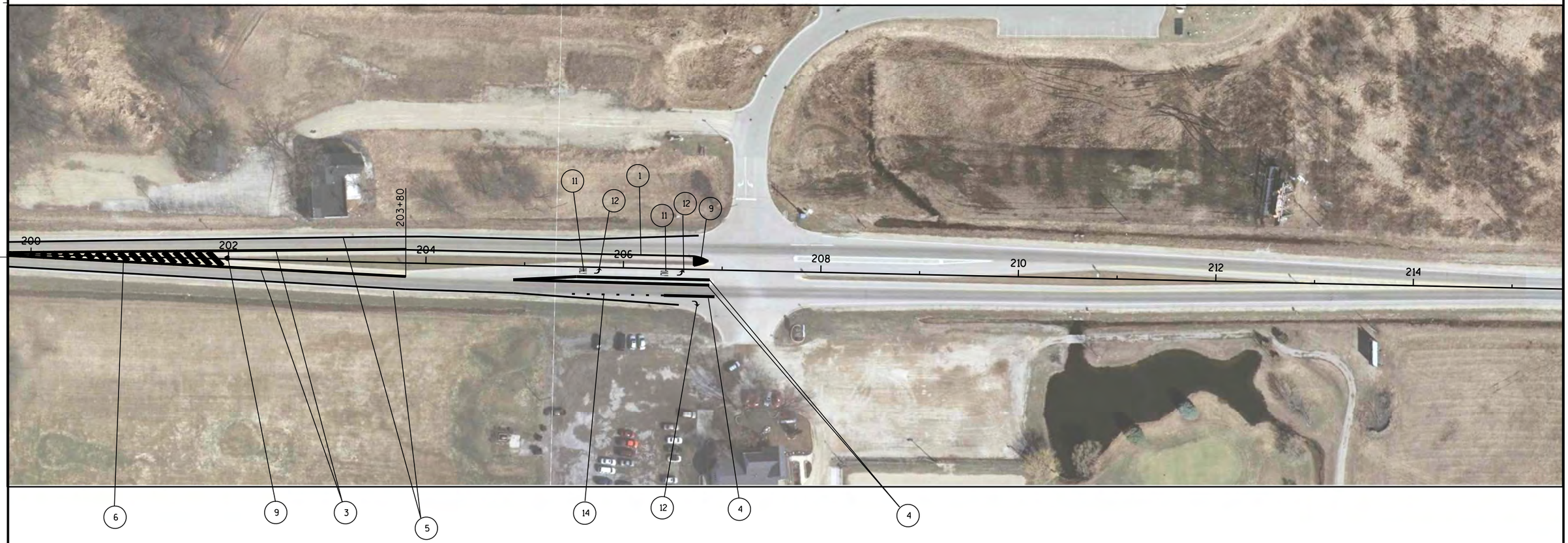
PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET 36	E

2

LEGEND

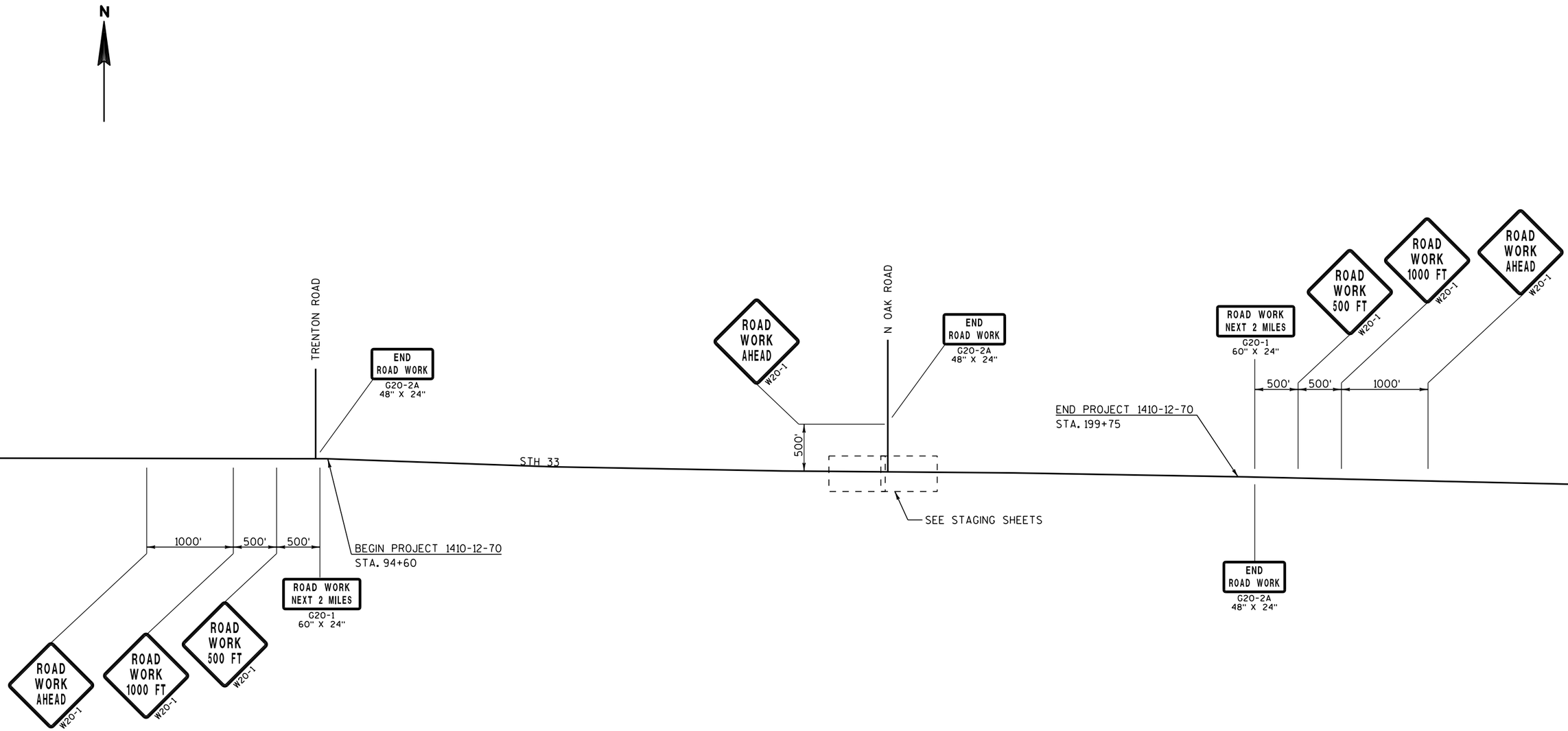
1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (12.5' LINE, 37.5' SKIP) (DASHED YELLOW)
3. PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
4. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (WHITE)
5. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
6. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
7. PAVEMENT MARKING EPOXY 4-INCH (12.5' LINE, 37.5' SKIP) (DASHED WHITE)
8. PAVEMENT MARKING CONCRETE CORRUGATED MEDIAN EPOXY (YELLOW)
9. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
10. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3
11. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
12. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
13. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH
14. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (3' LINE, 9' SKIP) (DASHED WHITE)

N



PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET 37 E

2



PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	TRAFFIC CONTROL OVERVIEW	SHEET 38	E

2

2

N

155

153+00

154+00

155+00

156+00

157+00

158+00

159

11' MIN

STH 33

STH 33

500'

25'

50'

SHOULDER WORK

W21-5

R/W

SLOPE INTERCEPT

SIGN

TRAFFIC CONTROL LEGEND

- DRUM W/ WARNING LIGHT TYPE C
- DRUM
- POST W/ ATTACHED SIGN
- DIRECTION OF TRAFFIC FLOW
- WORK ZONE

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1	SHEET 39	E

2

2

HEIGHT MOD

ROAD WORK AHEAD W20-1

NORTH OAK ROAD

500' MAX

11+00

10+00

R/W

SLOPE INTERCEPT

11' MIN

159+00

160+00

161+00

162+00

163+00

164+00

STH 33

50'

25'

R/W

SLOPE INTERCEPT

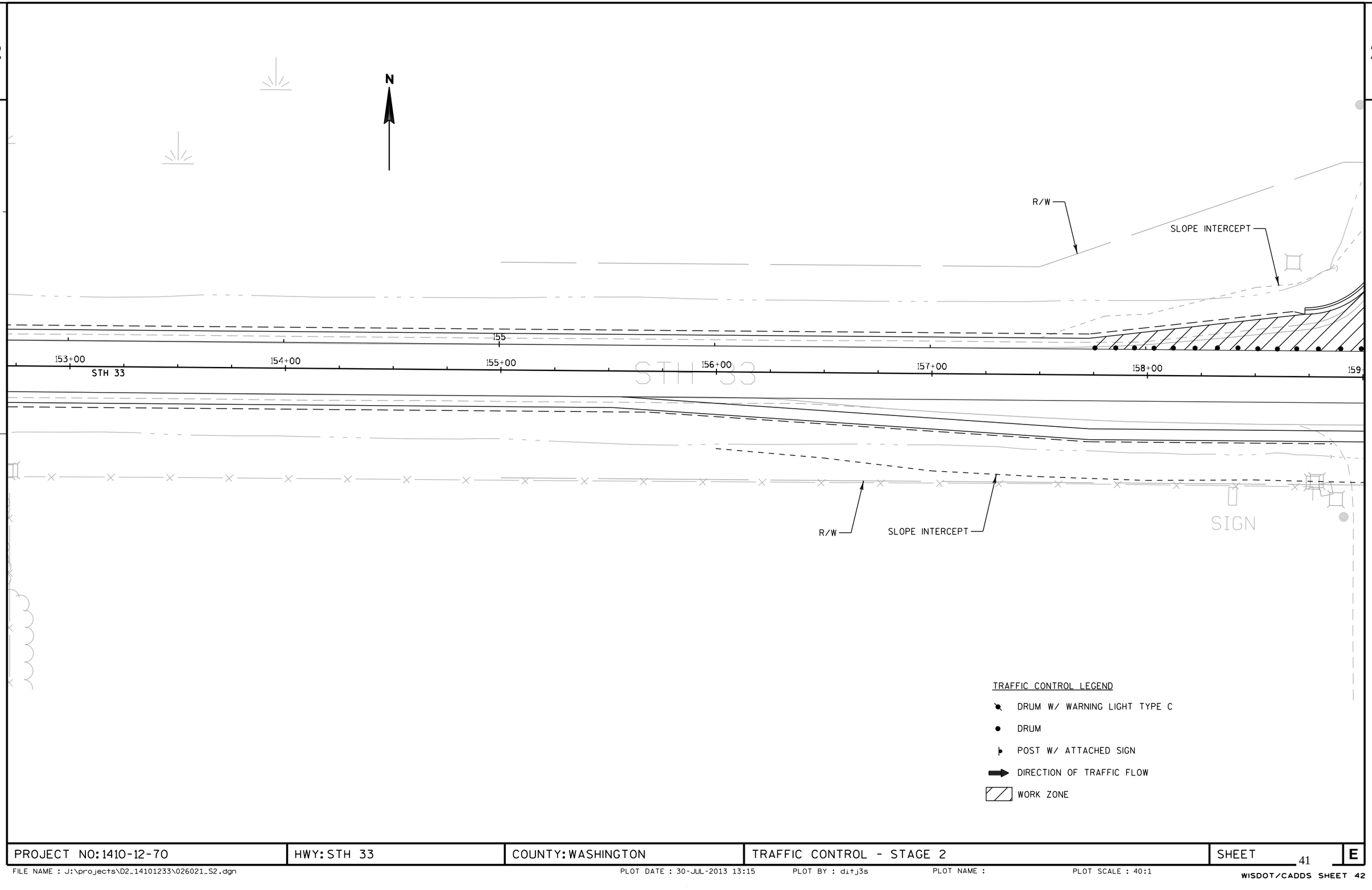
N

TRAFFIC CONTROL LEGEND

- DRUM W/ WARNING LIGHT TYPE C
- DRUM
- POST W/ ATTACHED SIGN
- DIRECTION OF TRAFFIC FLOW
- WORK ZONE

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1	SHEET 40	E

2



TRAFFIC CONTROL LEGEND

- DRUM W/ WARNING LIGHT TYPE C
- DRUM
- POST W/ ATTACHED SIGN
- DIRECTION OF TRAFFIC FLOW
- WORK ZONE

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2	SHEET 41	E

2

2

HEIGHT MOD

ROAD WORK AHEAD W20-1

NORTH OAK ROAD

N

SHOULDER WORK W21-5

500' MAX

10' TYP

R/W

SLOPE INTERCEPT

50'

25'

500'

159+00

160+00

161+00

162+00

163+00

164+00

STH 33

10+00

11+00

12'

11' MIN

5'

13'

SLOPE INTERCEPT

R/W

TRAFFIC CONTROL LEGEND

- DRUM W/ WARNING LIGHT TYPE C
- DRUM
- POST W/ ATTACHED SIGN
- DIRECTION OF TRAFFIC FLOW
- WORK ZONE

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2	SHEET 42	E

DATE 03OCT13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1410-12-70 QUANTITY
0010	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	6.000	6.000
0020	203.0200	REMOVING OLD STRUCTURE (STATION) 01. 172+00	LS	1.000	1.000
0030	204.0110	REMOVING ASPHALTIC SURFACE	SY	15.000	15.000
0040	204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS	SY	1,543.000	1,543.000
0050	204.0125	REMOVING ASPHALTIC SURFACE MILLING	TON	6,446.000	6,446.000
0060	204.0150	REMOVING CURB & GUTTER	LF	157.000	157.000
0070	205.0100	EXCAVATION COMMON	CY	946.710	946.710
0080	205.0400	EXCAVATION MARSH	CY	3,209.360	3,209.360
0090	209.0100	BACKFILL GRANULAR	CY	4,011.430	4,011.430
0100	211.0400	PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS	STA	204.000	204.000
0110	213.0100	FINISHING ROADWAY (PROJECT) 01. 1410-12-70	EACH	1.000	1.000
0120	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	320.000	320.000
0130	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	1,167.000	1,167.000
0140	440.4410.S	INCENTIVE IRI RIDE	DOL	4,000.000	4,000.000
0150	455.0105	ASPHALTIC MATERIAL PG58-28	TON	612.000	612.000
0160	455.0605	TACK COAT	GAL	2,124.000	2,124.000
0170	460.1103	HMA PAVEMENT TYPE E-3	TON	4,454.000	4,454.000
0180	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	6,610.000	6,610.000
0190	460.4110.S	REHEATING HMA PAVEMENT LONGITUDINAL JOINTS	LF	10,582.000	10,582.000
0200	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	238.000	238.000
0210	465.0315	ASPHALTIC FLUMES	SY	40.000	40.000
0220	465.0425	ASPHALTIC SHOULDER RUMBLE STRIP 2-LANE RURAL	LF	12,186.000	12,186.000
0230	465.0475	ASPHALT CENTER LINE RUMBLE STRIP 2-LANE RURAL	LF	5,775.000	5,775.000
0240	521.0115	CULVERT PIPE CORRUGATED STEEL 15-INCH	LF	24.000	24.000
0250	521.0118	CULVERT PIPE CORRUGATED STEEL 18-INCH	LF	34.000	34.000
0260	521.1015	APRON ENDWALLS FOR CULVERT PIPE STEEL 15-INCH	EACH	2.000	2.000
0270	521.1018	APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH	EACH	2.000	2.000
0280	522.0330	CULVERT PIPE REINFORCED CONCRETE CLASS IV 30-INCH	LF	65.000	65.000
0290	522.1030	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH	EACH	2.000	2.000
0300	523.0148	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 48X76-INCH	LF	64.000	64.000
0310	523.0419	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 19X30-INCH	LF	82.000	82.000
0320	523.0519	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 19X30-INCH	EACH	2.000	2.000
0330	523.0548	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 48X76-INCH	EACH	2.000	2.000
0340	601.0557	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	LF	151.000	151.000
0350	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 1410-12-70	EACH	1.000	1.000
0360	619.1000	MOBILIZATION	EACH	1.000	1.000

3

DATE 03OCT13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1410-12-70 QUANTITY
0370	625.0100	TOPSOIL	SY	420.000	420.000
0380	625.0500	SALVAGED TOPSOIL	SY	2,300.000	2,300.000
0390	627.0200	MULCHING	SY	420.000	420.000
0400	628.1504	SILT FENCE	LF	1,605.000	1,605.000
0410	628.1520	SILT FENCE MAINTENANCE	LF	802.000	802.000
0420	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	3.000	3.000
0430	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	1.000	1.000
0440	628.2004	EROSION MAT CLASS I TYPE B	SY	2,350.000	2,350.000
0450	628.2023	EROSION MAT CLASS II TYPE B	SY	158.000	158.000
0460	628.7555	CULVERT PIPE CHECKS	EACH	25.000	25.000
0470	628.7570	ROCK BAGS	EACH	20.000	20.000
0480	629.0210	FERTILIZER TYPE B	CWT	161.000	161.000
0490	630.0120	SEEDING MIXTURE NO. 20	LB	36.000	36.000
0500	630.0160	SEEDING MIXTURE NO. 60	LB	21.000	21.000
0510	630.0200	SEEDING TEMPORARY	LB	20.000	20.000
0520	633.5200	MARKERS CULVERT END	EACH	6.000	6.000
0530	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	48.000	48.000
0540	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	21.000	21.000
0550	637.2210	SIGNS TYPE II REFLECTIVE H	SF	327.420	327.420
0560	637.2230	SIGNS TYPE II REFLECTIVE F	SF	144.750	144.750
0570	638.2102	MOVING SIGNS TYPE II	EACH	9.000	9.000
0580	638.2602	REMOVING SIGNS TYPE II	EACH	53.000	53.000
0590	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	56.000	56.000
0600	642.5201	FIELD OFFICE TYPE C	EACH	1.000	1.000
0610	643.0200	TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 01. 1410-12-70	DAY	50.000	50.000
0620	643.0300	TRAFFIC CONTROL DRUMS	DAY	3,000.000	3,000.000
0630	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	120.000	120.000
0640	643.0710	TRAFFIC CONTROL WARNING LIGHTS TYPE B	DAY	240.000	240.000
0650	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	360.000	360.000
0660	643.0900	TRAFFIC CONTROL SIGNS	DAY	1,200.000	1,200.000
0670	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	10.000	10.000
0680	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	32,125.000	32,125.000
0690	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	3.000	3.000
0700	647.0726	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	LF	246.000	246.000
0710	647.0856	PAVEMENT MARKING CONCRETE CORRUGATED MEDIAN EPOXY	SF	132.000	132.000
0720	648.0100	LOCATING NO-PASSING ZONES	MI	1.990	1.990
0730	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	917.000	917.000
0740	650.5000	CONSTRUCTION STAKING BASE	LF	917.000	917.000
0750	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	151.000	151.000
0760	650.6000	CONSTRUCTION STAKING PIPE CULVERTS	EACH	5.000	5.000
0770	650.8000	CONSTRUCTION STAKING RESURFACING REFERENCE	LF	12,200.000	12,200.000
0780	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	867.000	867.000
0790	690.0150	SAWING ASPHALT	LF	1,266.000	1,266.000
0800	690.0250	SAWING CONCRETE	LF	80.000	80.000
0810	SPV.0060	SPECIAL 01. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2	EACH	3.000	3.000
0820	SPV.0060	SPECIAL 02. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3	EACH	2.000	2.000
0830	SPV.0060	SPECIAL 03. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS	EACH	3.000	3.000

3

DATE 03OCT13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1410-12-70 QUANTITY
0840	SPV.0090	SPECIAL 01. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH	LF	147.000	147.000
0850	SPV.0090	SPECIAL 02. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH	LF	728.000	728.000
0860	SPV.0090	SPECIAL 03. PAVEMENT MARKING GROOVED PREFORMED PLASTIC 4-INCH	LF	120.000	120.000
0870	SPV.0105	SPECIAL 01. MILLING AND REMOVING TEMPORARY JOINT	LS	1.000	1.000
0880	SPV.0195	SPECIAL 01. SAME DAY PAVING HMA PAVEMENT TYPE E-3	TON	5,694.000	5,694.000

3

STATION	LOCATION	203.0100 REMOVING SMALL CULVERT PIPE EACH
130+50 RT	STH 33 DRWY	1
159+00 RT	STH 33	1
10+50	NORTH OAK RD	1
180+68	STH 33	1
187+10 RT	STH 33	1
188+50 RT	STH 33	1
TOTAL		6

STATION - STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY
94+60 LT	STH 33 (FLUME)	5
94+60 RT	STH 33 (FLUME)	5
10+50 RT	NORTH OAK RD (FLUME)	5
TOTAL		15

STATION	LOCATION	465.0315 ASPHALTIC FLUMES SY
94+60 LT	STH 33	10
94+60 RT	STH 33	10
10+50 RT	NORTH OAK RD	10
10+70 LT	NORTH OAK RD	10
TOTAL		40

3

STATION - STATION	LOCATION	204.1500 REMOVING CURB AND GUTTER LF
10+25 - 10+62 LT	NORTH OAK ROAD	65
10+25 - 10+82 RT	NORTH OAK ROAD	92
TOTAL		157

STATION - STATION	LOCATION	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA
94+60 - 157+00	STH 33 EB	63
162+00 - 199+75	STH 33 EB	38
94+60 - 159+00	STH 33 WB	65
162+00 - 199+75	STH 33 WB	38
TOTAL		204

STATION	LOCATION	203.0200.01 REMOVING OLD STRUCTURE EACH
172+00	STH 33	1
TOTAL		1

STATION	LOCATION	205.0100 COMMON EXCAVATION CUT CY	UNEXPANDED FILL CY	EXPANDED FILL 1.25 CY	UNUASABLE MATERIAL (1) CY	AVIALBLE MATERIAL (2) CY	205.0400 MARSH EXCAVATION CY	209.0100 BACKFILL GRANULAR (3) 1.20 CY	MASS ORDINATE (4) CY
STAGE 1	STH 33 STA 156+00 - 162+50	458.15	188.40	235.50	181.00	277.15	2389.36	2867.23	41.65
STAGE 2	STH 33 158+00 - 163+00	323.50	152.75	190.94	138.00	185.50	820.00	984.00	32.75
128+50 LT	REMOVE LANSCAPING BED	23.00			17.25	5.75			5.75
130+50 RT	REMOVE DRWY OPENING	26.00			6.50	19.50			19.50
143+25 LT	REMOVE DRWY OPENING	11.50			2.88	8.63			8.63
187+00 RT	REMOVE DRWY OPENING	40.00			10.00	30.00			30.00
188+50 RT	REMOVE DRWY OPENING	47.56			11.89	35.67			35.67
189+00 LT	REMOVE DRWY OPENING	17.00			4.25	12.75			0.00
159+00 RT	STH 33 CULVERT							11.60	
172+00	STH 33 CULVERT							57.60	
180+68	STH 33 CULVERT							38.10	
188+50 RT	STH 33 CULVERT							7.00	
10+50	NORTH OAK RD CULVERT							45.90	
TOTAL		946.71	341.15	426.44	371.77	574.95	3209.36	4,011.43	173.95

1) SALAVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT
2) AVIABLE MATERIAL = COMMON - SALVAGED/UNUSABELE MATERIAL
3) MARSH EXCAVATION TO BE BACKFILLED WITH BACKFILL GRANULAR. MARSH BACKFILL FACTOR = 1.2
4) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE STAGES. PLUS QTY INDICATES AN EXCESS OF MATERIAL. MINUS INDICATES A SHORTAGE OF MATERIAL

ULESS OTHERWISE NOTED , ALL ITEMS ARE CATEGORY 0010

3

STATION - STATION	LOCATION	455.0105 ASPHALTIC MATERIAL PG58-28 TONS	455.0605 TACK COAT GAL	460.1103 HMA PAVEMENT TYPE E-3 TONS	460.2000 INCENTIVE DENSITY HMA PAVEMENT DOL	SPV.0195.01 SAME DAY PAVING HMA PAVEMENT E-3 TONS
WESTBOUND LANE						
94+60 - 96+26	TAPER TO TRENTON	6	22	45	60	55
96+26 - 102+25	MAINLINE STH 33	16	57	120	420	146
102+25 - 105+50	SHLD WIDDEING TAPER	10	34	71	100	86
105+50 - 130+00	8' SHLD AREA	77	273	572	820	705
130+00 - 199+75	MAINLINE STH 33	186	659	1,384	1,980	1,704
158+95 - 161+03	OAK RD TURN LANE	4	14	30	40	35
161+03 - 162+53	OAK RD TURN LANE TAPER	2	5	11	20	27
EAST BOUND LANE						
94+60 - 96+26	TAPER TO TRENTON	6	22	45	60	55
96+26 - 199+75	MAIN LINE STH 33	275	978	2,053	2,930	2,529
155+56 - 157+73	OAK ROAD BYPASS TAPER	3	9	18	30	22
157+73 - 160+23	OAK ROAD BYPASS LANE	6	20	41	60	51
160+23 - 163+48	OAK ROAD BYPASS TAPER	4	13	27	40	33
10+33 - 11+00	OAK RD	5	18	37	50	46
UNDISTRIBUTED (FULL DEPTH MILLING)		12				200
TOTAL		612	2,124	4,454	6,610	5,694

STATION - STATION	COMMENT	204.0125 REMOVING ASPHALTIC MILLING TONS
WESTBOUND		
94+60 - 96+26	TAPER TO TRENTON	45
96+26 - 108+00		339
108+00 - 121+00		375
121+00 - 199+75		2,269
108+00 - 121+00	WIDER SHOULDER	98
EASTBOUND		
94+60 - 96+26	TAPER TO TRENTON	102
96+26 - 108+00		339
108+00 - 121+00		375
121+00 - 199+75		2,269
OAK ROAD		
10+33 - 11+00		35
UNDISTRIBUTED (FULL DEPTH MILLING)		200
TOTAL		6,446

STATION - STATION	LOCATION	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY
94+60 - 95+60 LT	STH 33	228
94+60 - 95+60 RT	STH 33	228
96+26 - 97+26	STH 33	167
199+75 - 198+75	STH 33	333
196+50 RT	CHOPPER DR	120
120+50 RT	EARL STIER DR	120
125+50 RT	AERIAL DR	120
11+00	OAK RD	120
113+85 LT	DRWY LT	7
114+87 LT	DRWY LT	7
115+90 LT	DRWY LT	7
116+80 LT	DRWY LT	10
119+80 LT	DRWY LT	8
120+85 LT	DRWY LT	9
123+06 LT	DRWY LT	10
125+40 LT	DRWY LT	10
128+50 LT	DRWY LT	15
130+15 LT	DRWY LT	10
151+90 RT	DRWY RT	14
TOTAL		1,543

STATION - STATION	LOCATION	465.0475 ASPHALT CENTER LINE RUMBLE STRIPS 2 LANE RURAL LF
133+00 - 155+00	STH 33	2,200
164+00 - 199+75	STH 33	3,575
TOTAL		5,775

3

STATION - STATION	LOCATION	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON
106+61 RT	CHOPPER DR	62
120+50 RT	EARL STIER DR	29
125+50 RT	AERIAL DR	20
113+85 LT	DRWY LT	4
114+87 LT	DRWY LT	3
115+90 LT	DRWY LT	4
116+80 LT	DRWY LT	4
119+80 LT	DRWY LT	3
120+85 LT	DRWY LT	3
123+06 LT	DRWY LT	2
125+40 LT	DRWY LT	3
128+50 LT	DRWY LT	75
130+15 LT	DRWY LT	3
130+50 RT	DRWY RT	18
151+90 RT	DRWY RT	5
TOTAL		238

STATION - STATION	LOCATION	465.0425 ASPHALTIC SHOULDER RUMBLE STRIP 2 LANE RURAL LF
133+00 - 142+92 LT	STH 33	992
143+57 - 157+50 LT	STH 33	1117
162+53 - 199+75 LT	STH 33	2848
96+26 - 104+46 RT	STH 33	652
107+24 - 119+45 RT	STH 33	969
121+28 - 124+55 RT	STH 33	255
126+32 - 129+40 RT	STH 33	248
131+12 - 199+75 RT	STH 33	5,105
TOTAL		12,186

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 1 1/4-INCH TON
158+59 - 161+03	OAK ROAD TURN LANE	50	293
161+03 - 162+53	OAK ROAD TURN LANE TAPER		106
155+56 - 157+73	OAK ROAD BYPASS TAPER		137
157+73 - 160+23	OAK ROAD LANE	10	315
160+23 - 163+48	OAK ROAD BYPASS TAPER		205
10+33 - 11+00	OAK ROAD		20
172+00	STH 33 (CULVERT)		63
180+68	STH 33 (CULVERT)		28
94+60 - 199+75 RT	STH 33	130	
94+60 - 199+75 LT	STH 33	130	
TOTAL		320	1,167

ULESS OTHERWISE NOTED , ALL ITEMS ARE CATEGORY 0010

CATEGORY 0020

STATION - STATION	LOCATION	INVERT ELEVATION	INVERT OFFSET	OUTLET ELEVATION	OUTET OFFSET	SLOPE %	521.0115 CULVERT PIPE STEEL 15-INCH LF	521.0118 CULVERT PIPE STEEL 18-INCH LF	522.0330 CULVERT PIPE REINFORCED CONCRETE CLASS IV 30-INCH LF	523.0148 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL EL CLASS HE-III 48X76-INCH	523.0419 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL EL CLASS HE-IV 19X30-INCH LF
158+82 - 159+18 RT	STH 33 DRWY	860.04	32' RT	859.82	32' RT	0.64%		34			
10+50	OAK RD	859.31	37' LT	858.91	45' RT	0.50%					82
172+00	STH 33	855.17	32' LT	854.74	32' RT	0.70%				64	
180+68	STH 33	857.27	32.5'LT	856.94	32.5' RT	0.65%			65		
188+50 RT	STH 33 DRWY		MATCH EXISTING DITCH				24				
TOTAL							24	34	65	64	82

CATEGORY 0020

STATION - STATION	LOCATION	521.1015 APRON ENDWALL FOR STEEL CULVERT PIPE 15-INCH EACH	521.1018 APRON ENDWALL FOR STEEL CULVERT PIPE 18-INCH EACH	522.1030 APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH EACH	523.0519 HORIZONTAL ELLIPITAL 19X30 EACH	523.0548 HORIZONTAL ELLIPITAL 48X76 EACH	633.5200 MARKERS CULVERT END EACH	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH
159+00 RT	STH 33		2					1
10+50	OAK RD				2		2	1
172+00	STH 33					2	2	1
180+68	STH 33			2			2	1
188+50 RT	STH 33	2						1
TOTAL		2	2	2	2	2	6	5

STATION - STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2004 EROSION MAT CLASS I TYPE B SY	628.2023 EROSION MAT CLASS II TYPE B SY	628.1905 MOBILIZATION EROSION CONTROL EACH	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL EACH
155+00 - 164+00 RT	STH 33	1,000	500				
157+25 - 159+25 LT	STH 33 & NORTH RD INT	205	102	350			
159+50 -163+00 LT	STH 33	400	200				
157+25 - 159+00 RT	STH 33 (DITCH BOTTOM)				120		
172+00 RT & LT	STH 33 (CULVERT ENDS)				20		
180+68 RT & LT	STH 33 (CULVERT ENDS)				18		
155+25 - 159+00 RT	STH 33			750			
159+25 - 163+75 RT	STH 33			700			
159+50 - 162+75 LT	STH 33			550			
155+25 - 163+75 RT	OAK ROAD BYPASS LANE					1	
159+50 - 162+50 LT	OAK ROAD TURN LANE					1	
	CULVERTS STH 33					1	1
TOTAL		1,605	802	2,350	158	3	1

SPV.0105.01

MILLING AND REMOVING TEMPORAY JOINT

STATION - STATION	LOCATION	LS
94+60 - 199+75 (UPPER & LOWER LIFT)	STH 33	1
TOTAL		1

STATION - STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
156+50 - 162+00 RT	STH 33	550.00	
157+75 - 159+15 LT	STH 33	140.00	
159+40 - 162+50 LT	STH 33	310.00	
172+08	STH 33	20.00	40.00
180+70	STH 33	20.00	40.00
187+00 RT	STH 33 DRWY	12.00	
10+14 -10+85 RT	NORTH OAK ROAD	71.00	
10+14 - 10+75 LT	NORTH OAK ROAD	61.00	
10+50	NORTH OAK ROAD	82.00	
TOTAL		1,266.00	80.00

601.0557
CONCRETE CURB AND GUTTER
6-INCH SLOPED 36-INCH TYPE D

STATION - STATION	LOCATION	LF
10+33 - 19+70 LT	NORTH OAK ROAD	66
10+33 - 10+80 RT	NORTH OAK ROAD	85
TOTAL		151

ULESS OTHERWISE NOTED , ALL ITEMS ARE CATEGORY 0010

STATION - STATION	LOCATION	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0160 SEEDING MIXTURE NO. 60 LB	625.0500 SALVAGED TOPSOIL SY	625.0100 TOPSOIL SY	627.0200 MULCH SY	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH	630.0200 SEEDING TEMPORARY LB
128+50 LT	STH 33 DRIVEWAY	2	1			80	80			
130+50 RT	STH 33 DRIVEWAY	2	1			75	75			
143+30 LT	STH 33 DRIVEWAY	2	1			25	25			
155+25 - 159+00 RT	STH 33	46	20		700					
157+25 - 159+25 LT	STH 33 @ NORTH RD INT	22	10		350					
159+25 -163+75 RT	STH 33	46		10	700					
159+50 - 162+75 LT	STH 33	35		8	550					
159+00 RT	STH 33 (CULVERT END)	1		1				3		
10+50	NORTH OAK RD							4		
172+00 LT & RT	STH 33 (CULVERT ENDS)	1		1				12		
180+68 LT& RT	STH 33 (CULVERT ENDS)	1		1				4		
187+00 RT	STH 33	1	1			120	120			
188+50 RT	EDGES OF NEW DRIVEWAY	1	1			70	70	2		
189+00 LT	STH 33	1	1			50	50			
UNDISTRIBUTED									20	20
TOTAL		161	36	21	2,300	420	420	25	20	20

618.0100
MAINTENANCE AND REPAIR OF HAUL ROADS

LOCATION	EACH
PROJECT 1410-12-70	1.00
TOTAL	1.00

LOCATING NO PASSING ZONES

LOCATION	648.0100 MI
STH 33	1.99
TOTAL	1.99

STATION - STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB AND GUTTER LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	650.8000 CONSTRUCTION STAKING REFERENCE LINE LF
155+25 - 163+75	STH 33	850	850			
10+33 - 11+00	NORTH OAK ROAD	67	67			
10+33 - 10+80 RT	NORTH OAK ROAD			85		
10+33 - 10+70 LT	NORTH OAK ROAD			66		
155+50 - 163+50	STH 33				800	
10+33 - 11+00	NORTH OAK ROAD				67	
92+00 - 214+00	STH 33					12,200
TOTAL		917	917	151	867	12,200

TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE

PROJECT	643.0200 DAYS
ID 1410-12-70	50
TOTAL	50

460.4110.S
REHEATING HMA LONGITUDINAL JOINTS

STATION - STATION	LOCATION	LF
94+60 - 199+75	STH 33	10,515
10+33 - 11+00	North Oak Rd	67
TOTAL		10,582

STAGE	LOCATION	643.0300 TRAFFIC CONTROL DRUMS DAYS	643.0715 TRAFFIC CONTROL WARRING LIGHTS TYPE C DAYS	643.0710 TRAFFIC CONTROL WARRING LIGHTS TYPE B DAYS	643.0900 TRAFFIC CONTROL SIGNS DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAYS	643.0105 TRAFFIC CONTROL SIGNS PORTABLE CHANGEABLE MESSAGE DAYS
1	BYPASS LANE	1000	240	160	120	80	
2	TURN LANE	1800	120	80	80	40	
	STH 33	200			1000		10
TOTAL		3,000	360	240	1200	120	10

ULESS OTHERWISE NOTED , ALL ITEMS ARE CATEGORY 0010

TYPE I & II PERMANENT SIGNING

CATEGORY CODE 010

SIGN NO.	CODE	SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II REFLECTIVE F [SF]	634.0616 WOOD POSTS 4"x 6"X16' [EA]	634.0618 WOOD POSTS 4"x 6"X18' [EA]	638.2102 MOVING SIGNS TYPE II [EA]	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS NEW SIGN LOCATION
1	D7-68 L	Sandy Knoll	-- x --	--	--	--	--	--	--	--	--	--
		CO. Park	-- x --	--	--	--	--	--	--	--	--	--
		<-----	72 x 36	18	--	--	--	--	1	--	--	Reuse existing Post
2	R2-1(2M)	40 MPH	30 x 36	7.50	--	1	--	--	1	1	--	--
3	R2-1(2M)	40 MPH	30 x 36	7.50	--	1	--	--	1	1	--	--
4	J4-1(2M)	--	24 x 36	6.00	--	--	--	--	1	1	--	--
	M3-2	--	24 x 12	--	--	--	--	--	--	--	--	--
	M1-6	STH 33	24 x 24	--	--	--	--	--	--	--	--	--
5	R6-2L(2M)	--	30 x 36	7.50	--	1	--	--	--	--	--	--
6	---	No. not used	-- x --	--	--	--	--	--	--	--	--	--
7	R5-1(2M)	--	36 x 36	9.00	--	1	--	--	1	1	--	--
8	R7-1D(2M)	--	24 x 30	5.00	--	1	--	--	1	1	--	--
9	R5-1A(2M)	--	42 x 30	8.75	--	--	--	--	1	1	10	--
10	R3-8K (2M)	--	30 x 36	7.50	--	1	--	--	1	1	--	--
11	W4-2R(2M)	--	36 x 36		9.00	--	--	--	1	--	--	re-install on light pole
12	R4-7(2M)	--	24 x 30	5.00	--	1	--	--	1	1	--	--
13	W9-2L (2)	--	36 x 36		9.00	1	--	--	1	1	--	--
14	R5-1A(2M)	--	42 x 30	8.75	--	--	--	--	1	--	13	--
15	W6-2(2M)		36 x 36		9.00	1	--	--	1	1	--	--
	--	NO PARKING ANYTIME	-- x --	--	--	--	--	--	1	--	--	--
16	R5-1(2M)	--	36 x 36	9.00	--	--	--	--	1	--	15	--
17	R4-7(3)	--	36 x 48	12.00	--	1	--	--	1	1	--	--
	W5-5 4(2M)	--	18 x 18		2.25	--	--	--	--	--	--	SEE ATTACHED DETAIL
18	J4-1(2M)	--	24 x 36	6.00		1	--	--	1	1	--	--
	M3-4	--	24 x 12	--		--	--	--	--	--	--	--
	M1-6	STH 33	24 x 24	--		--	--	--	--	--	--	--
19	R2-1(3)	40 MPH	36 x 48	12.00		1	--	--	1	1	--	--
20	R7-1D(2M)	--	24 x 30	5.00		1	--	--	1	1	--	--
21	W6-1(2M)	--	36 x 36		9.00	1	--	--	1	1	--	--
22	D7-68 R	Sandy Knoll										--
		CO. Park										--
		----->	72 x 36	18		--	2	--	1	2	--	--
23	R2-1(2M)	50 MPH	30 x 36	7.50		--	--	--	1	--	--	Re-install on light pole
	--	NO PARKING ANYTIME	-- x --	--		--	--	--	1	--	--	--
24	D2-3	Newburg 5	108 x 36	27.00		2	--	--	1	2	--	--
		Saukville 11	-- x --	--		--	--	--	--	--	--	--
		Port Washington 13	-- x --	--			--	--	--	--	--	--
25	W6-3(2M)	--	36 x 36		9.00	1	--	--	--	--	--	--
26	W14-3(2M)	--	48 x 36		6.00	1	--	--	1	--	--	--
27	R1-1(3)	--	36 x 36	7.46		--	1	--	1	1	--	Str. Name sign shall be moved by other(City or Township)
		Str. Name sign				--	--	--	--	--	--	
28	D1-55R	NATIONAL GUARD	96 x 24	16.00		2	--	--	1	2		--
		ARMORY ---->	-- x --	--		--	--	--	--	--	--	--
29	D1-55L	NATIONAL GUARD	96 x 24	16.00		2	--	--	1	2		--
		<--- ARMORY	-- x --	--		--	--	--	--	--	--	--
30	R2-1(2M)	50 MPH	30 x 36	7.50		1	--	--	--	--	--	--
31	R2-1(2M)	50 MPH	30 x 36	7.50		1	--	--	1	1	--	--
32	D1-2	WEST BEND	72 x 24	12.00		2	--	--	1	2	--	--
		<---- AIRPORT	-- x --				--	--			--	--
33	D1-2	WEST BEND	72 x 24	12.00		2			1	2		
		AIRPORT ---->	-- x --				--	--				--
	R2-1	50 MPH					--	--	1			--
34	R2-1(2S)	55 MPH	24 x 30	5		1	--	--	1	1	--	--
35	R2-1(3)	50 MPH	36 x 48	5.00		1	--	--	1	1	--	--

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	MISCELLANEOUS SIGNING QUANTITIES	SHEET 50 E

TYPE I & II PERMANENT SIGNING

CATEGORY CODE 010

SIGN NO.	CODE	SIGN MESSAGE	TYPE II SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II REFLECTIVE F [SF]	634.0616 WOOD POSTS 4"x 6"X16' [EA]	634.0618 WOOD POSTS 4"x 6"X18' [EA]	638.2102 MOVING SIGNS TYPE II [EA]	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS NEW SIGN LOCATION
36	R1-1(3)	--	36	x	36	7.46		1	--	--	1	1	--	--
37	W1-7(2M)	--	48	x	24	--	8.00	1	--	--	1	1	--	--
38	W14-3(2M)	--	48	x	36		6.00	1	--	--	1	1	--	--
39	W6-3(2M)	--	36	x	36	--	9.00	1	--	--	--	--	--	--
40	W6-1(2M)	--	36	x	36	--	9.00	--	1	--	1	--	--	--
41	R5-1(2M)	--	36	x	36	9		--	1	--	1	1	--	--
42	W6-2(2M)		36	x	36	--	9.00	--	--	--	1	--	41	--
43	W5-5 4(2M)	--	18	x	18		2.25	--	--	--	--	--	--	Mount under R4-7 sign, per detail
44	W5-5 4(2M)	--	18	x	18		2.25	--	--	--	--	--	--	Mount under R4-7 sign, per detai
45	W6-3(2M)	--	36	x	36	--	9.00	1	--	--	--	--	--	--
46	W6-1(2M)	--	36	x	36	--	9.00	--	1	--	1	1	--	--
47	R5-1(2M)	--	36	x	36	9		--	1	--	1	1	--	--
48	W6-2(2M)		36	x	36	--	9.00	--	--	--	1	--	47	--
49	R3-20L (2M)		24		36	6			1	--	1	1	--	---
50	R5-1A(2M)	--	42	x	30	8.75	--	--	1	--	1	1	--	--
51	R5-1A(2M)	--	42	x	30	8.75	--	1	--	--	--	--	--	---
52	R6-2L(2S)	--	24	x	30	5.00	--	--	1	--	1	1	--	--
53	R6-2L(2S)	--	24	x	30	5.00	--	--	1	--	1	1	--	--
54	R5-1(2M)	--	36	x	36	9.00	--	--	1	--	1	1	--	--
55	R5-1(2M)	--	36	x	36	9.00	--	--	1	--	1	1	--	--
56	R3-20L (2M)		24		36	6			1	--	1	1	--	--
57	R5-1A(2M)	--	42	x	30	8.75	--	--	1	--	1	1	--	--
58	R5-1A(2M)	--	42	x	30	8.75	--	1	--	--	--	--	--	---
59	R7-1D(2M)	--	24	x	30	5.00	--	--	--	--	--	--	--	SEE SHT 1 OF 9
60	W8-70 (2M)	--	36	x	36	--	9.00	--	1	--	--	--	--	see detail attachement, pg 2
61	W7-51(2M)	--	36	x	18	--	4.50	--	--	--	--	--	60	pg 2
62	W8-70 (2M)	--	36	x	36	--	9.00	--	1	--	--	--	--	see detail attachement, pg 8
63	W7-51(2M)	--	36	x	18	--	4.50	--	--	--	--	--	62	pg 8
64	R3-8V(MOD) (2M)	--	30	x	72	15.00	--	--	2	--	--	--	--	SEE SHT 1 OF 9
65	--	ADOPT- A- HWY						2		1		2		Move to same location
65A	--	PLAQUE								1				
66	--	ADOPT- A- HWY						2		1		2		Move to same location
66A	--	PLAQUE								1				
	Undistributed						--	7	2	5	2	7	--	--
	Totals					327.42	144.75	48.00	21.00	9.00	53.00	56.00	--	--

SHEET 2 OF 2

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	MISCELLANEOUS SIGNING QUANTITIES	SHEET 51

FILE NAME : C:\1410-12-70\QTY_SIGN.DGN PLOT DATE : 29-JUL-2013 11:50 PLOT BY : PLOT NAME : PLOT SCALE : 201.110824:1

WISDOT/CADDS SHEET 43

PAVEMENT MARKINGS CATEGORY CODE 0010

LOCATION	646.0106 PAVEMENT MARKING EPOXY 4-INCH (YELLOW) (LF)	646.0106 PAVEMENT MARKING EPOXY 4-INCH (12.5' LINE 37.5' SKIP DASHED YELLOW) (LF)	646.0106 PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW) (LF)	646.0106 PAVEMENT MARKING EPOXY 4-INCH (WHITE) (LF)	646.0106 PAVEMENT MARKING EPOXY 4-INCH (12.5' LINE 37.5' SKIP DASHED WHITE) (LF)	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW) (LF)	647.0856 PAVEMENT MARKING CONCRETE CORRUGATED MEDIAN EPOXY (YELLOW) (SF)	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW) (EACH)	SPV.0060.02 PAVEMENT MARKINGS GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3 (WHITE) (EACH)	SPV.0060.03 PAVEMENT MARKINGS GROOVED PREFORMED THERMOPLASTIC WORDS ("ONLY" WHITE) (EACH)	SPV.0060.01 PAVEMENT MARKINGS GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2 (WHITE) (EACH)	SPV.0090.01 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH (LF)	SPV.0090.02 PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (WHITE) (LF)	SPV.0090.02 PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (3' LINE 9' SKIP DASHED WHITE) (LF)	SPV.0090.03 PAVEMENT MARKING GROOVED PREFORMED PLASTIC 4-INCH (WHITE) (LF)
STA 92+00 to 97+70	570	--	478	791	25	14	132	1	2	--	--	67	108	26	--
STA 97+70 to 112+00	750	363	--	2740	--	--	--	--	--	--	--	30	--	--	--
STA 112+00 to 127+00	742	375	--	2870	--	--	--	--	--	--	--	20	--	--	--
STA 127+00 to 142+00	1500	375	--	2945	--	--	--	--	--	--	--	--	--	--	--
STA 142+00 to 157+00	540	375	--	3000	--	--	--	--	--	--	--	--	--	--	--
STA 157+00 to 171+00	230	350	--	2688	63	--	--	--	--	--	--	30	120	--	120
STA 171+00 to 186+00	--	375	--	3000	--	--	--	--	--	--	--	--	--	--	--
STA 186+00 to 199+50	500	338	--	2700	--	--	--	--	--	--	--	--	--	--	--
STA 199+50 to 209+00	290	--	1720	1432	--	232	--	2	--	3	3	--	450	24	--
SUBTOTALS	5122	2551	2198	22166	88	246	132	3	2	3	3	147	678	50	120
TOTALS	32125					246	132	3	2	3	3	147	728		120

SHEET 1 OF 1

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PAVEMENT MARKING QUANTITIES	SHEET:	E

FILE NAME : J:\projects\d2_14101233\030202_mq.pptx PLOT DATE : 19-JUNE-2013 PLOT BY : MSCCXV PLOT NAME : 030202_mq.pdf PLOT SCALE : 1:1

N

BEGIN PROJECT 1410-12-70
STA. 94+60

5

5

LEGEND

BUTT JOINTS

X X X SAWING ASPHALT

SAWING CONCRETE

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 53	E

N

5

5

LEGEND

BUTT JOINTS

X X X SAWING ASPHALT

SAWING CONCRETE

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 54	E

LEGEND

BUTT JOINTS

X X X SAWING ASPHALT

SAWING CONCRETE

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 55	E

N

3" ASPHALT SURFACE
AND 6" BASE AGGREGATE DENSE 1 1/4"

5

5

REMOVE ACCESS
REDITCH
REMOVE CULERT PIPE

LEGEND

BUTT JOINTS

X X X SAWING ASPHALT

SAWING CONCRETE

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 56	E

N

REMOVE ACCESS
AND REDITCH

T 11 N
R 8 E — 9 / 17 — 16 — 20

5 5

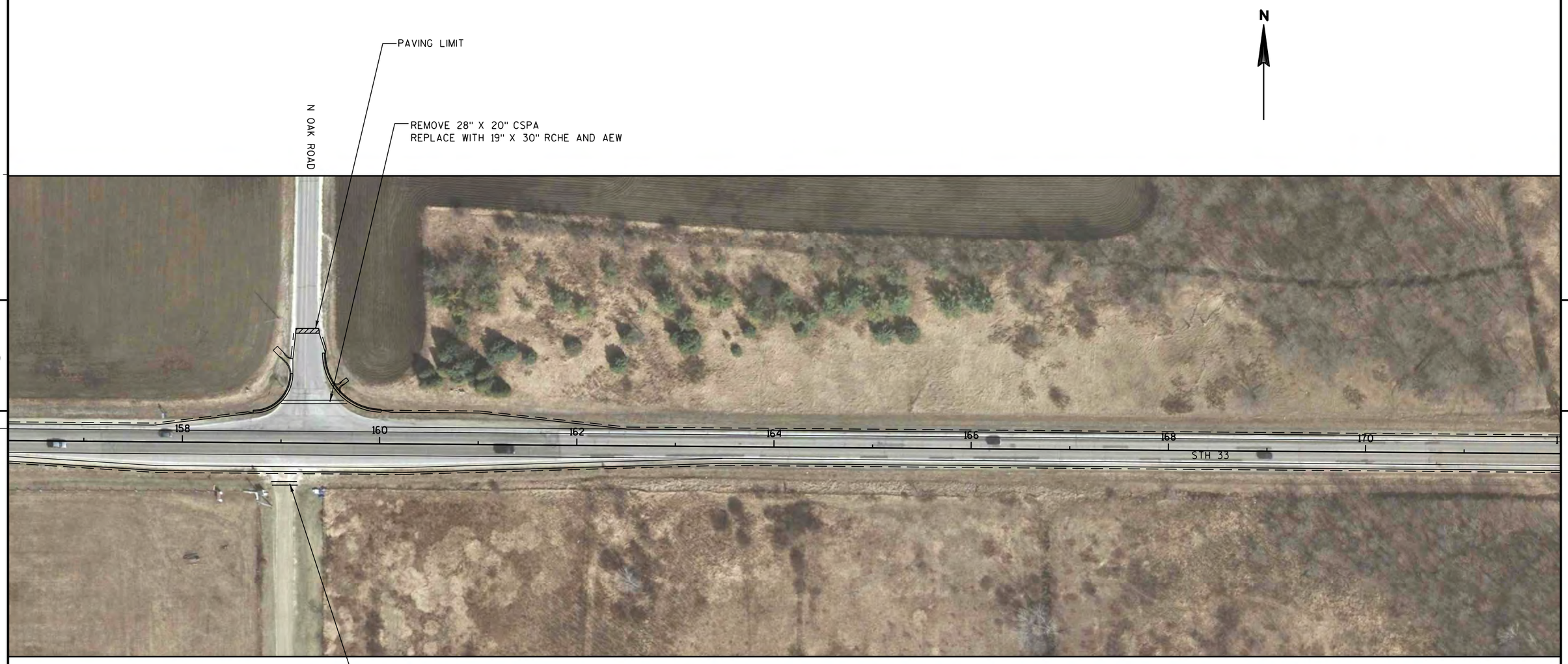
LEGEND

BUTT JOINTS

X X X SAWING ASPHALT

SAWING CONCRETE

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 57	E



5 5

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 58	E

REMOVE BOX CULVERT AND 71" X 47" CSPA
REPLACE WITH 48" X 76" RCHE AND AEW
6" -BELOW GROUND
64'@ 0.70%

REMOVE 30" CMCP
REPLACE WITH 30" CONCRETE PIPE AND AEW
65'@ 0.51%

LEGEND

BUTT JOINTS

X X X SAWING ASPHALT

SAWING CONCRETE

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 59	E

N

EXCAVATED EXCESS
GRAVEL AND REDITCH

END PROJECT 1410-12-70
STA. 199+75
BUTT JOINT REQUIRED

5

5

REMOVE CMCP
AND REDITCH

SAWCUT REMOVE ASPHALT,
4" BASE, PLACE TOPSOIL 6",
SEED AND MULCH

3" ASPHALT SURFACE AND
6" BASE AGGREGATE DENSE 1 1/4"

REMOVE 12" CMCP
REPLACE WITH 15" CMCP AND AEW

MATCH CONCRETE

T 11 N
9 10
16 15
R 20 E

LEGEND

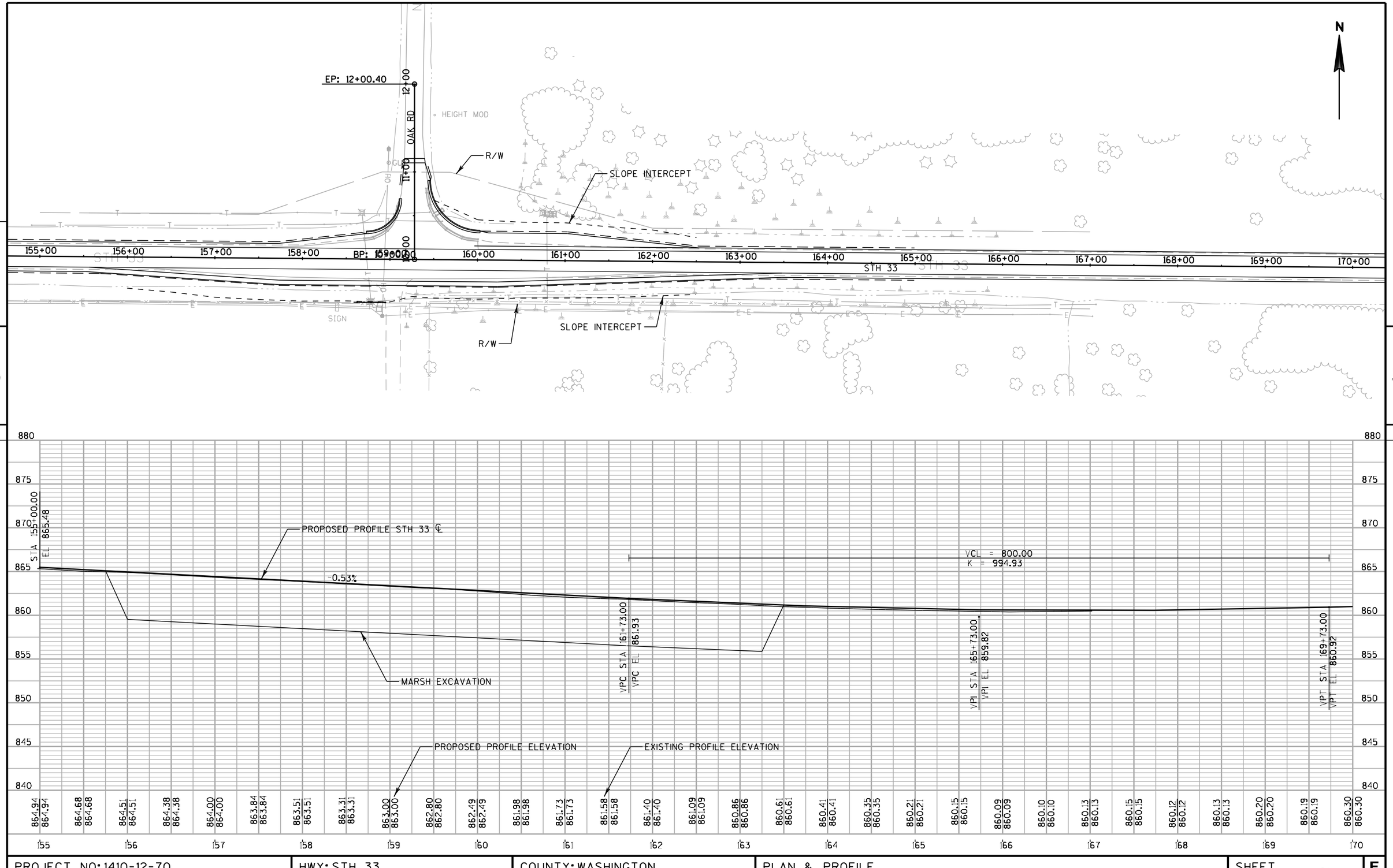
BUTT JOINTS

X X X SAWING ASPHALT

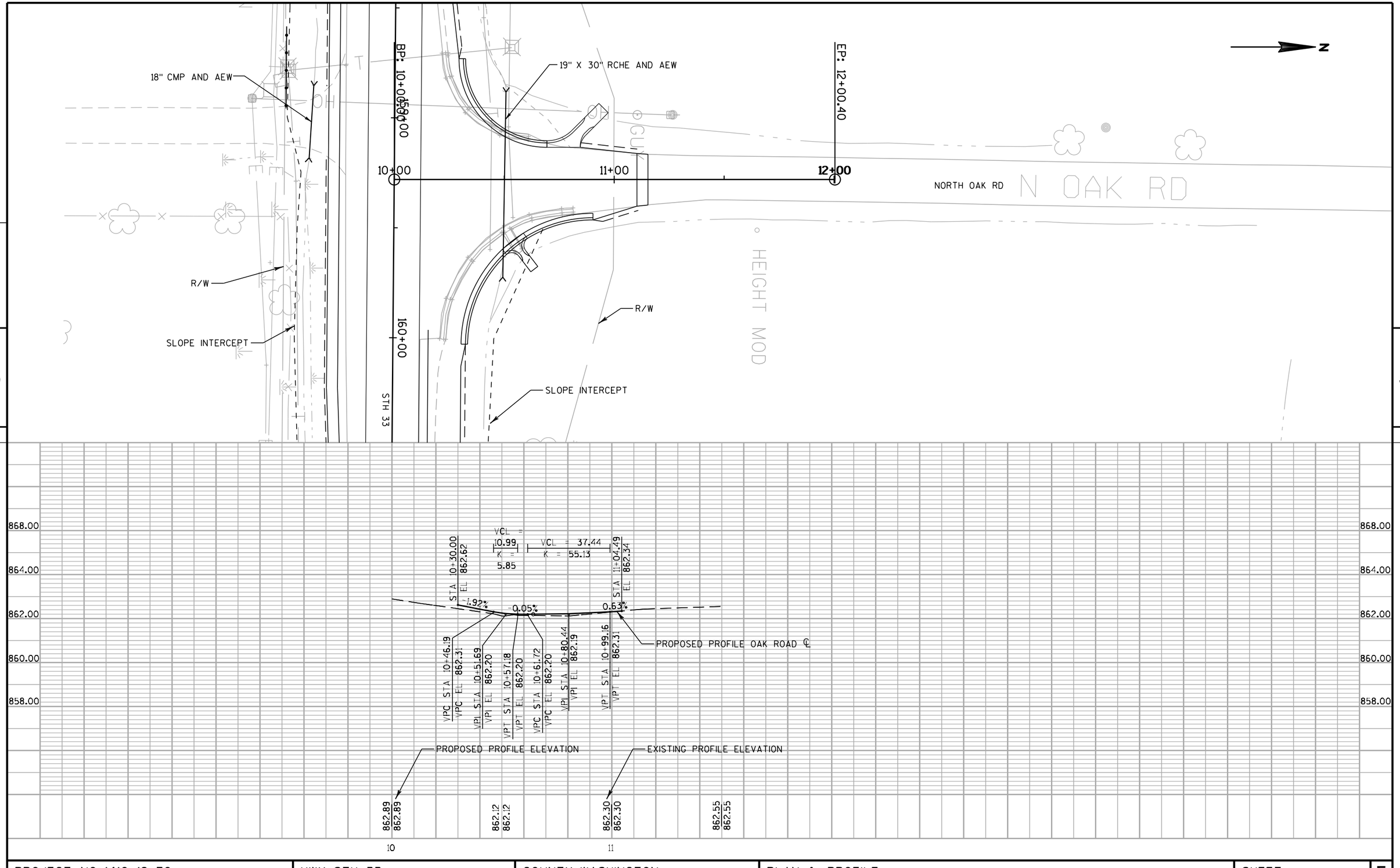
SAWING CONCRETE

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 60	E

FILE NAME : J:\projects\D2_14101233\050008_PD.dgn PLOT DATE : 30-JUL-2013 13:17 PLOT BY : ditj3s PLOT NAME : PLOT SCALE : 100:1



PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PLAN & PROFILE	SHEET 61 E



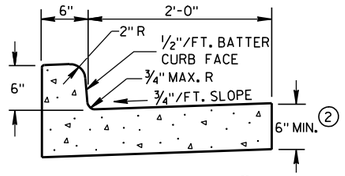
PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	PLAN & PROFILE	SHEET 62	E

FILE NAME : J:\projects\D2_14101233\050102_PP.dgn PLOT DATE : 30-JUL-2013 13:18 PLOT BY : ditj3s PLOT NAME : PLOT SCALE : 40:1

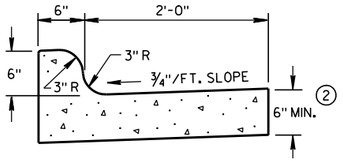
WISDOT/CADDS SHEET 40

Standard Detail Drawing List

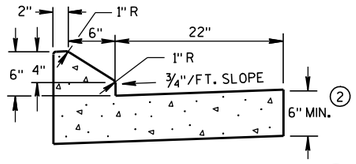
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
11B01-05	CONCRETE CORRUGATED MEDIAN
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
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C04-01	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-01	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C12-03	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C18-03	MEDIAN ISLAND MARKING
15C19-01A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C29-03A	BICYCLE LANE MARKING
15C29-03B	BICYCLE LANE MARKING
15D28-01	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY



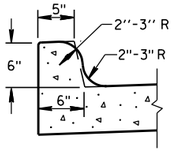
TYPES A & D (1)



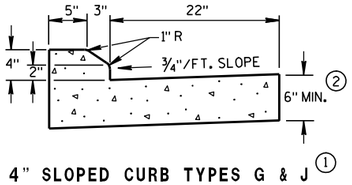
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

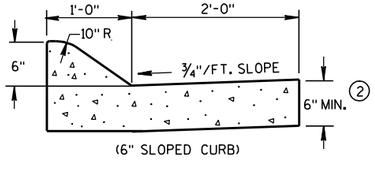


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

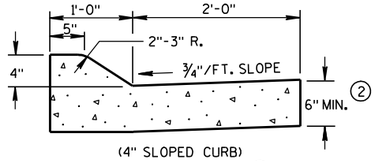


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

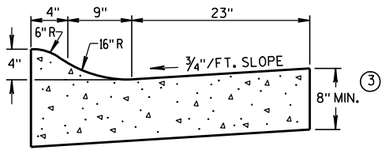


(6" SLOPED CURB)



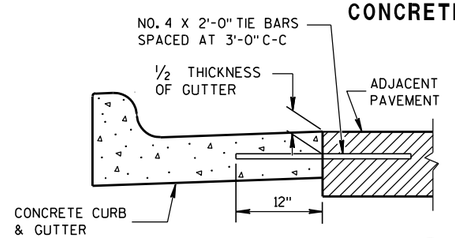
(4" SLOPED CURB)

TYPES A & D (1)

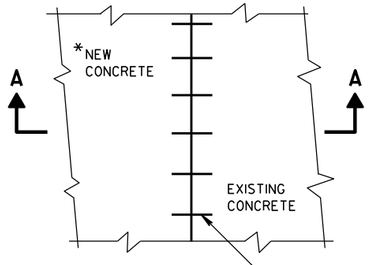


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"

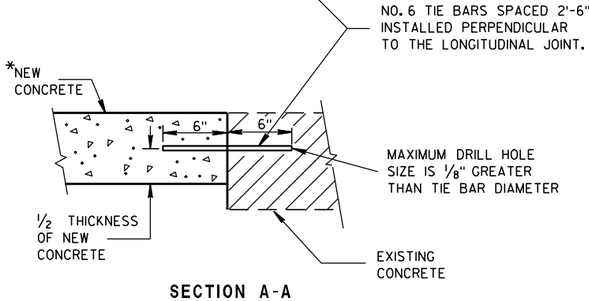


TYPICAL TIE BAR LOCATION (1)



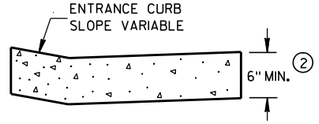
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW

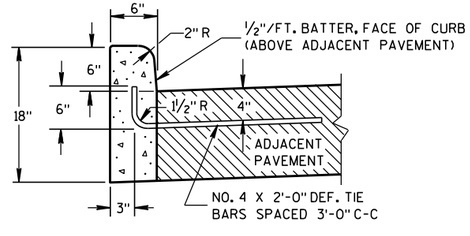


SECTION A-A

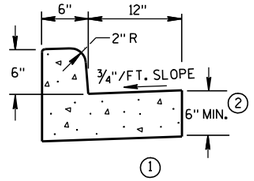
TIE BARS DRILLED INTO EXISTING PAVEMENT



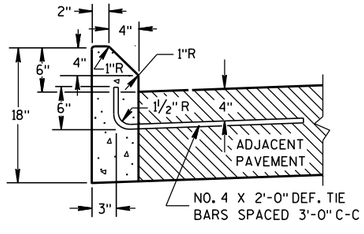
DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)



(1)
TYPES A & D

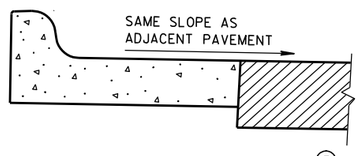


(1)
TYPES A & D
CONCRETE CURB & GUTTER 18"



(1)
TYPES G & J

CONCRETE CURB



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

GENERAL NOTES

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

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

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

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

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

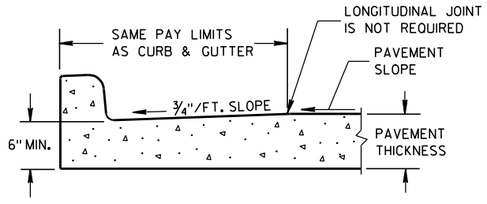
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

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

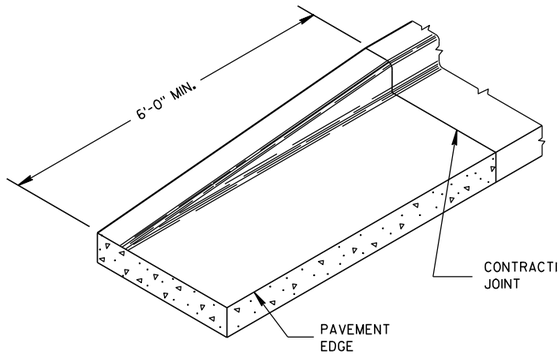
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

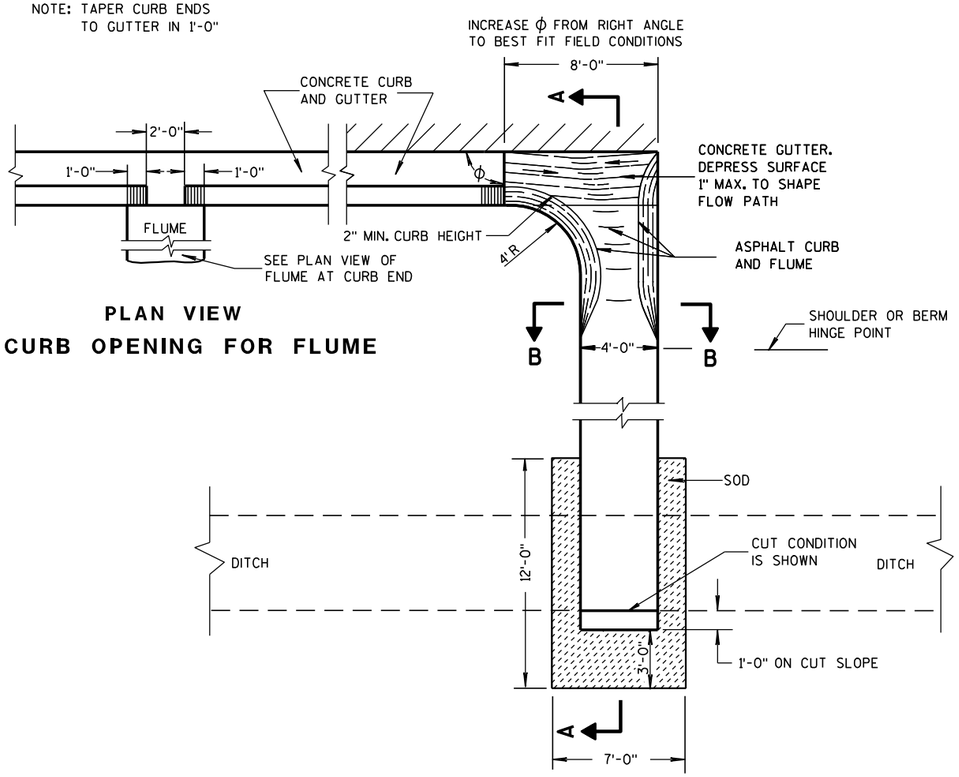
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

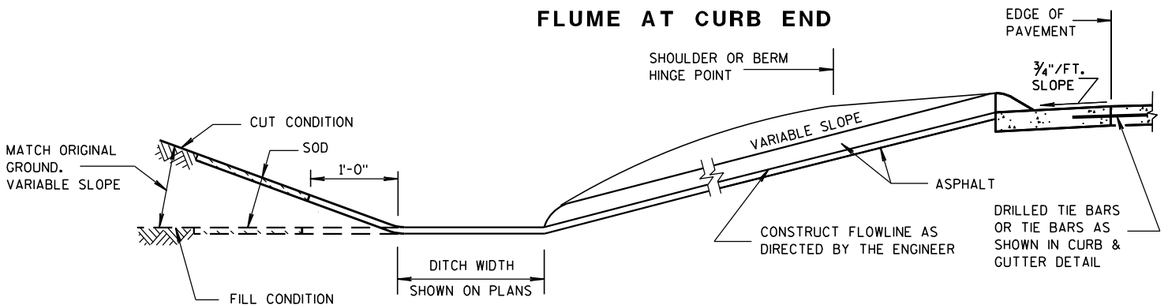
S.D.D. 8 D 1-17

ASPHALTIC FLUME

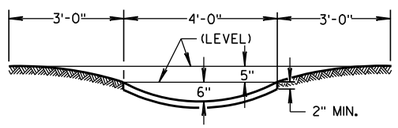


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

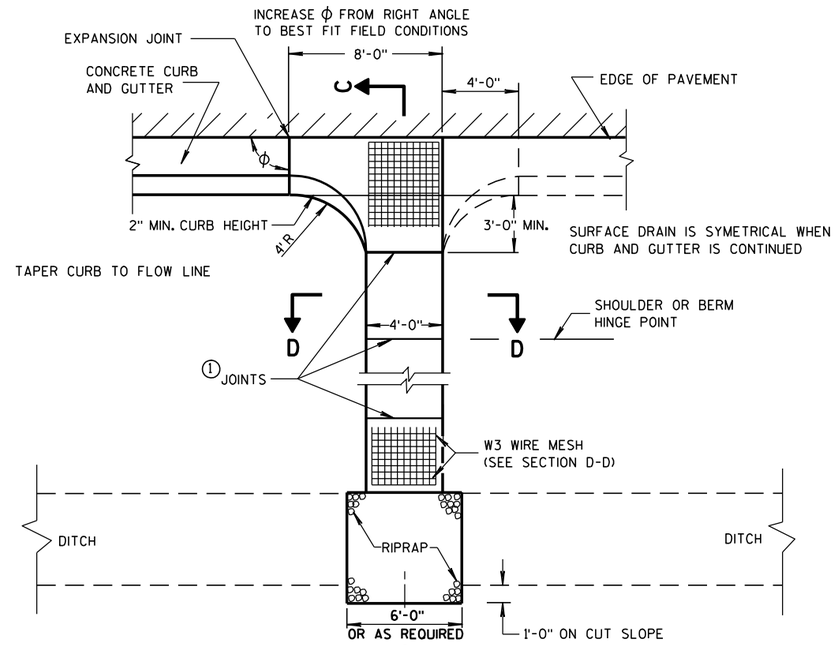
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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

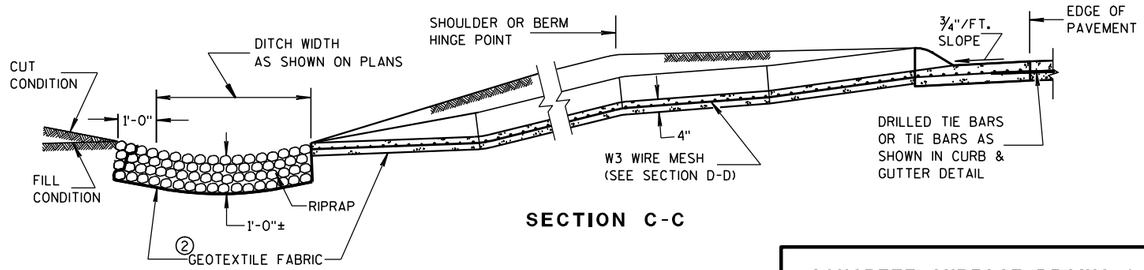
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

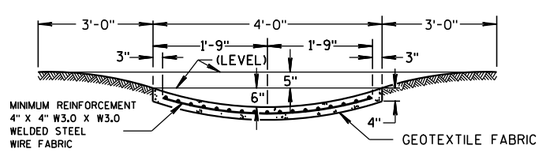
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
65
MENT

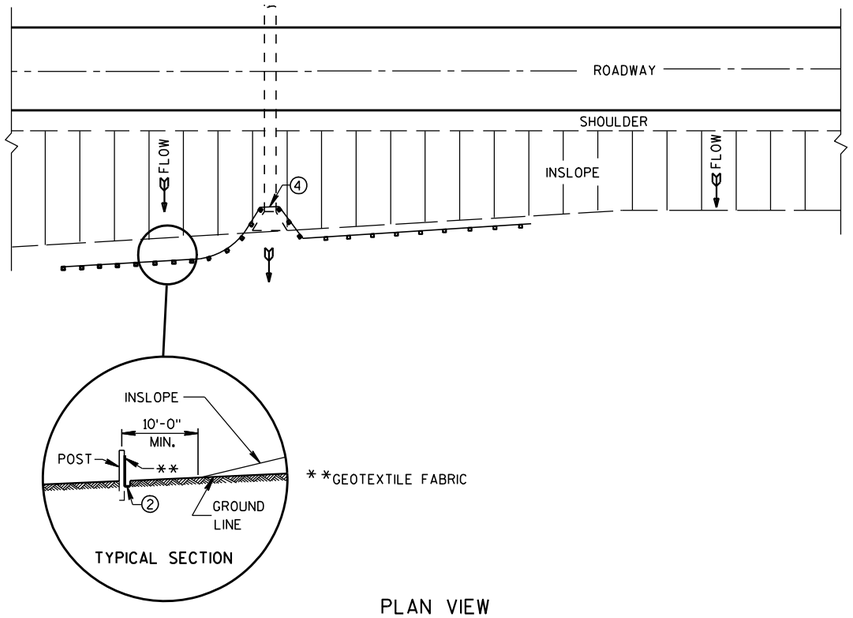
FHWA

6

S.D.D. 8 D 4-5

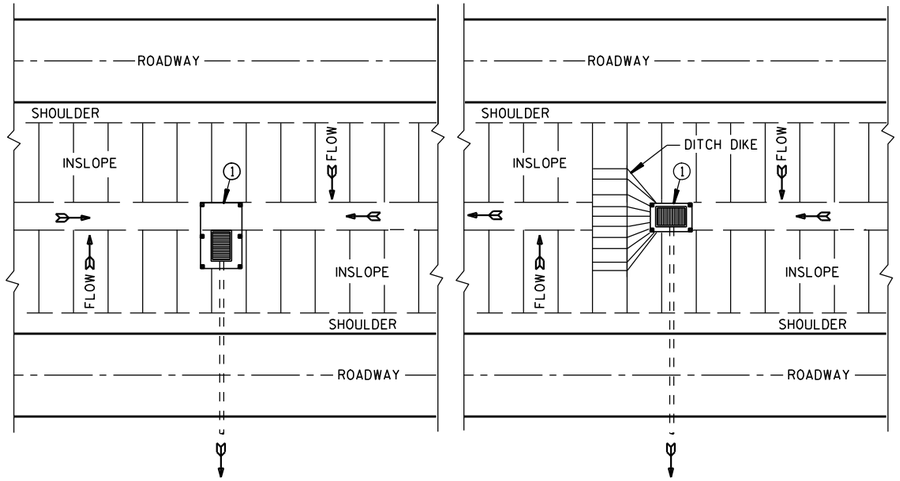
6

S.D.D. 8 D 4-5



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



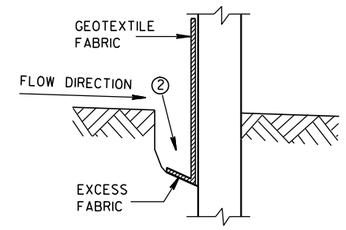
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

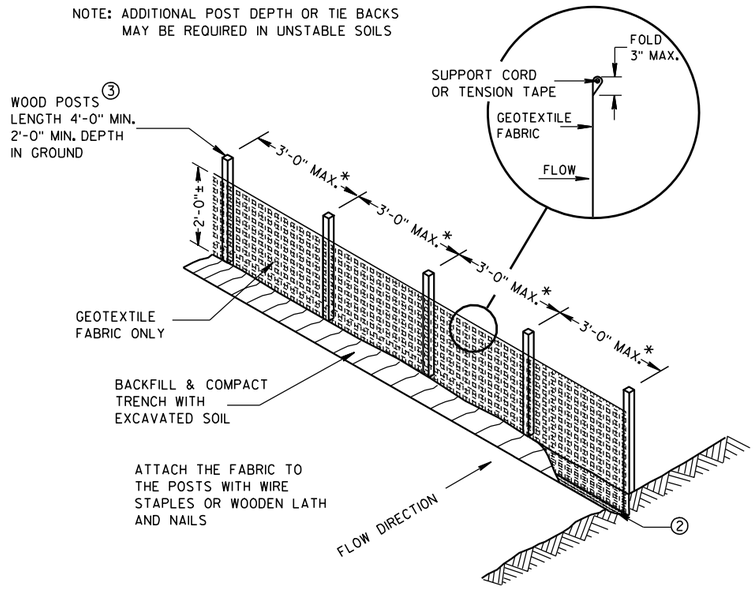
GENERAL NOTES

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

1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

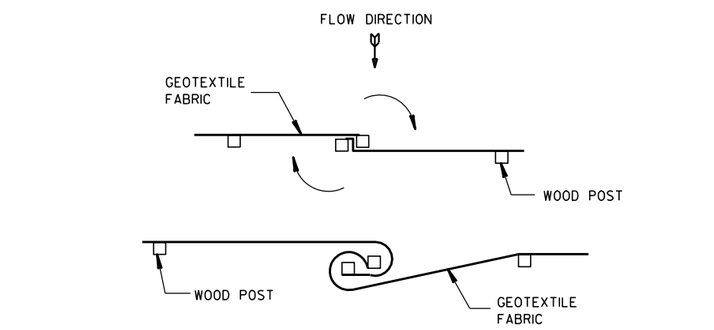


TRENCH DETAIL

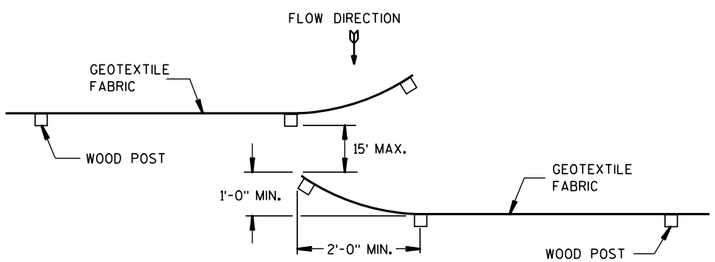


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

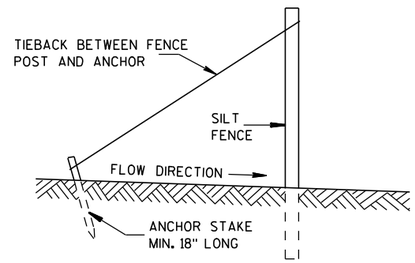


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

METAL APRON ENDWALLS

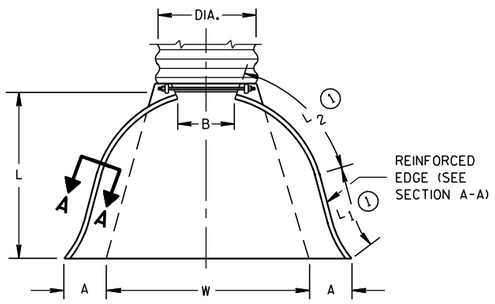
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

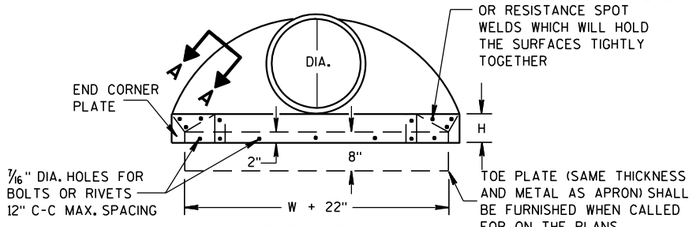
REINFORCED CONCRETE APRON ENDWALLS

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

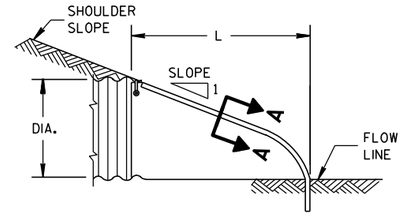
* MINIMUM
** MAXIMUM



PLAN VIEW

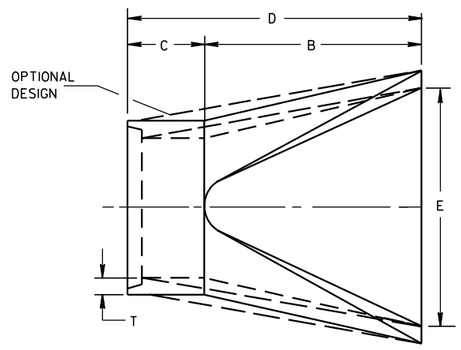


END VIEW

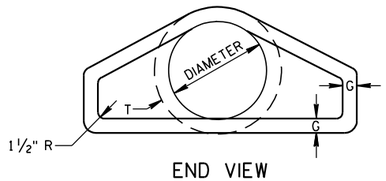


SIDE ELEVATION

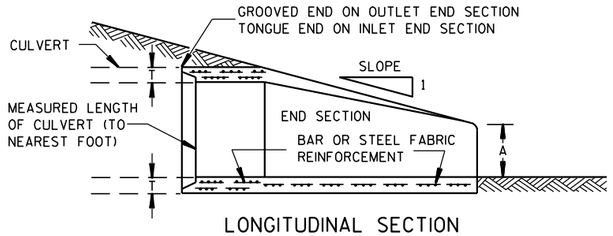
METAL ENDWALLS



PLAN

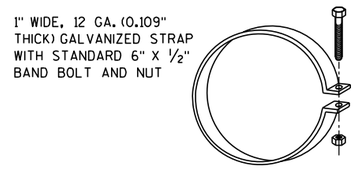


END VIEW



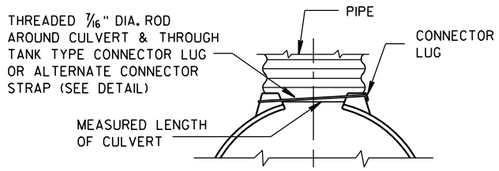
LONGITUDINAL SECTION

CONCRETE ENDWALLS

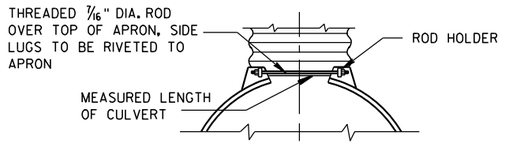


ALTERNATE FOR TYPE 1 CONNECTION

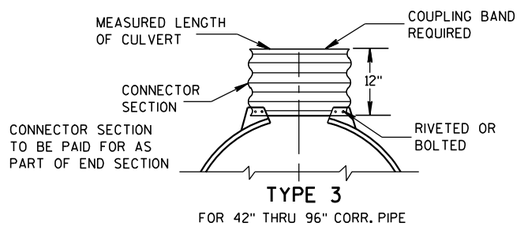
END SECTION CONNECTOR STRAP



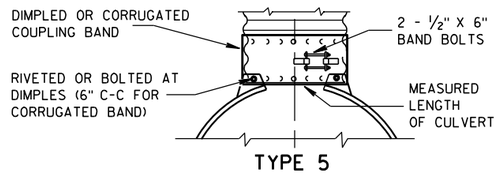
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

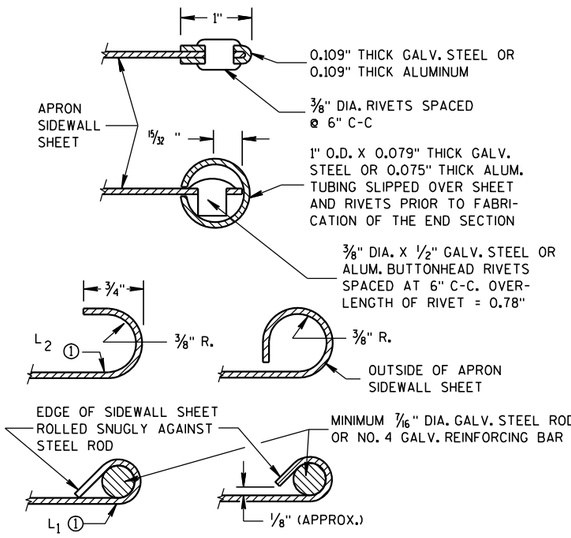
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

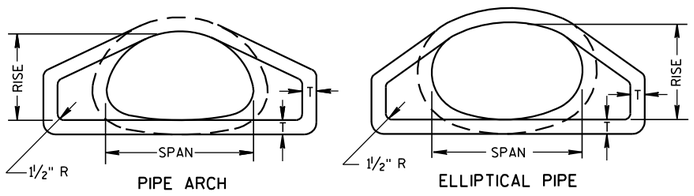
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

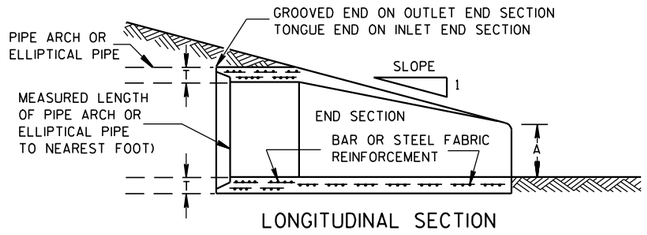
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOP 67 NEER
FHWA

6

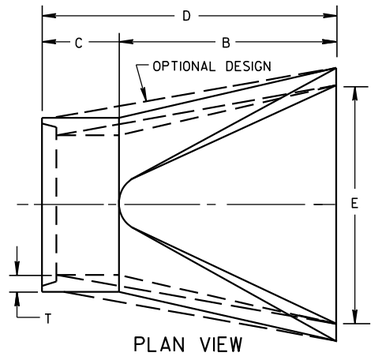
S.D.D. 8 F 1-11



END VIEW

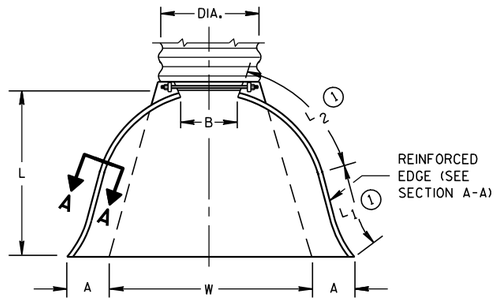


LONGITUDINAL SECTION

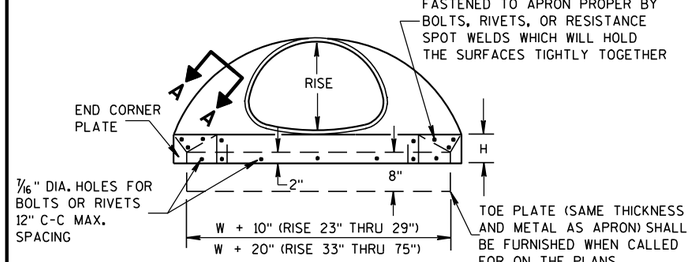


PLAN VIEW

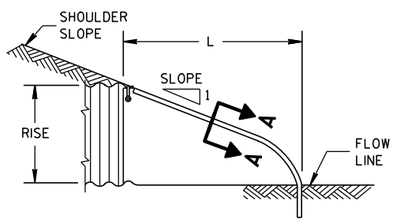
CONCRETE ENDWALLS



PLAN VIEW

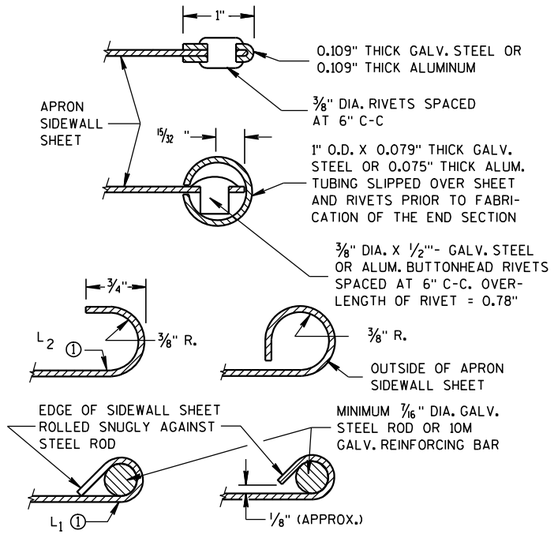


END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

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

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	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

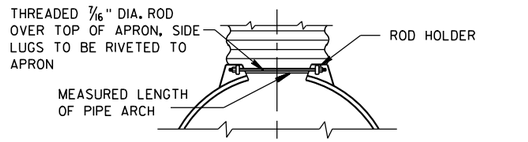
REINFORCED CONCRETE PIPE ARCH

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

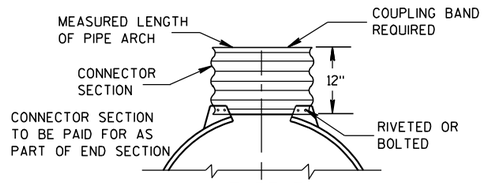
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48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

**NOMINAL SIZE



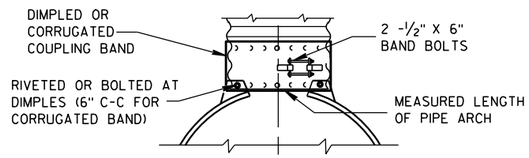
TYPE 2

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

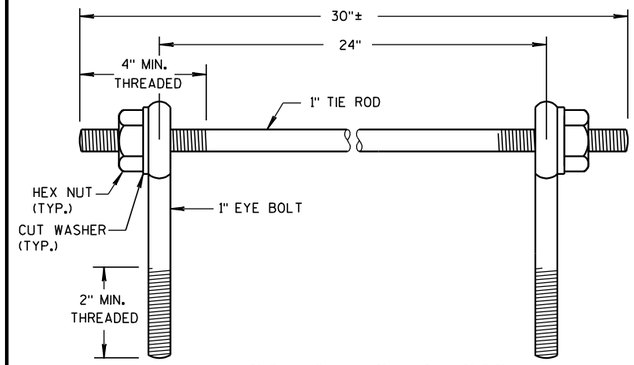
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

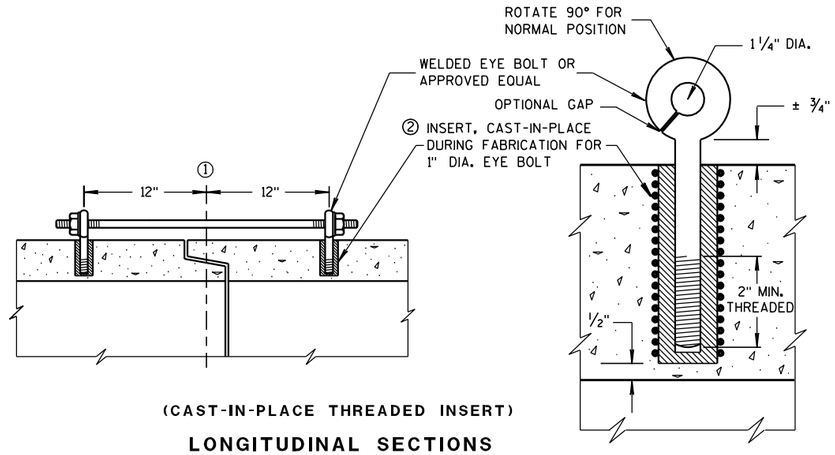
11/30/94 — DATE

/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.

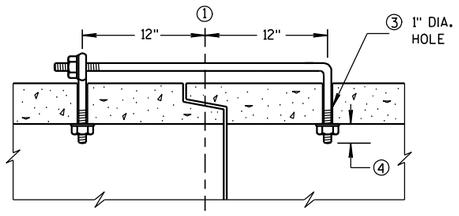
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

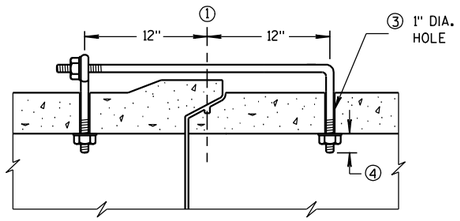
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

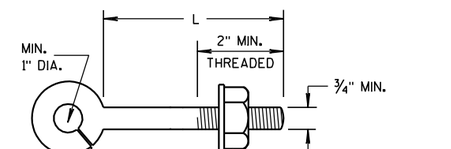


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

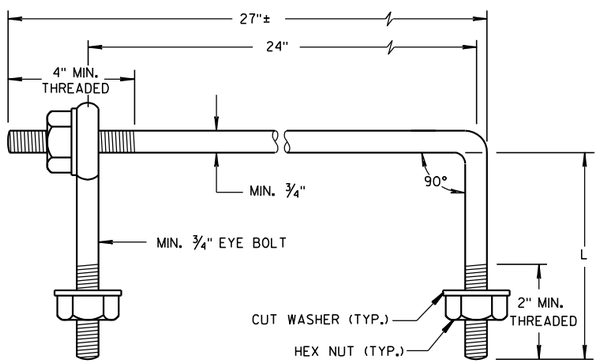
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



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

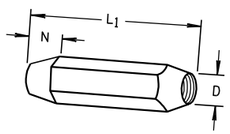
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

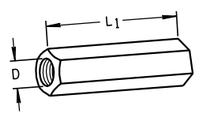
ADJUSTABLE TIE ROD TABLE

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



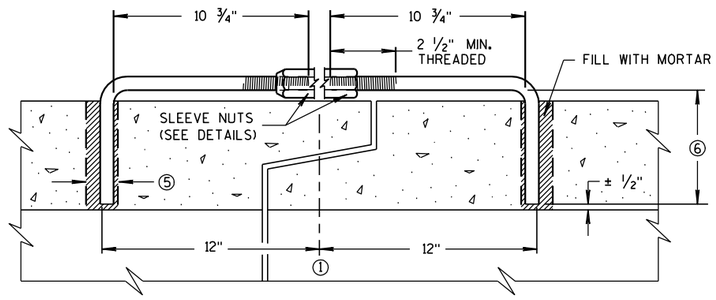
TAPERED



PLAIN

RIGHT AND LEFT THREADS

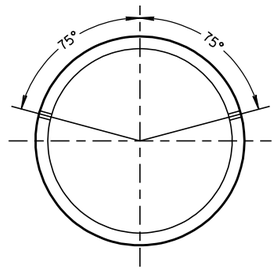
SLEEVE NUTS



LONGITUDINAL SECTION

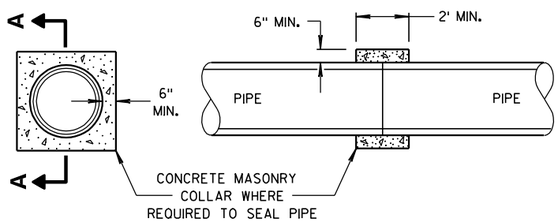
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 F 4-7

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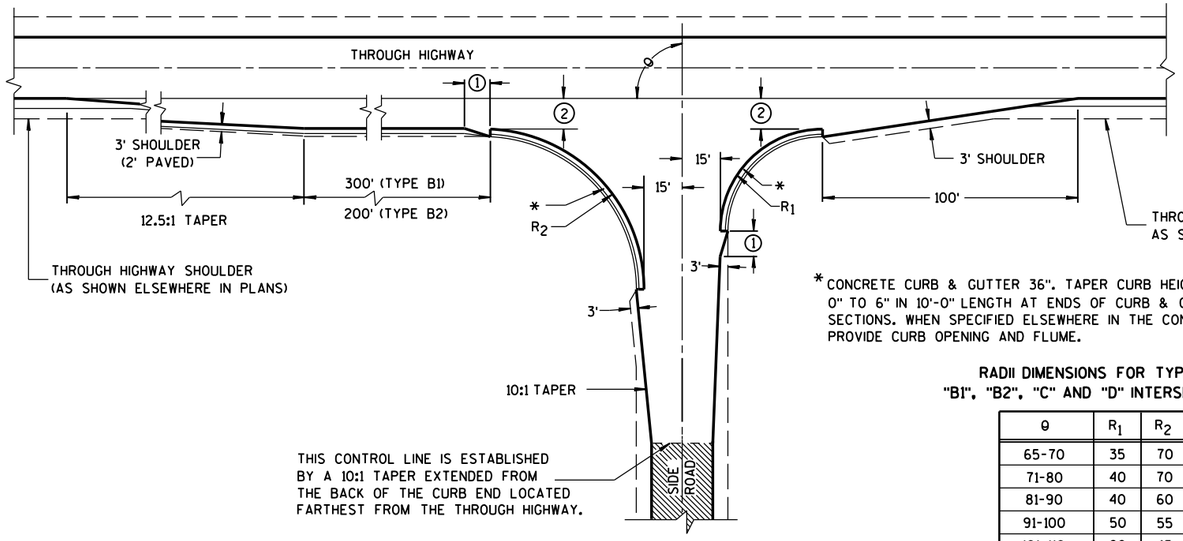
S.D.D. 8 F 4-7

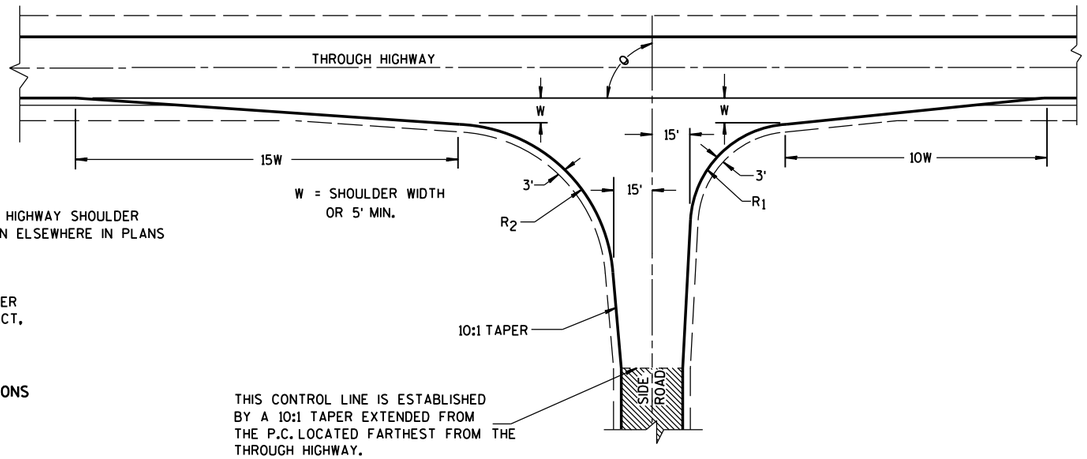


TYPE "B1" AND "B2"

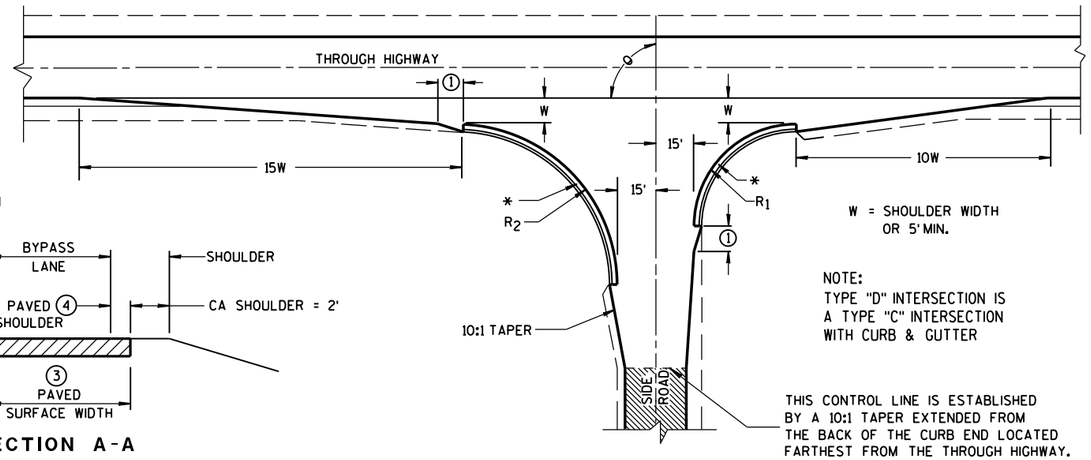
*CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

RADII DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

θ	R_1	R_2
65-70	35	70
71-80	40	70
81-90	40	60
91-100	50	55
101-110	60	45



TYPE "C"



TYPE "D"

GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING PAVED SURFACE

BYPASS LANE

(1) 10-FT TYPICAL.

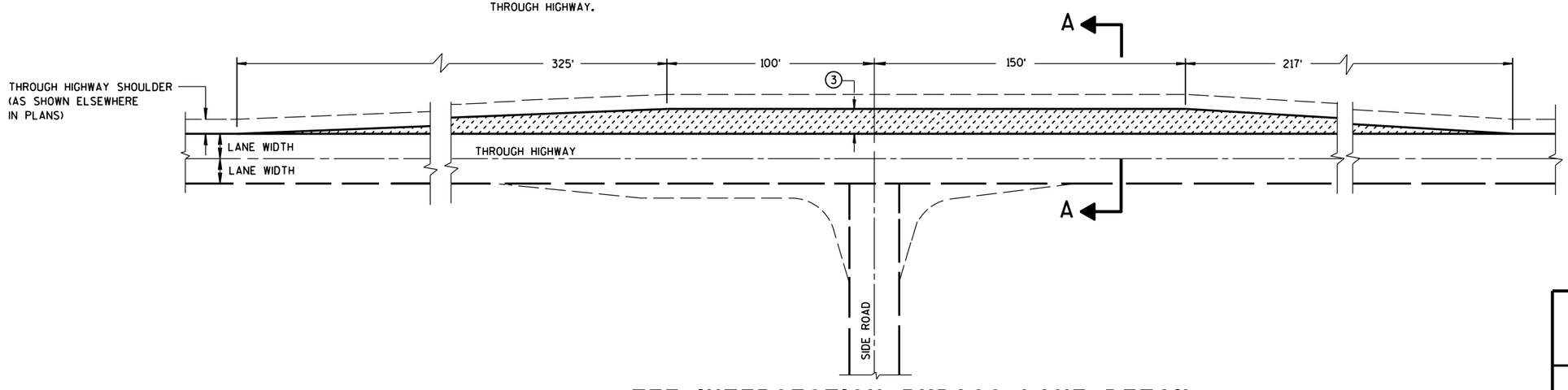
(2) 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

(3) BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.

(4) BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.

SECTION A-A
(SHOWING BYPASS LANE AND SHOULDER)



TEE INTERSECTION BYPASS LANE DETAIL

AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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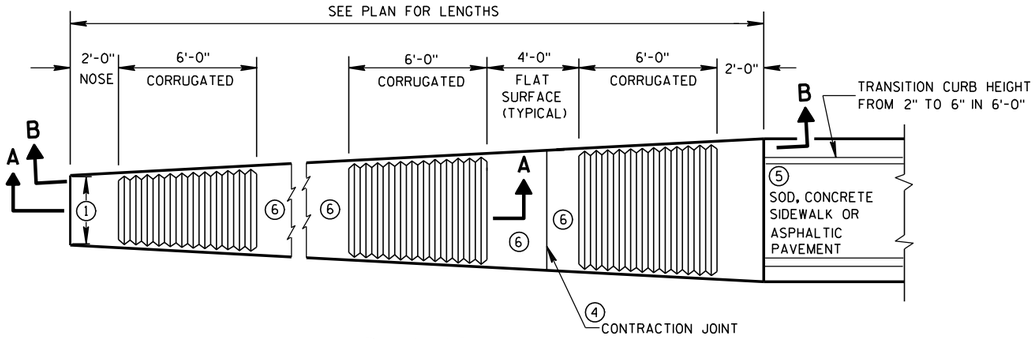
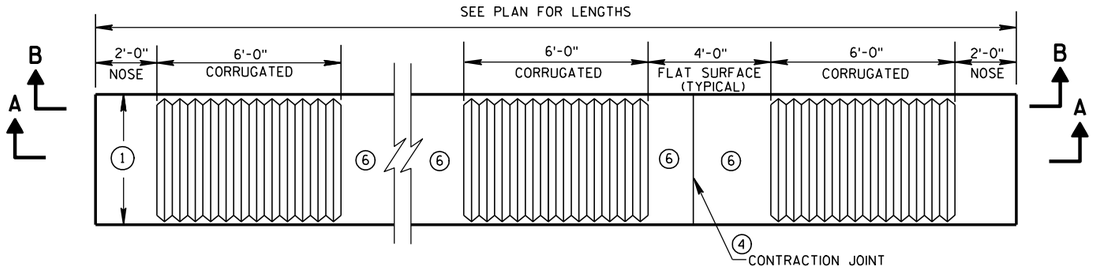
S.D.D. 9 A 1-13a



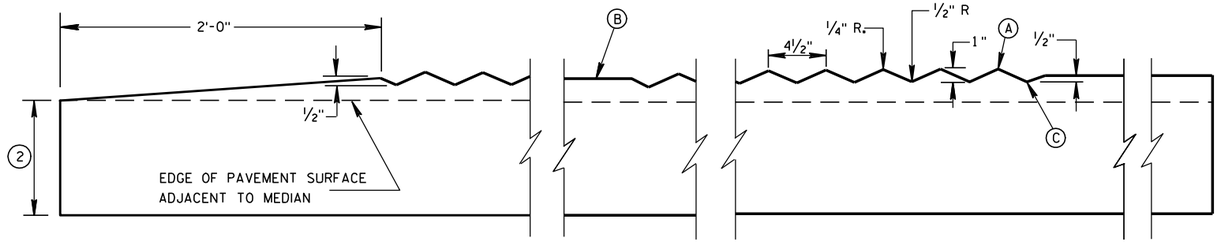
PLAN VIEW

VARIABLE WIDTH CONCRETE CORRUGATED MEDIAN



PLAN VIEW

UNIFORM WIDTH CONCRETE CORRUGATED MEDIAN



SECTION A-A

LONGITUDINAL SECTION

GENERAL NOTES

(1) SEE PLANS FOR CONSTANT OR VARIABLE WIDTH.

(2) THE DEPTH OF THE CONCRETE CORRUGATED MEDIAN SHALL BE 9-INCHES UNLESS SHOWN OTHERWISE IN THE PLAN.

ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN IN THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

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

(3) ASPHALTIC PAVEMENT OVER BASE AGGREGATE DENSE.

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

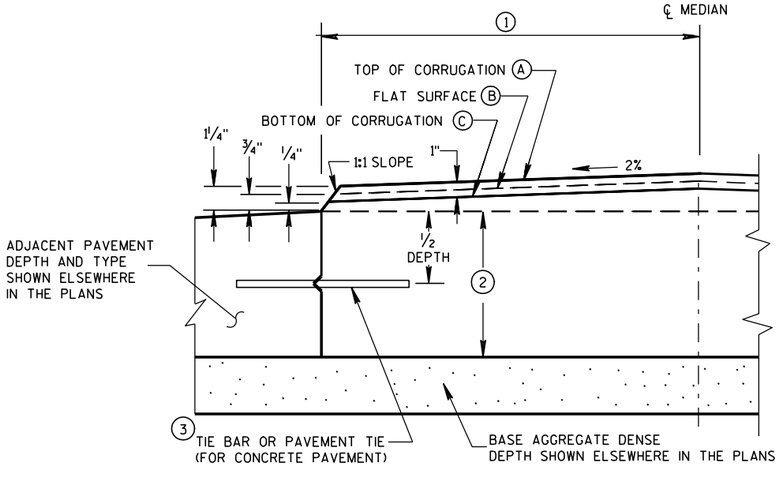
INSTALL TIE BARS TO MAINTAIN A MINIMUM OF 3-INCHES OF COVER BETWEEN THE TIE BAR AND THE CONCRETE SURFACE (BOTTOM AND TOP).

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

(4) CONCRETE CORRUGATED MEDIAN CONTRACTION JOINTS SHALL BE CONSTRUCTED TO MATCH THE JOINTS IN ADJACENT CONCRETE PAVEMENT. WHERE ADJACENT PAVEMENT IS ASPHALT WITH BASE AGGREGATE DENSE. TRANSVERSE CONTRACTION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS.

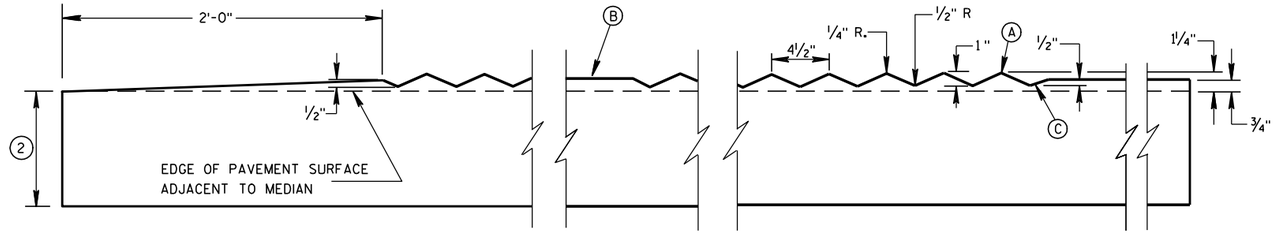
(5) SURFACE TYPE AND DETAILS ARE DEFINED ELSEWHERE IN THE PLAN.

(6) YELLOW MARKING ON FLAT SURFACE WHEN MEDIAN SEPARATES OPPOSING TRAFFIC.



HALF CROSS SECTION

(2) CONCRETE CORRUGATED MEDIAN AND ADJACENT PAVEMENT



SECTION B-B

LONGITUDINAL SECTION

CONCRETE CORRUGATED MEDIAN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12/17/07 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER

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S.D.D. 11 B 1-5

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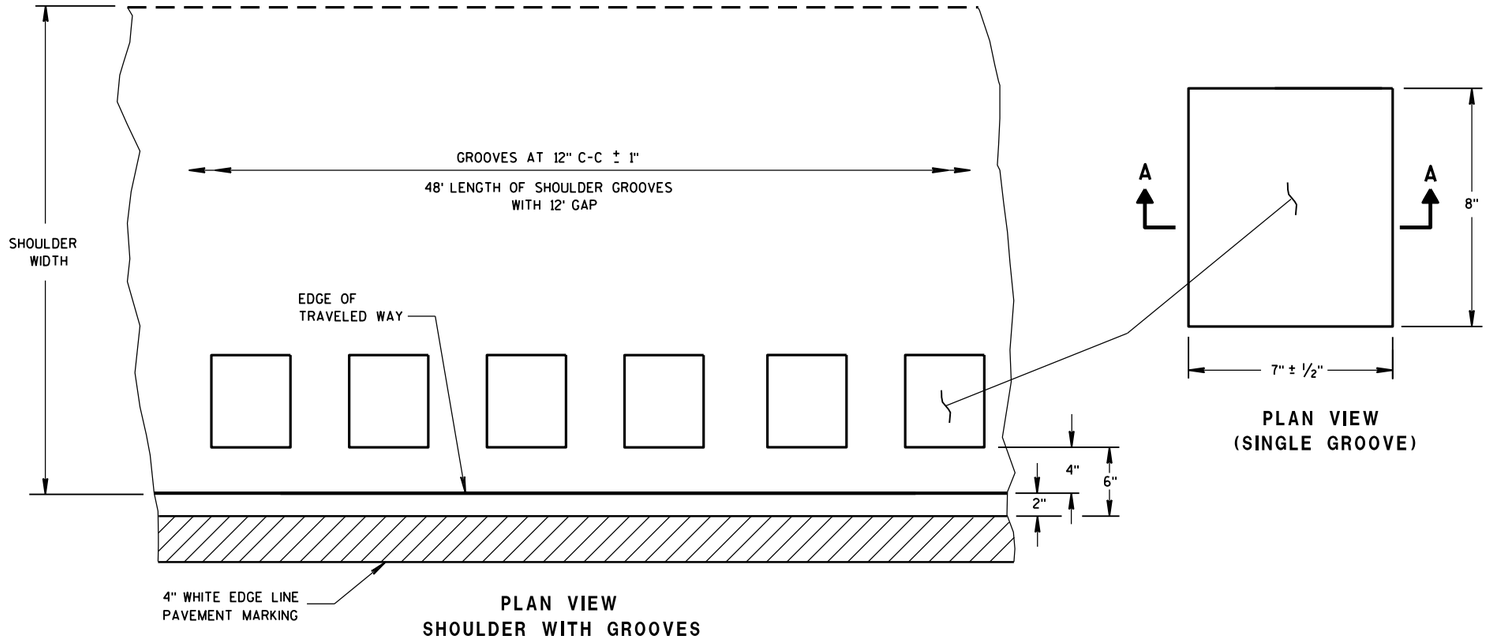
S.D.D. 11 B 1-5



PLAN VIEW
SHOULDER WITH GROOVES

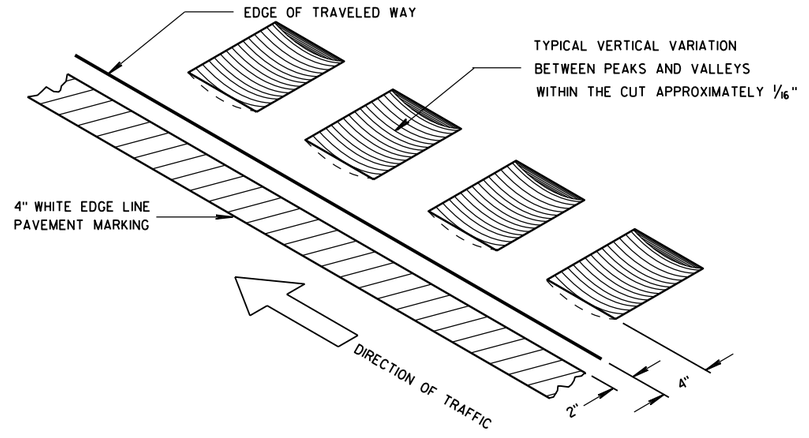
PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

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

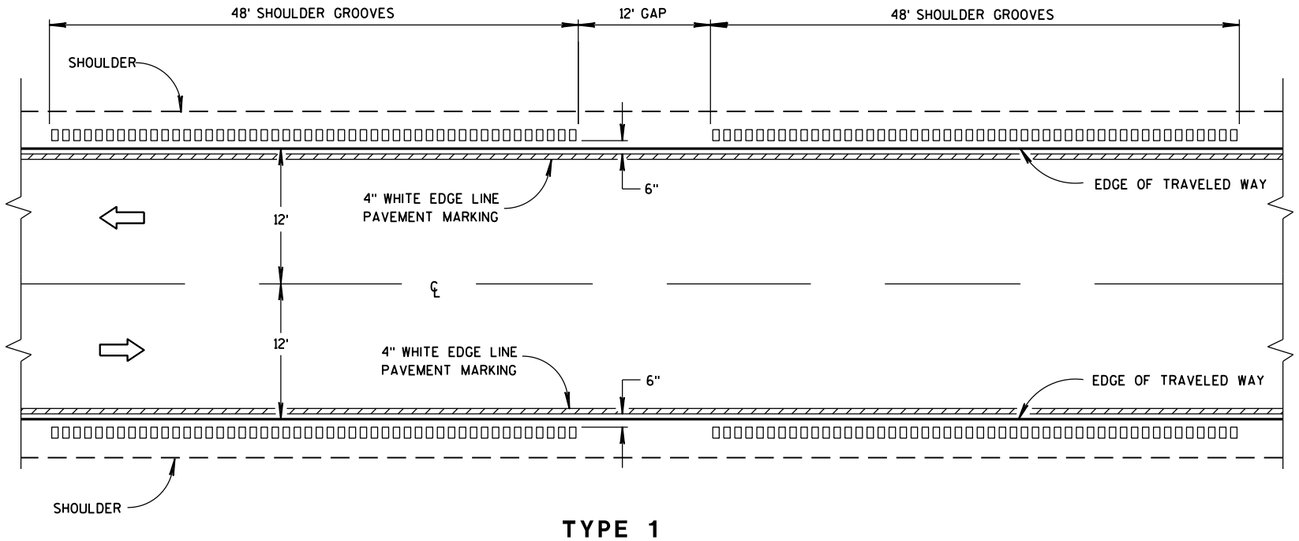
DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

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

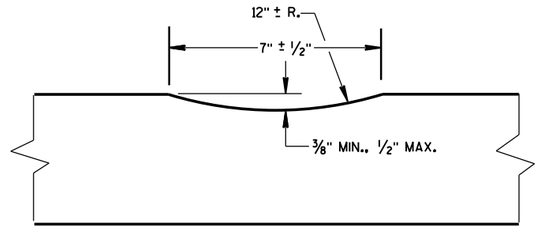


ISOMETRIC

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP



TYPE 1
2-LANE SHOULDER RUMBLE STRIP



SECTION A-A

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

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

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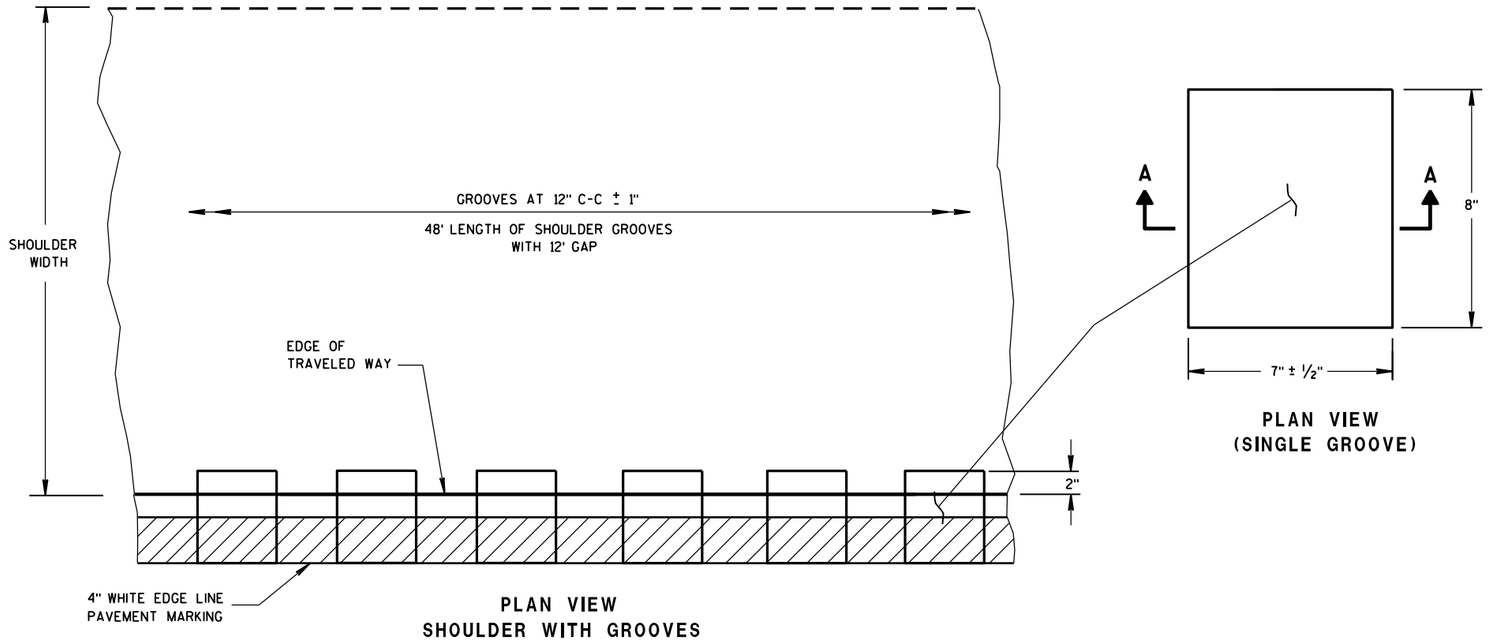
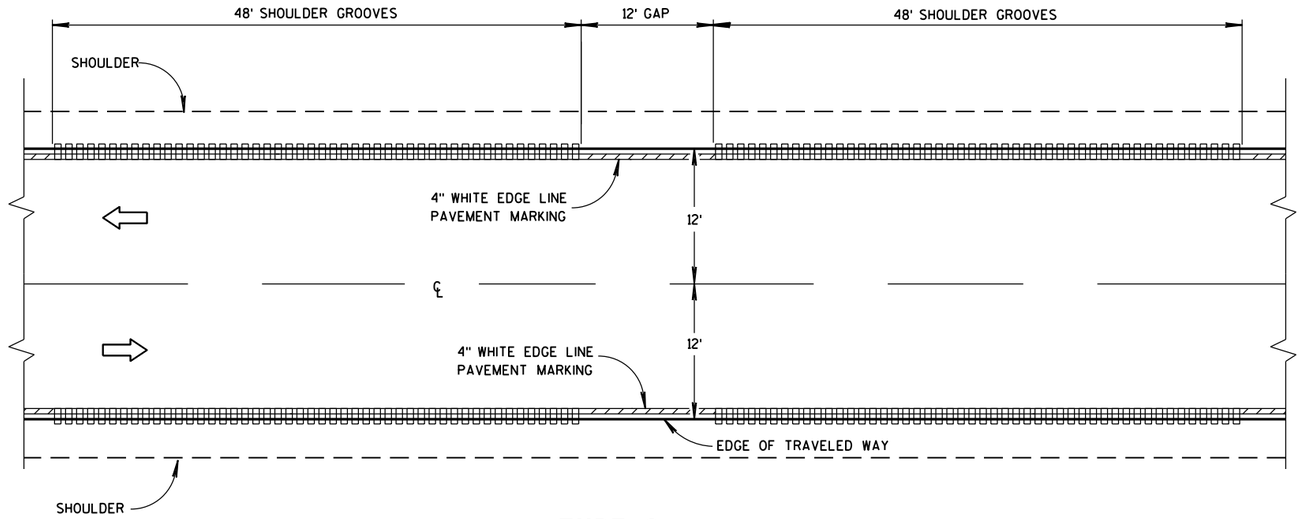
S.D.D. 13 A 10-1a



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR TYPE 2 MILLED RUMBLE STRIP



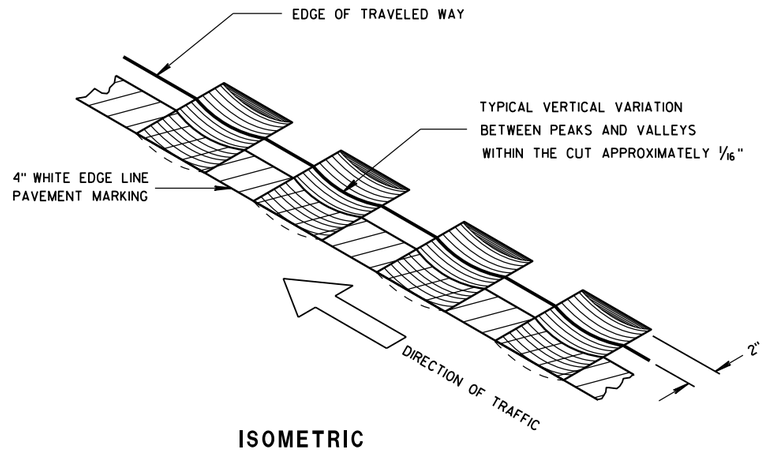
TYPE 2
2-LANE SHOULDER RUMBLE STRIP

GENERAL NOTES

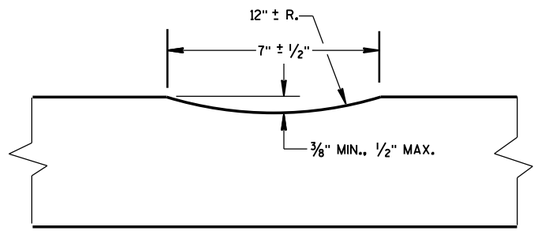
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

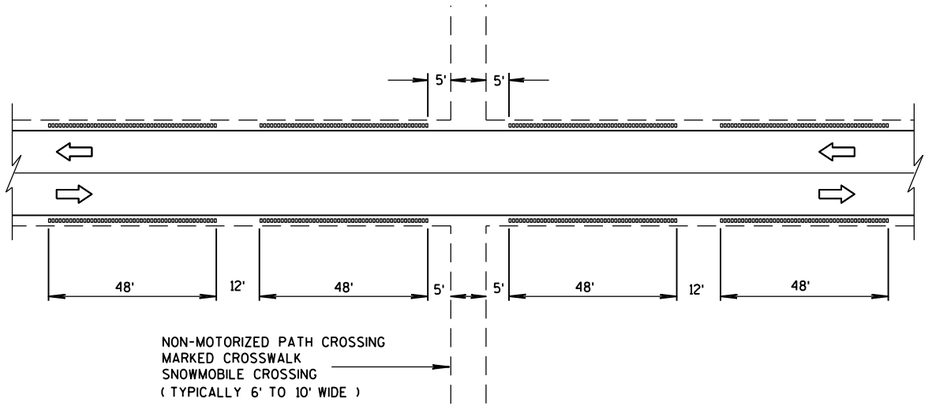
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

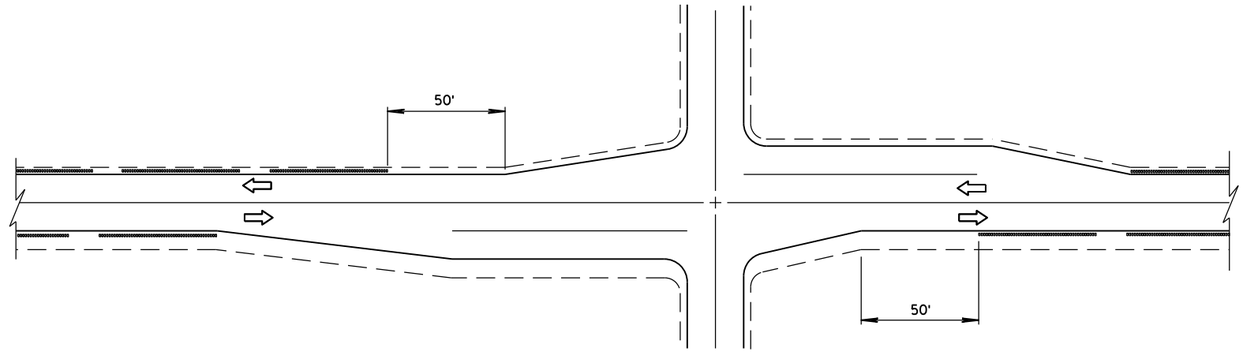
S.D.D. 13 A 10-1b

6

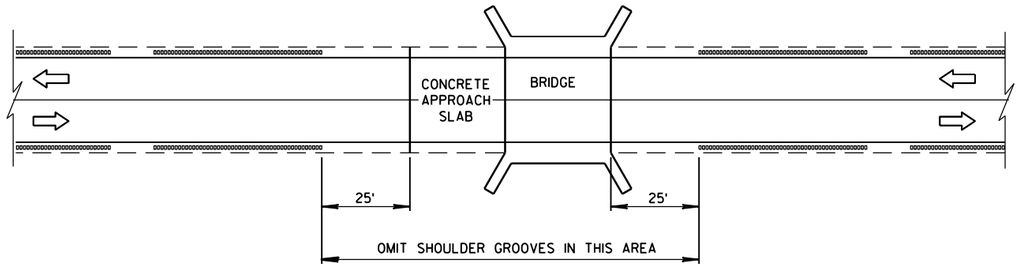
S.D.D. 13 A 10-1b



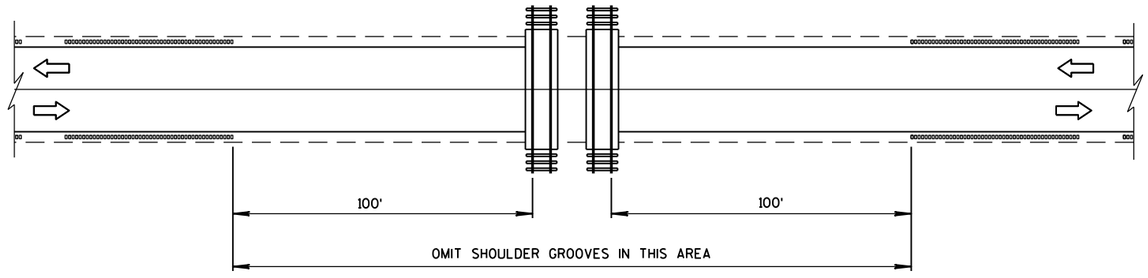
SHOULDER GROOVES AT MISCELLANEOUS CROSSINGS



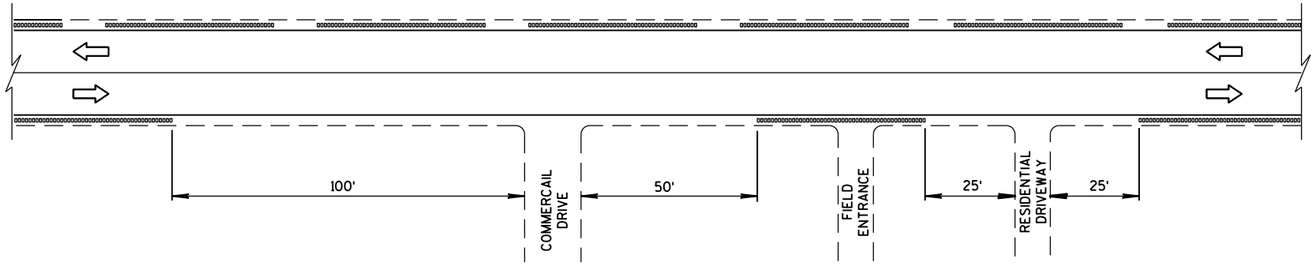
SHOULDER GROOVES AT INTERSECTIONS



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

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

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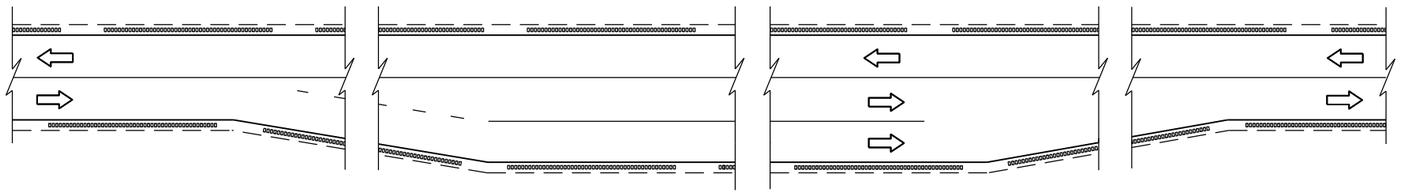
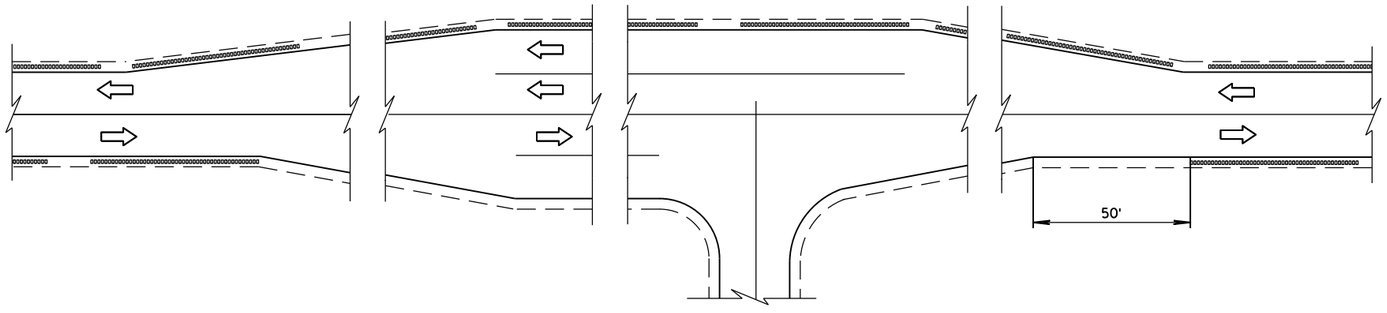
S.D.D. 13 A 10-1c



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

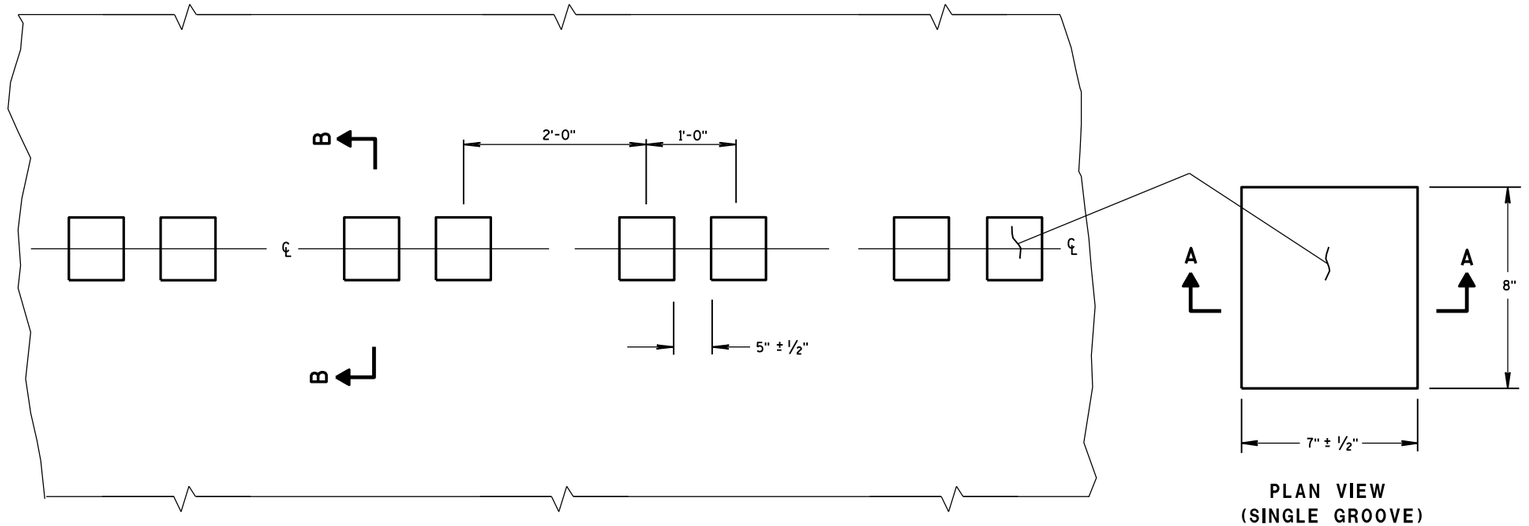
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12/17/2012
DATE

/S/ Jerry H. Zoga
ROADWAY STANDARDS ENGINEER

FHWA



PLAN VIEW
CENTER LINE WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

GENERAL NOTES

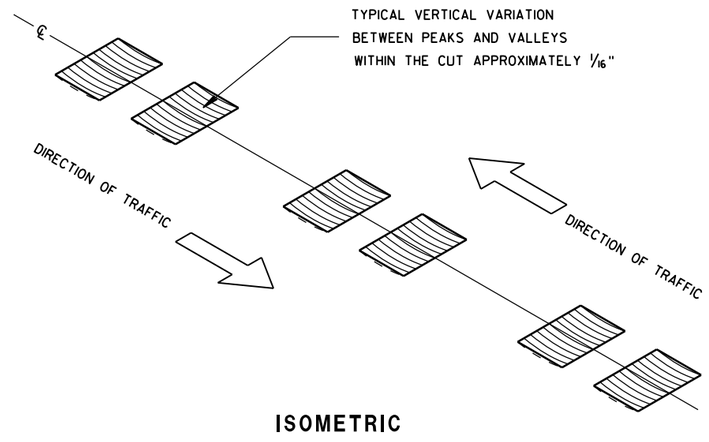
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

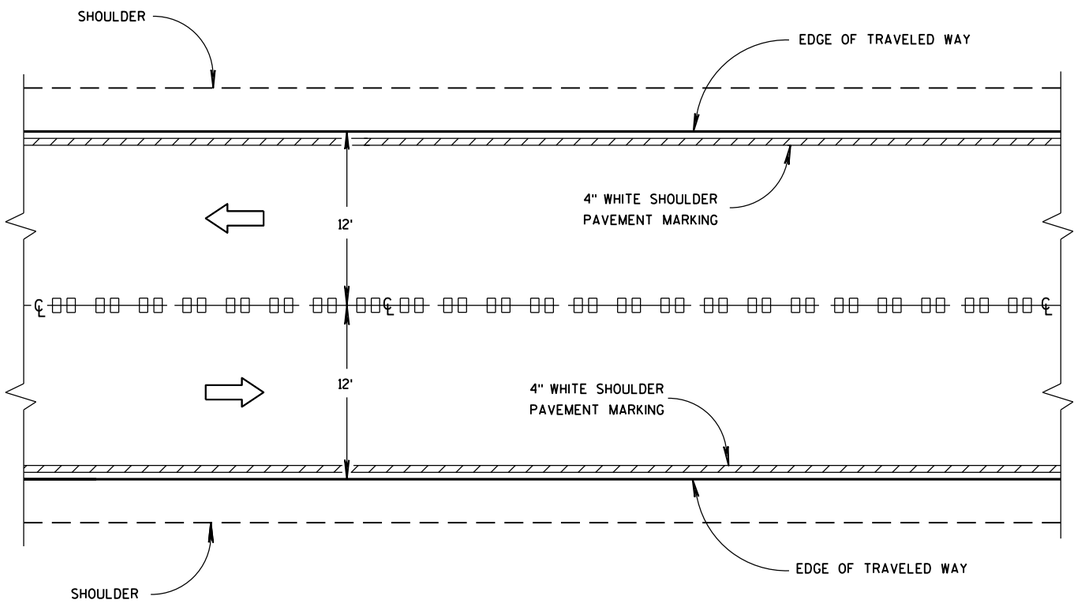
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

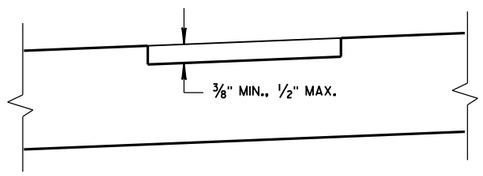
(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



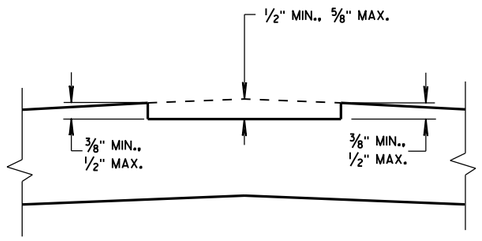
ISOMETRIC



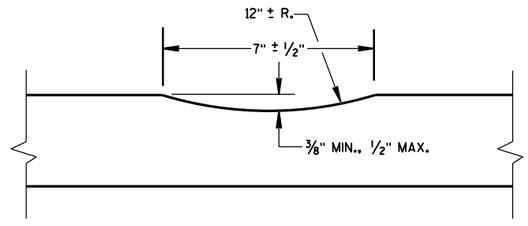
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



SECTION B-B
CROWNED ROADWAY



SECTION A-A

6

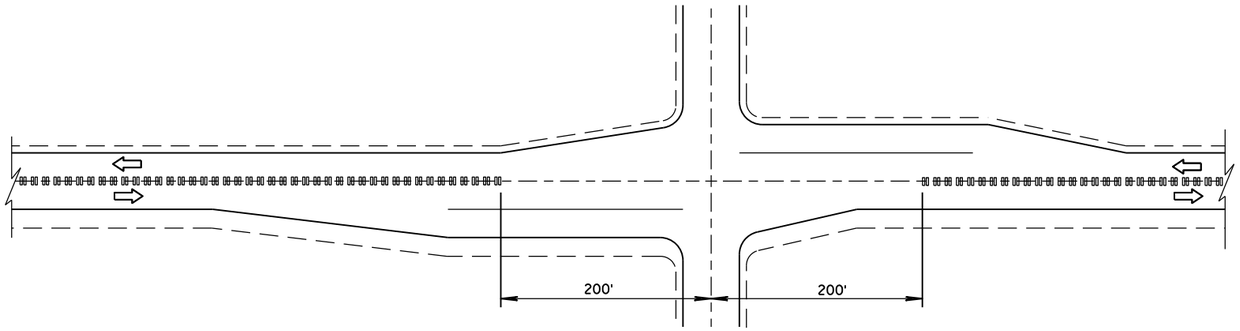
S.D.D. 13 A 11-2a

2-LANE RURAL
CENTER LINE RUMBLE STRIP,
MILLING

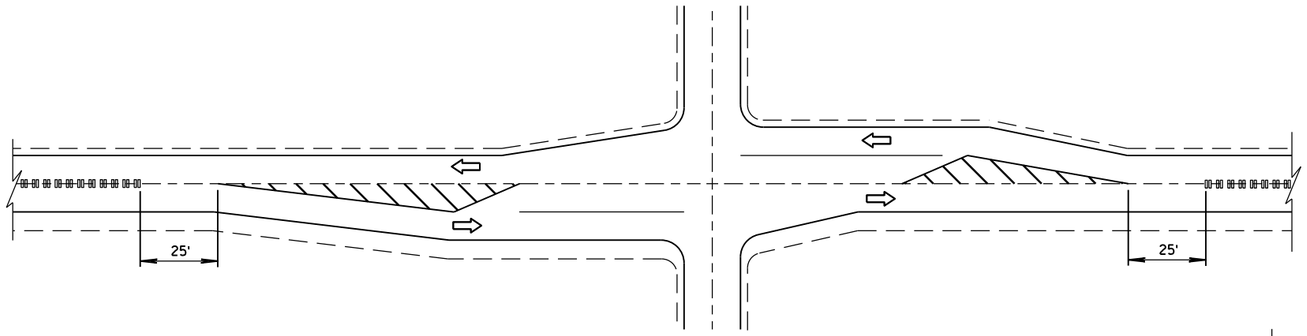
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

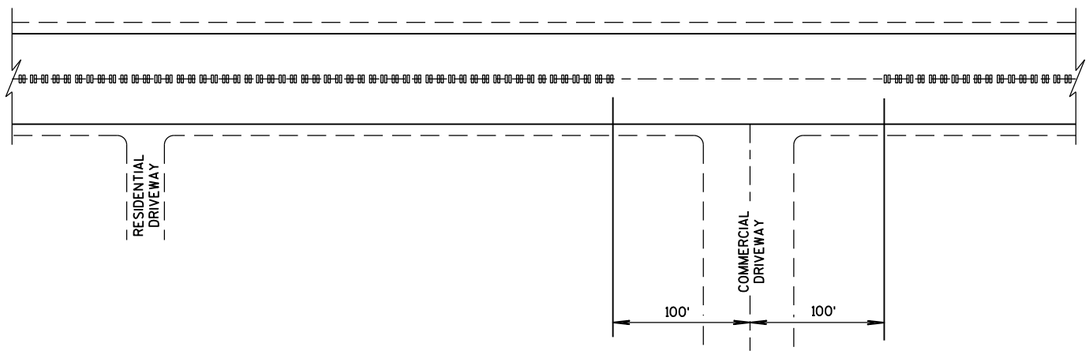
S.D.D. 13 A 11-2a



CENTER LINE GROOVES AT INTERSECTIONS

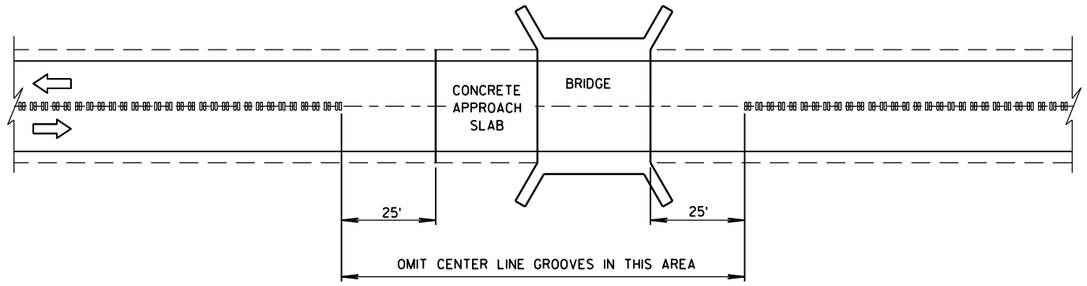


CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)

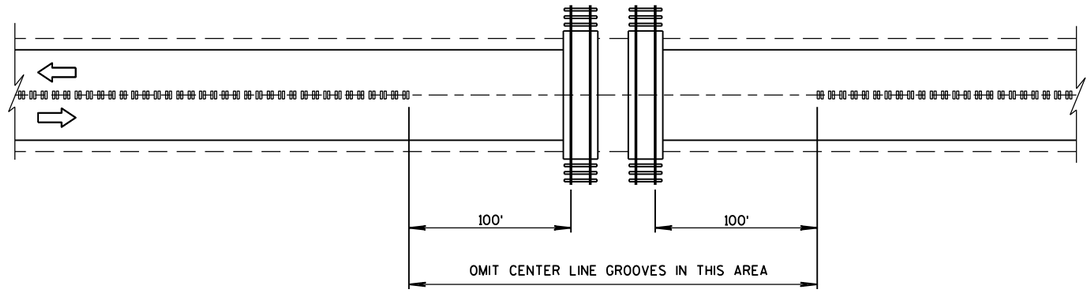


CENTER LINE GROOVES AT DRIVEWAYS (1)

(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

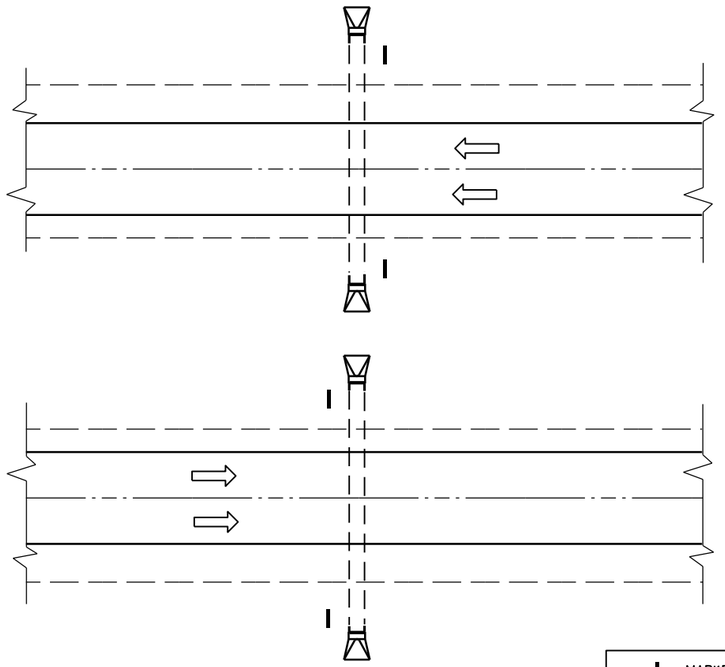
5/15/2013
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

77

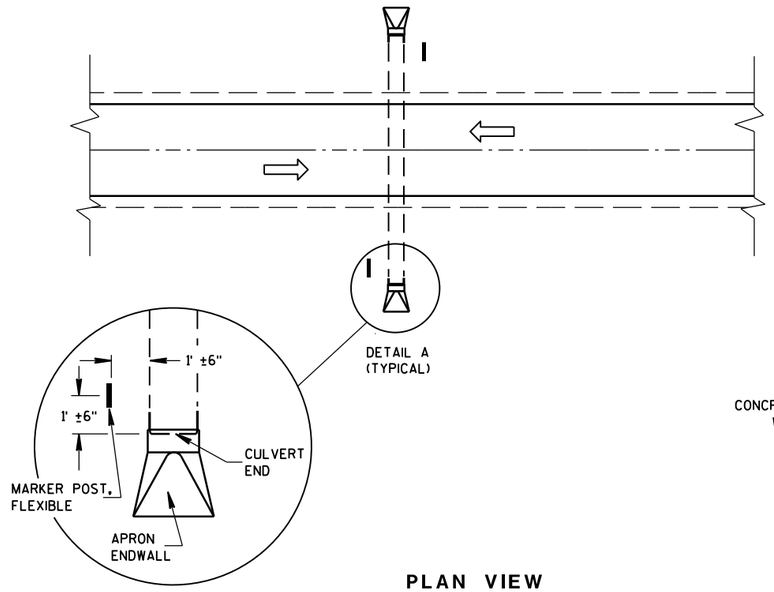
NT

FHWA



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

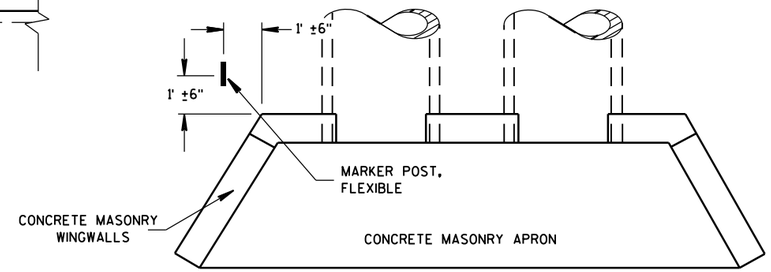
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

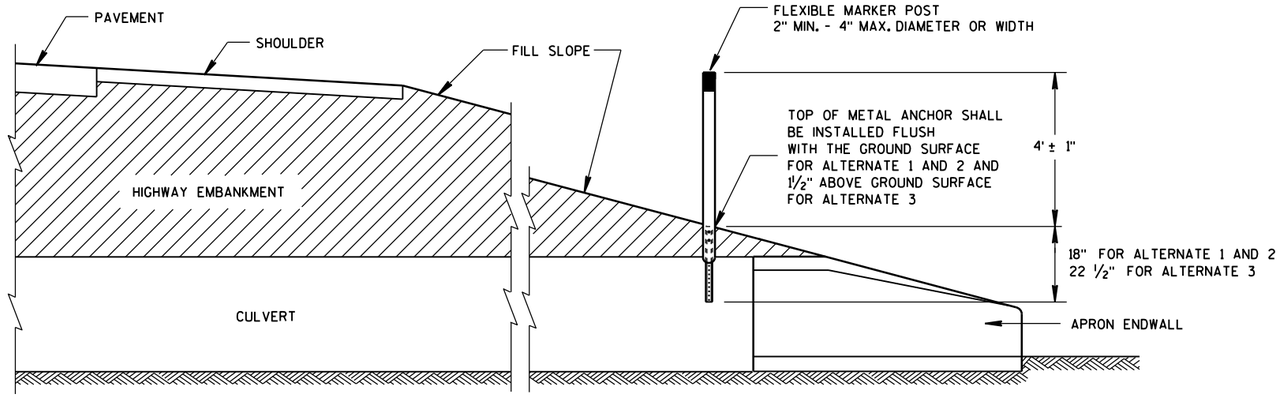
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

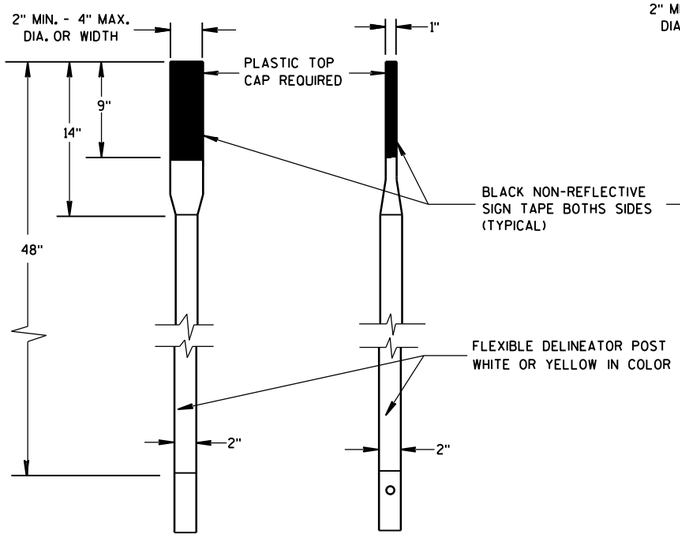
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

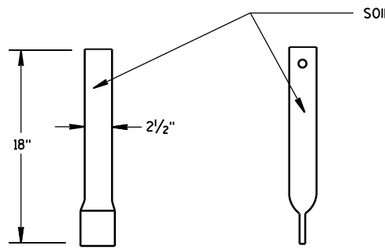
6

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

6

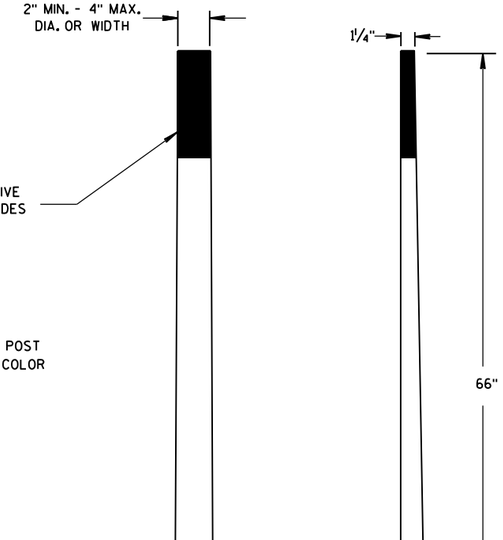
S.D.D. 15 A 3-2a





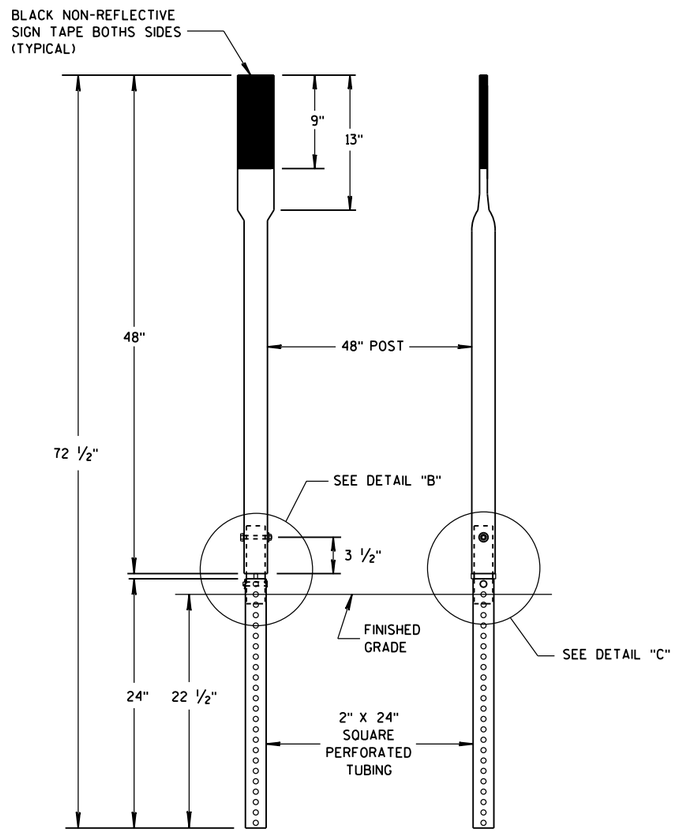
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

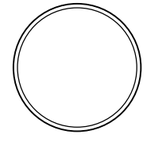
ALTERNATE 2



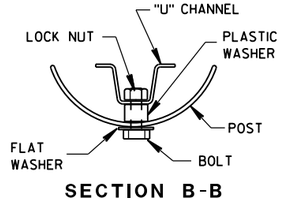
FRONT VIEW SIDE VIEW

ALTERNATE 3

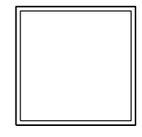
FLEXIBLE MARKER POSTS



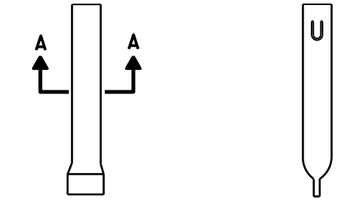
SECTION A-A



SECTION B-B

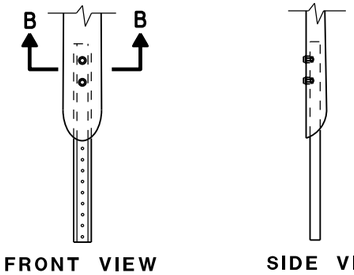


SECTION C-C



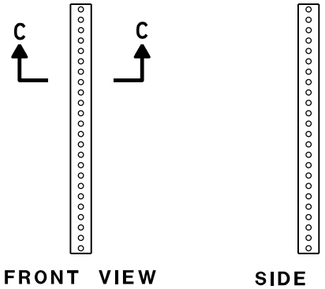
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

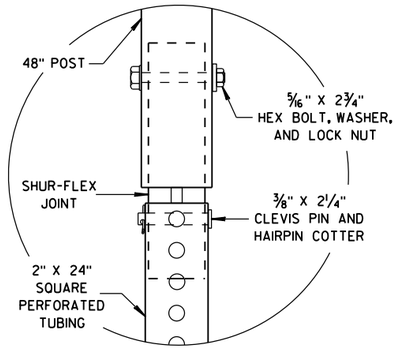
ALTERNATE 2



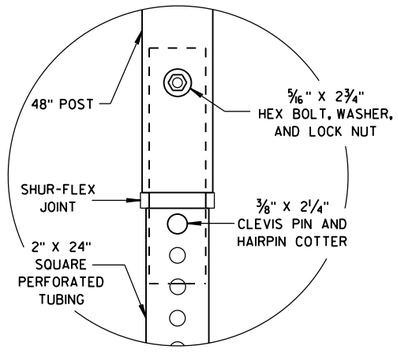
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



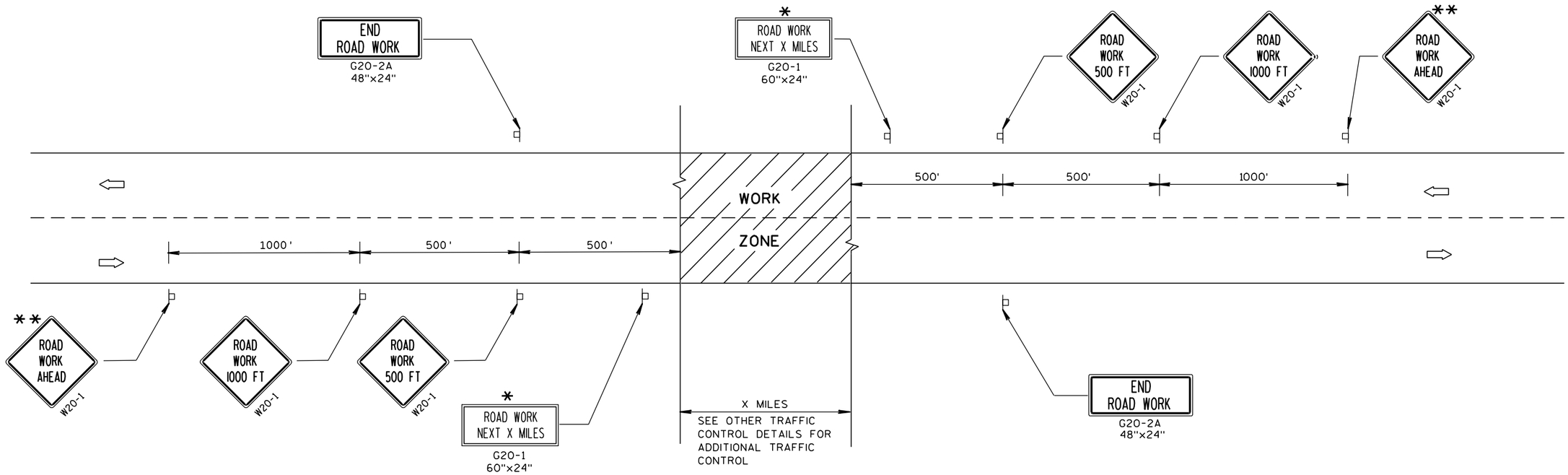
DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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



GENERAL NOTES

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

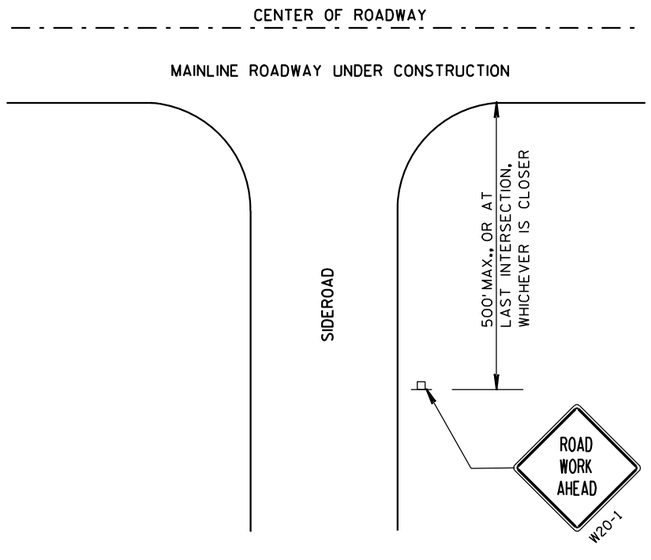
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



LEGEND

POST MOUNTED SIGN

DIRECTION OF TRAFFIC FLOW

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

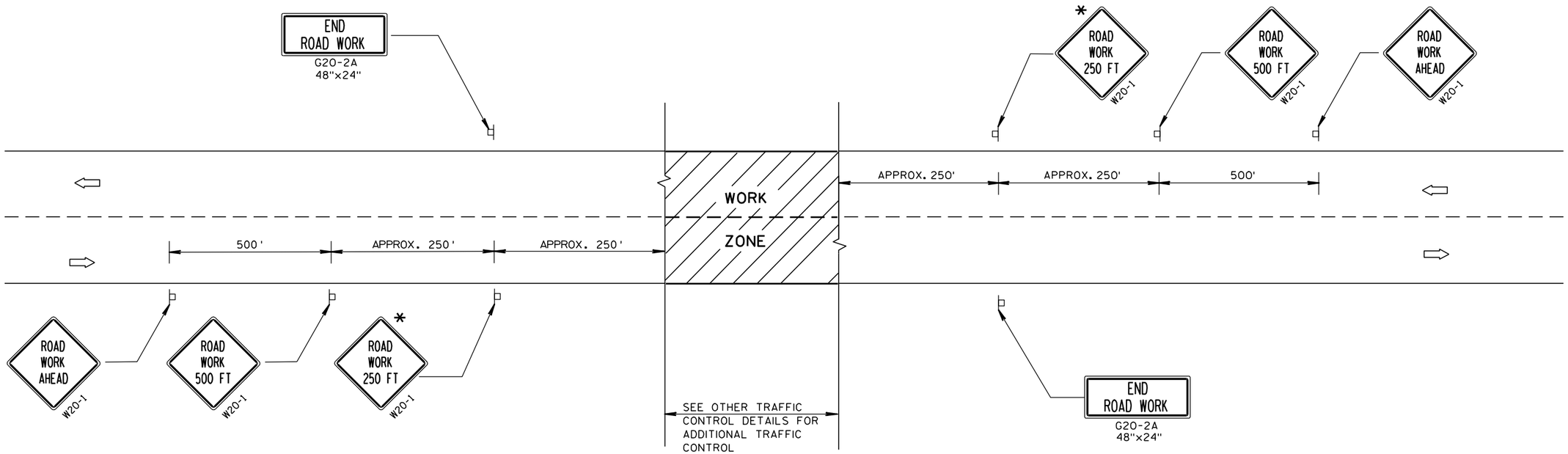
5/23/00 DATE

/S/ Chester J. [illegible] 80 CHIEF SIGNS AND MARKING ENGINEER

FHWA

6

S.D.D. 15 C 4-1



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.

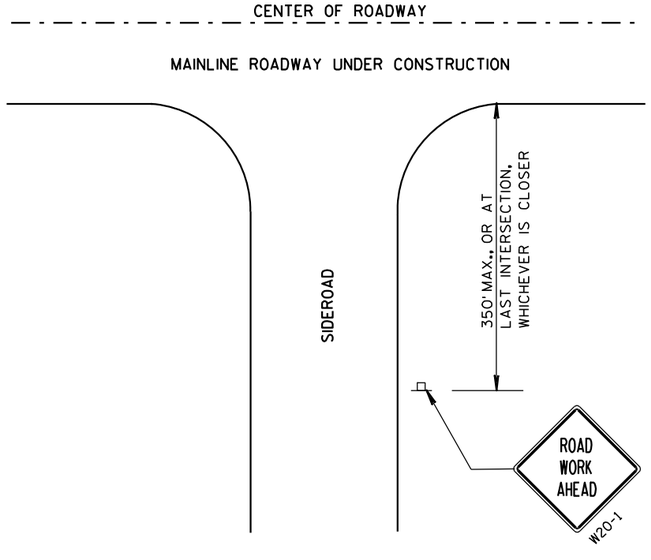
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS, IF APPROVED BY DISTRICT TRAFFIC UNIT.

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.

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



LEGEND

POST MOUNTED SIGN

DIRECTION OF TRAFFIC FLOW

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

5/23/00
DATE

/S/ Chester J. [illegible]
CHIEF SIGNS AND MARKING ENGINEER

FHWA

6

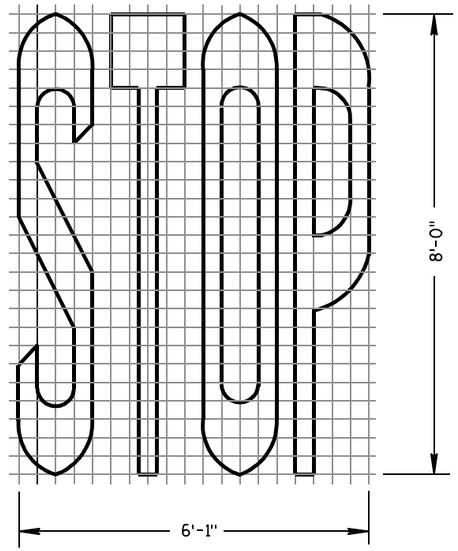
S.D.D. 15 C 5-1

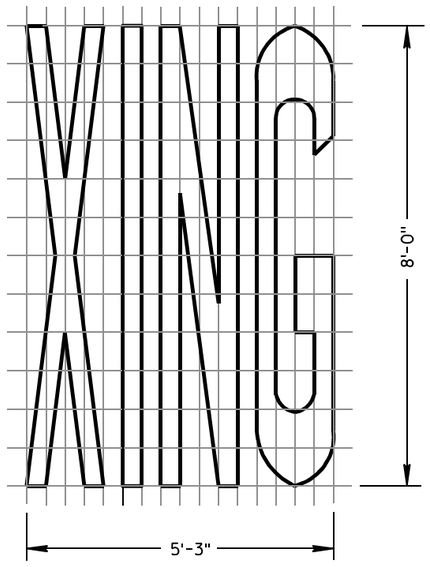
S.D.D. 15 C 5-1

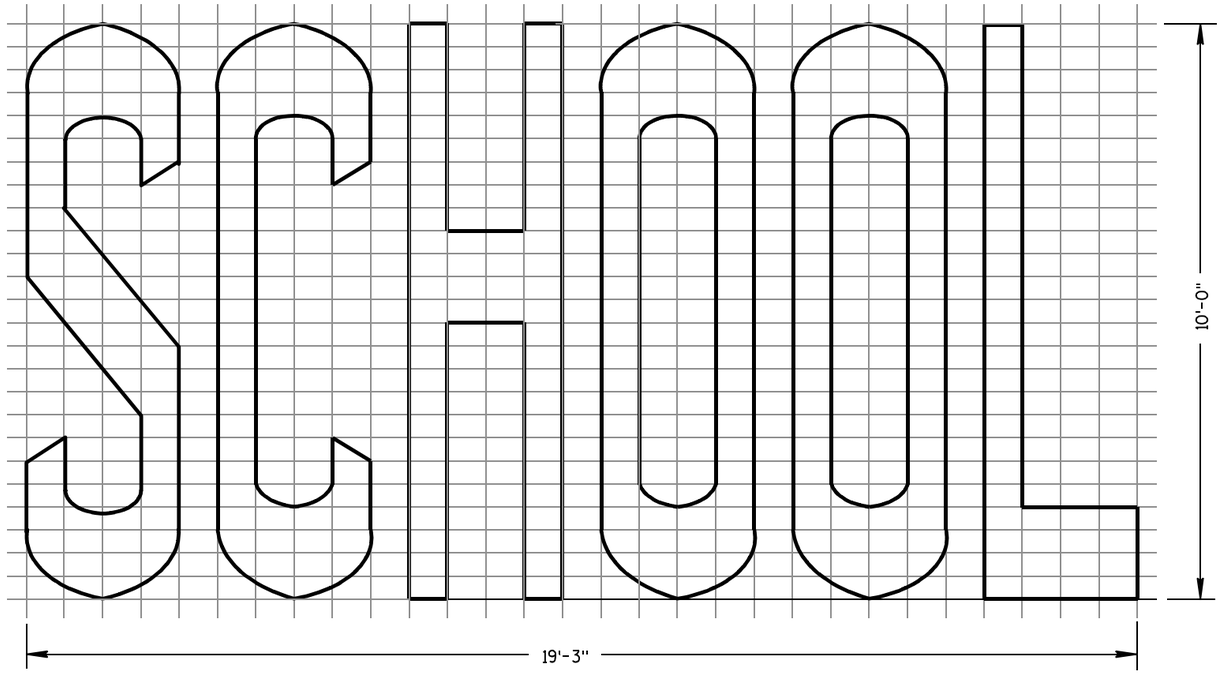
GENERAL NOTES

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.

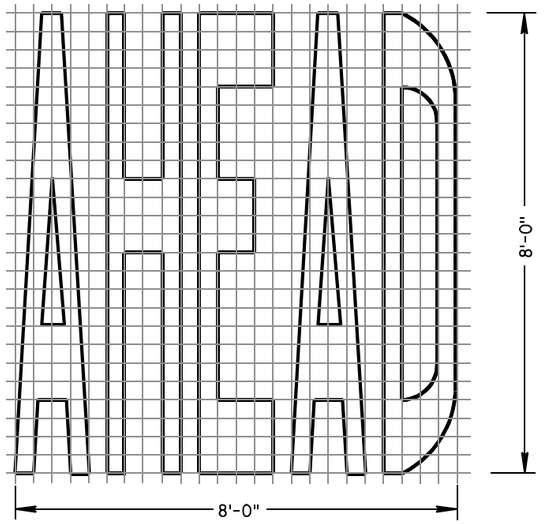
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

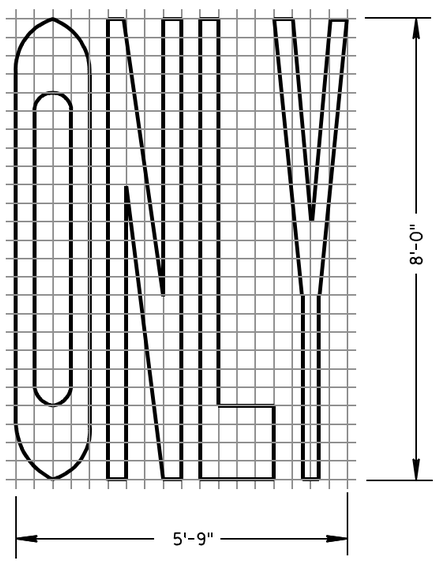


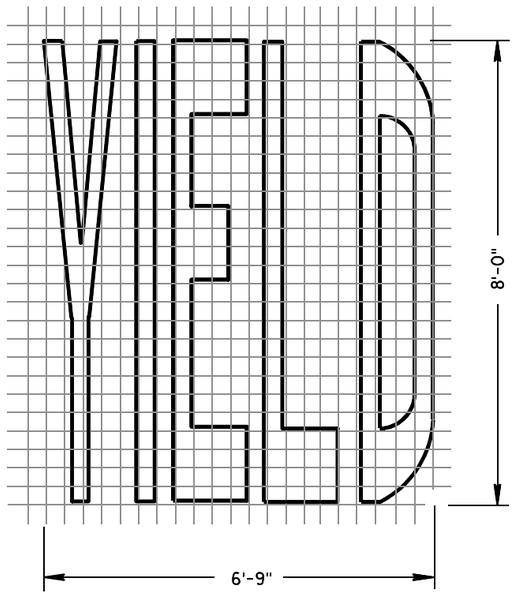


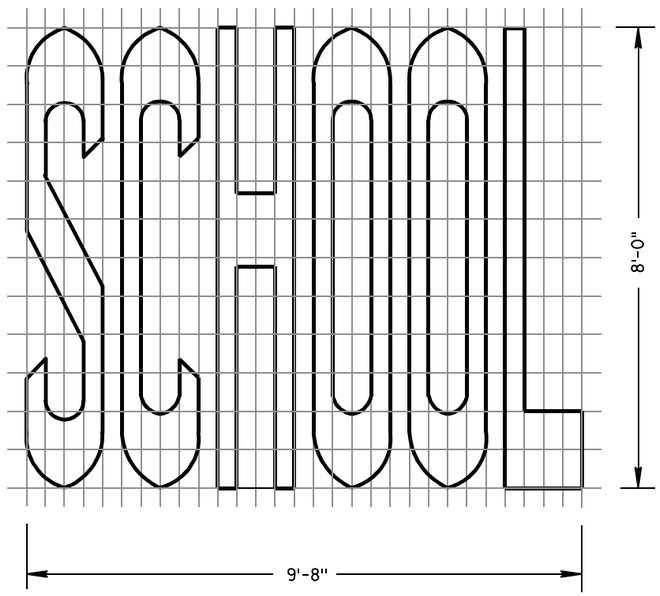


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

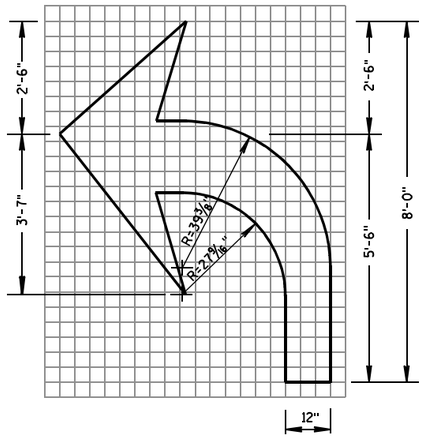
APPROVED

7-1-11 DATE — /S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER — IGN

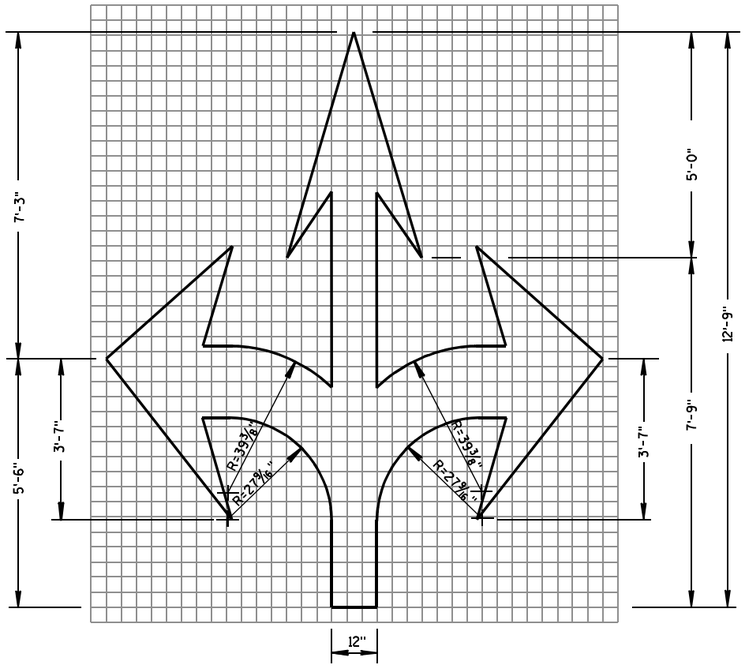
FHWA

6

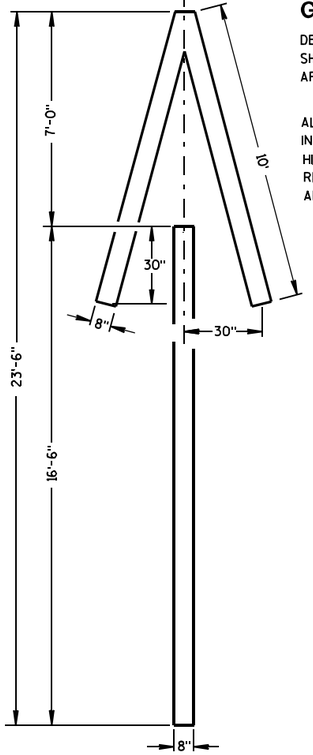
S.D.D. 15 C 7-12b



TYPE 2



TYPE 6

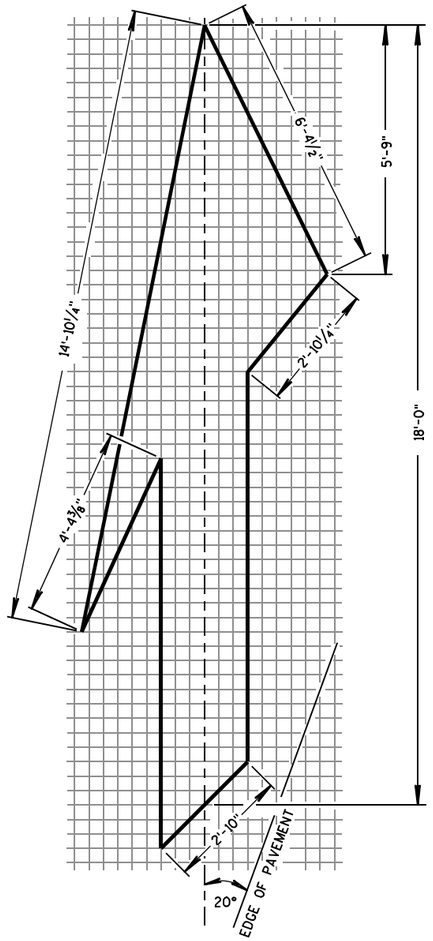


TYPE 4

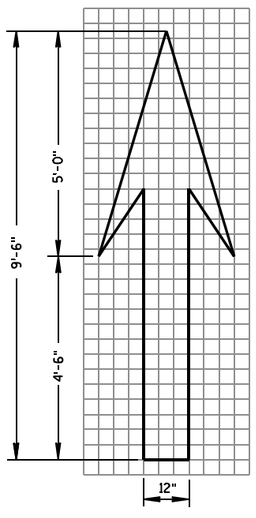
GENERAL NOTES

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

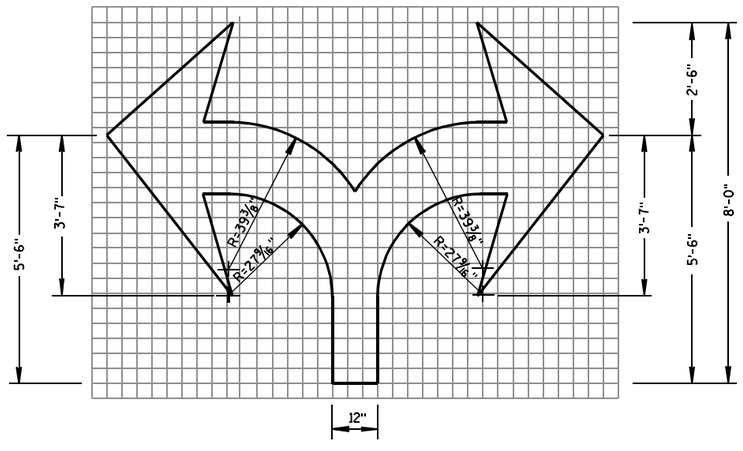
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



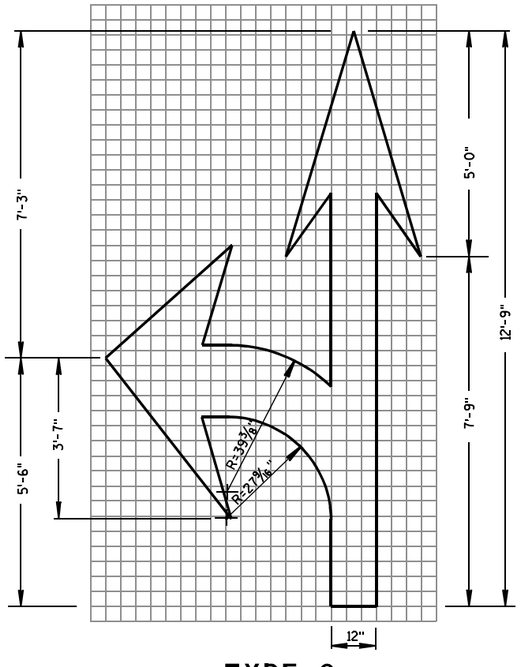
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

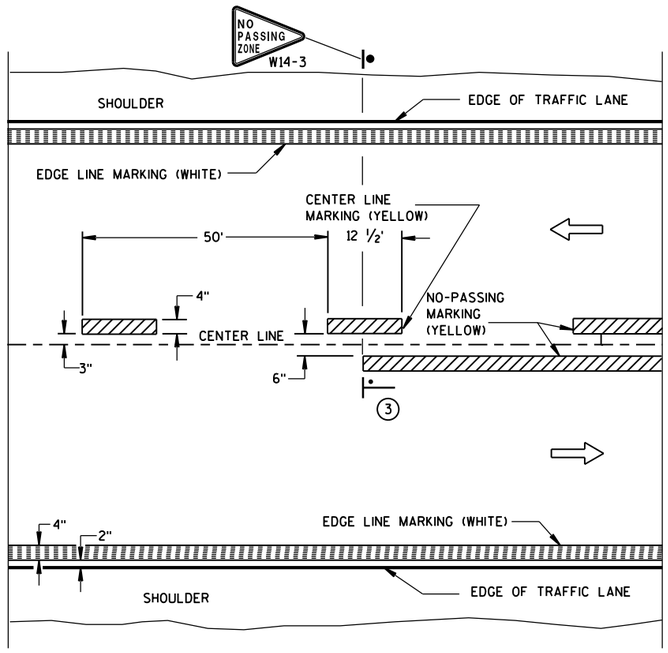
FHWA

6

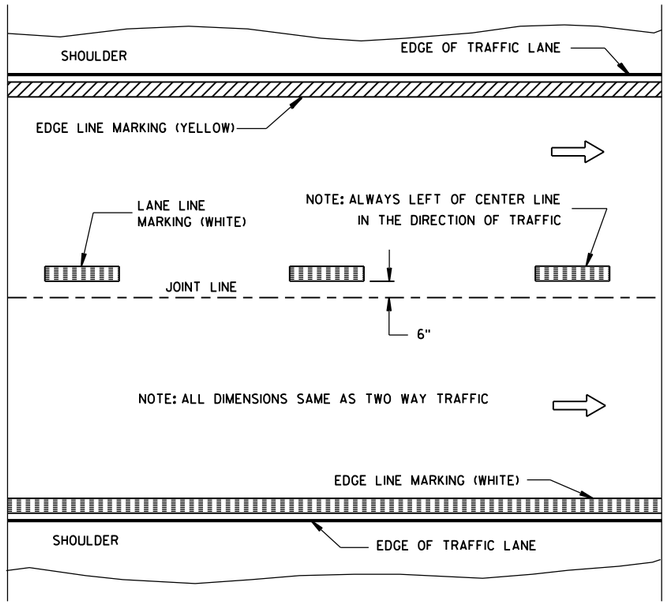
S.D.D. 15 C 7-12c

6

S.D.D. 15 C 7-12c

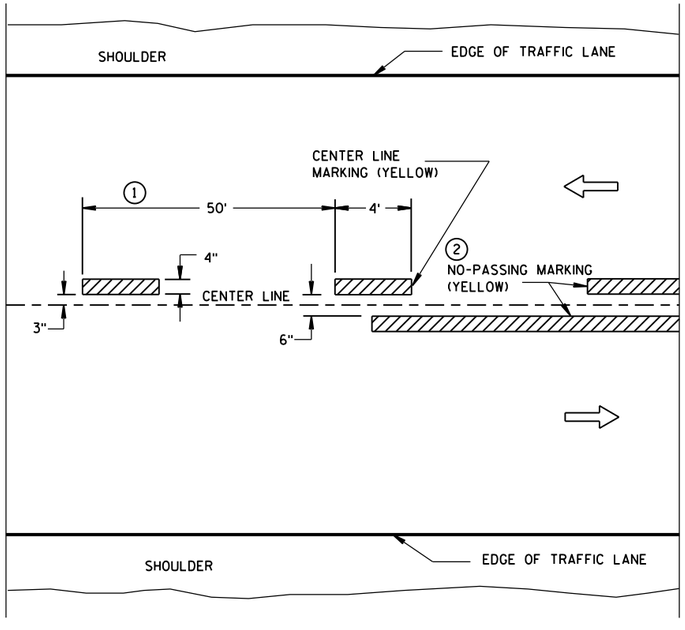


TWO WAY TRAFFIC

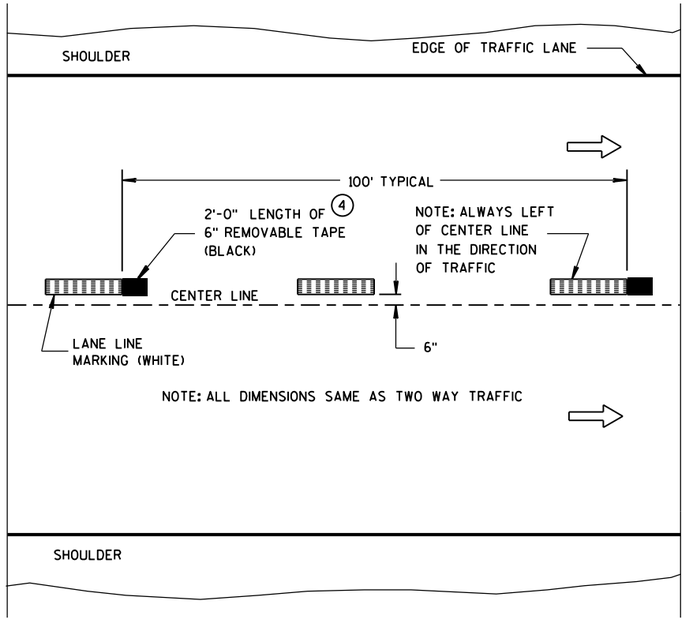


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

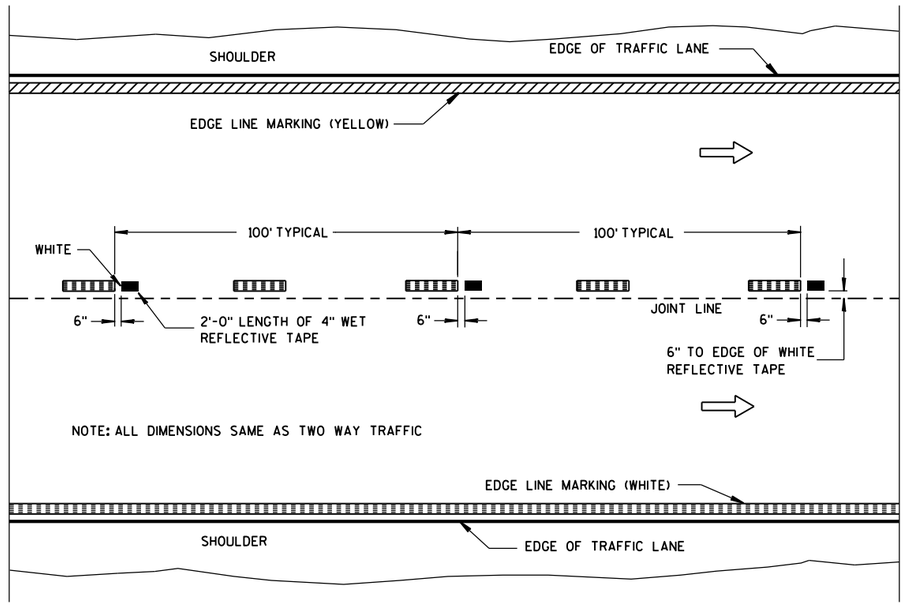
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



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

LEGEND

"T" MARKING

POST MOUNTED SIGN

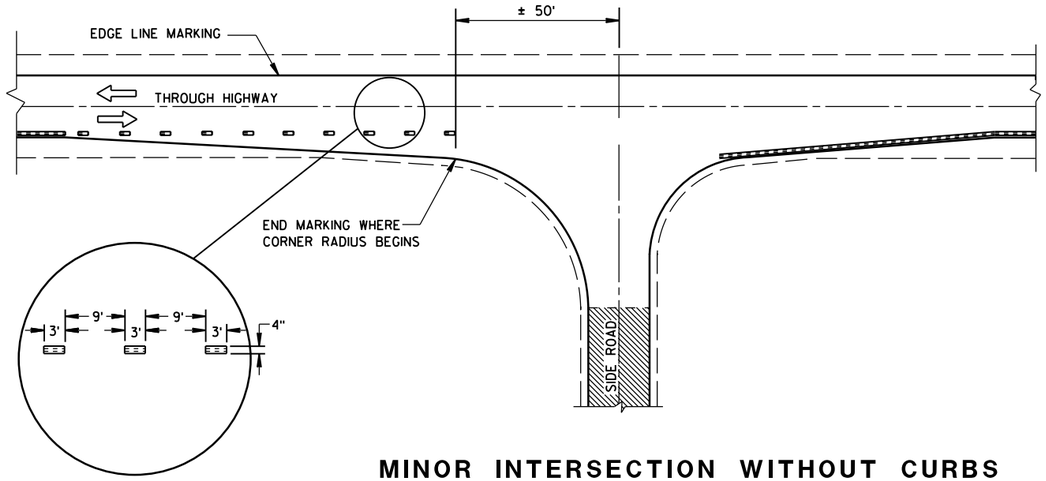
PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E
FHWA

6

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



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.

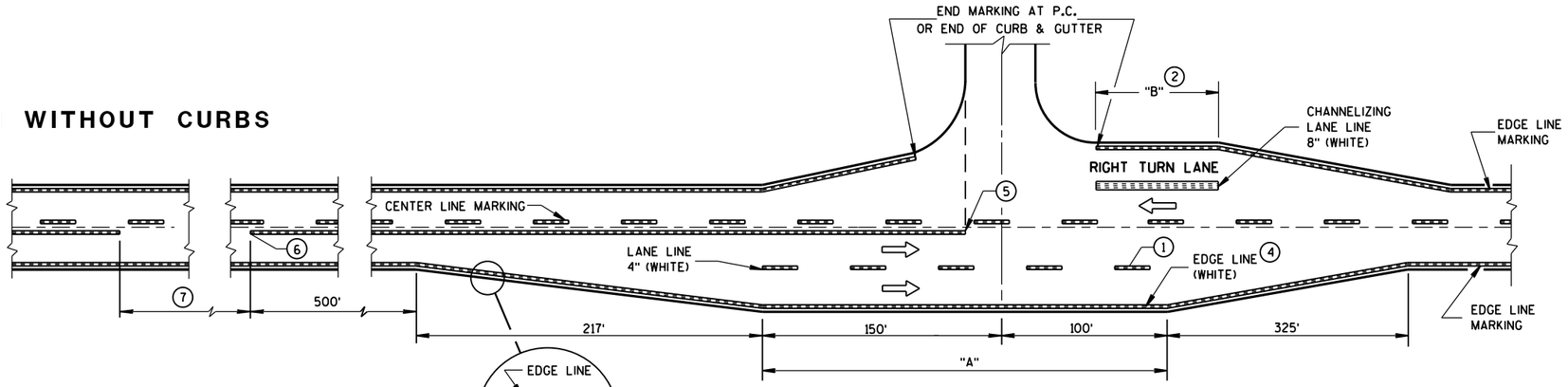
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

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

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

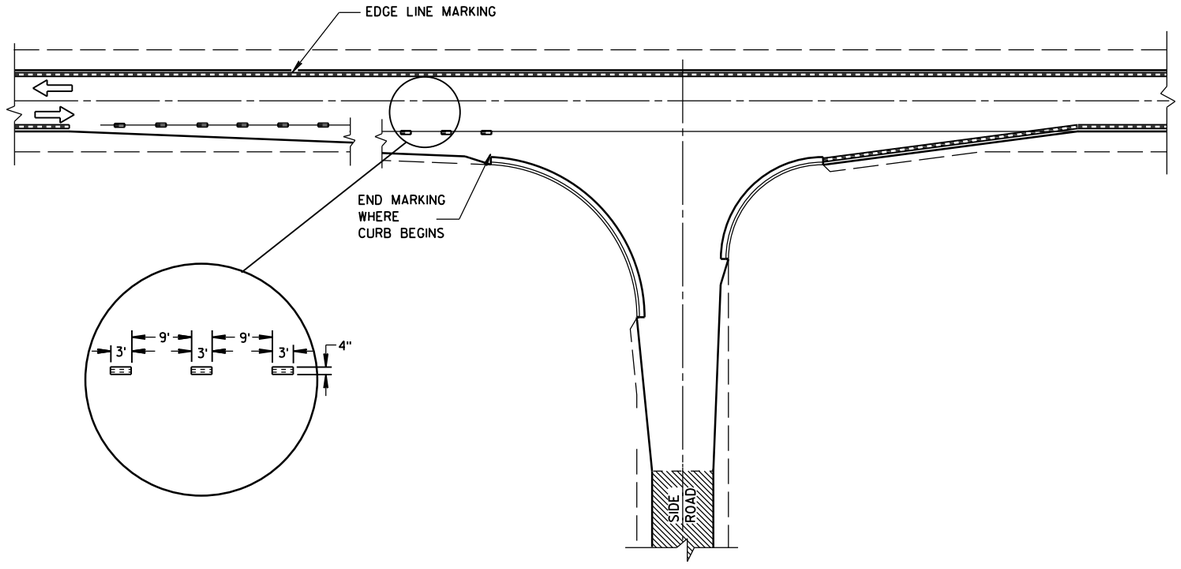
(7)

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



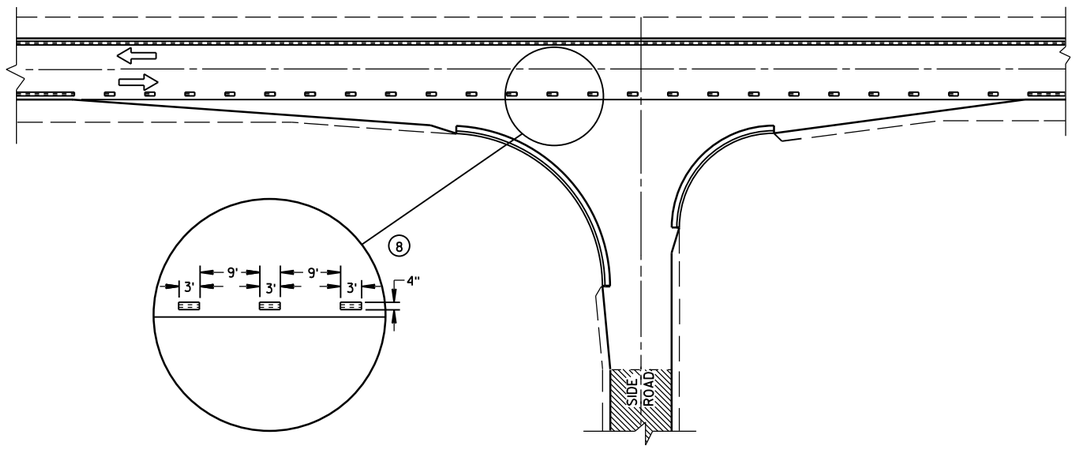
MAJOR INTERSECTIONS

(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)

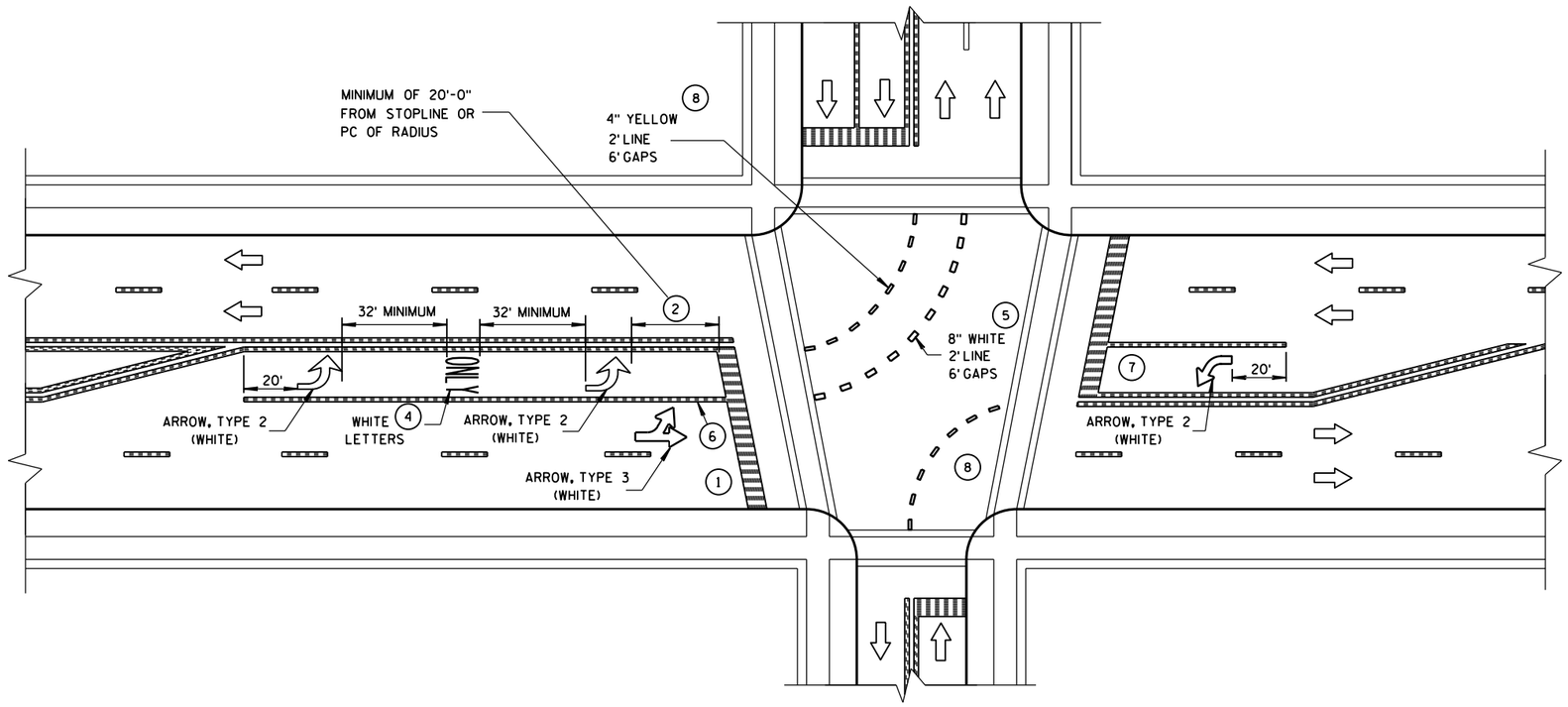
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

6

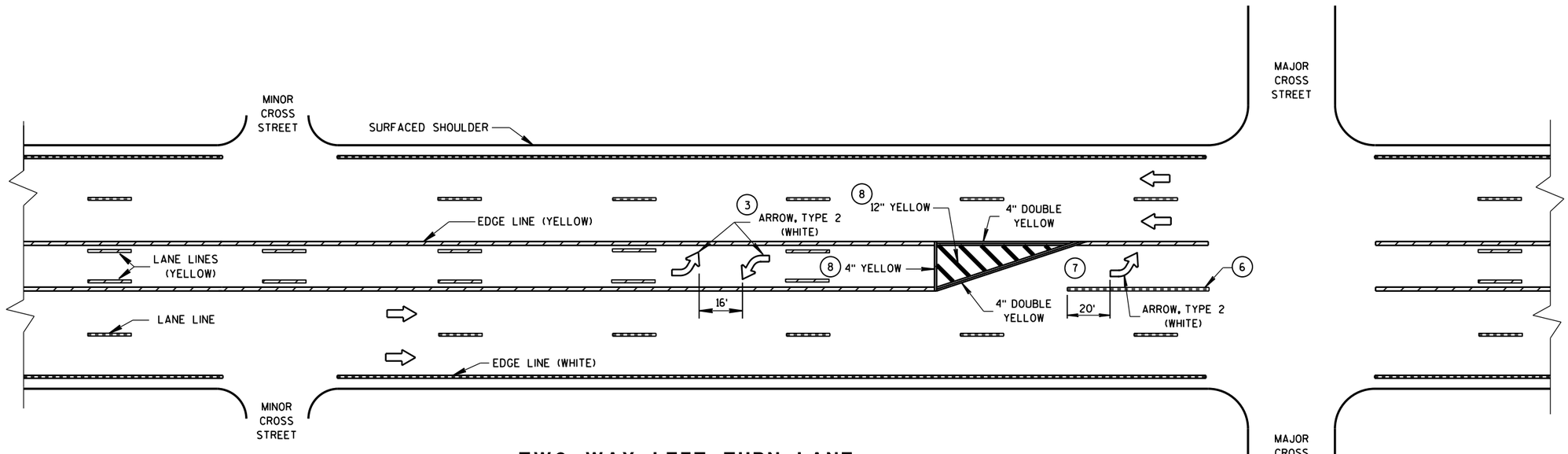
S.D.D. 15 C 8-16b



GENERAL NOTES

1. STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
3. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
4. ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET OR WHEN ON A CURVE.
5. 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
6. 8" WHITE
7. ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108 FEET.
8. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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

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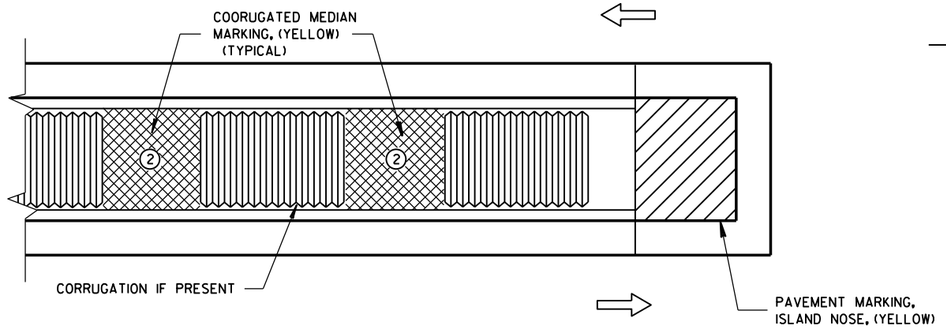
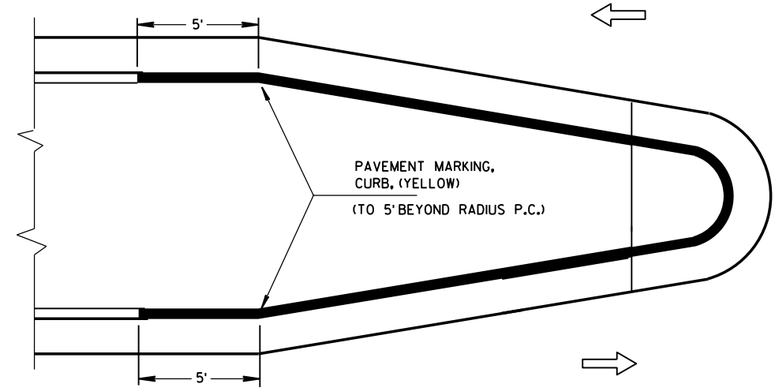
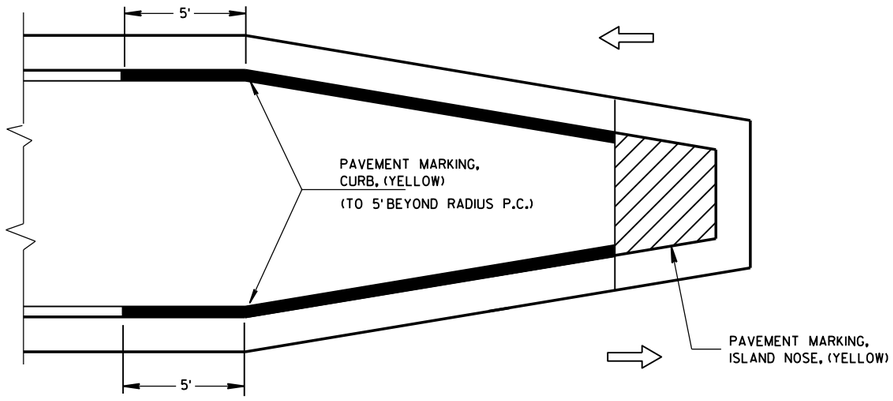
S.D.D. 15 C 8-16e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

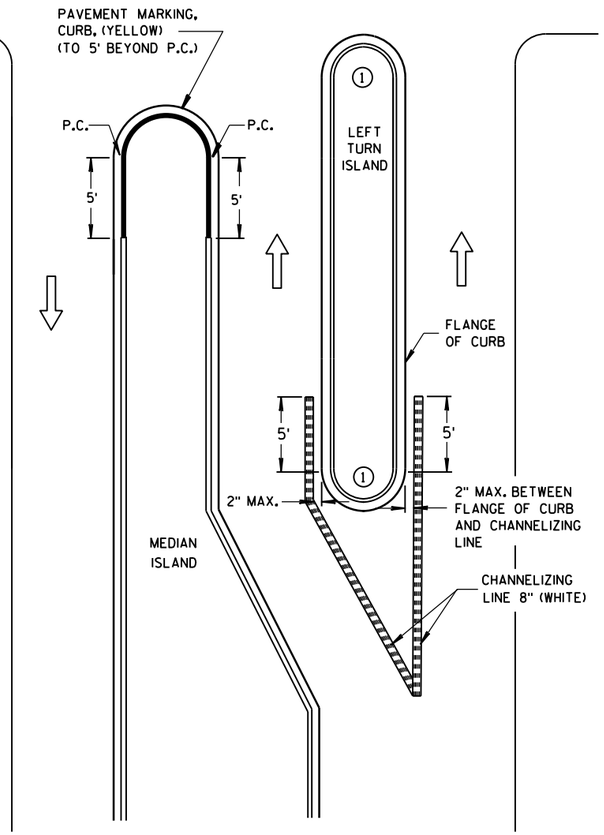


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

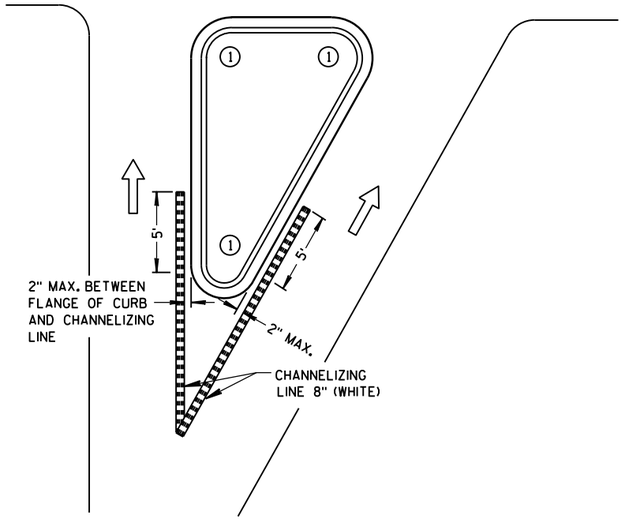


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

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

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



RIGHT TURN ISLAND

LEGEND

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

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

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

TWO-LANE ROADWAY

SYMBOLS

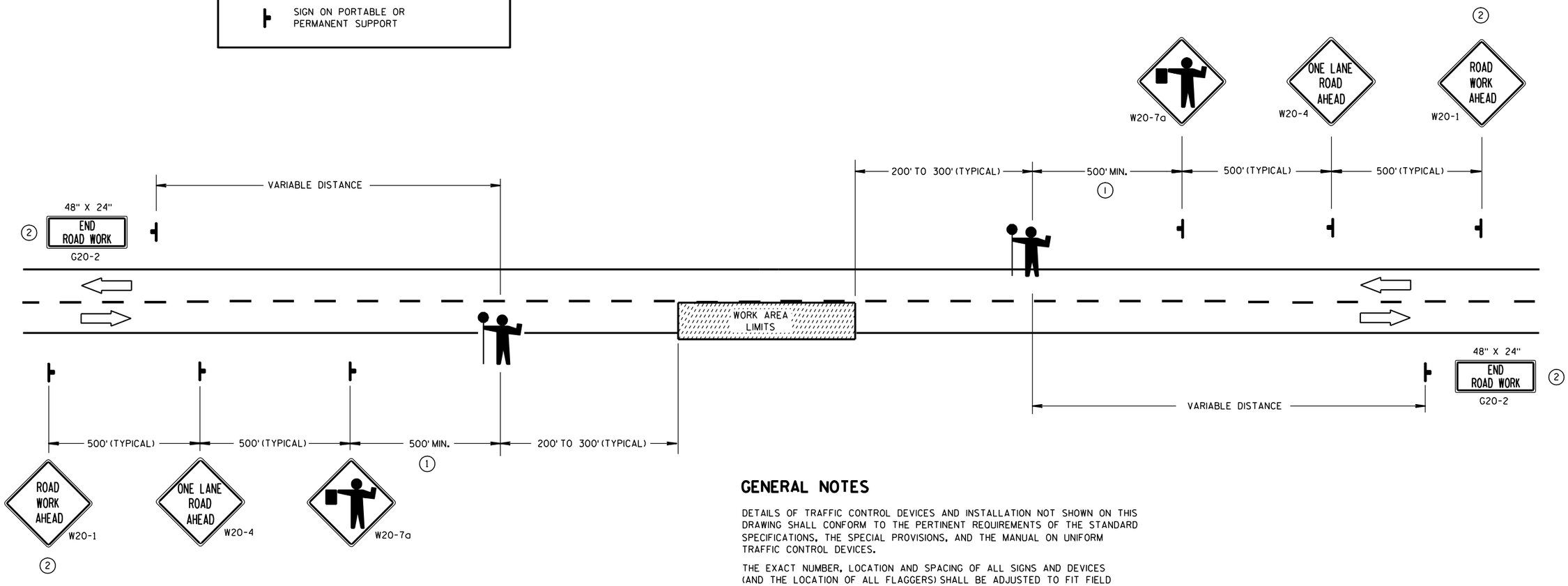
WORK AREA

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

SIGN ON PORTABLE OR PERMANENT SUPPORT

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, THE "FLAGGER AHEAD", THE "ROAD WORK AHEAD" AND THE ONE LANE ROAD AHEAD" SIGNS SHALL BE COVERED OR REMOVED AND THE HIGHWAY RESTORED TO NORMAL OPERATION.

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

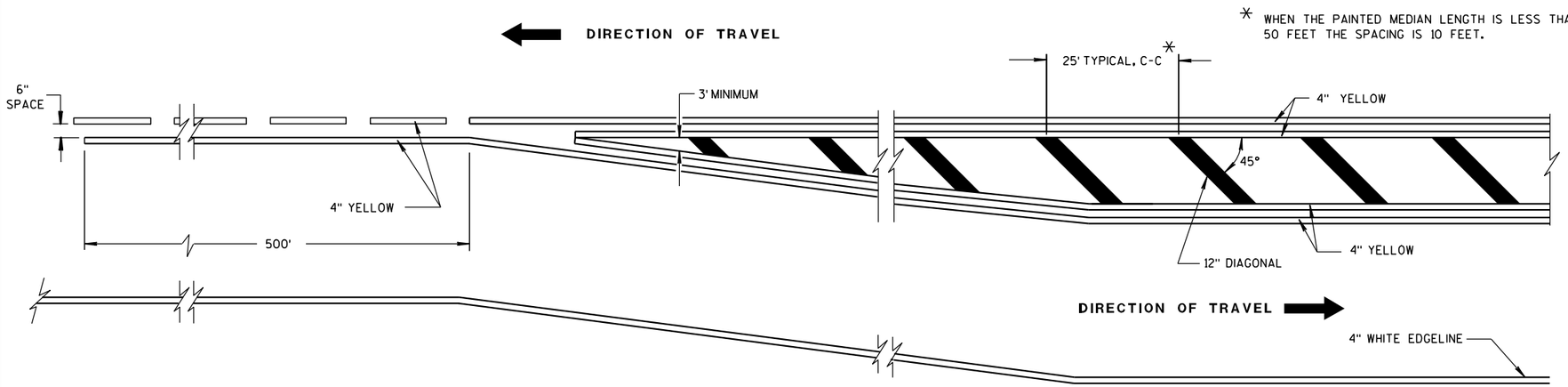
9/5/06 — DATE

/S/ Thomas N. Nathaam — STATE TRAFFIC ENGINEER

FHWA

6

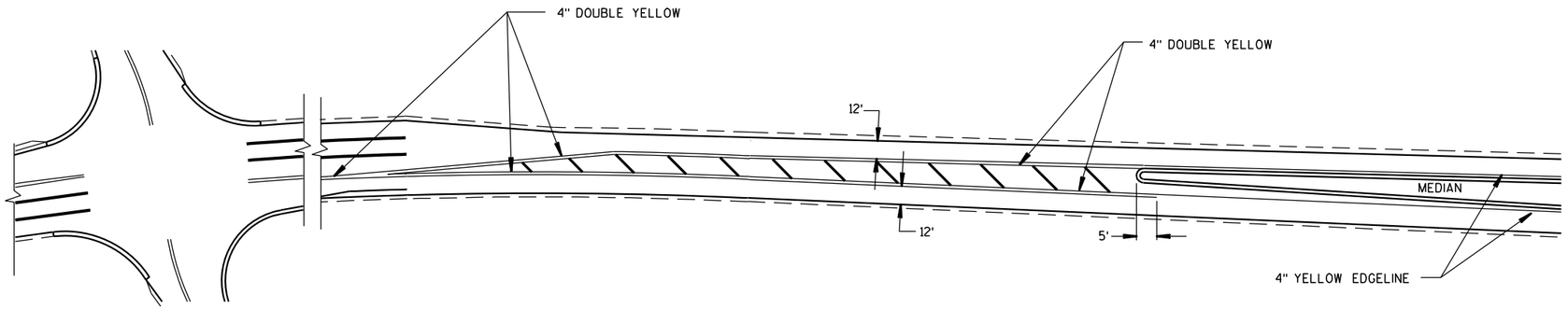
S.D.D. 15 C 12-3



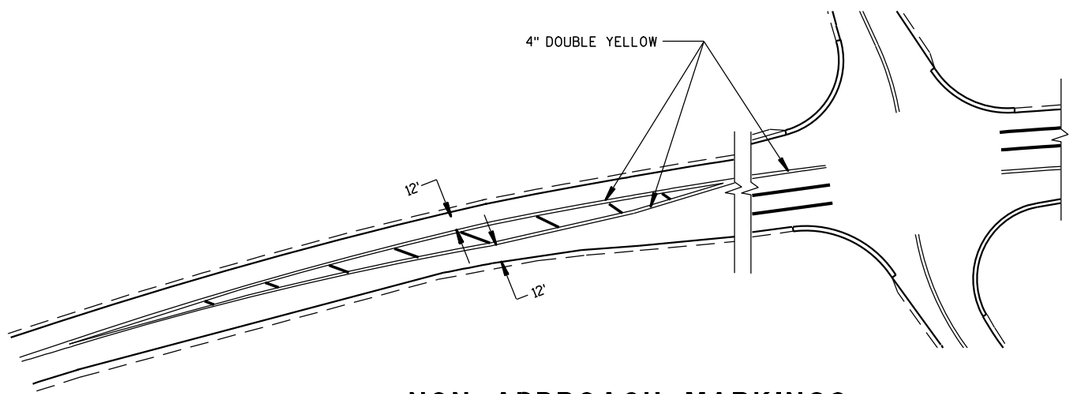
MEDIAN ISLAND DETAIL

GENERAL NOTE

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



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-5-09 DATE	/S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER
FHWA	

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S.D.D. 15 C 18-3

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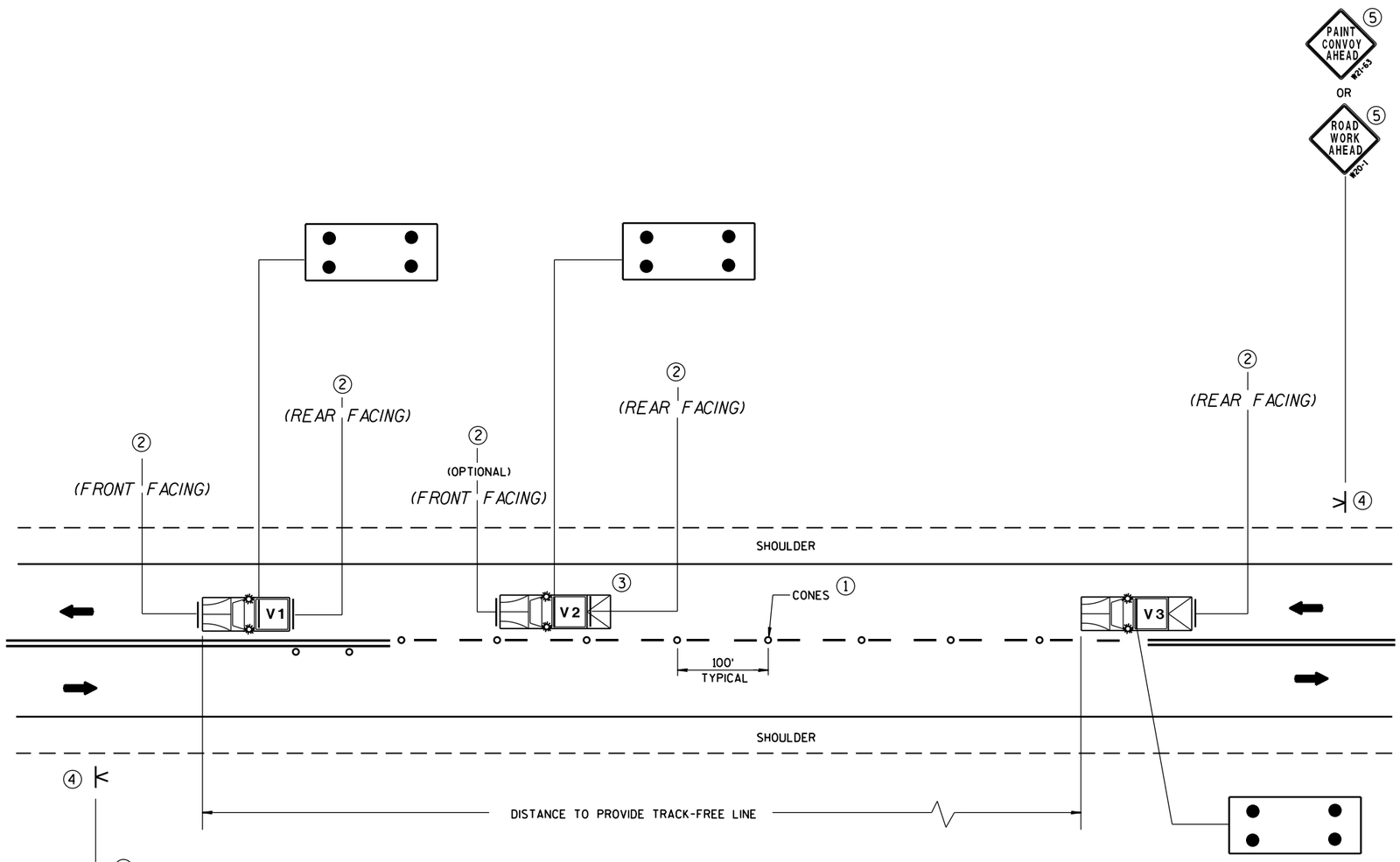
S.D.D. 15 C 18-3



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 PORTABLE SUPPORT
- DIRECTION OF TRAVEL
- CONES
- FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING OPERATION
TWO-LANE TWO-WAY ROADWAY

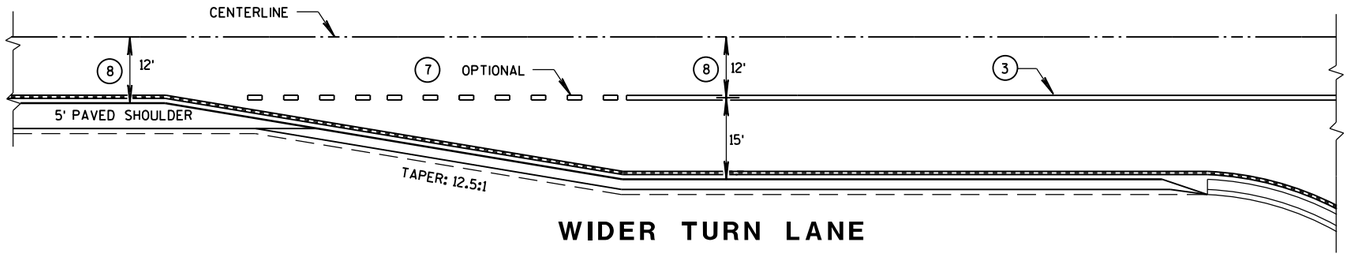
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/6/2011 DATE
/S/ Thomas N. Notbohm STATE TRAFFIC ENGINEER

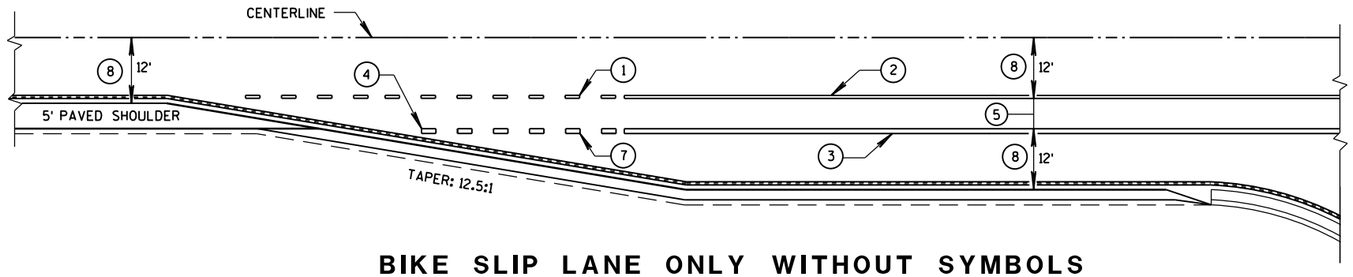
FHWA

6

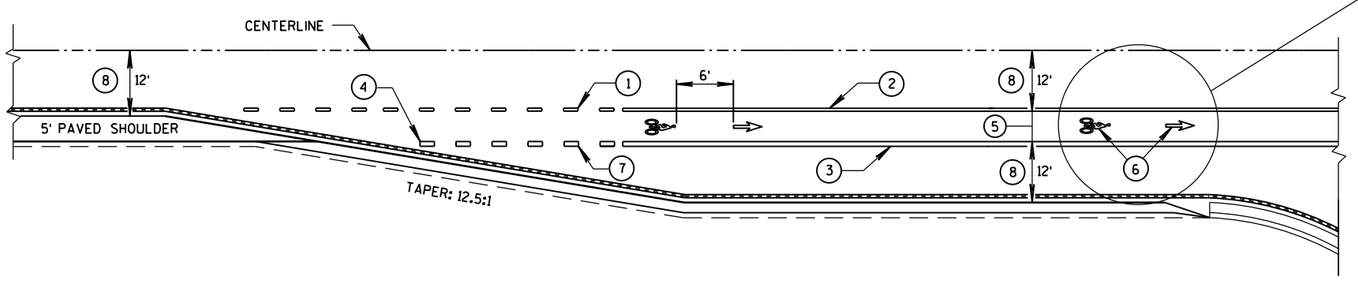
S.D.D. 15 C 19-1a



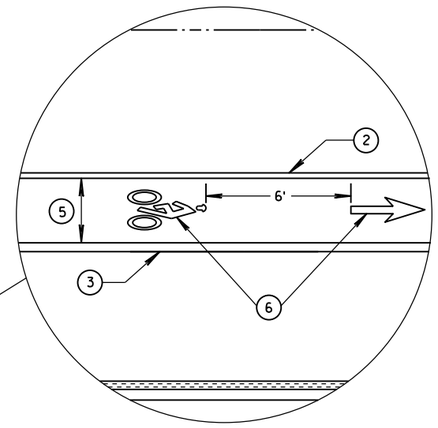
WIDER TURN LANE



BIKE SLIP LANE ONLY WITHOUT SYMBOLS



BIKE LANE WITH SYMBOLS



GENERAL NOTES

1. 3' LINE, 9' GAP - 4-INCH WIDE, WHITE.
2. 4-INCH, WHITE.
3. 8-INCH, WHITE.
4. IF SIGNED AND/OR MARKED AS A BICYCLE FACILITY INCLUDE SECOND LINE OF LINE-SPACE MARKING, OTHERWISE DO NOT.
5. BIKE ACCOMMODATION FOR CONCRETE PAVEMENT IS 5' WIDE.
   BIKE ACCOMMODATION FOR ASPHALT PAVEMENT IS A MINIMUM OF 4', 5' AT ≥ 45 MPH.
6. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
7. 3' LINE, 9' GAP - 8-INCH WIDE, WHITE.
8. REFER TO CONTRACT PLANS.

6

S.D.D. 15 C 29-3a

BICYCLE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

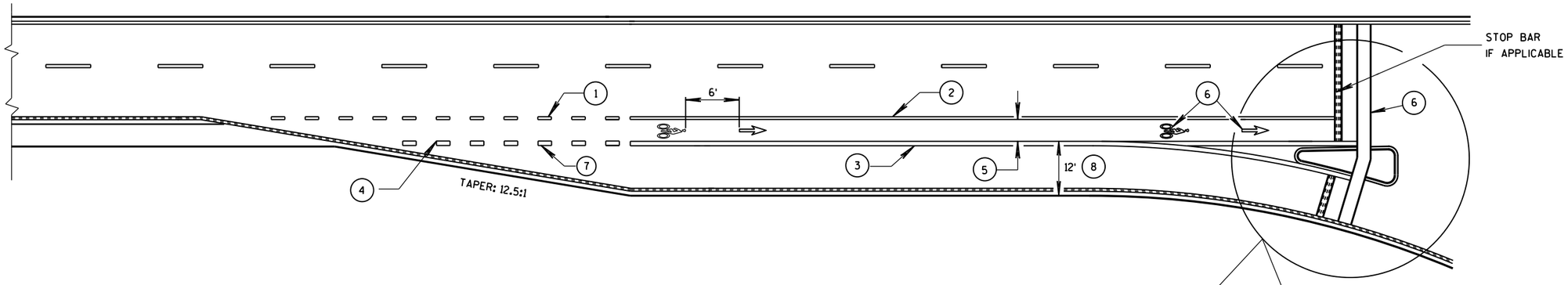
FHWA

6

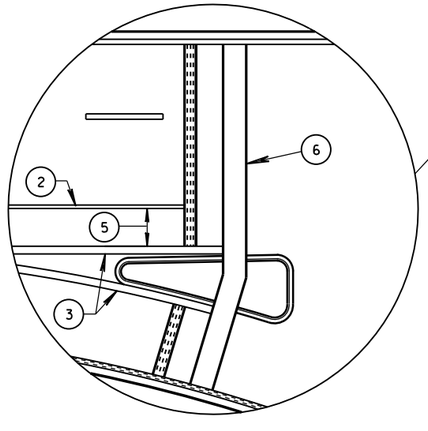
S.D.D. 15 C 29-3a

GENERAL NOTES

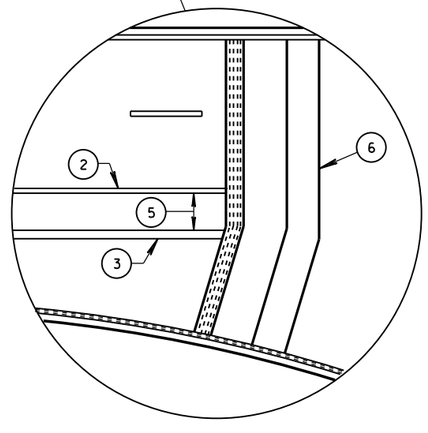
1. 3' LINE, 9' GAP - 4-INCH WIDE, WHITE.
2. 4-INCH, WHITE.
3. 8-INCH, WHITE.
4. IF SIGNED AND/OR MARKED AS A BICYCLE FACILITY INCLUDE SECOND LINE OF LINE-SPACE MARKING, OTHERWISE DO NOT.
5. 5' TYPICAL.
6. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
7. 3' LINE, 9' GAP - 8-INCH WIDE, WHITE.
8. REFER TO CONTRACT PLANS.



BIKE LANE - 4-LANE DIVIDED WITH RIGHT TURN LANE



4 LANE DIVIDED WITH ISLAND



4 LANE DIVIDED WITHOUT ISLAND

BICYCLE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/30/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC E
FHWA

6

S.D.D. 15 C 29-3b

6

S.D.D. 15 C 29-3b

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.

W20-1 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.

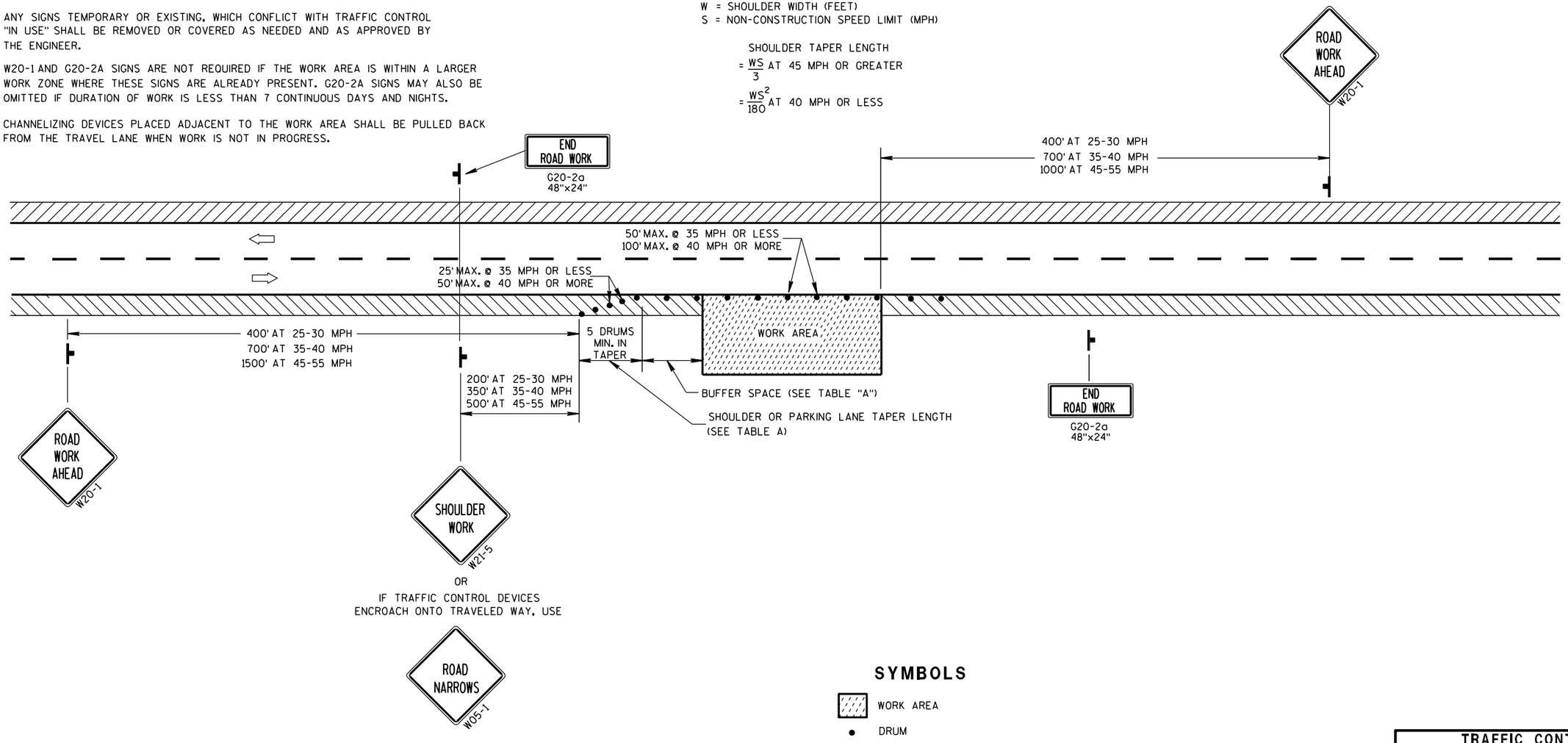
CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

TABLE A

S \ W	SHOULDER TAPER LENGTH (FEET) 4	6	8	10	BUFFER SPACE (FEET)
30	20	30	40	50	85
35	30	45	55	70	120
40	40	55	75	90	170
45	60	90	120	150	220
50	70	100	135	170	280
55	75	110	150	185	335

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

SHOULDER TAPER LENGTH
$= \frac{WS}{3}$ AT 45 MPH OR GREATER
$= \frac{WS^2}{180}$ AT 40 MPH OR LESS



SYMBOLS

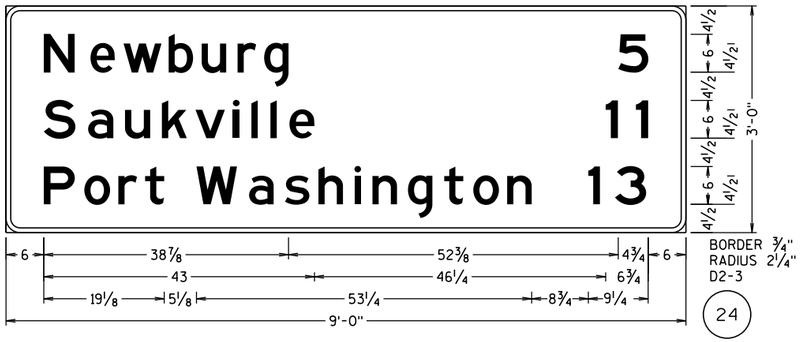
- WORK AREA
- DRUM
- POST MOUNTED SIGN
- DIRECTION OF TRAFFIC FLOW

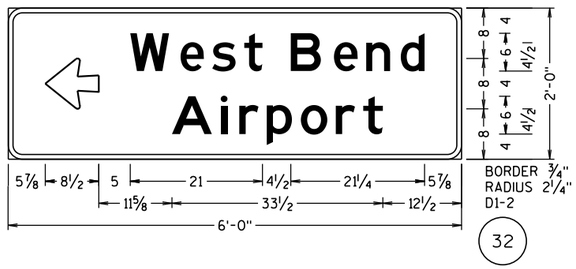
TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

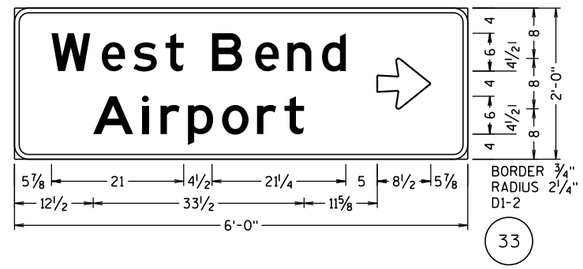
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

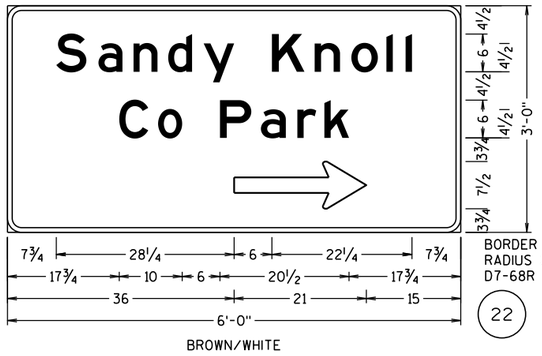
APPROVED
5/23/00 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK[illegible] ENGINEER
FHWA

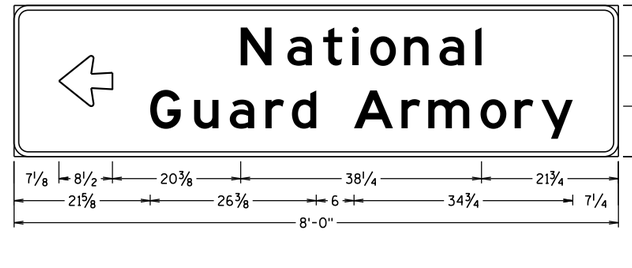
6
S.D.D. 15 D 28-1

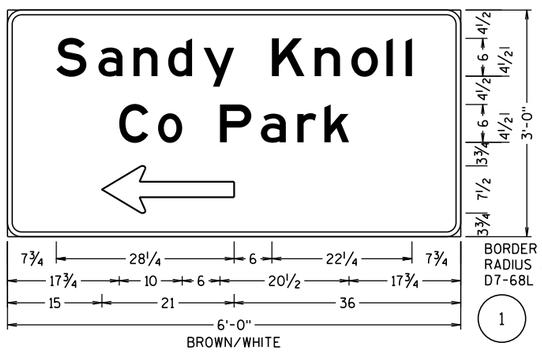


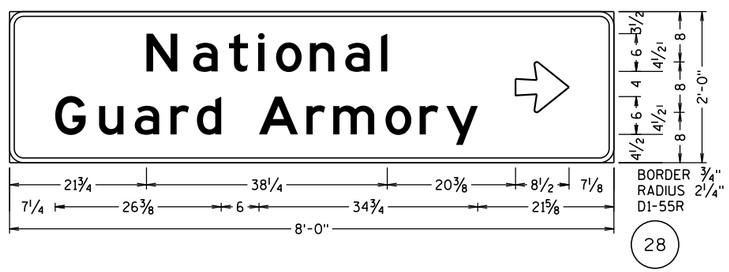










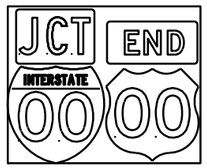


GENERAL NOTES:

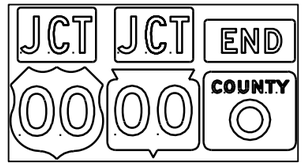
1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE II".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.
6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10
11. DO NOT SCALE.

TYPICAL ASSEMBLIES

J1-1

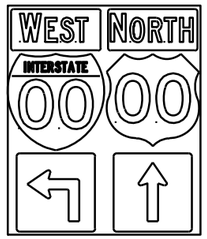


J1-2

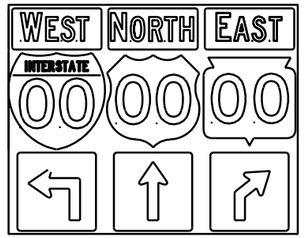


J1-3

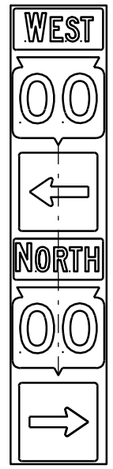
J2-1



J2-2

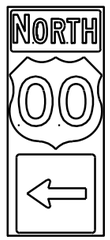


J2-3

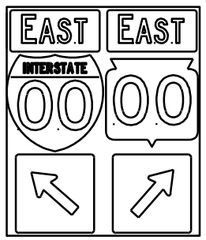


JV

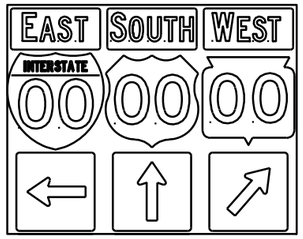
(Typical Vertical J-Assembly
See Note 10 and 11)



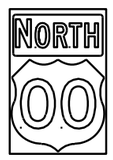
J3-1



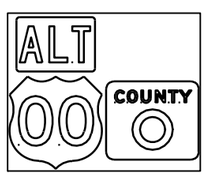
J3-2



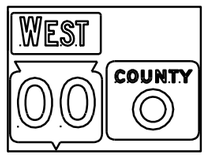
J3-3



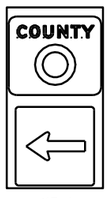
J4-1



J4-2



J4-2



J13-1

J12-1

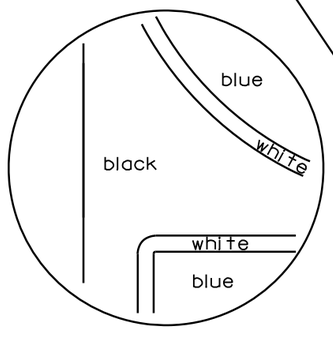
J32-1

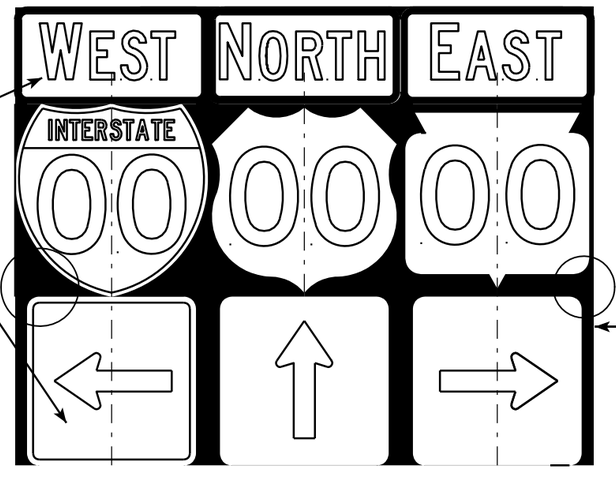
J33-1

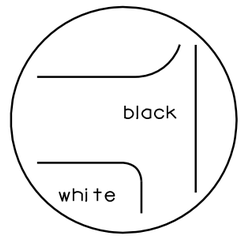
J23-1

J22-1

blue background
with interstate







black background

NOTES

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

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

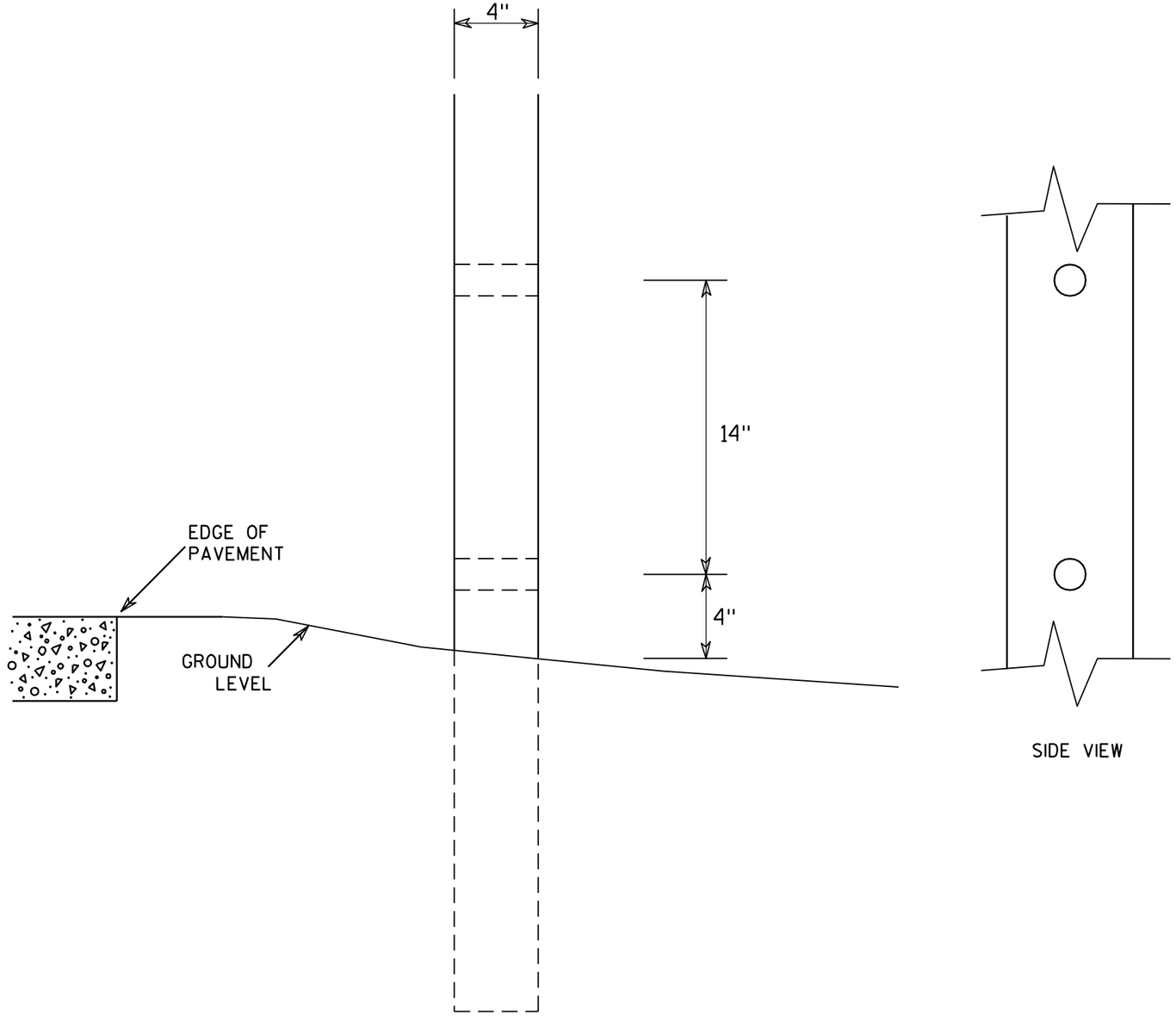
DATE 3/25/13 PLATE NO. A2-1S.7

7

7

PROJECT NO:

SHEET NO: 95 E



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

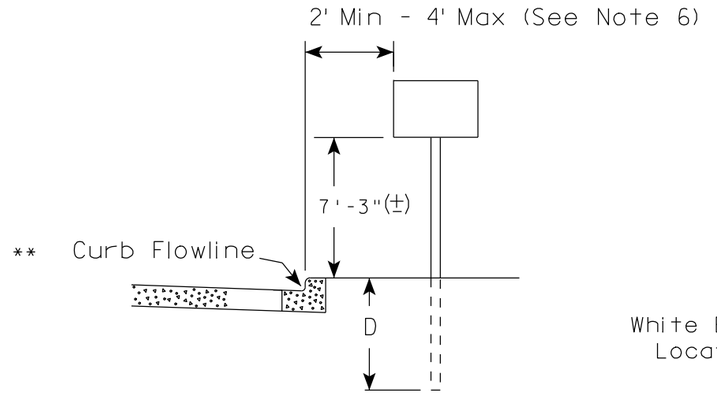
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

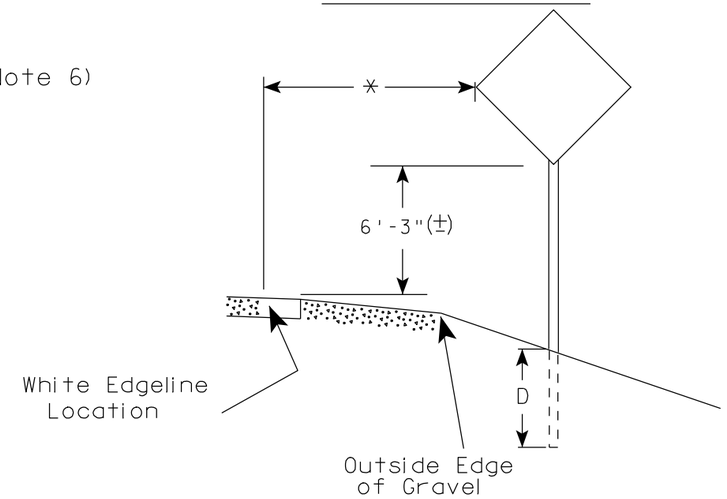
DATE 3/27/97 PLATE NO. A4-11.2

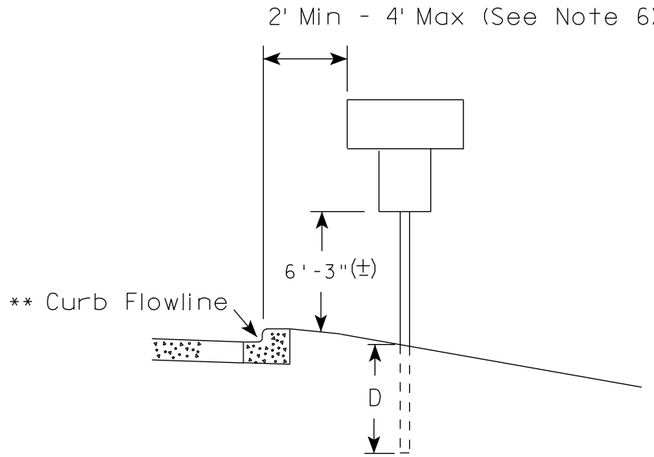
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 96	E

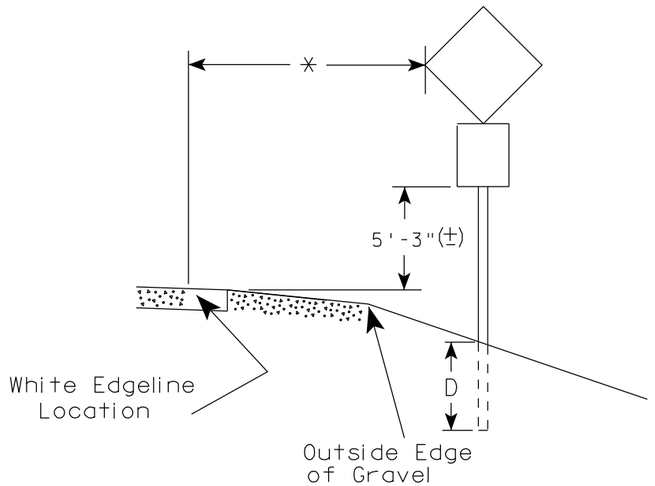
URBAN AREA



RURAL AREA (See Note 2)







GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

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

** 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

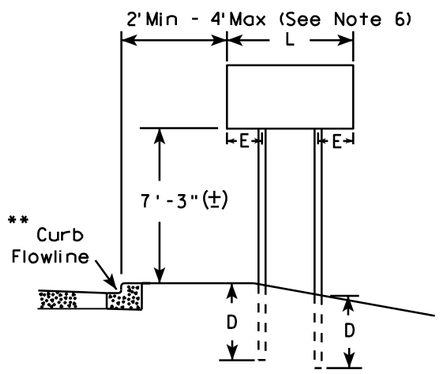
WISCONSIN DEPT OF TRANSPORTATION

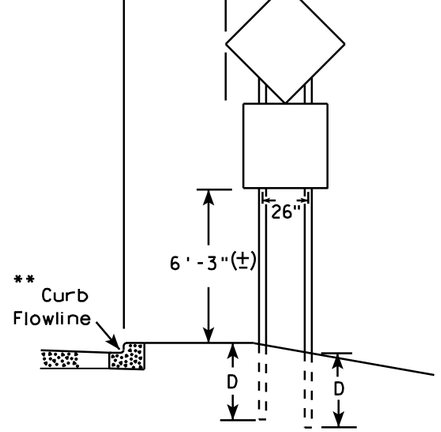
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/24/2013 PLATE NO. A4-3.17

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 97	E

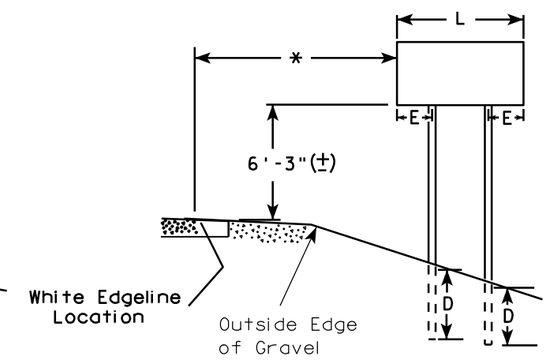
URBAN AREA

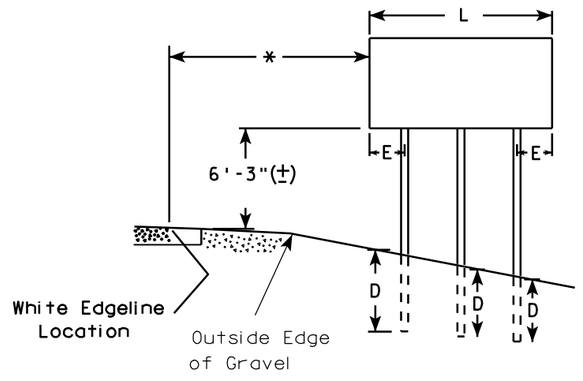


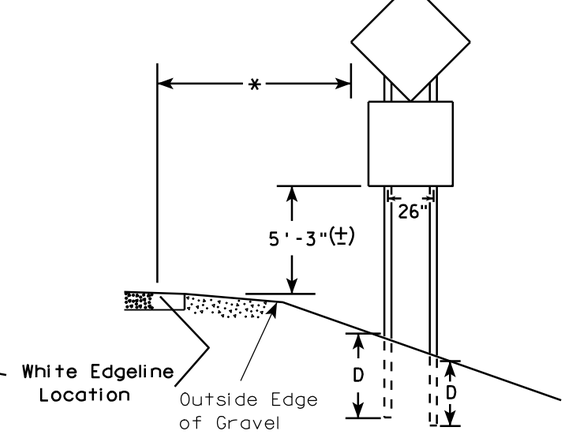


48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN

GENERAL NOTES

1. For multiple post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4"-3" (±).

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

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

*** See A4-3 sign plate for signs 4' or less in width or 20 S.F. or less in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
*** Greater than 48" Less than 60"	12"
60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

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

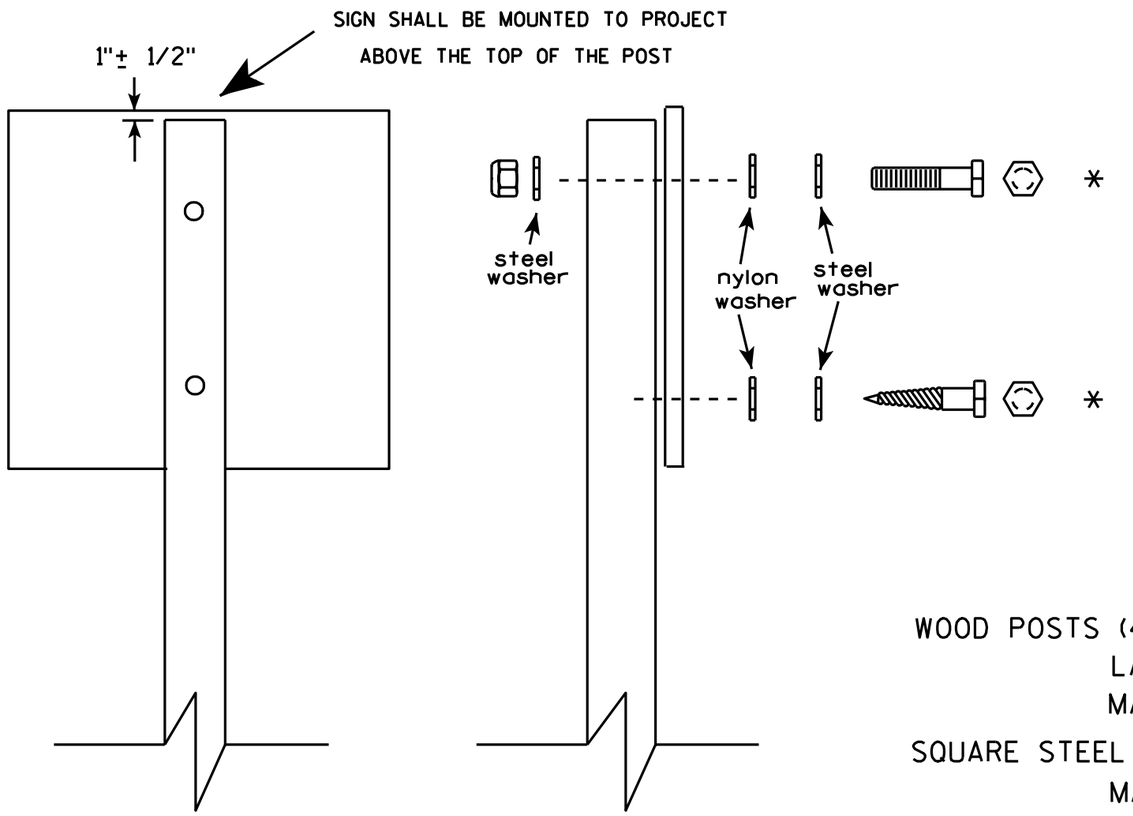
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/21/2011 PLATE NO. A4-4.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 98	E



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

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

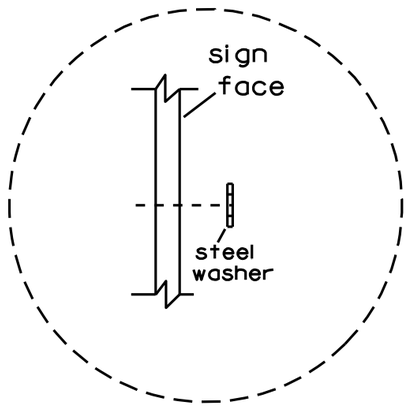
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

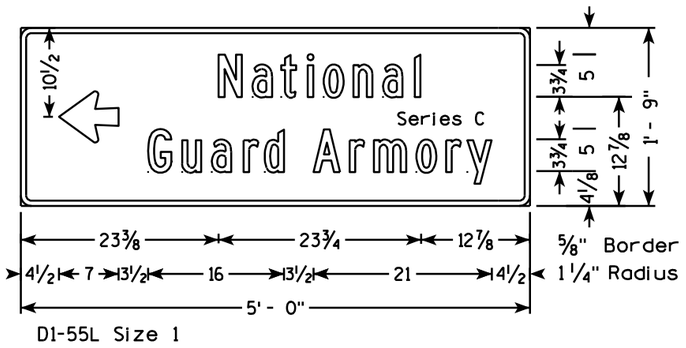
DATE 3/23/10 PLATE NO. A4-8.7

7

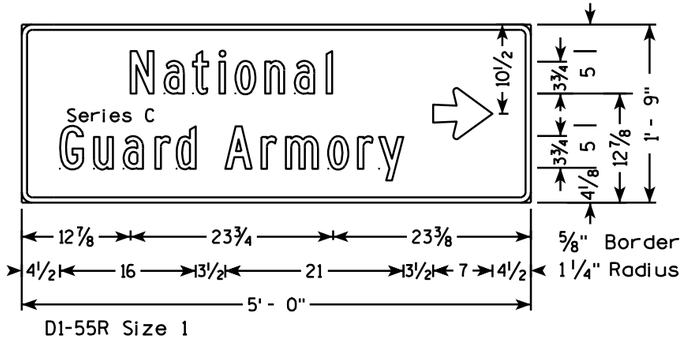
7

PROJECT NO:

SHEET NO: 99 E



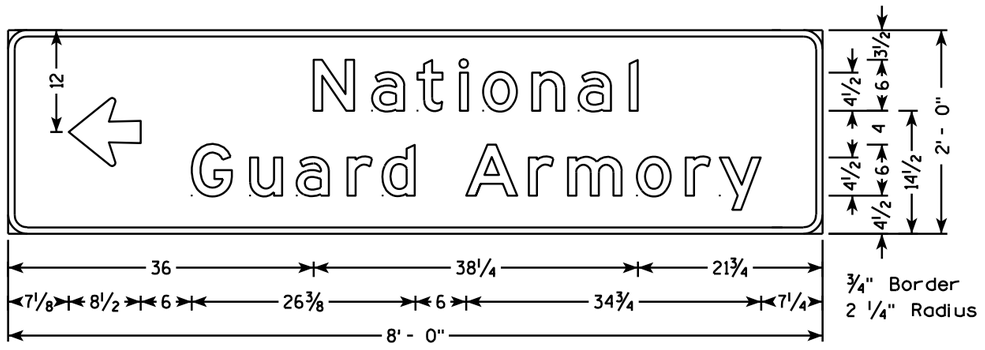
D1-55L Size 1



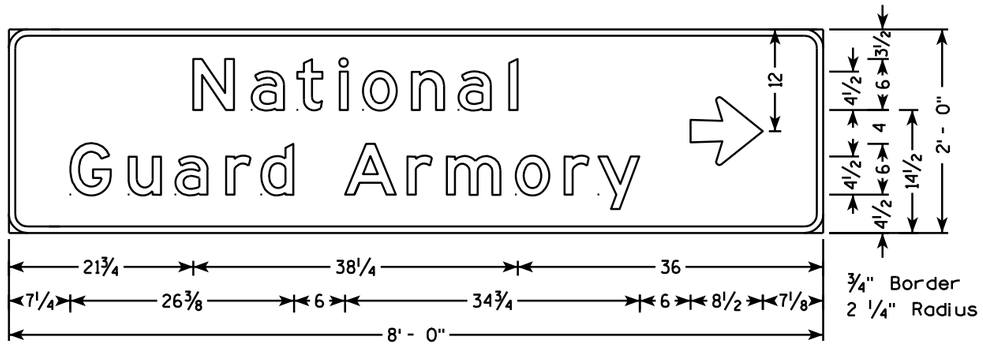
D1-55R Size 1

NOTES

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



D1-55L Size 2



D1-55R Size 2

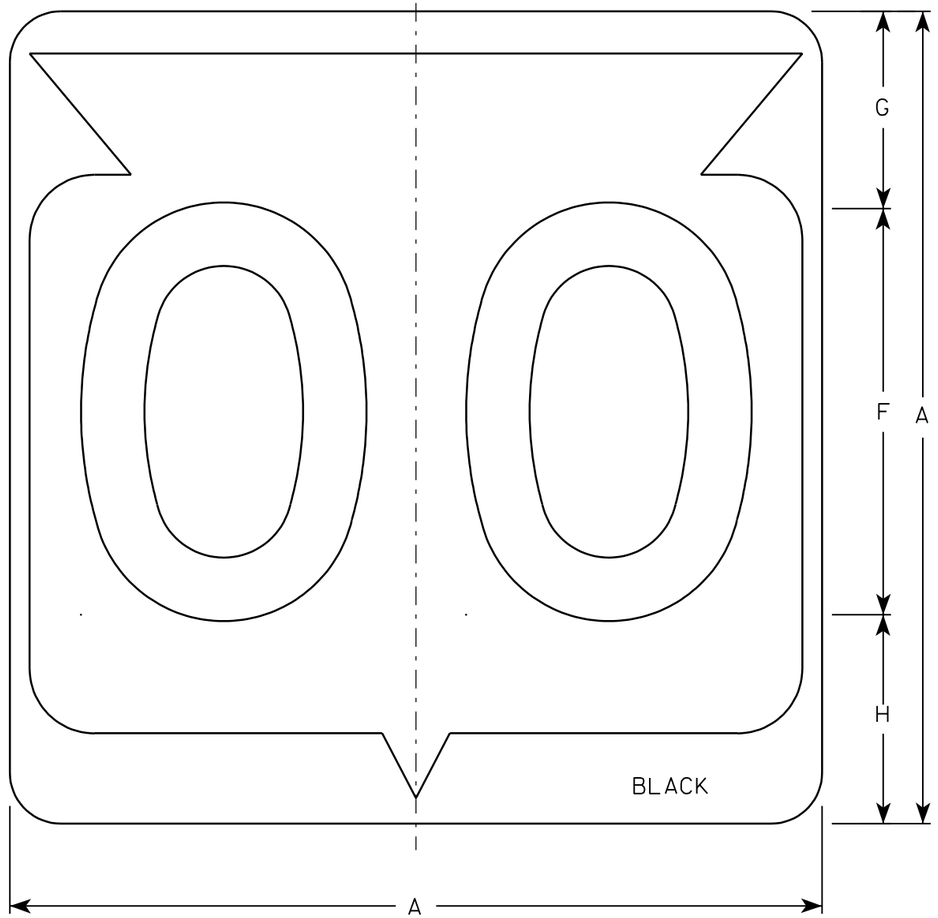
TYPICAL STANDARD
D1-55L & R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/21/13 PLATE NO. D1-55L.2

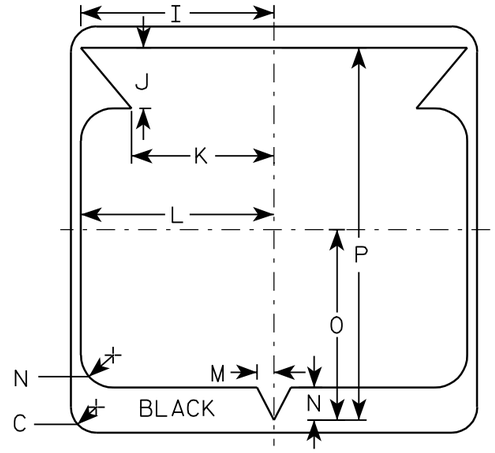
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 100	E



M1-6

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



Metric equivalent for this sign is:

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

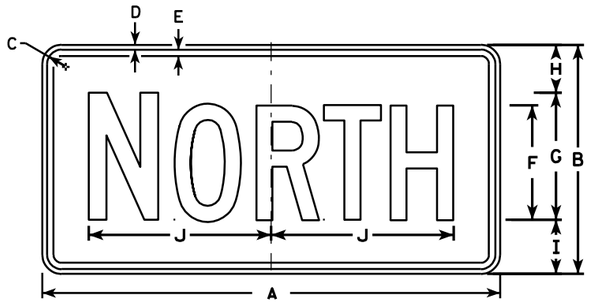
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

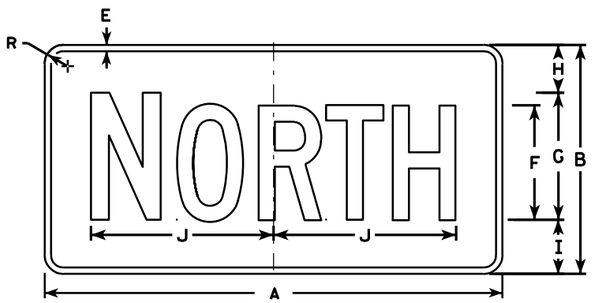
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

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



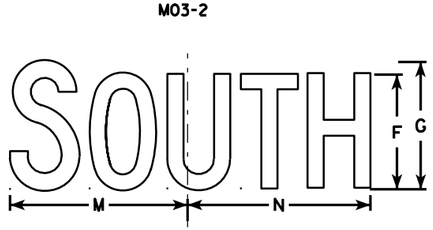
M3-1
MK3-1
MO3-1



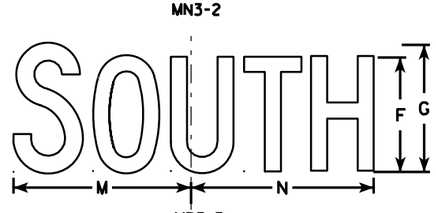
MB3-1
MG3-1
MM3-1
MN3-1

M3-2
MK3-2
MO3-2

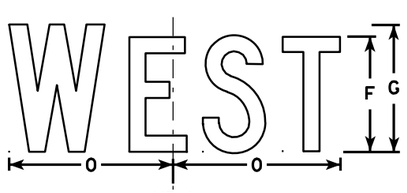
MB3-2
MG3-2
MM3-2
MN3-2



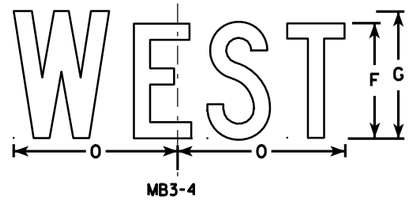
M3-3
MK3-3
MO3-3



MB3-3
MG3-3
MM3-3
MN3-3



M3-4
MK3-4
MO3-4



MB3-4
MG3-4
MM3-4
MN3-4

NOTES

1. All Signs Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White - Type H Reflective (Detour or temporary signs - Reflective) Message - Black
   MB3-1 thru MB3-4 Background - Blue Message - White - Type H Reflective (Detour or temporary signs - Reflective)
   MG3-1 thru MG3-4 Background - Green Message - White - Type H Reflective
   MK3-1 thru MK3-4 Background - Green Message - White - Type H Reflective
   MM3-1 thru MM3-4 Background - White - Type H Reflective Message - Green
   MN3-1 thru MN3-4 Background - Brown Message - White - Type H Reflective
   M03-1 thru M03-4 Background - Orange - Reflective Message - Black
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

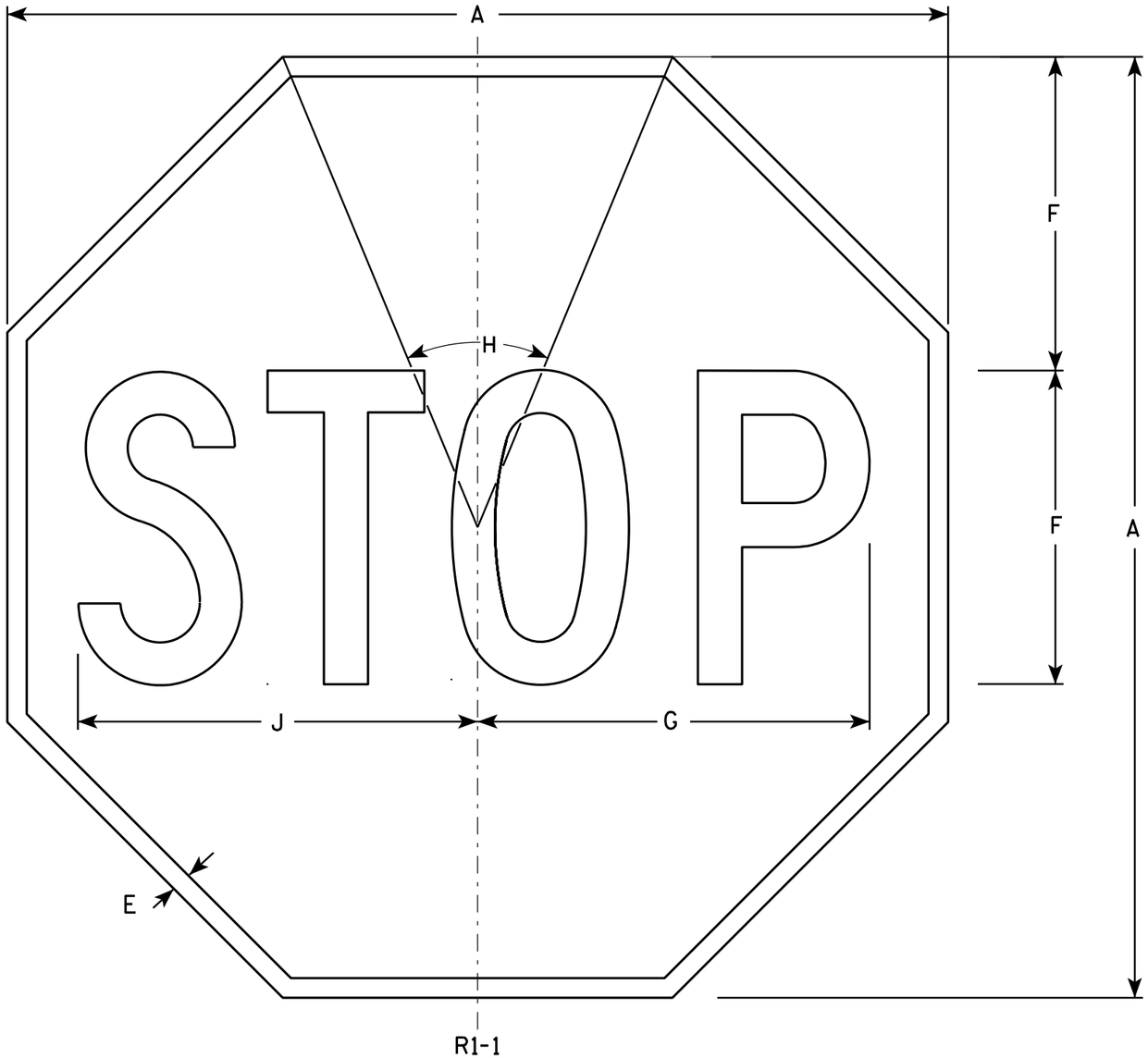
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/10/10 PLATE NO. M3-1.12

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



NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24				3/8	8	10	45°		10 1/4																	3.31
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

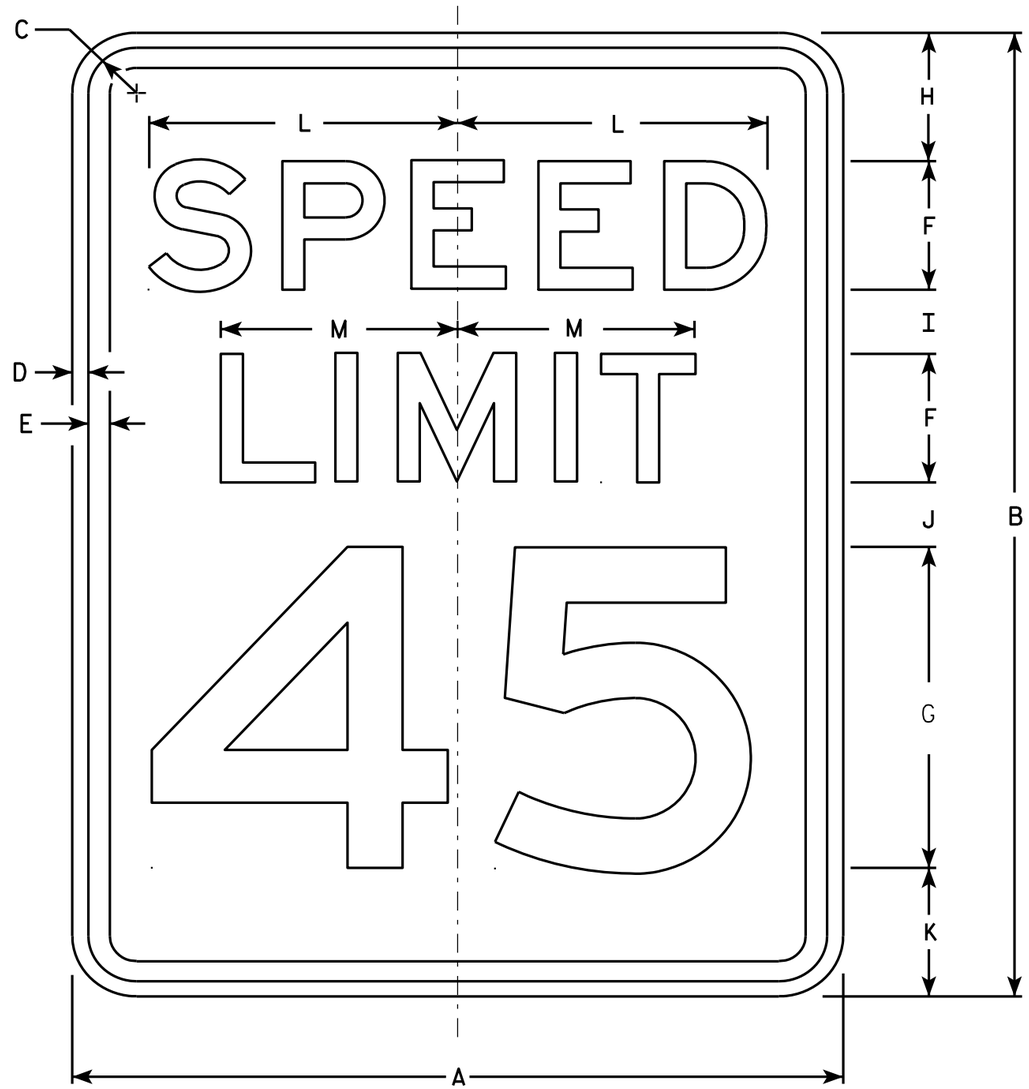
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 103	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

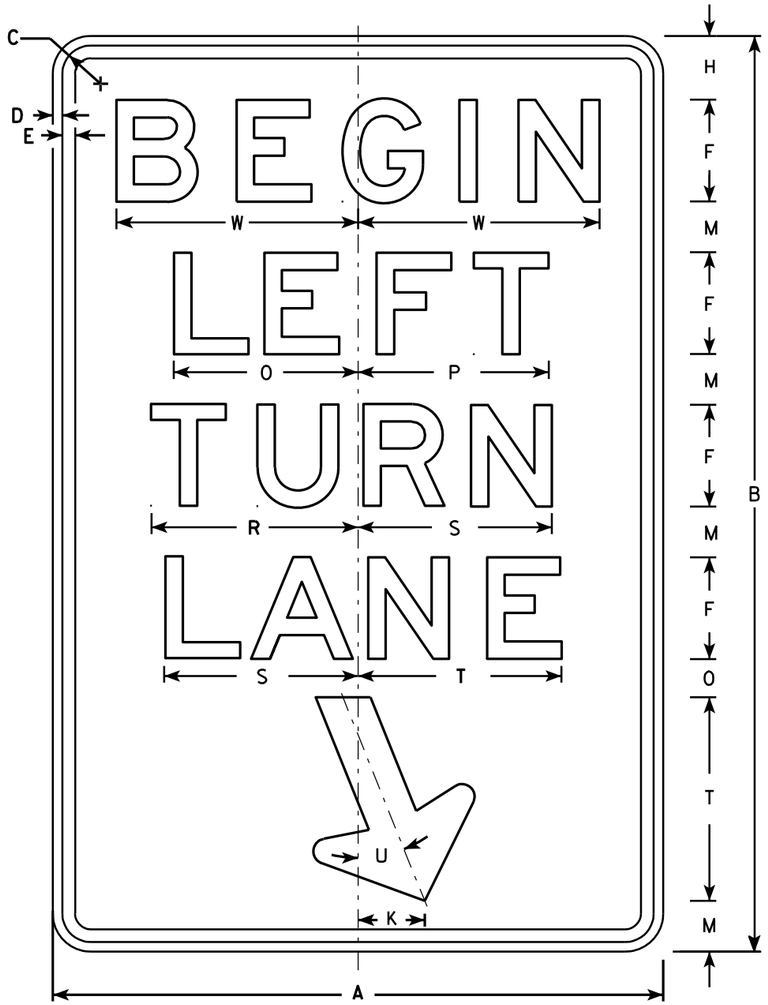
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

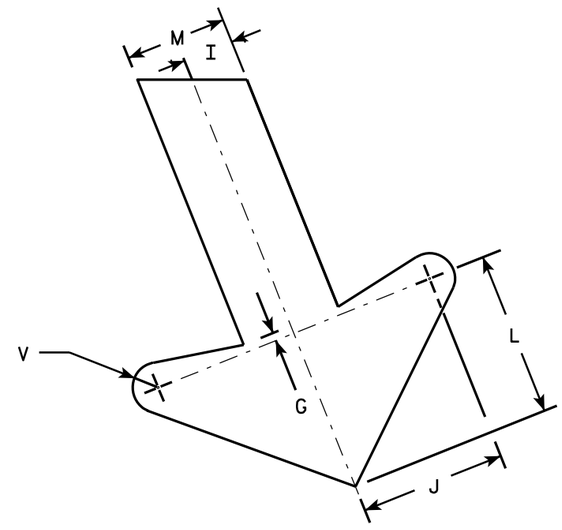
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 104 | E



R3-20L

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.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

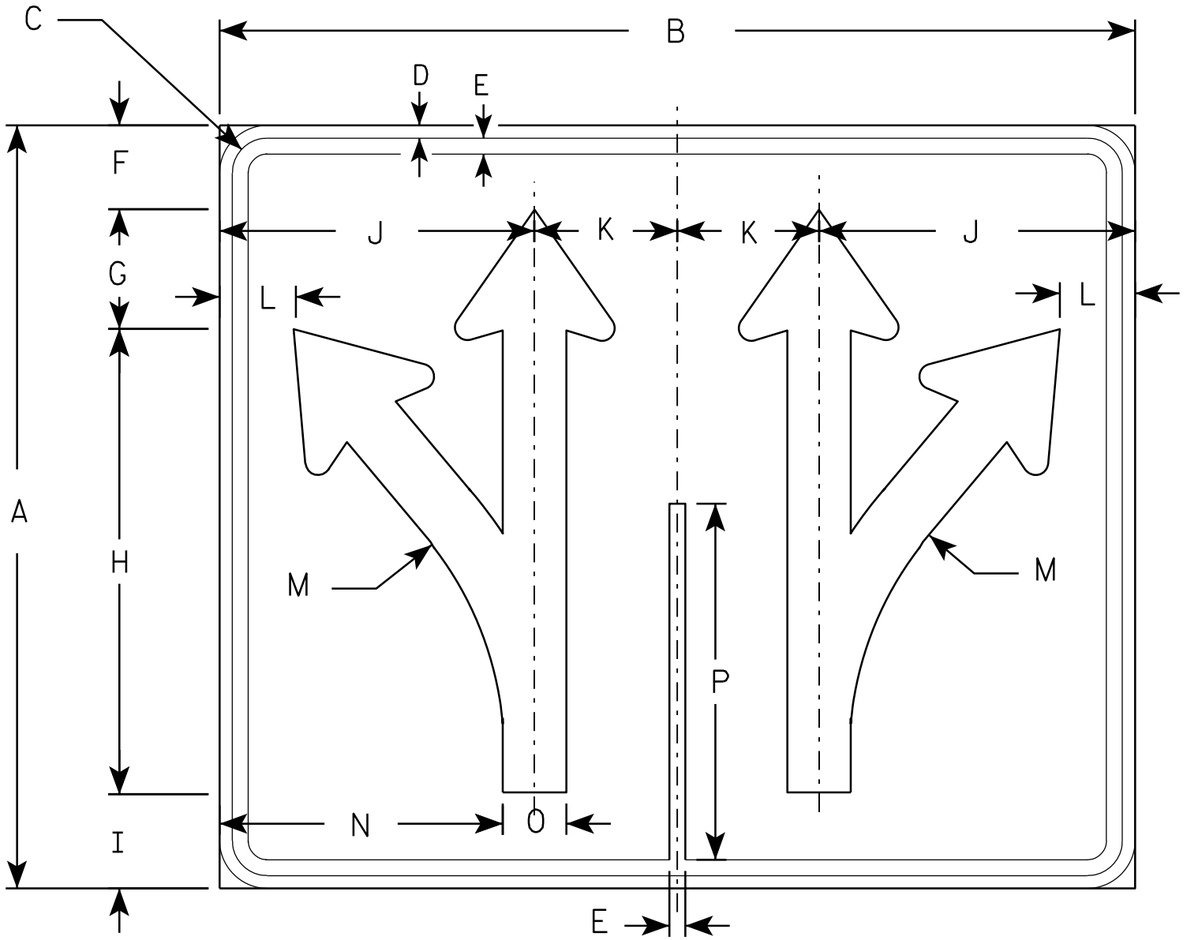
STANDARD SIGN
R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

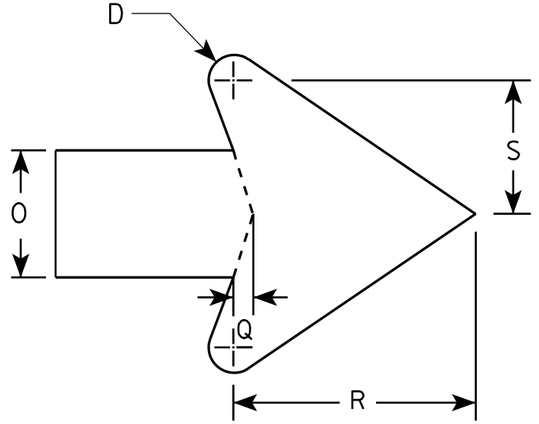
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 105 | E



R3-8K

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.



ARROW DETAIL

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	30	36	1 3/8	1/2	5/8	3 1/4	4 3/4	18 1/4	3 3/4	12 3/8	5 5/8	3	13 1/4	11 1/8	2 1/2	14	3/8	4 3/4	2 5/8								7.5
2M	30	36	1 3/8	1/2	5/8	3 1/4	4 3/4	18 1/4	3 3/4	12 3/8	5 5/8	3	13 1/4	11 1/8	2 1/2	14	3/8	4 3/4	2 5/8								7.5
3																											
4	48	54	2 1/4	3/4	1	5 1/4	7 1/2	29 1/4	5 7/8	18 5/8	8 3/8	4 3/8	22 1/4	16 3/4	3 3/4	22 3/8	5/8	7 1/8	4								18.0
5	48	54	2 1/4	3/4	1	5 1/4	7 1/2	29 1/4	5 7/8	18 5/8	8 3/8	4 3/8	22 1/4	16 3/4	3 3/4	22 3/8	5/8	7 1/8	4								18.0

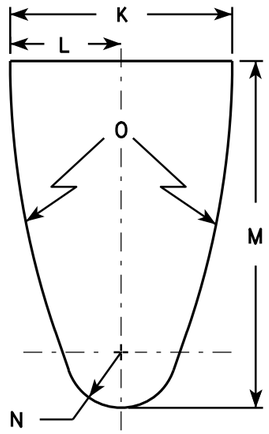
STANDARD SIGN
R3-8K

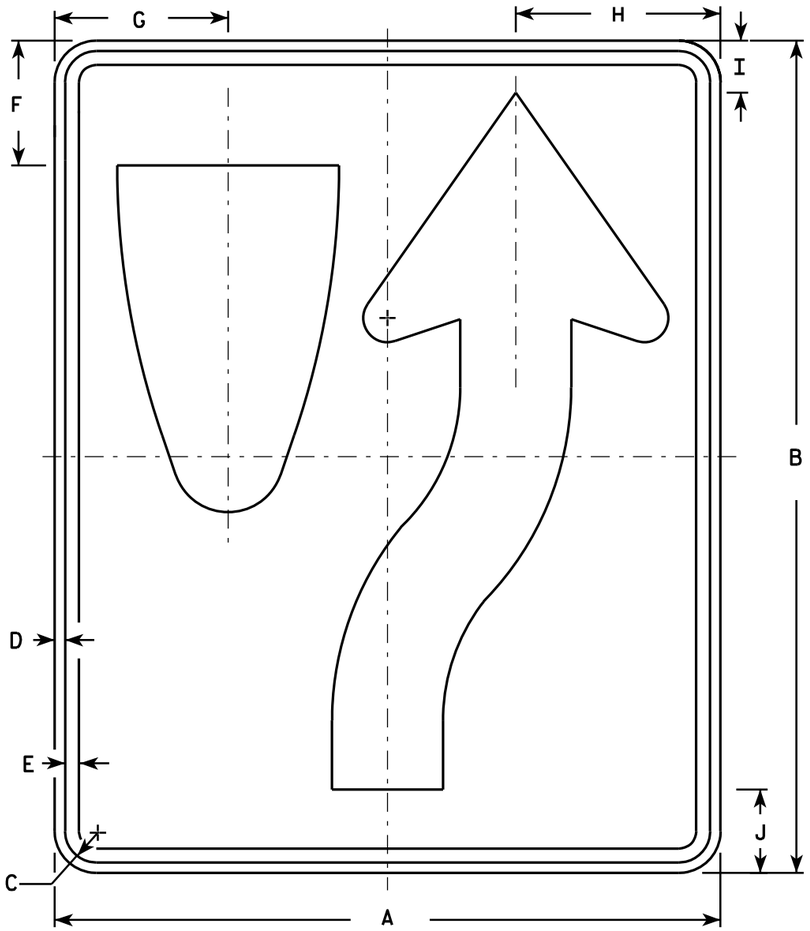
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/2011 PLATE NO. R3-8K.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 106	E

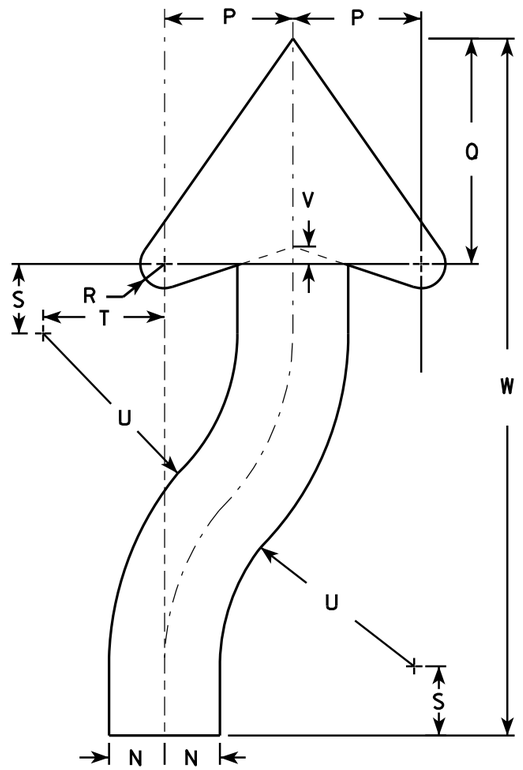




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

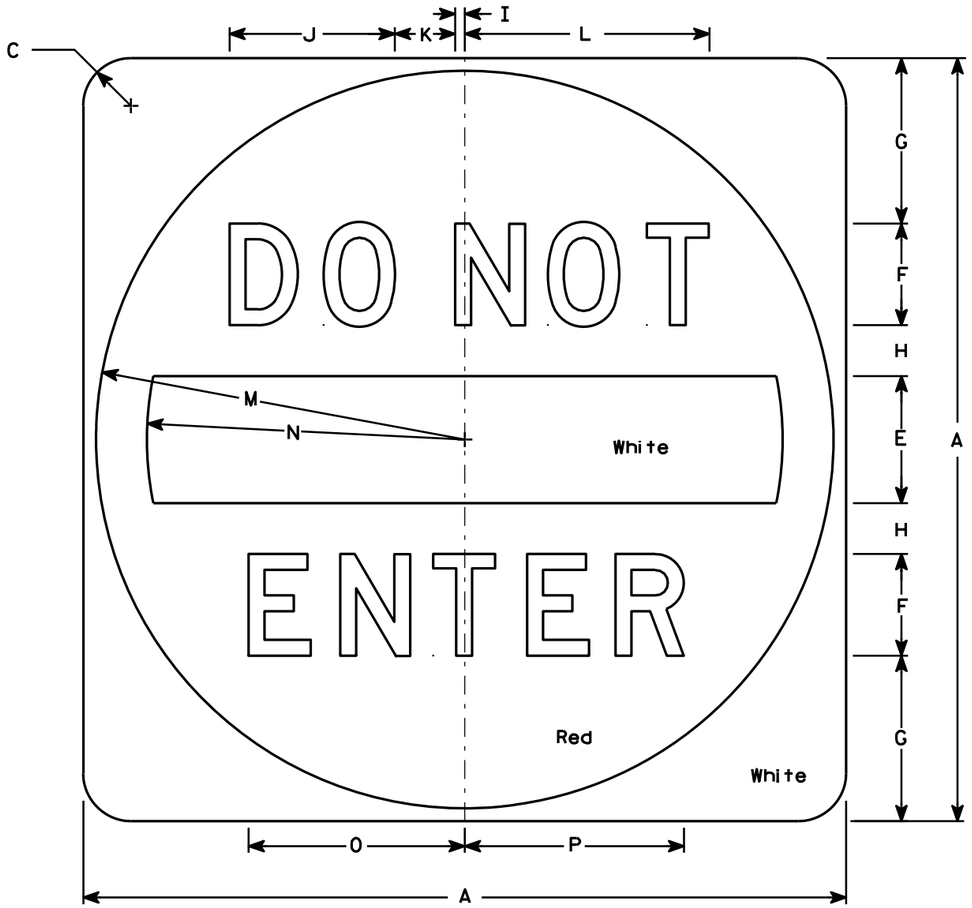
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 107	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.26
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

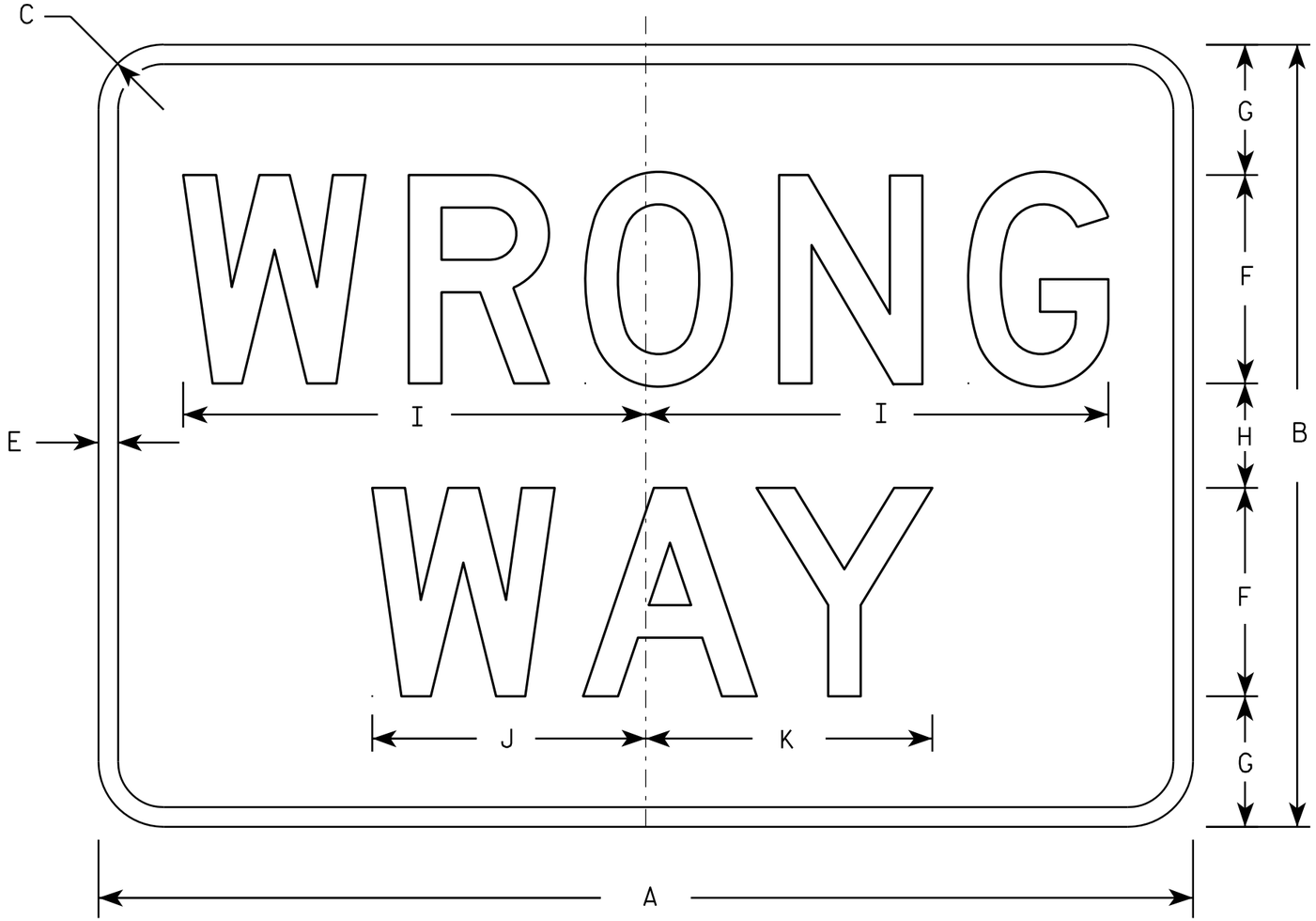
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 108 | E



R5-1A

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

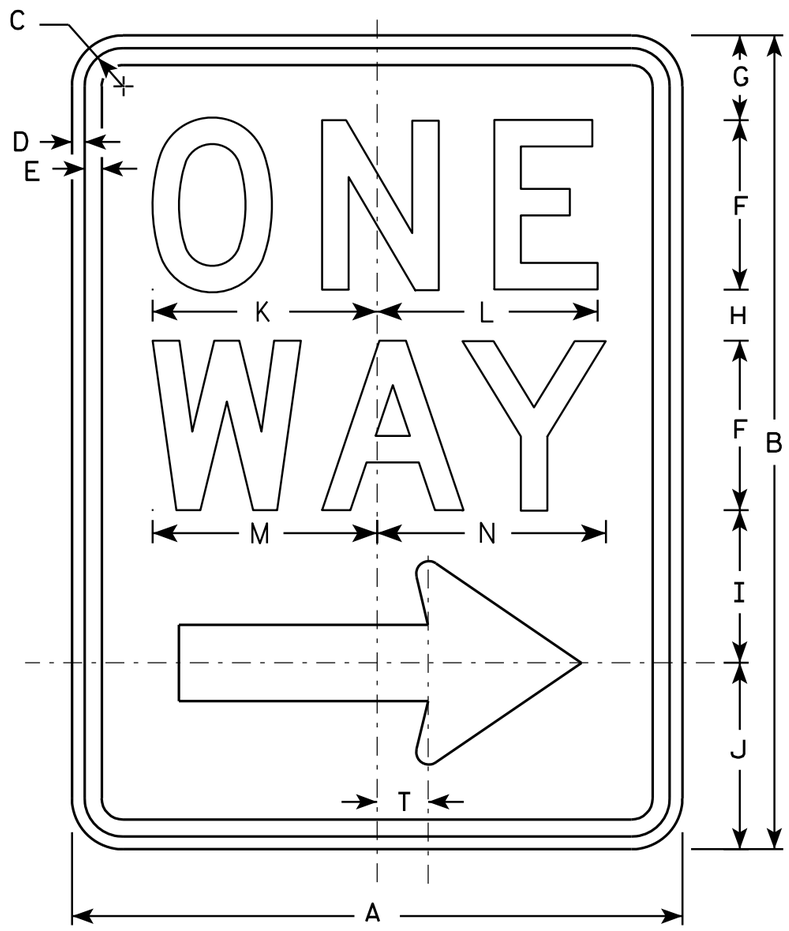
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 109 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R51A.DGN PLOT DATE : 17-DEC-2010 12:42 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 5.462457:1.000000

WISDOT/CADDS SHEET 42

7

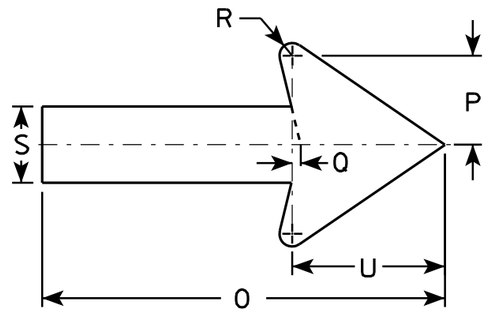
7



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

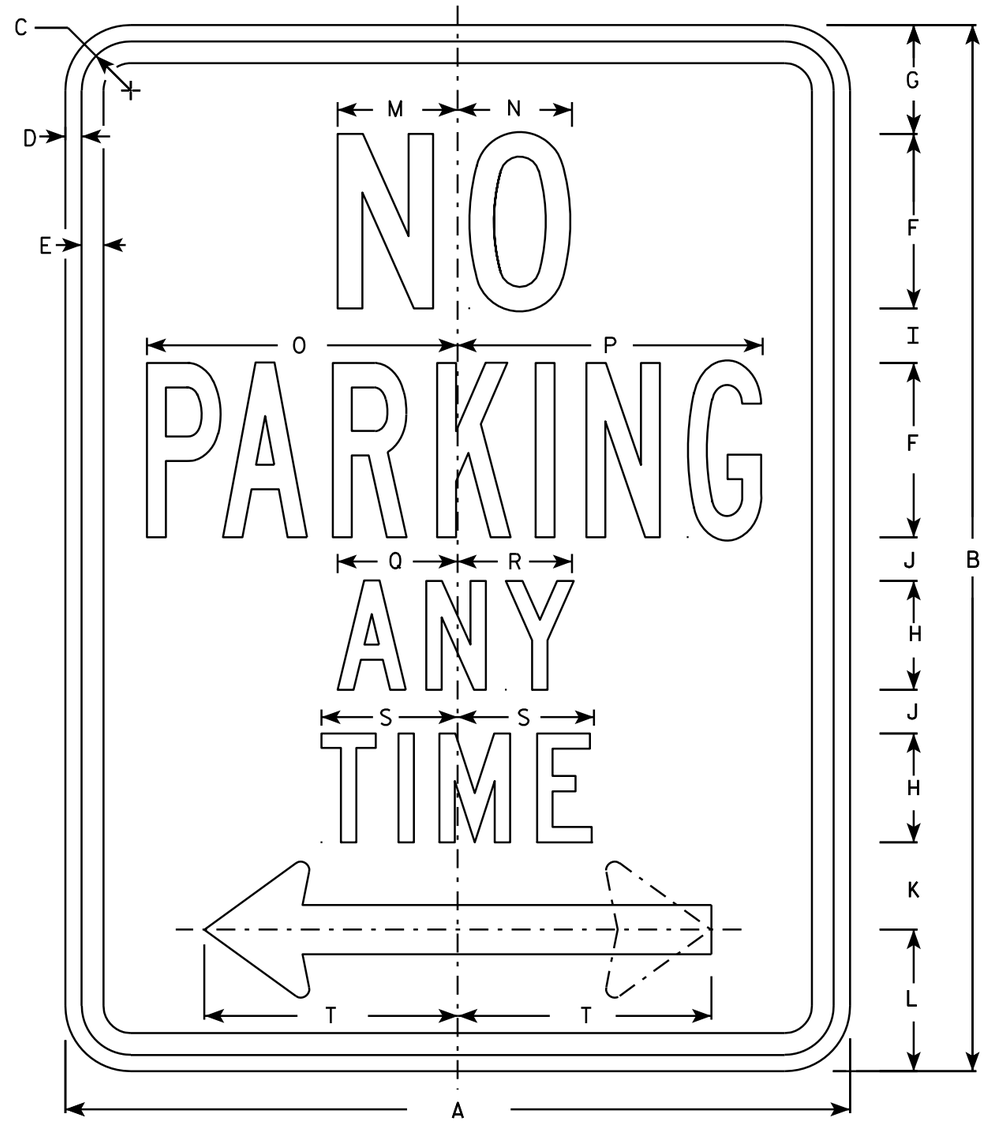
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

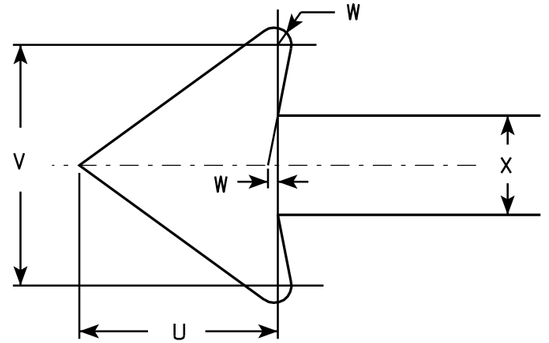
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 110	E



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

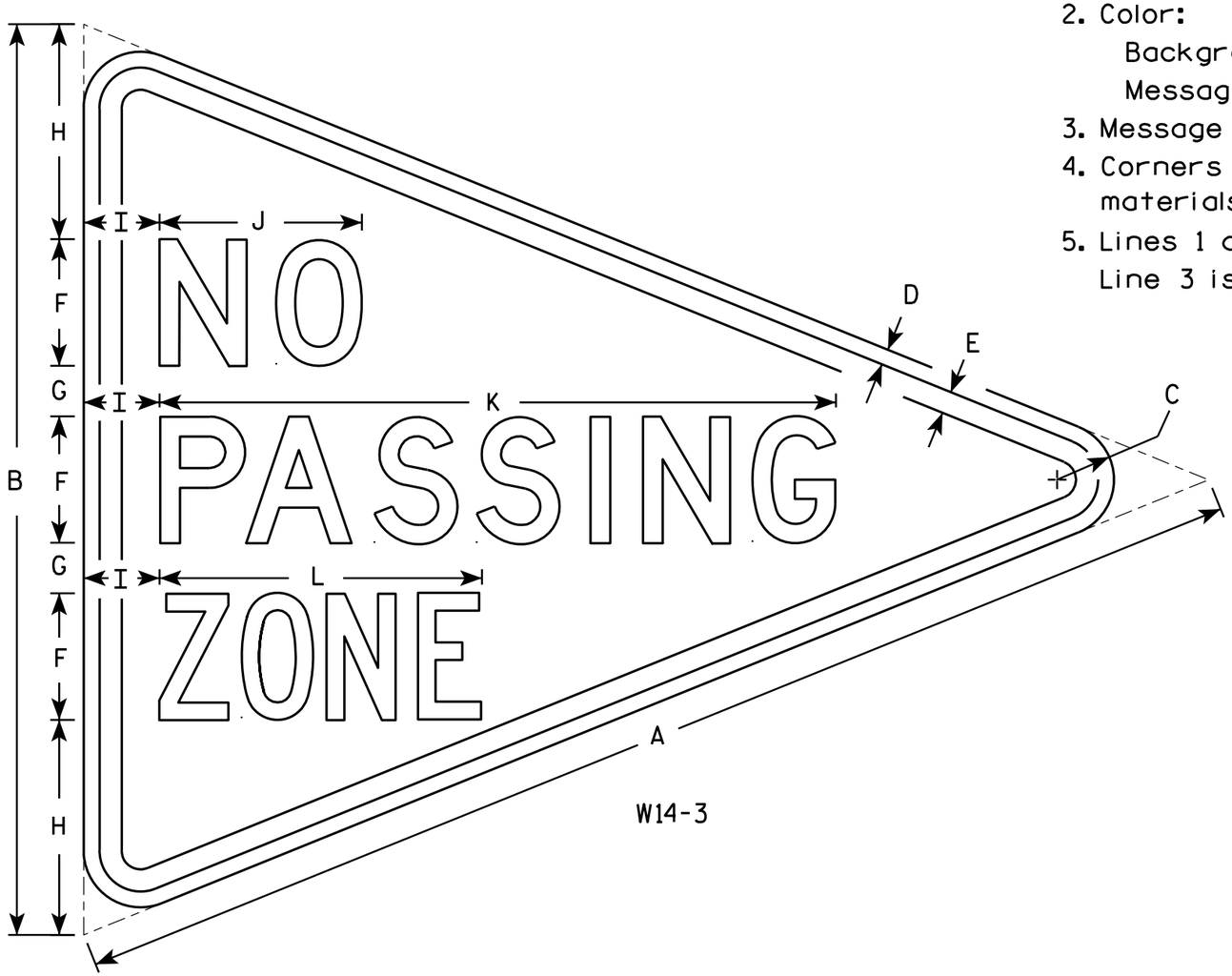
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 111 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R71.DGN PLOT DATE : 31-MAR-2011 09:20 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.476110:1.000000

WISDOT/CADDS SHEET 42

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																											

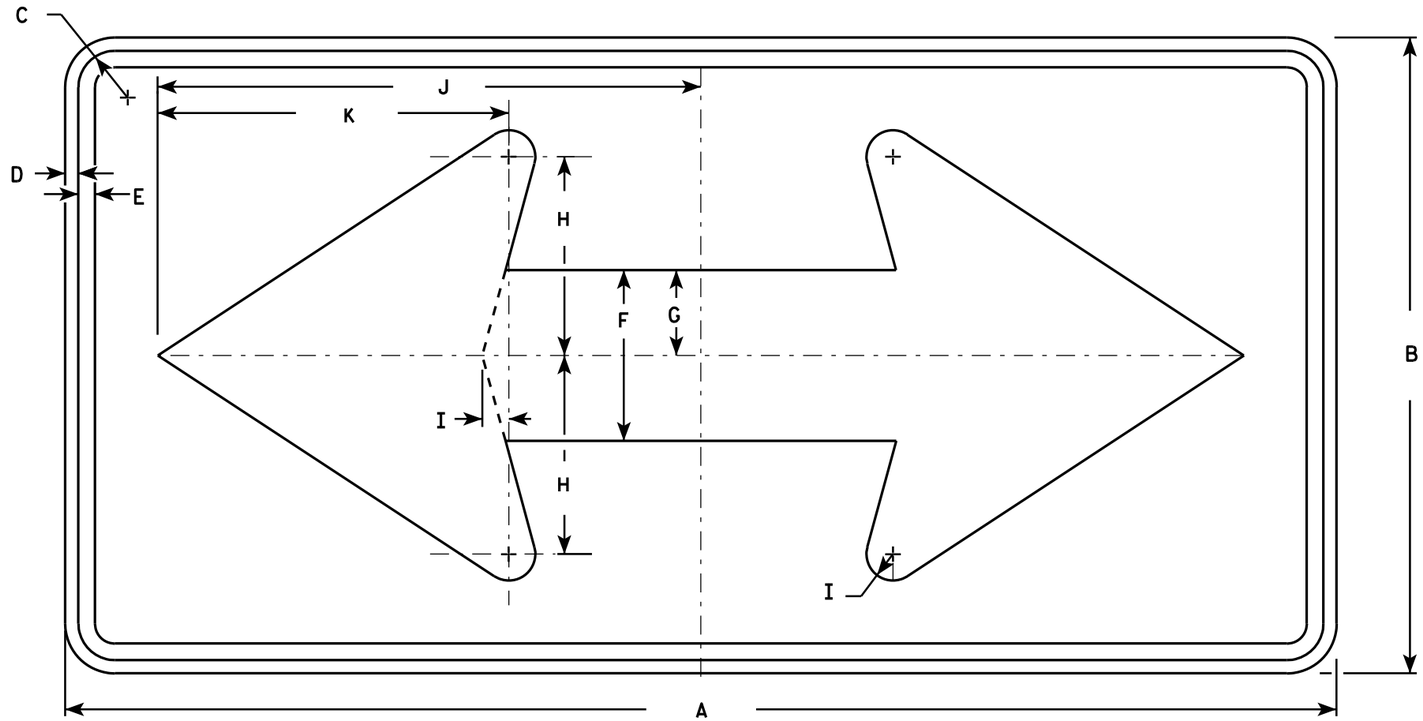
STANDARD SIGN
W14-3

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: 112	E



W1-7

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	36	18	1 1/8	3/8	1/2	5	2 1/2	5 3/4	3/4	15 5/8	10 1/8																4.5
2S	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	96	48	2 1/4	3/4	1	13	6 1/2	15	2	41	26 1/2																32.0

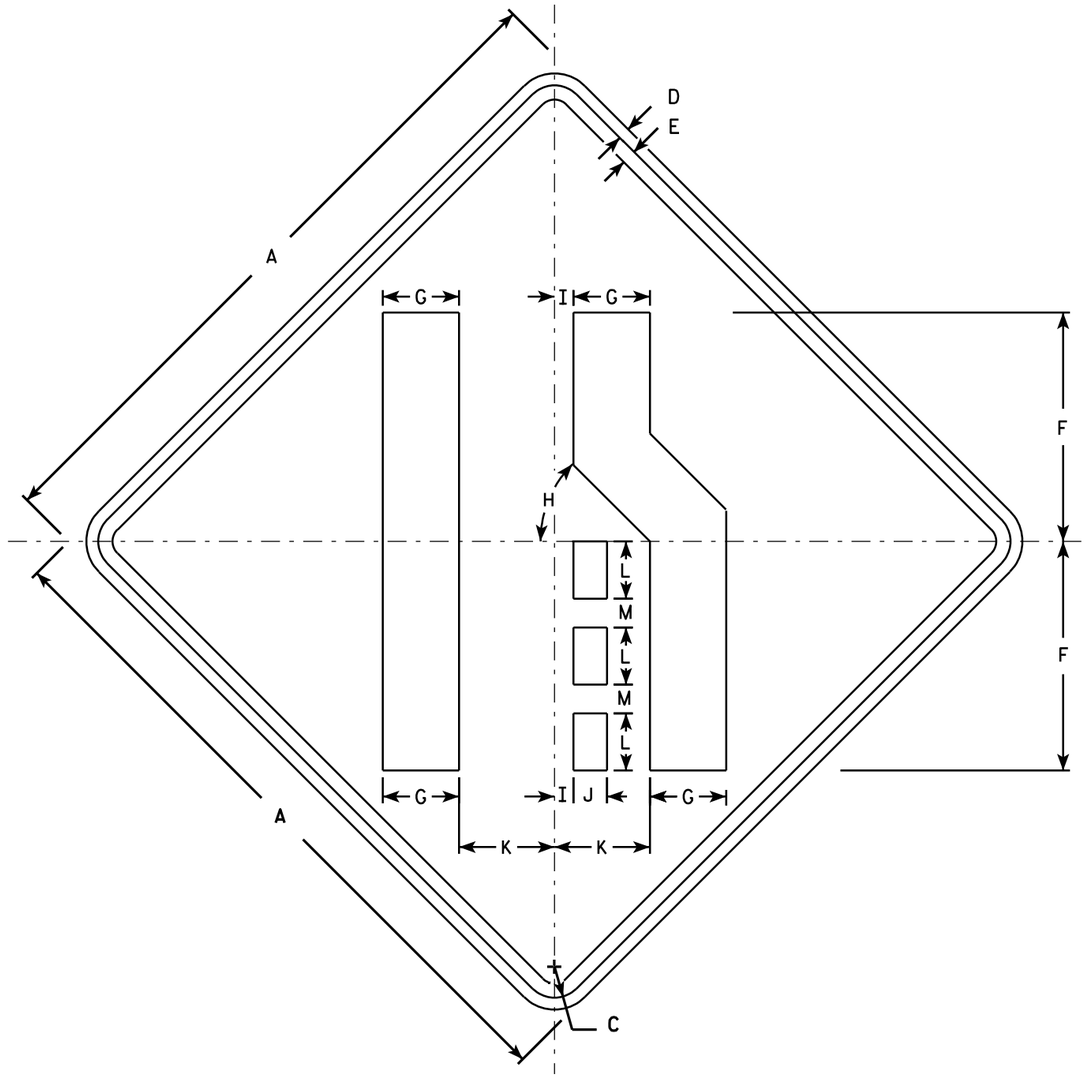
STANDARD SIGN
W1-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-7.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 113 | E



W4-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-2L is the same as W4-2R except the symbol 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	30		1 3/8	1/2	5/8	10	3 3/8	45°	7/8	1 1/2	4 1/4	2 1/2	1 1/4														6.25
2S	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2M	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
3	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W4-2

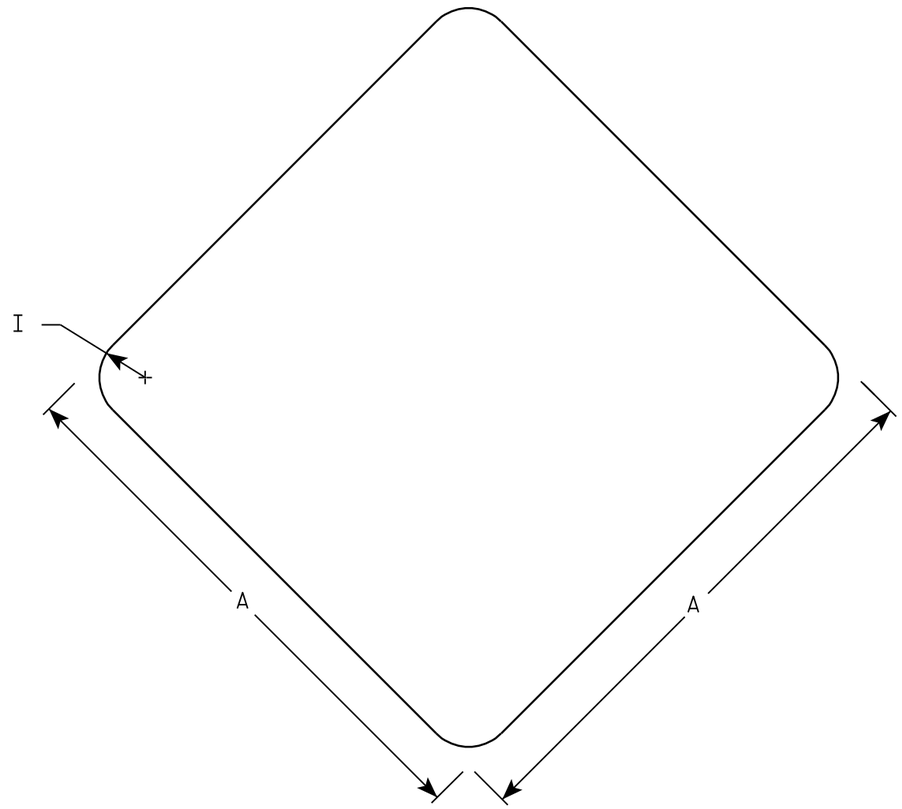
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/12/13 PLATE NO. W4-2.14

PROJECT NO:

SHEET NO: 114 E



W5-54

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
3. Corners may be square or rounded when base material is plywood. When base material is metal the corners shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12								1																		1.0
2S	18								1 ½																		2.25
2M	18								1 ½																		2.25
3																											
4																											
5																											

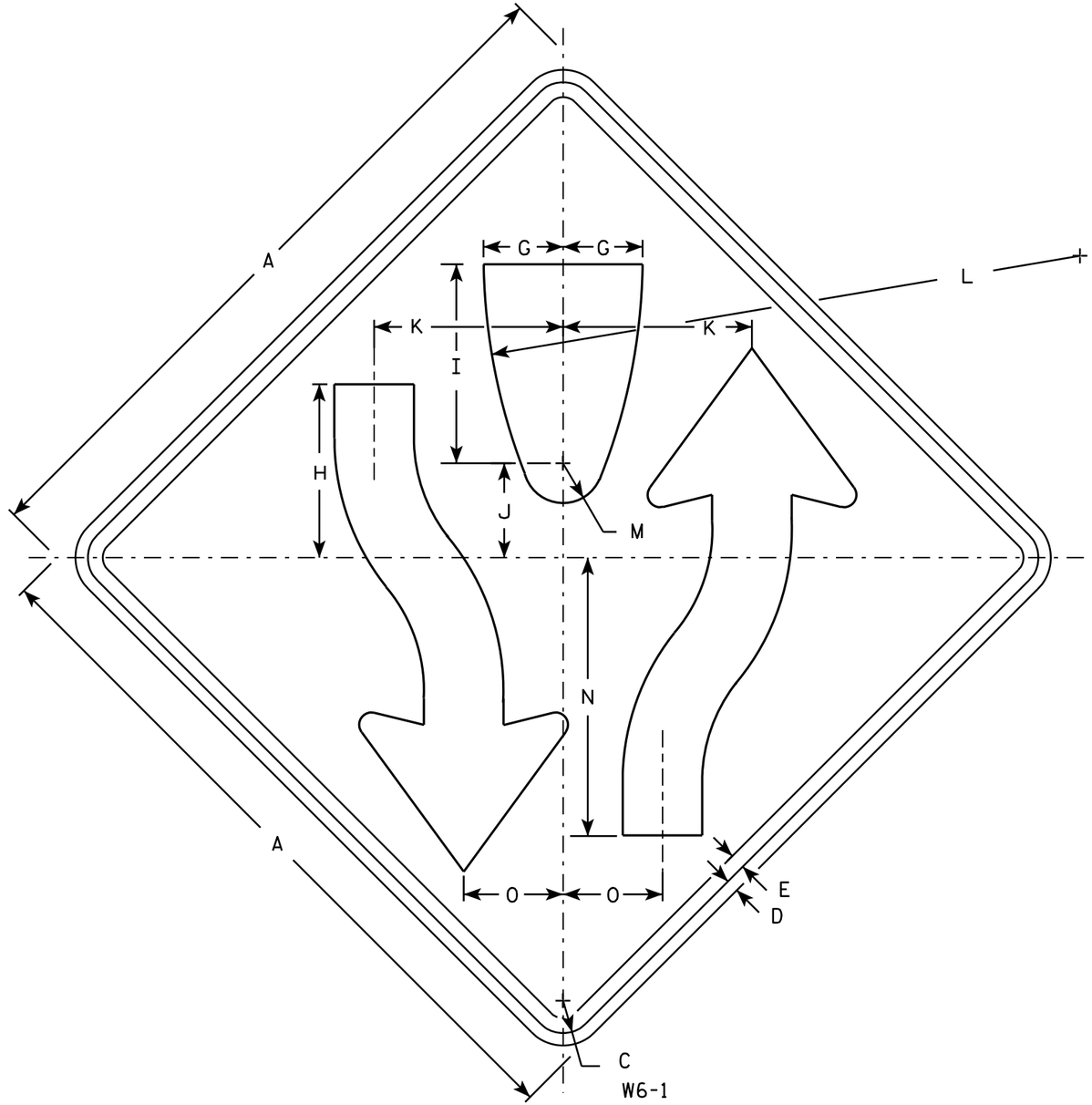
STANDARD SIGN
W5-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

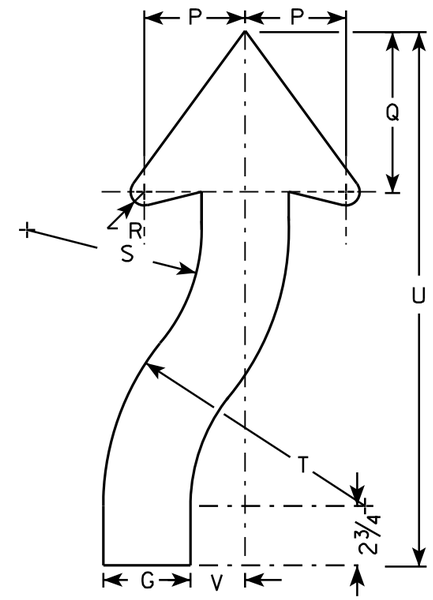
DATE 11/3/10 PLATE NO. W5-54.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 115 | 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. W6-2 same as W6-1 but is rotated 180° when mounted.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		3 1/4	8	8 1/4	4 1/8	7 7/8	25	1 3/4	11 5/8	4 1/8	3 7/8	6 3/4	5/8	6 5/8	9 7/8	21 5/8	2					6.25
2S	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
2M	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
3																											
4	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0
5	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0

STANDARD SIGN
W6-1 & W6-2

WISCONSIN DEPT OF TRANSPORTATION

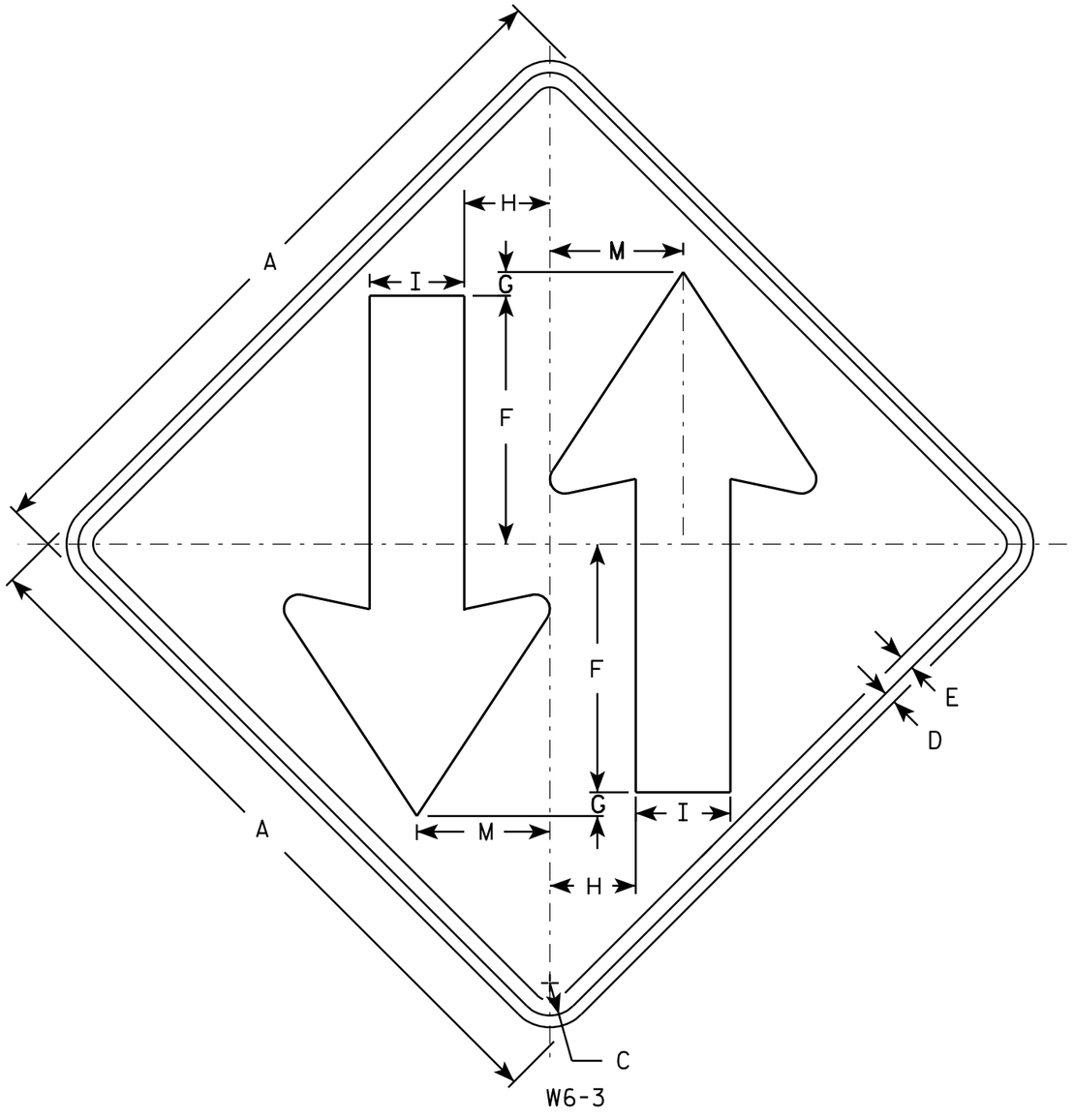
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W6-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 116	E

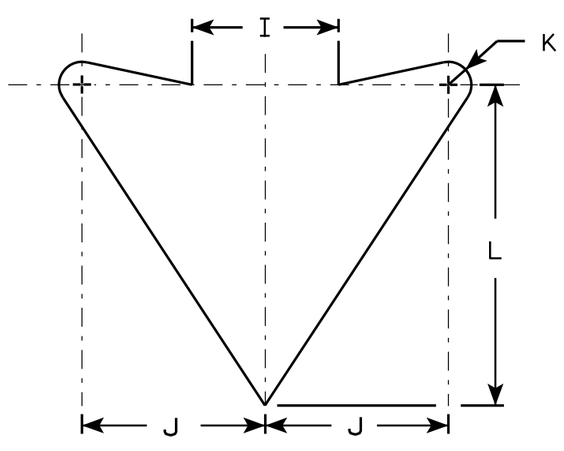
7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W61.DGN PLOT DATE : 12-MAR-2013 14:02 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.946657:1.000000
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.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	10 1/2	1	3 5/8	4	5	5/8	8 3/4	5 5/8														6.25
2S	36		1 5/8	5/8	3/4	12	1	4 1/4	5	6	3/4	10 1/2	6 3/4														9.0
2M	36		1 5/8	5/8	3/4	12	1	4 1/4	5	6	3/4	10 1/2	6 3/4														9.0
3																											
4	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
5	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0

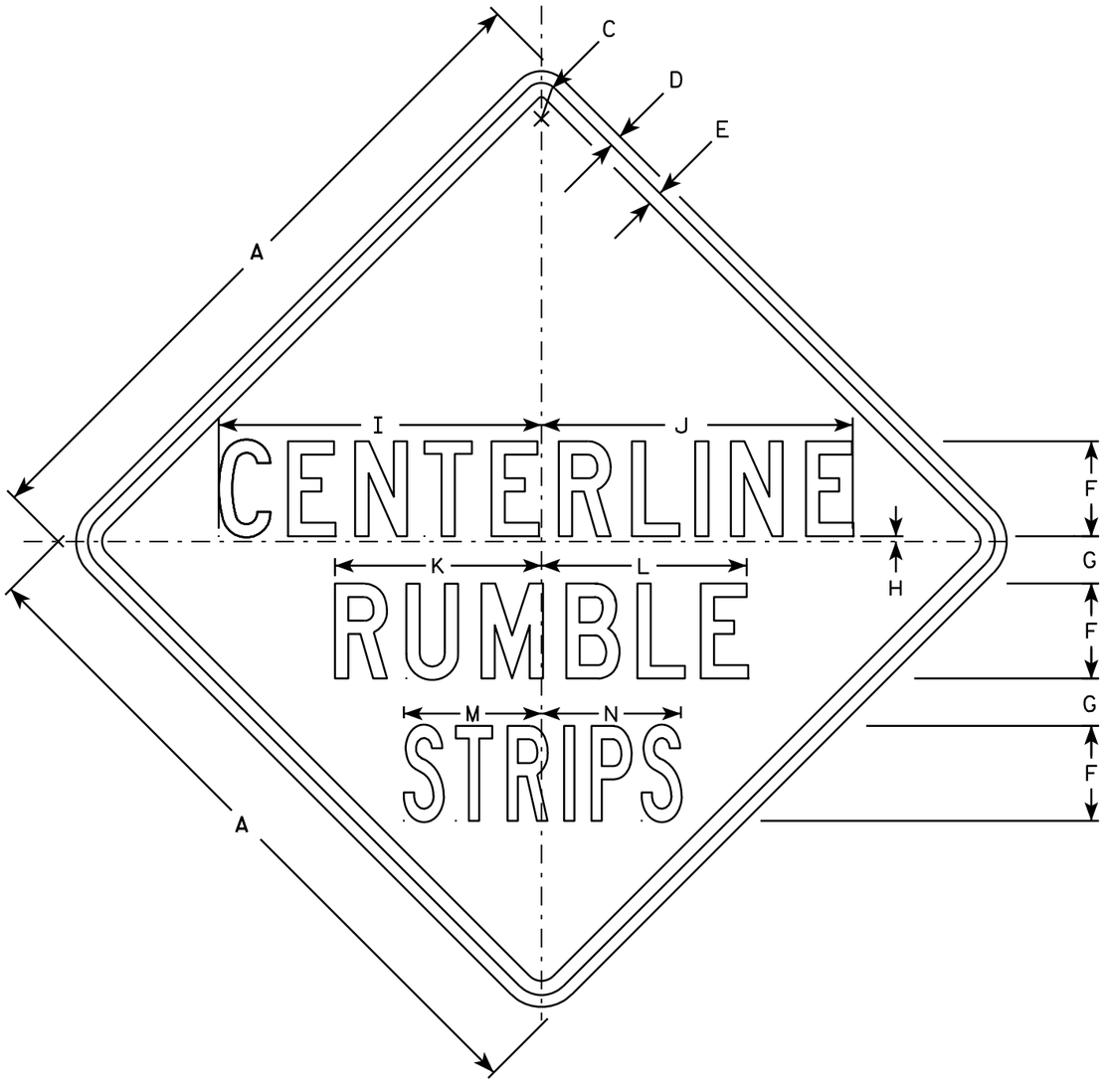
STANDARD SIGN
W6-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W6-3.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 117	E



W8-70

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 may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 and 2 are Series C.
   Line 3 is Series B.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 5/8	5/8	3/4	5	2 1/2	1/4	17	16 3/8	10 7/8	10 3/4	7 1/4	7 3/8													9.0
2M	36		1 5/8	5/8	3/4	5	2 1/2	1/4	17	16 3/8	10 7/8	10 3/4	7 1/4	7 3/8													9.0
3	36		1 5/8	5/8	3/4	5	2 1/2	1/4	17	16 3/8	10 7/8	10 3/4	7 1/4	7 3/8													9.0
4																											
5																											

STANDARD SIGN
W8-70

WISCONSIN DEPT OF TRANSPORTATION

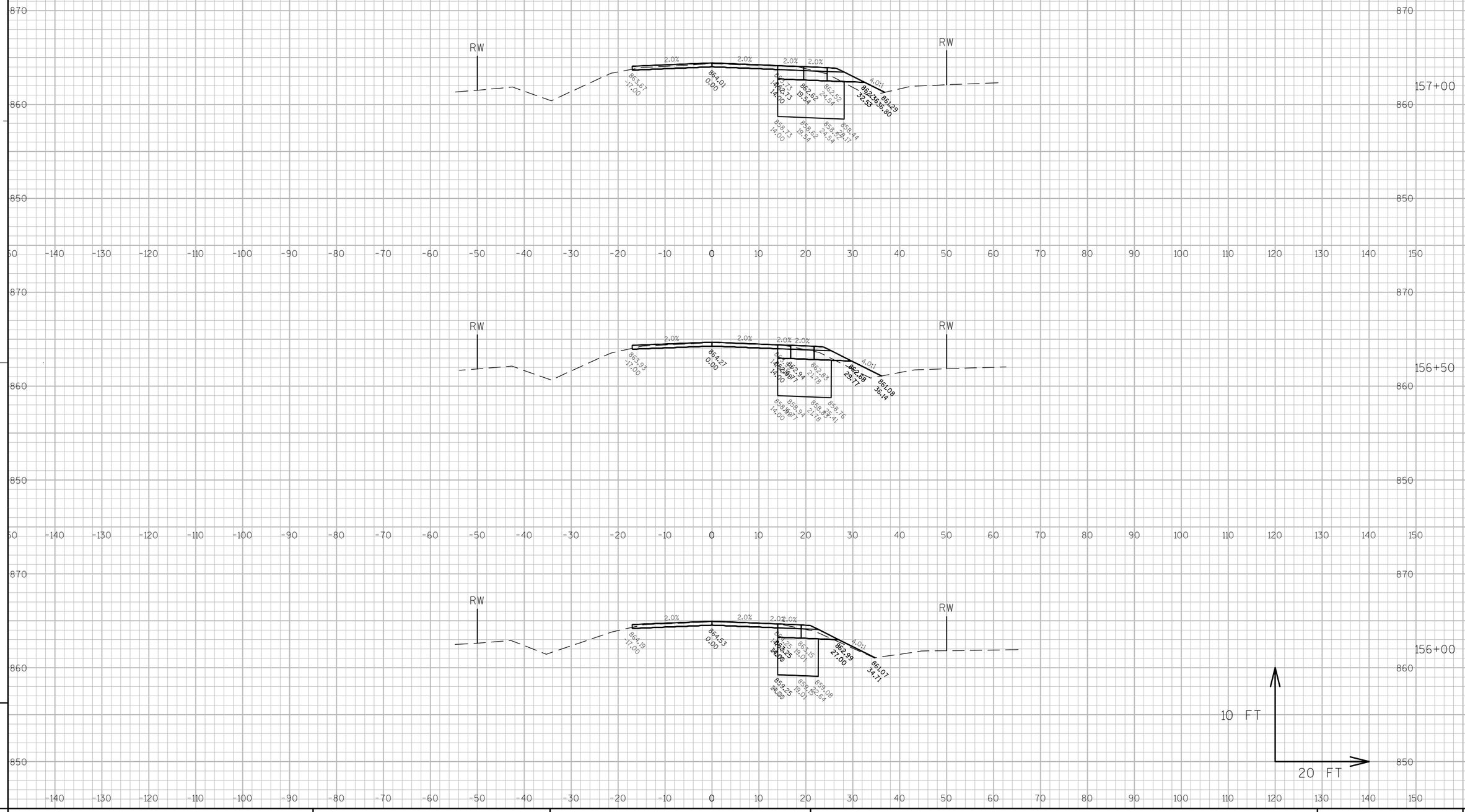
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/18/13 PLATE NO. W8-70.3

PROJECT NO:

SHEET NO: 118 E

STATION	LOCATION	INCREMENTAL VOL (UNADJUSTED) CUT CY	FILL CY	EXPANDED FILL 1.25 CY	UNUSABLE MATERIAL CY	CUMULATIVE VOLUME CUT CY	EXPANDED FILL 1.25 CY
156+00	STH 33	0.00	0.00	0.00	0.00	0.00	
156+50	STH 33	33.32	6.42	8.03	11.56	33.32	8.03
157+00	STH 33	36.14	10.89	13.61	11.56	69.46	21.64
157+50	STH 33	42.57	10.82	13.53	11.56	112.03	35.16
158+00	STH 33	53.79	11.14	13.93	30.81	165.82	49.09
158+50	STH 33	57.15	12.11	15.14	30.81	222.97	64.23
159+00	STH 33	47.89	11.26	14.08	30.81	270.86	78.30
159+50	STH 33	84.45	10.56	13.20	30.81	355.31	91.50
160+00	STH 33	101.06	27.16	33.95	23.10	456.37	125.45
160+50	STH 33	68.51	43.20	54.00	23.10	524.88	179.45
161+00	STH 33	58.71	46.12	57.65	23.10	583.59	237.10
161+50	STH 33	54.00	45.84	57.30	23.10	637.59	294.40
162+00	STH 33	51.39	36.57	45.71	23.10	688.98	340.11
162+50	STH 33	49.59	24.38	30.48	23.10	738.57	370.59
10+33	OAK ROAD	0.00	0.00	0.00	0.00	738.57	370.59
10+40	OAK ROAD	10.73	3.89	4.86	5.62	749.30	375.45
10+60	OAK ROAD	19.37	15.49	19.36	5.62	768.67	394.81
10+80	OAK ROAD	8.84	17.12	21.40	5.62	777.51	416.21
11+00	OAK ROAD	4.14	8.18	10.23	5.62	781.65	426.44
128+50 LT	REMOVE LANSCAPING BED	23.00			17.25	804.65	426.44
130+50 RT	REMOVE DRWY OPENING	26.00			6.50	830.65	426.44
143+25 LT	REMOVE DRWY OPENING	11.50			2.88	842.15	426.44
187+00 RT	REMOVE DRWY OPENING	40.00			10.00	882.15	426.44
188+50 RT	REMOVE DRWY OPENING	47.56			11.89	929.71	426.44
189+00 LT	REMOVE DRWY OPENING	17.00			4.25	946.71	426.44
TOTAL		946.71	341.15	426.44	371.77	946.71	426.44



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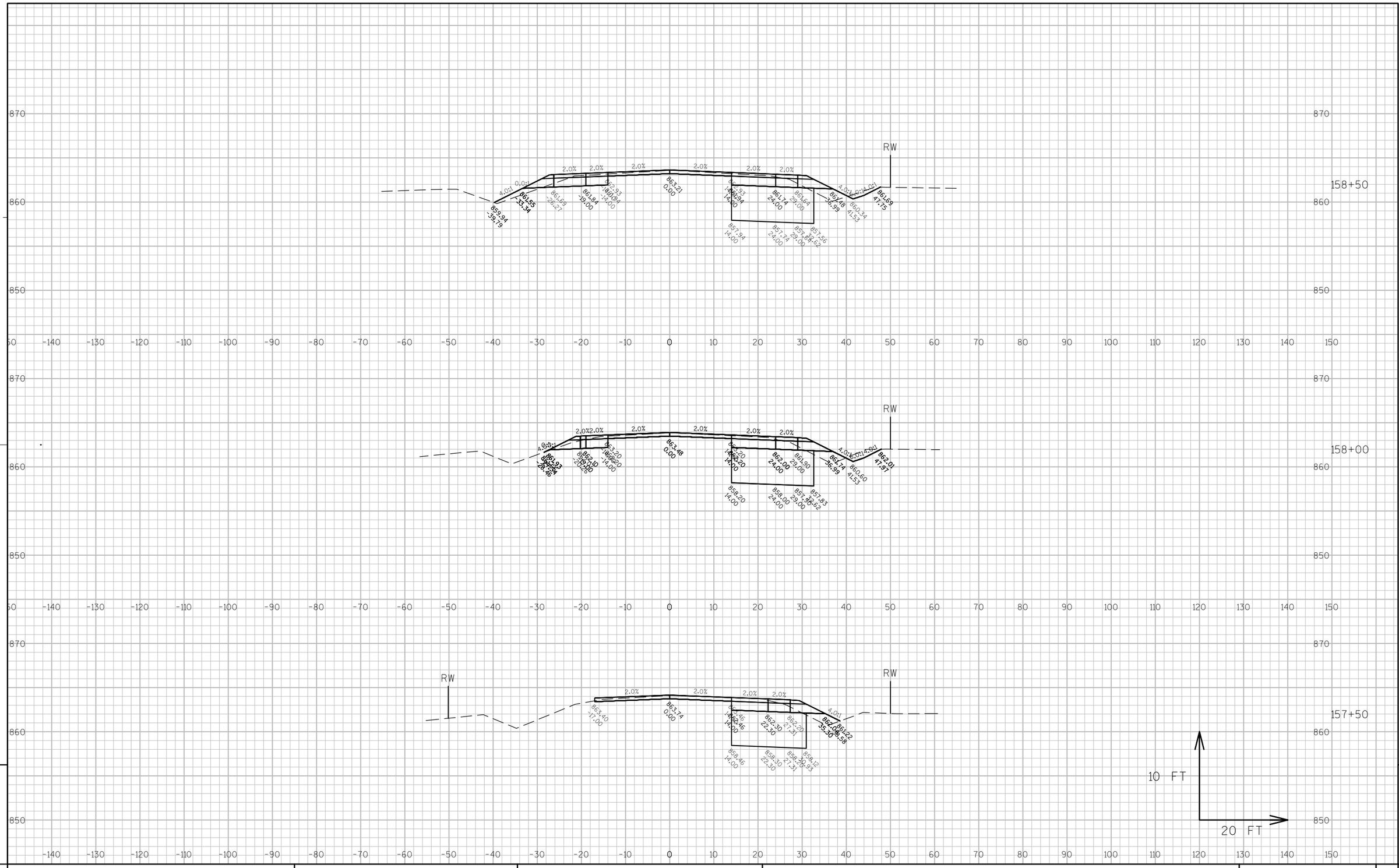
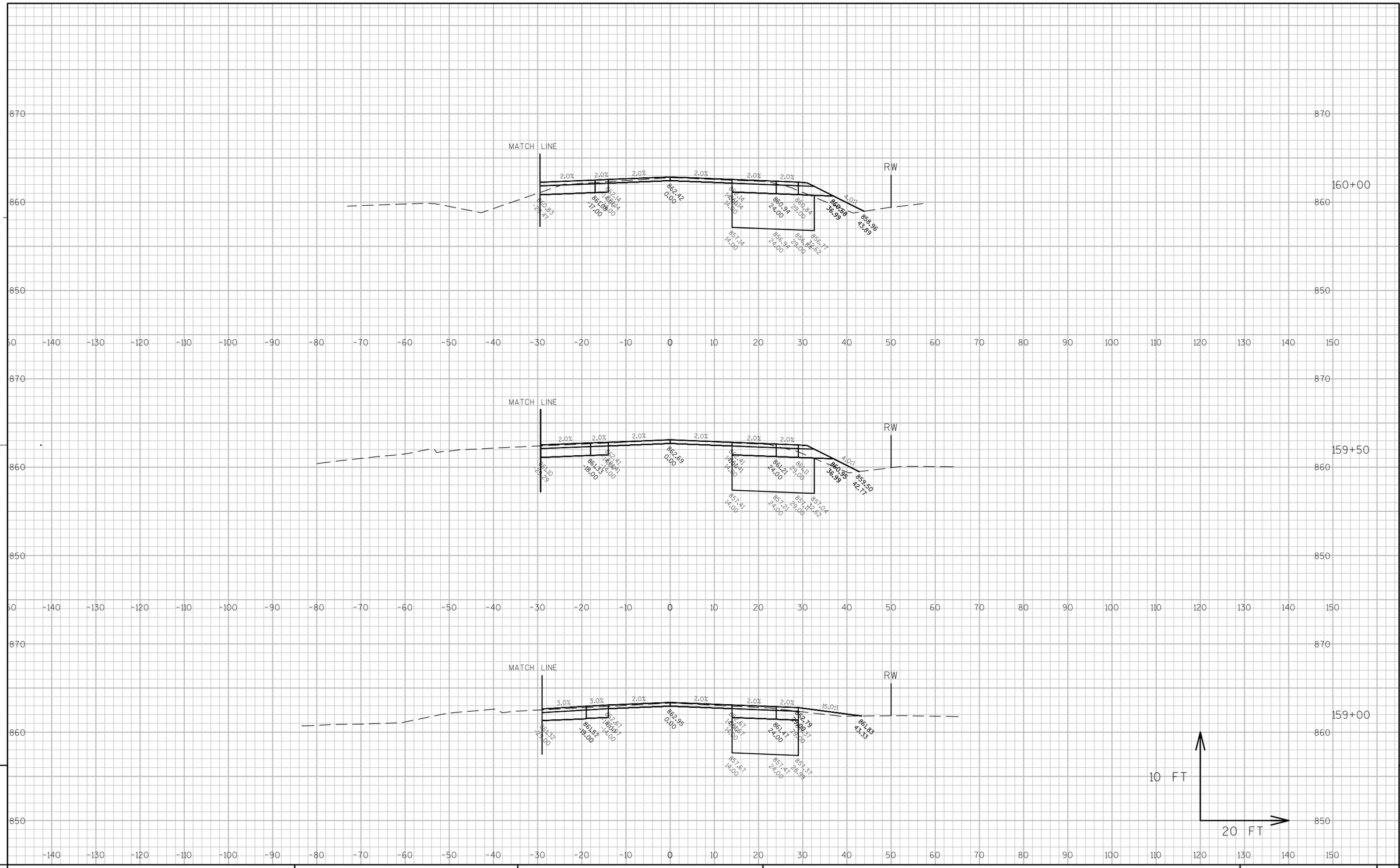
PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	CROSS SECTIONS: MAINLINE	SHEET 120	E



PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	CROSS SECTIONS: MAINLINE	SHEET 121 E

FILE NAME : N:\PDS\C3D\14101230\DESIGN\XSECTIONS\XS-EBSOAKRD.DWG PLOT DATE : 7/30/2013 8:22 AM PLOT BY : CONRAD, CHRISTOPHER PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	CROSS SECTIONS: MAINLINE	SHEET	E

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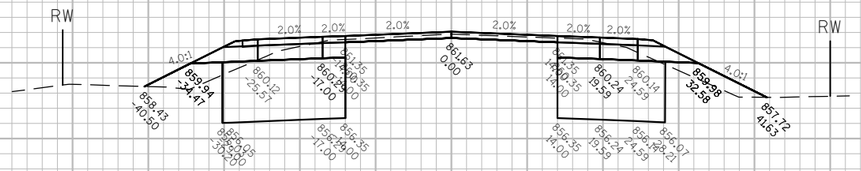

PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	CROSS SECTIONS: MAINLINE	SHEET 123	E

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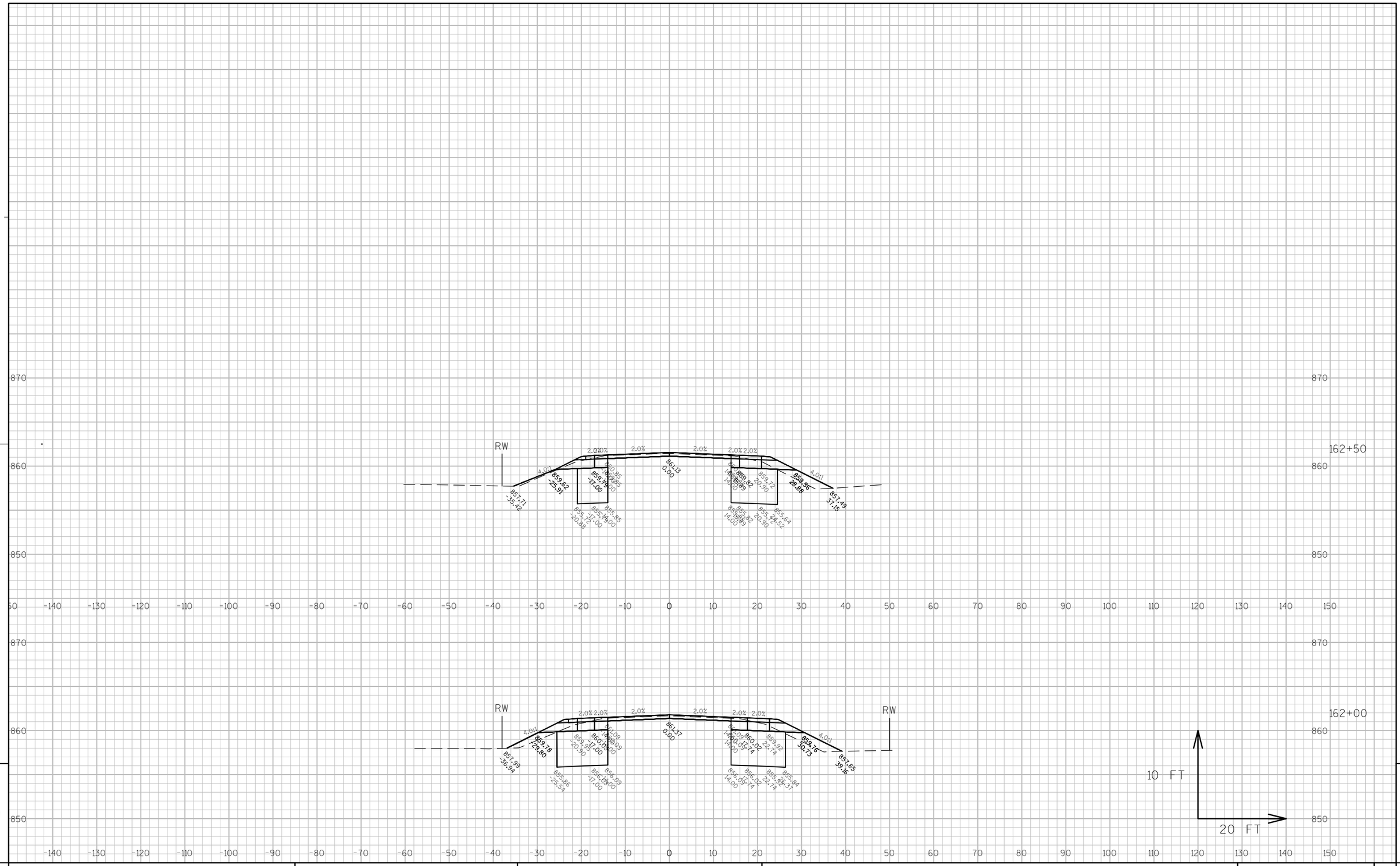
WISDOT/CADDS SHEET 49



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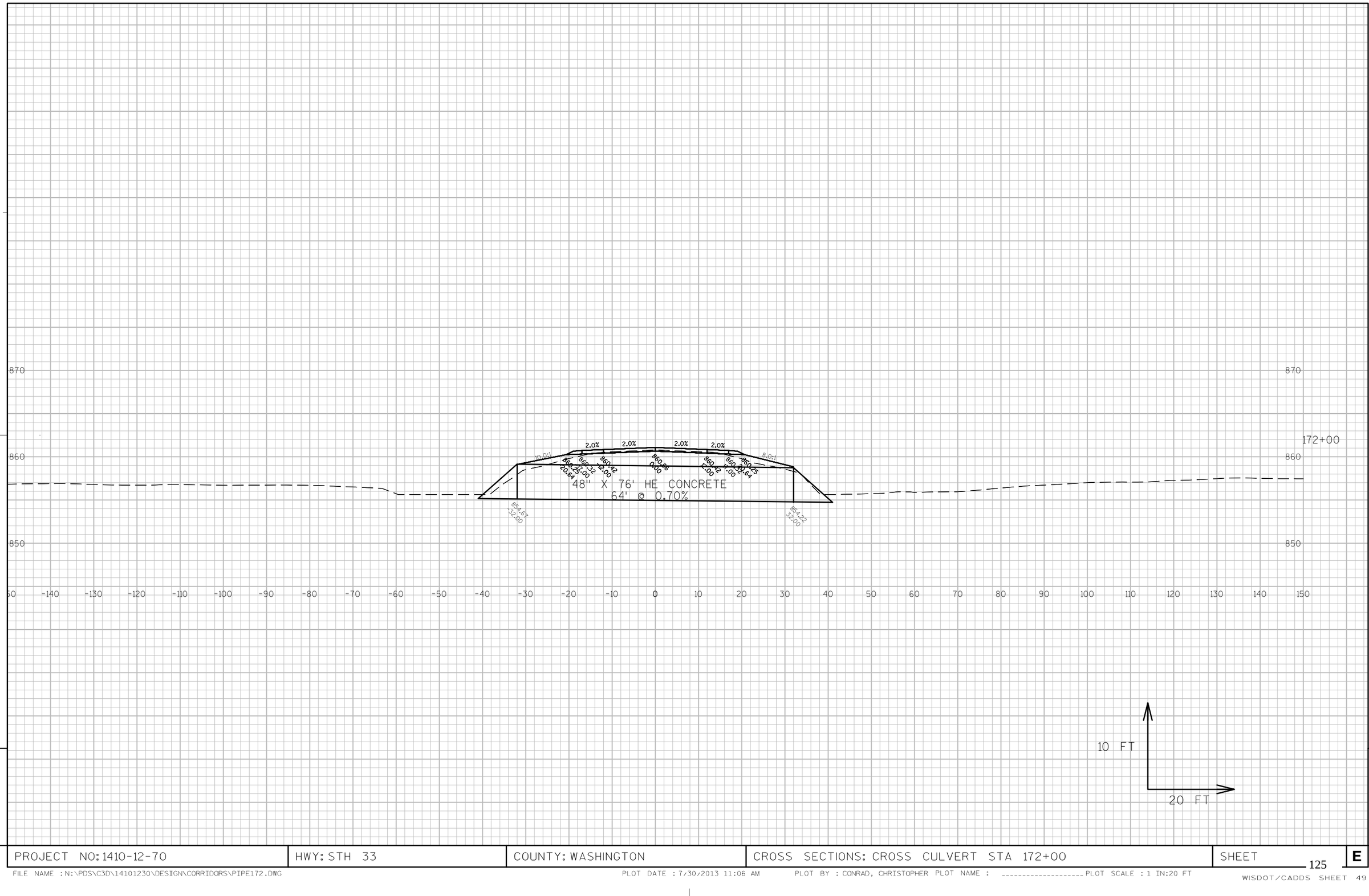
PROJECT NO: 1410-12-70 | HWY: STH 33 | COUNTY: WASHINGTON | CROSS SECTIONS: MAINLINE | SHEET | E

FILE NAME : N:\PDS\C3D\14101230\DESIGN\XSECTIONS\XS-EBSOAKRD.DWG PLOT DATE : 7/30/2013 8:22 AM PLOT BY : CONRAD, CHRISTOPHER PLOT NAME : ---------- PLOT SCALE : 1:20_XREF



PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	CROSS SECTIONS: CROSS CULVERT STA 172+00	SHEET	E

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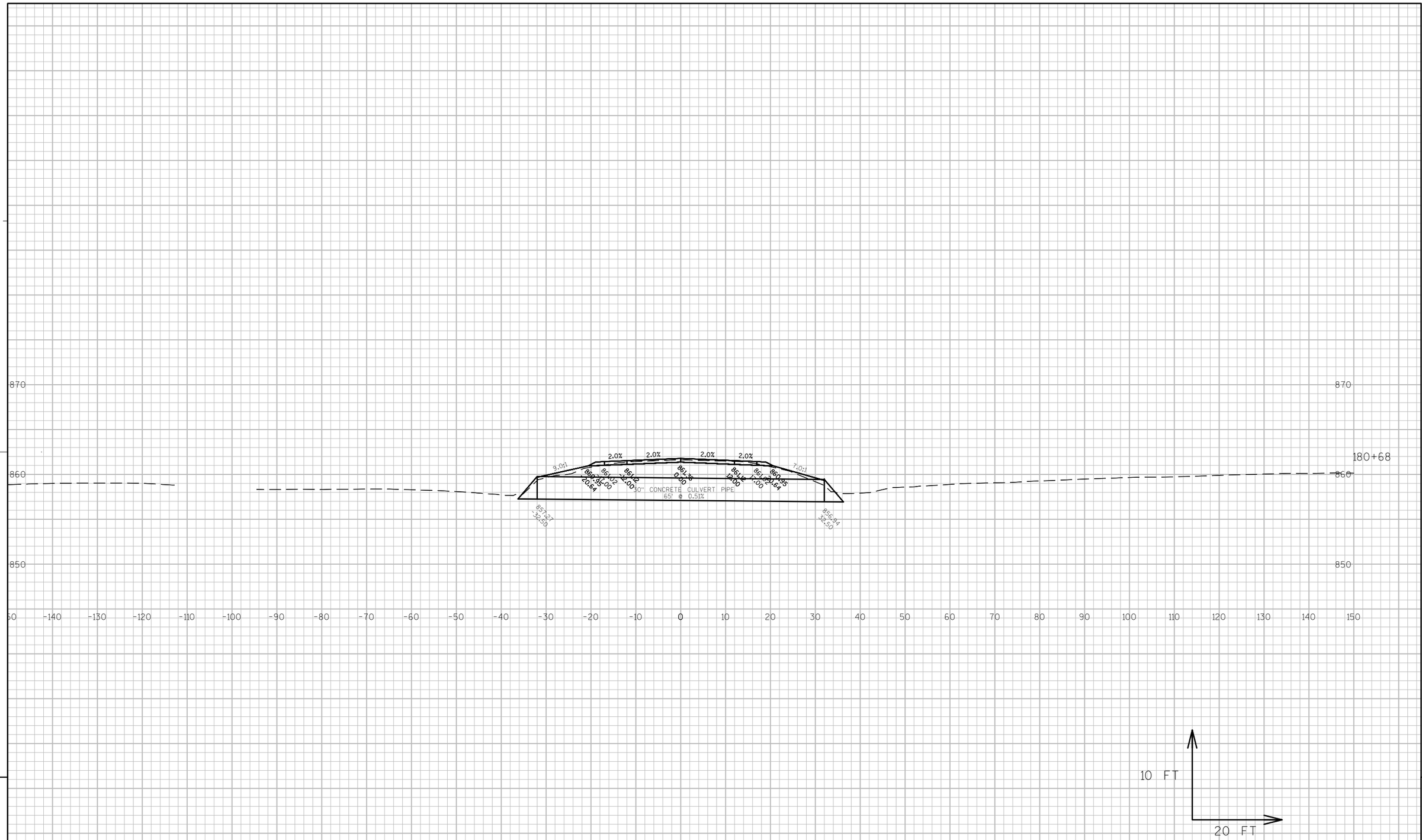

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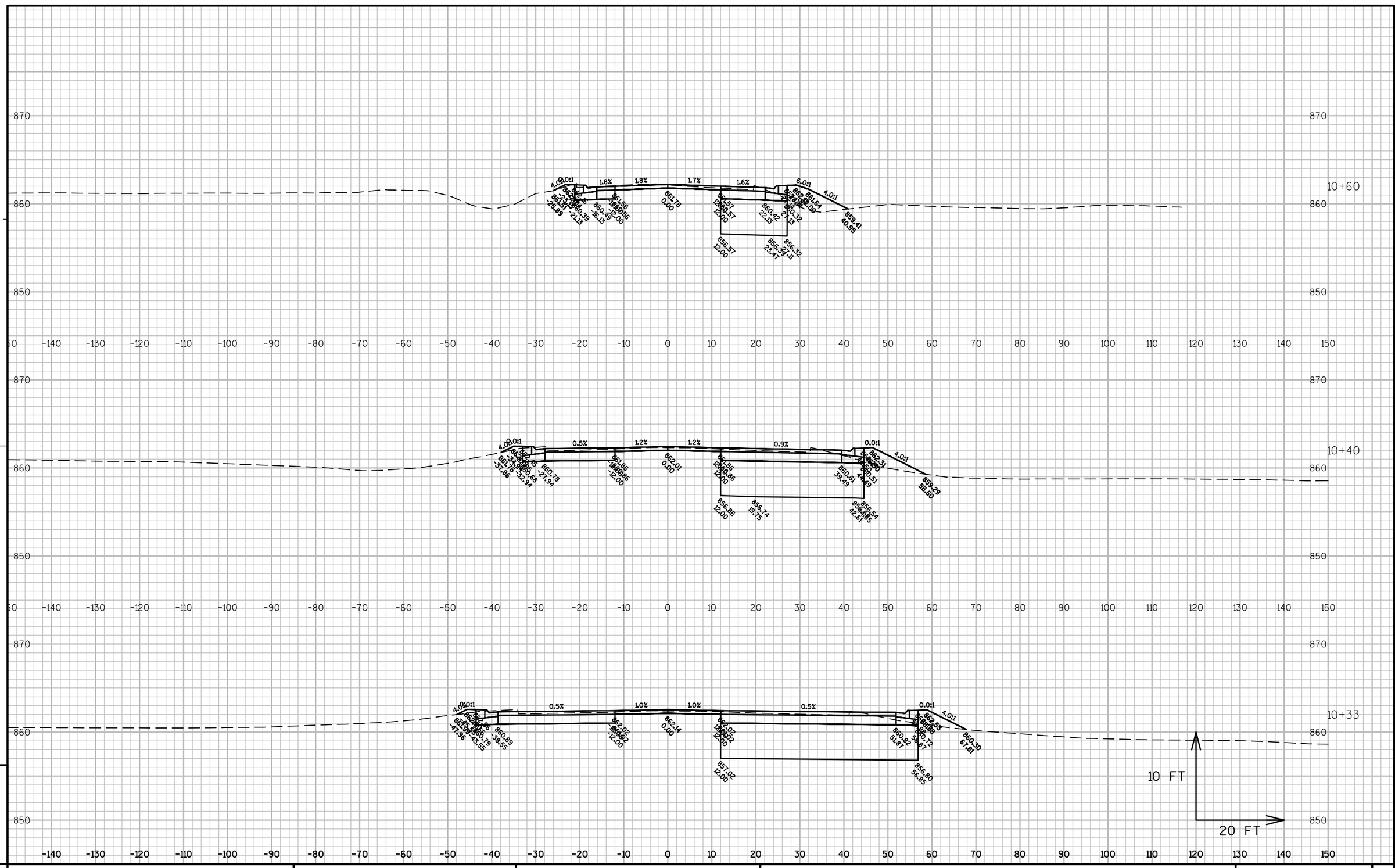
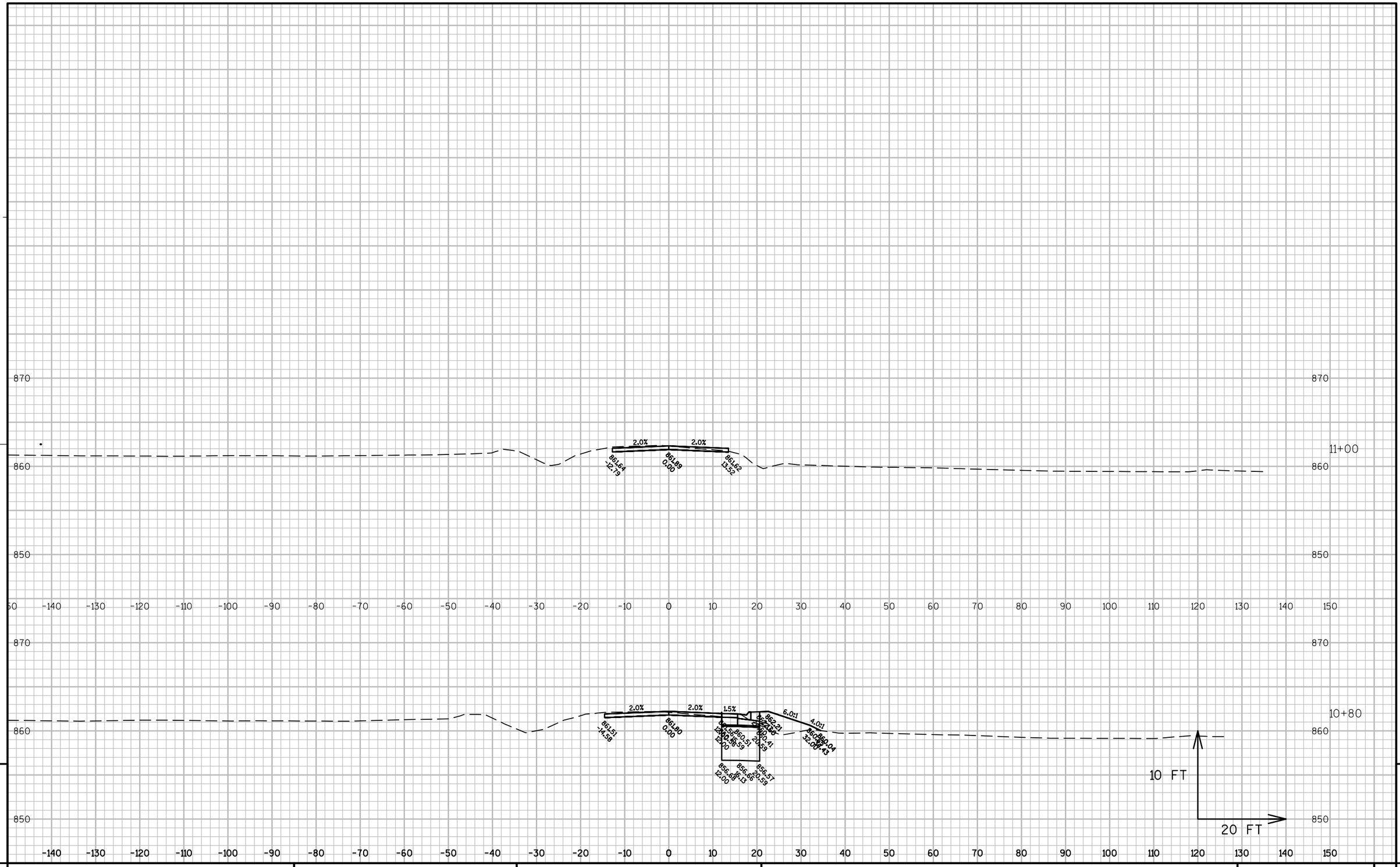
PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	CROSS SECTIONS: CROSS CULVERT STA 180+68	SHEET	E

FILE NAME : N:\PDS\C3D\14101230\DESIGN\CORRIDORS\PIPE180.DWG PLOT DATE : 7/30/2013 11:20 AM PLOT BY : CONRAD, CHRISTOPHER PLOT NAME : ---------- PLOT SCALE : 1 IN:20 FT



PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	CROSS SECTIONS: OAK ROAD	SHEET	E



PROJECT NO: 1410-12-70	HWY: STH 33	COUNTY: WASHINGTON	CROSS SECTIONS: OAK ROAD	SHEET	E

FILE NAME : N:\PDS\C3D\14101230\DESIGN\XSECTIONS\XS-OAKRD.DWG PLOT DATE : 7/29/2013 1:24 PM PLOT BY : CONRAD, CHRISTOPHER PLOT NAME : PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

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