

County Signing Training

March 2020

“Just because it’s out there doesn’t mean it’s right”



Agenda

Wood Posts

Installation Standards

Traffic Control

Delineators

Maintenance Responsibilities

Charging

Compliance Dates



Wood Posts

Must meet Standard Spec 634.2.1

Must be pressure treated using Chromate Copper Arsenate (CCA)

Posts purchased from state contract meet these requirements



Wood Posts

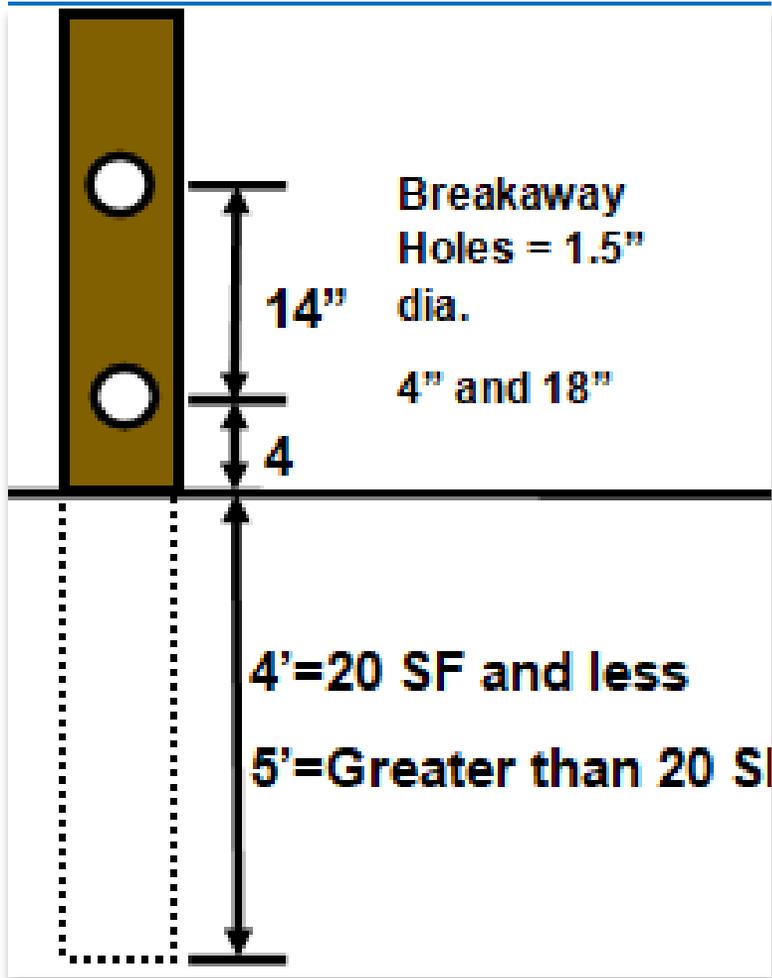
New crash-worthiness requirements (MASH) took effect January 1, 2020

- 4x4 wood posts **do not** meet MASH requirements
- Any work involving signs on 4x4 posts must include changing the posts to 4x6 posts

Manual for Assessing Safety Hardware



Wood Posts



4x6 posts must include breakaway holes

- Sign Plate A4-11

Posts must be dug 4' or 5'

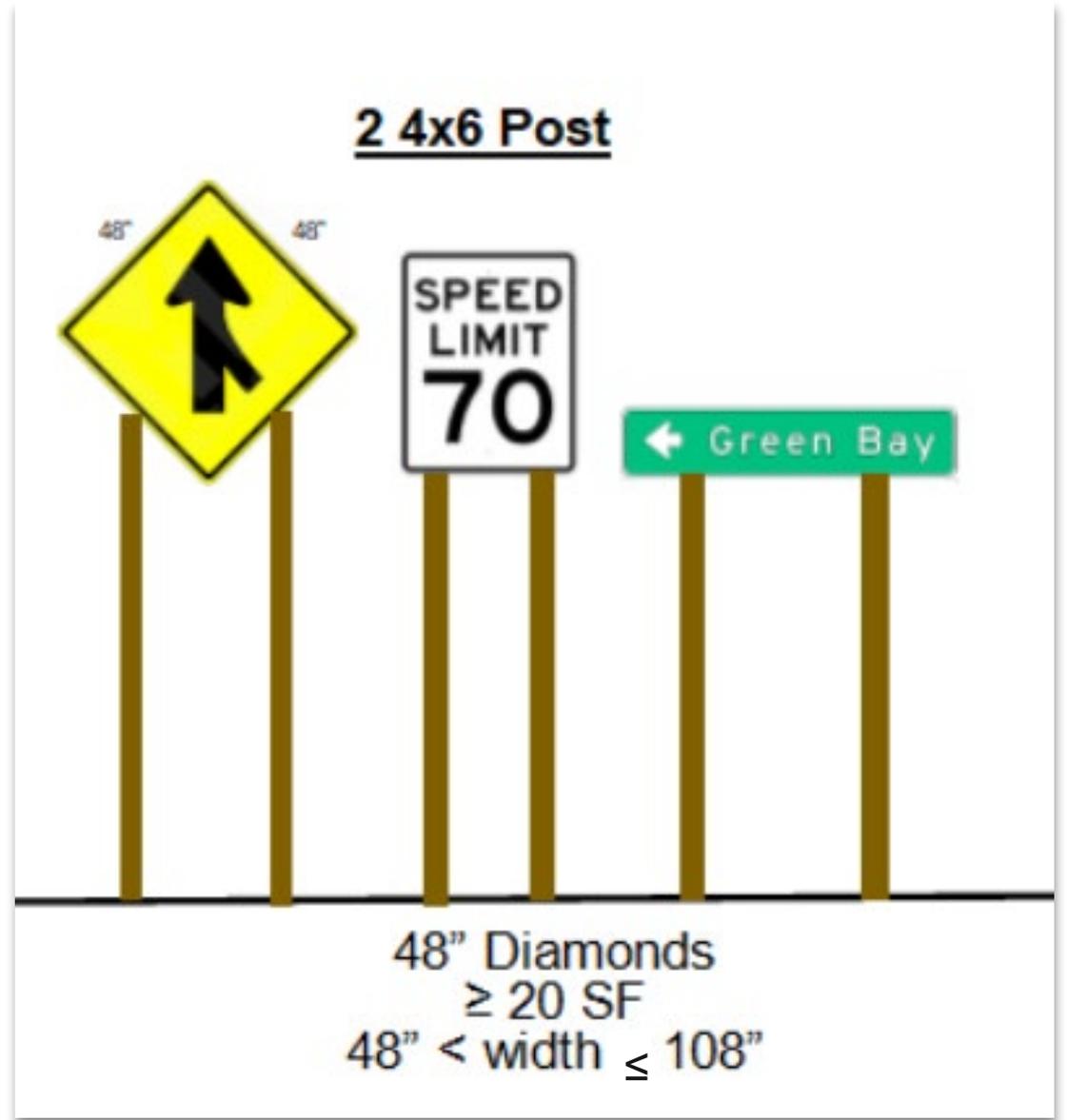
- Sign Plate A4-3

Compact backfill in 6" layers

- Soil/Gravel

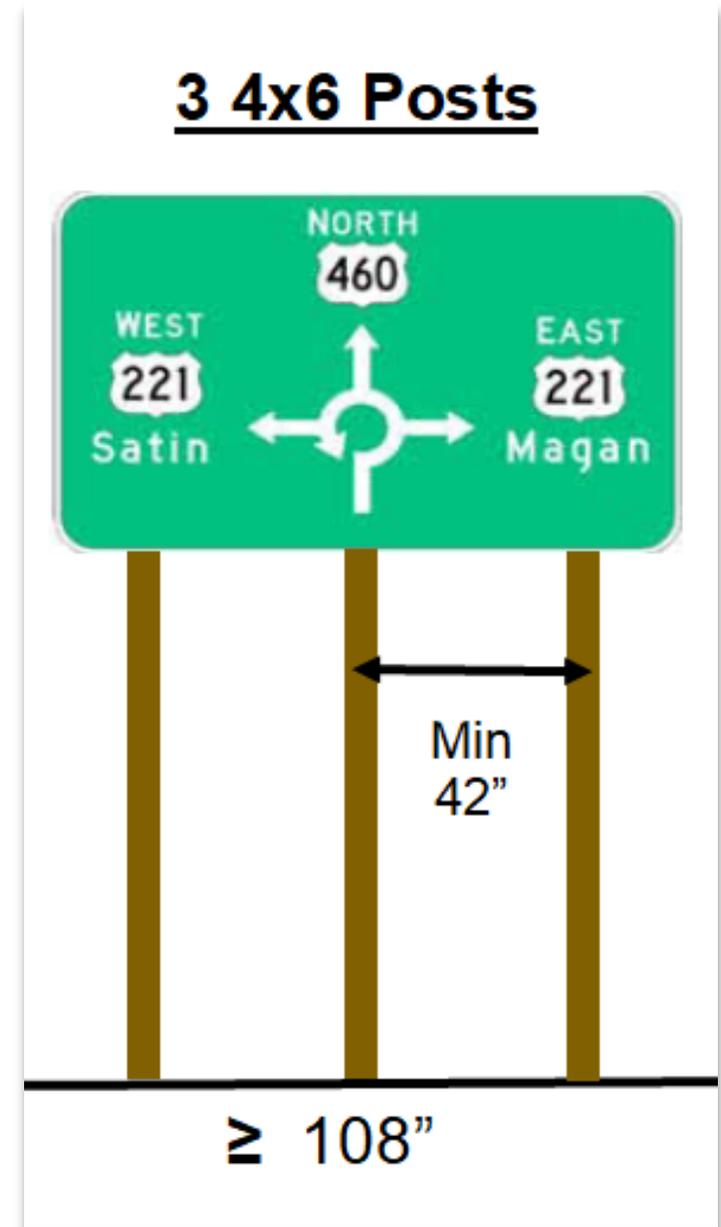
Installation Standards

- ▶ 2 Post Installations
 - Wider than 48"
 - 20 sf and larger
 - 48" Diamonds
- ▶ No minimum between posts



Installation Standards

- ▶ Signs wider than 9' require 3 wood posts
 - Minimum of 42" between posts center to center



Installation Standards

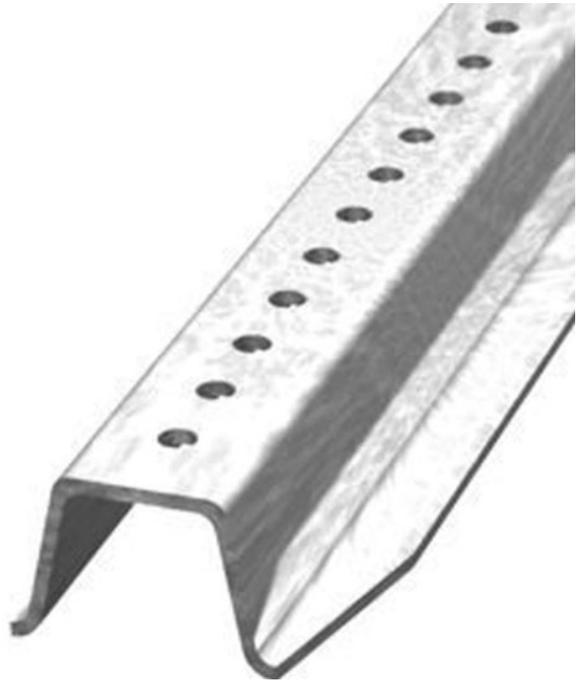
SIGN PLATE A4-18

72" Stringers: 78", 84" or 90" Signs

90" Stringers: 96", 102" or 108" Signs

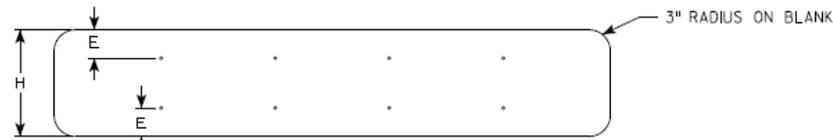
108" Stringers: 114", 120" or 126" Signs

126" Stringers: 132", 138" or 144" Signs

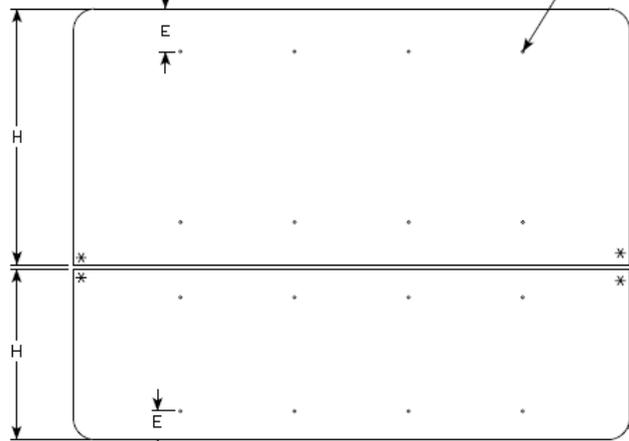


- Stringers
 - Supplied by WisDOT
 - Required on signs 78" and wider
 - Two stringers per sign panel
 - 2 Additional Bolts per stringer for 78" and 90" stringers
 - 4 Additional Bolts per Stringer for 108" and 126" Stringers
 - Attach Stringers to Sign using 5/16" x 1-3/4" machine bolts
- **Missing stringers**
 - contact Jon Eldridge





SINGLE-PIECE ALUMINUM SIGN 7/16" MOUNTING HOLES



MULTI-PIECE ALUMINUM SIGN

* DO NOT PUT RADIUS ON INSIDE CORNERS

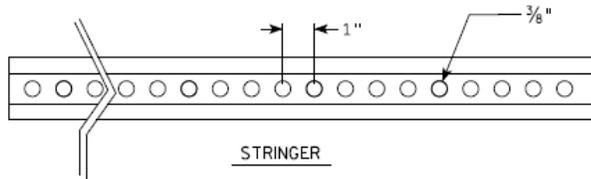
3" RADIUS ON OUTSIDE CORNERS OF BLANK

GENERAL NOTES

- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER,
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

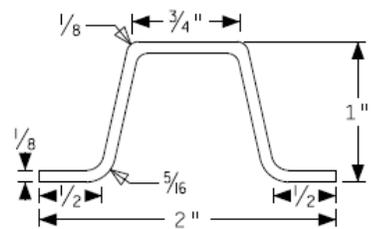
SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16 1/2" 33 1/2" 50 1/2" 67 1/2"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19 1/2" 38 1/2" 57 1/2" 76 1/2"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22 1/2" 43 1/2" 64 1/2" 85 1/2"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

7

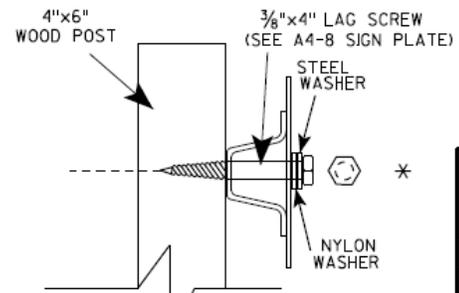


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

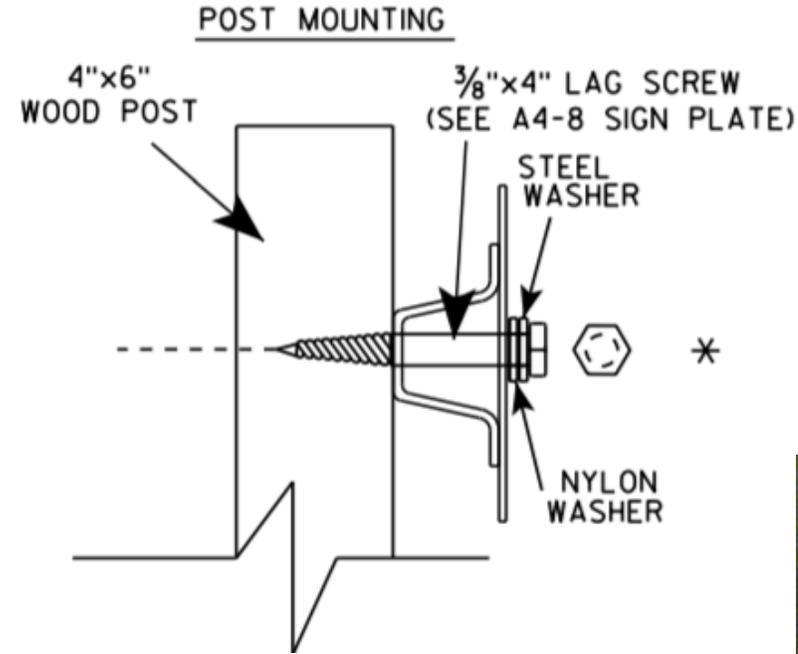
DATE 4/26/15 PLATE NO. A4-18a.1

7



Installation Standards - Wood Posts

- Attach Stringers to Sign using 5/16" x 1-3/4" machine bolts
- All Lags and Bolts need Steel and Nylon Washers
 - Only Nylon Washers are provided by WisDOT. Contact Jon Eldridge if you run out.



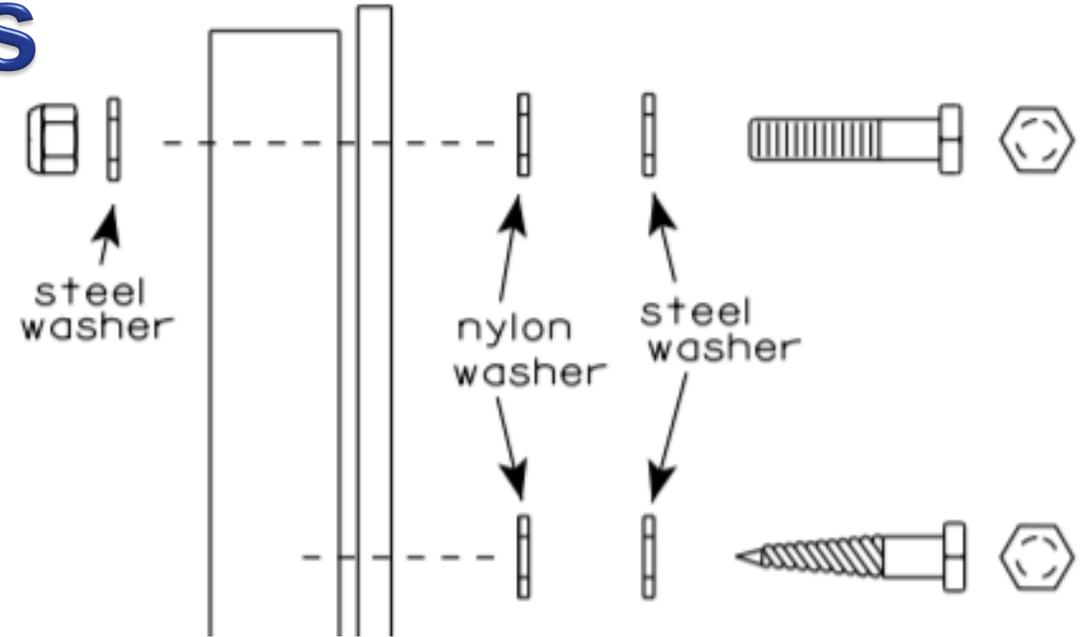
Attach Sign, Stringer & Posts using 3/8" x 4" Lag Screws

Attach Sign to Post using 3/8" x 3" Lag Screws



Installation Standards- Square Steel Posts

- Attach Stringers to Sign
 - 5/16" x 1-3/4" Machine Bolts
- Attach Sign, Stringer & Posts
 - 3/8" x 5" Machine Bolts
- Attached Sign to Post
 - 3/8" x 3-1/4" Machine Bolts
- All Bolts need Steel and Nylon Washers
 - Only Nylon Washers are provided by WisDOT. Contact Jon Eldridge if you run out.

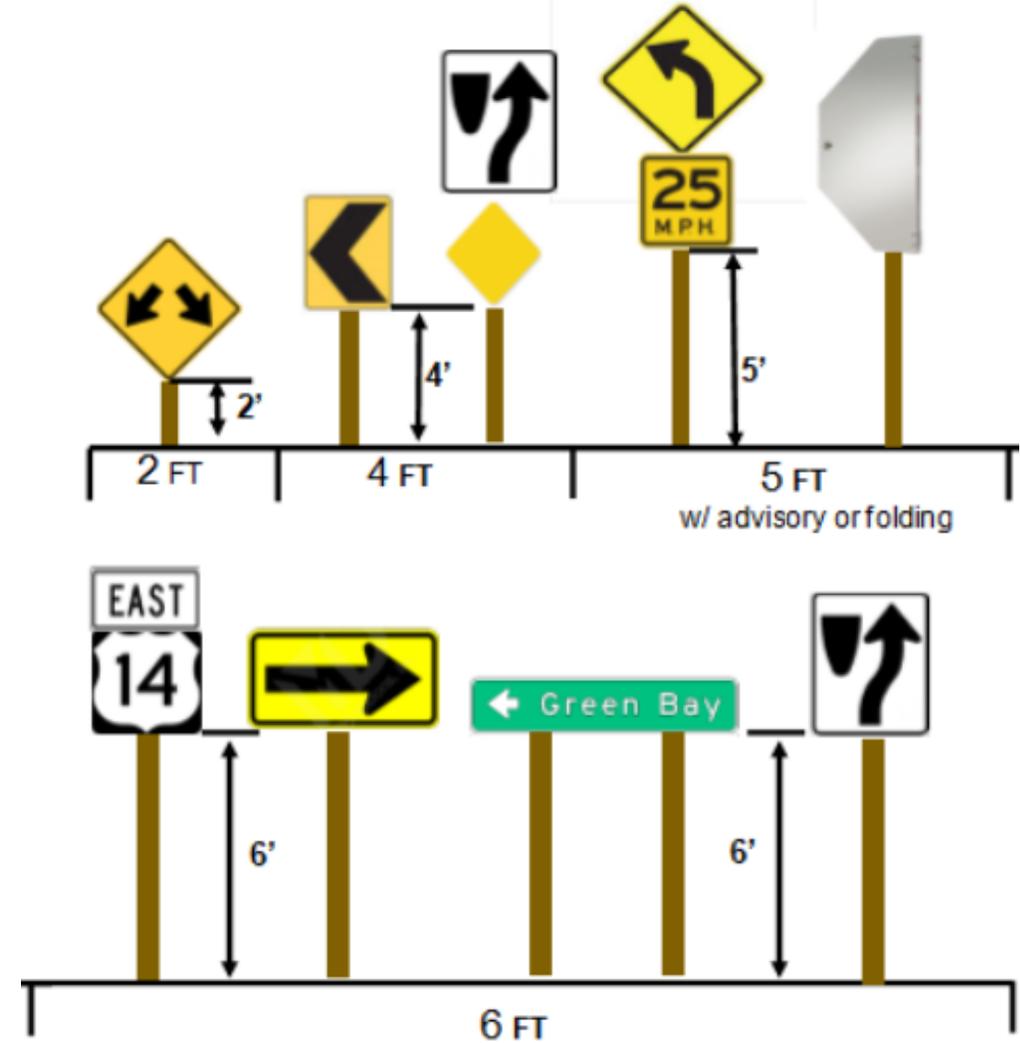


Installation Standards

Mounting height per A4-3:

- **Typical 6'**
 - Rural & Conventional Roadways
- If multiple signs are mounted together, overall mounting height may be reduced by 1'
- Refer to installation cheat sheet for all other installations

Standard Installation for Rural Highways

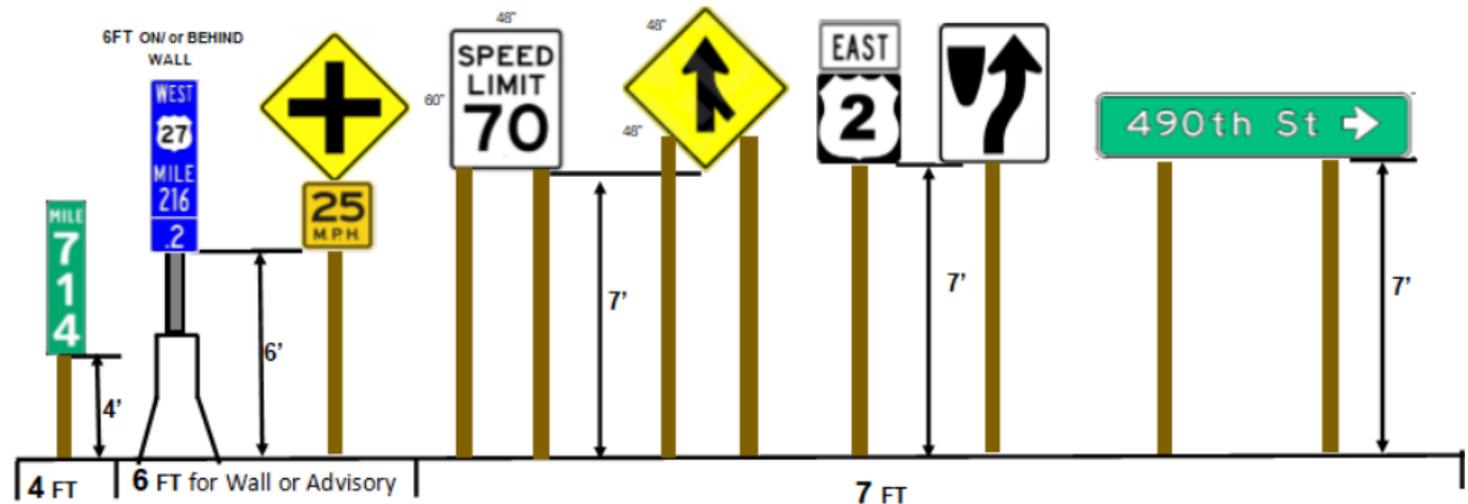


Installation Standards

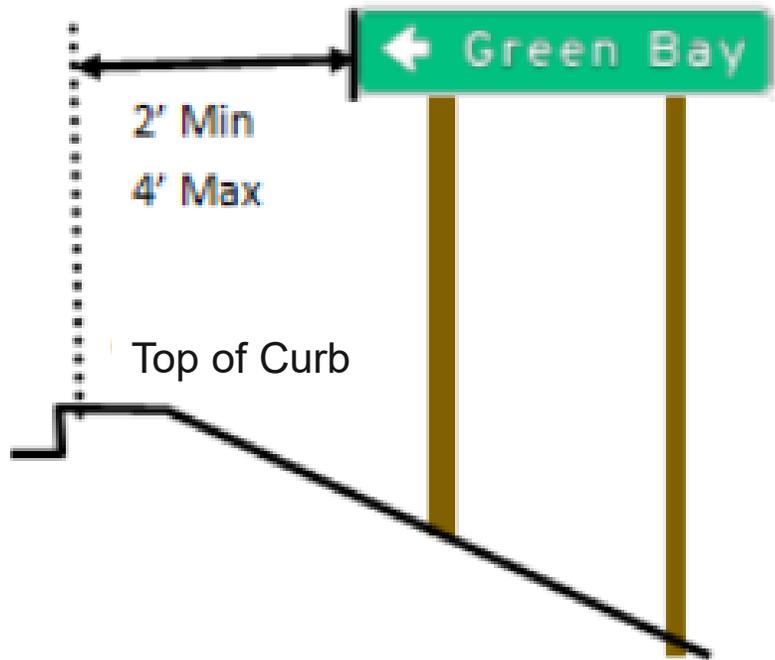
Mounting height per A4-3:

- 7' – Urban Locations & Freeways and Expressways
- If multiple signs are mounted together, overall mounting height may be reduced by 1'
- Refer to installation cheat sheet for all other installations

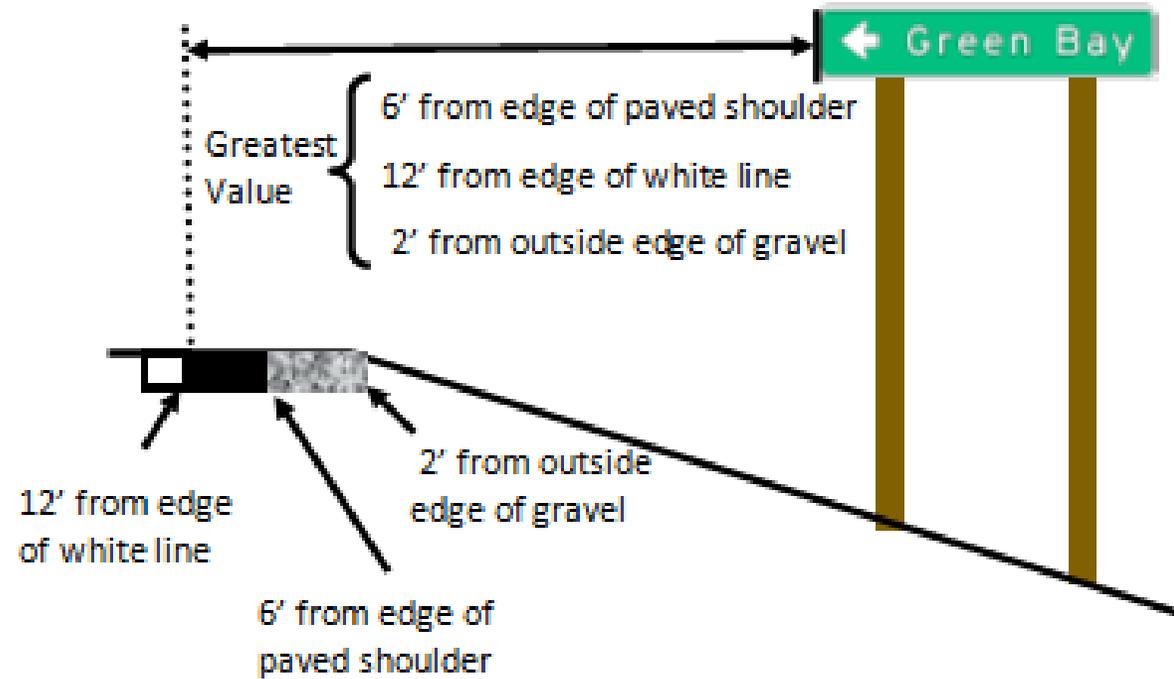
Standard Installation for Freeways, Expressways & Urban Highways



Urban Area



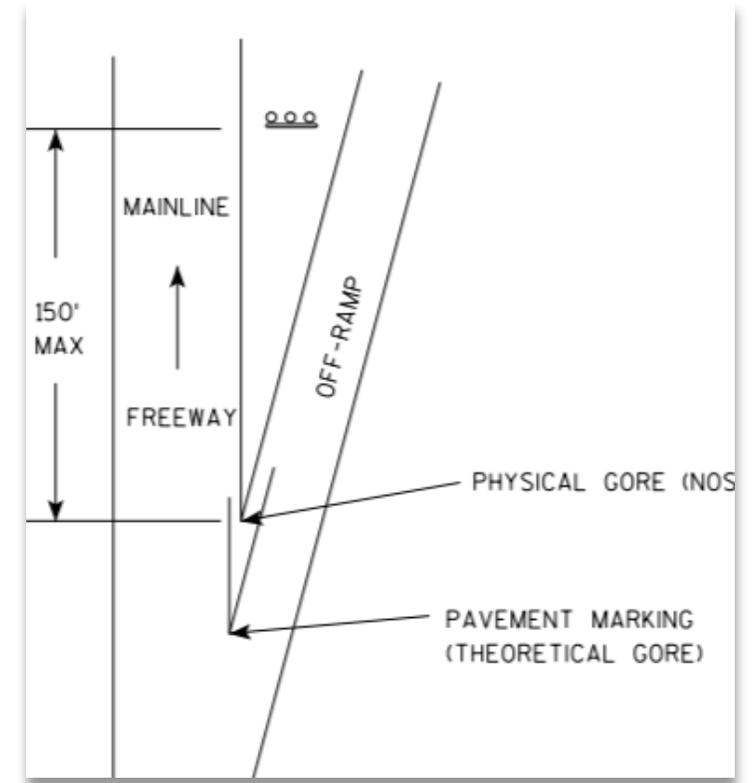
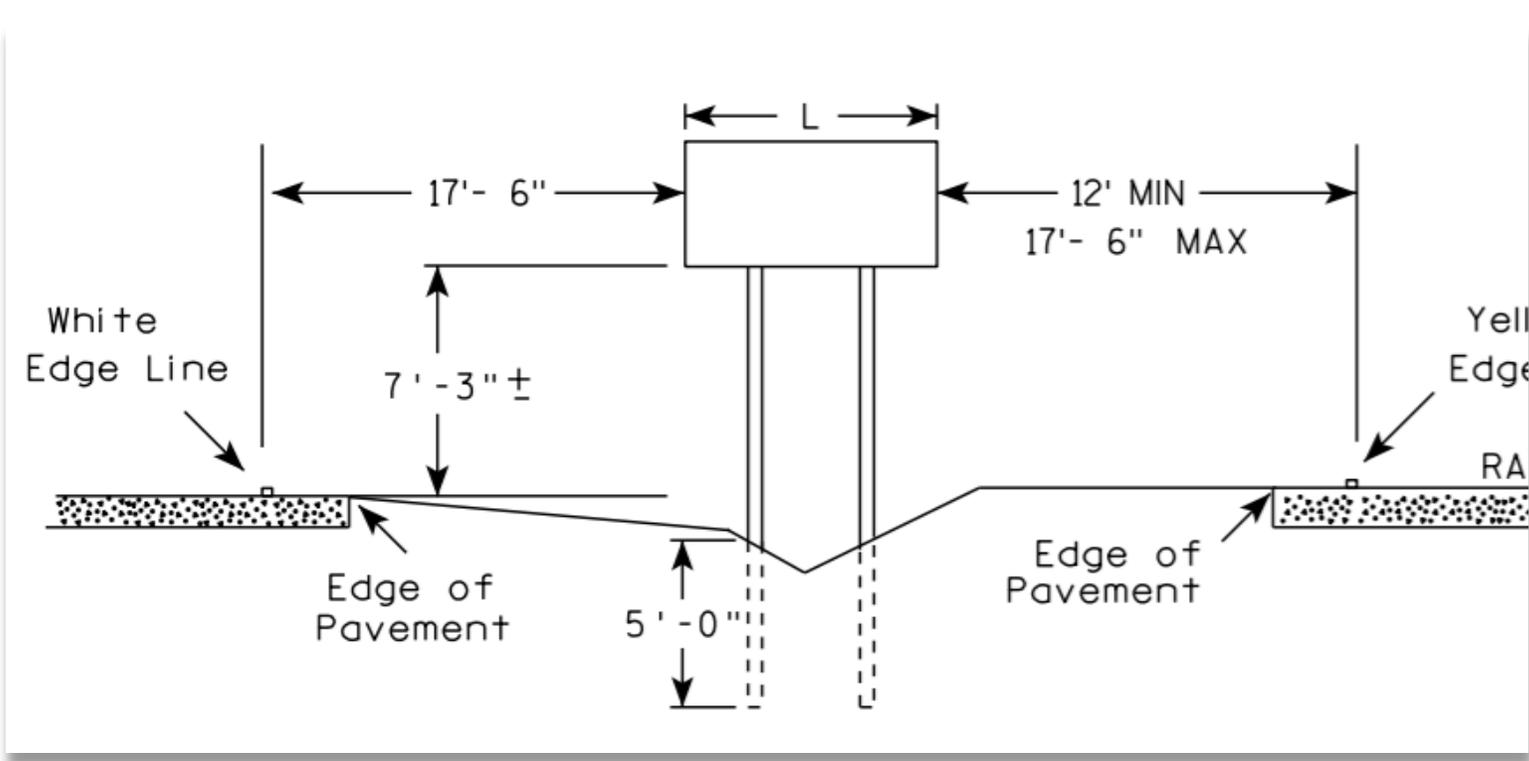
Rural Area



Installation Standards

Signs must be located per Sign Plate A4-4





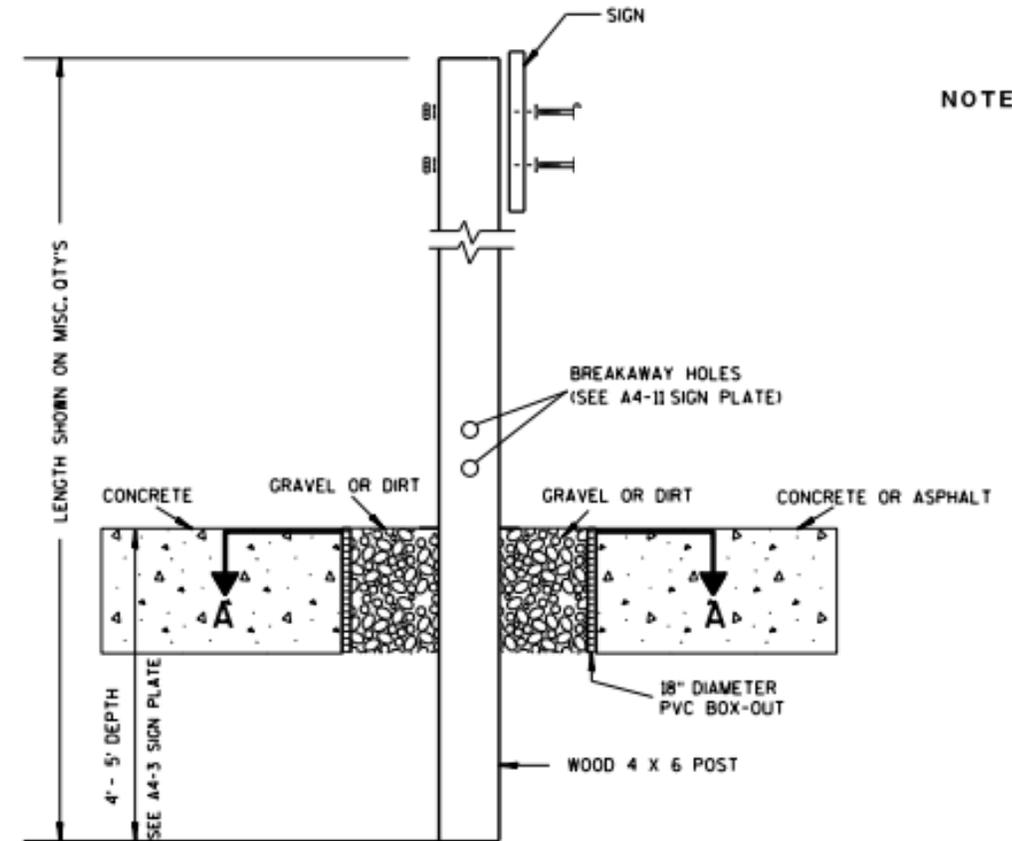
Installation Standards in Gore

Signs must be located per Sign Plate A4-2



Signs in Existing Pavement

- ▶ Existing asphalt
 - 2x2 PSST post can be punched through
 - 4x6 wood post requires 18" x 18" square box-out to be cut
- ▶ Existing concrete
 - 2x2 PSST post requires surface coupler
 - Surface coupler available on state steel post contract
 - 4x6 wood post requires 18" hole cored into concrete
- ▶ See Sign Plate A4-3B



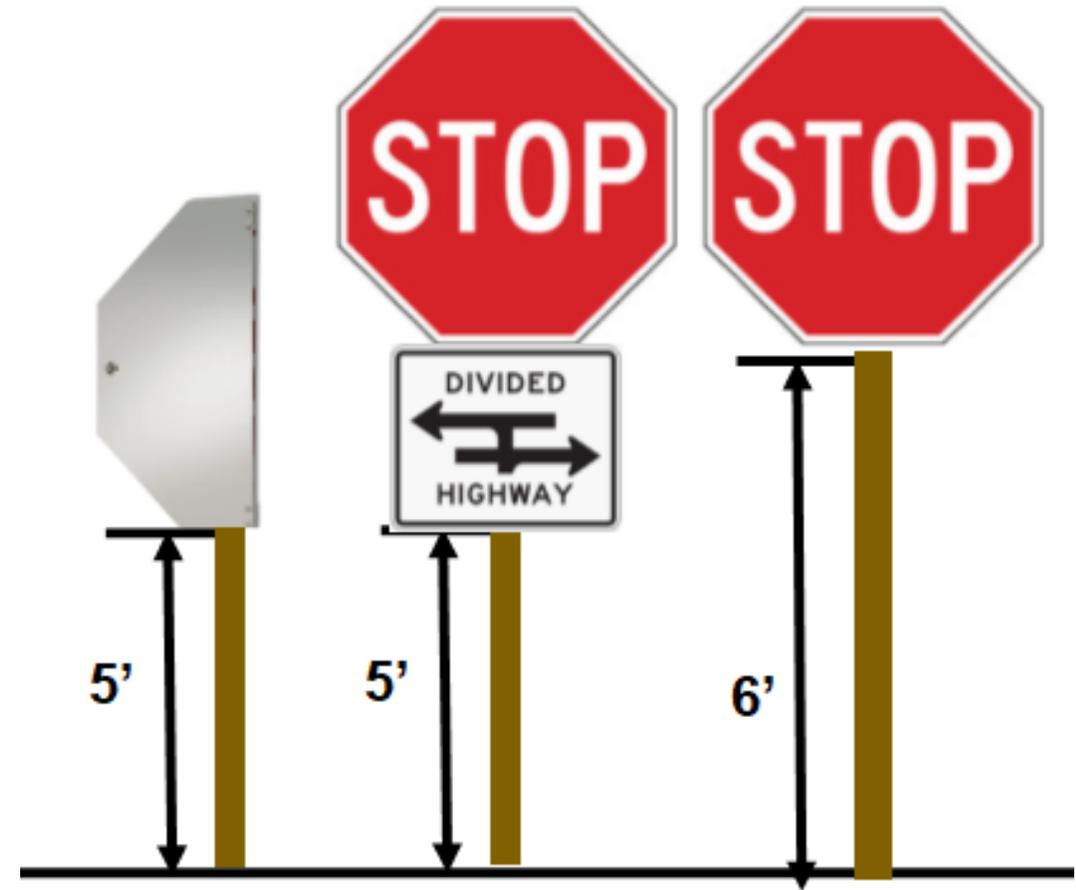
Stop Signs

Do not install street name signs on the same post as a stop sign

Standard Stop Signs are 30" except for the following:

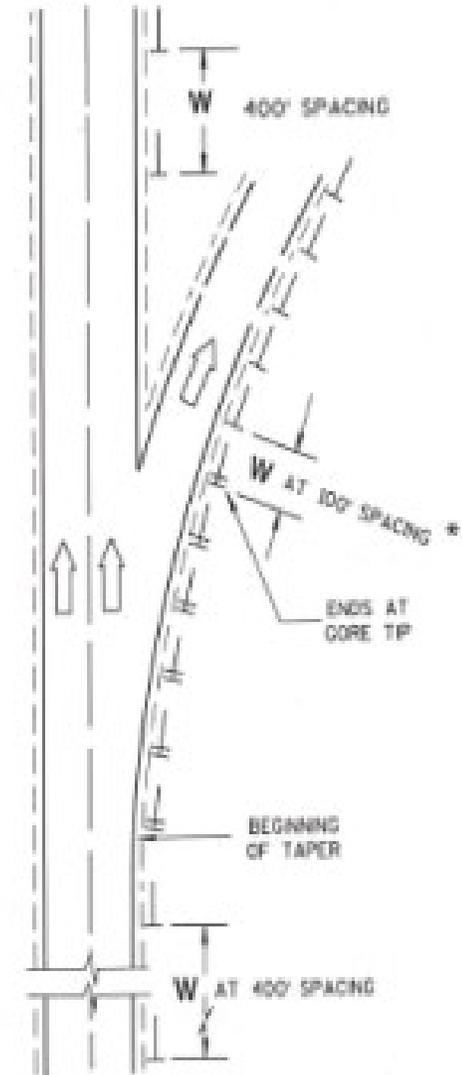
- State or USH Highway stops
- Intersecting a Multilane Roadway
- Safety Issues
- **Do not downsize without checking with your region coordinator**

All Way signs should be installed under every Stop Sign where every leg stops



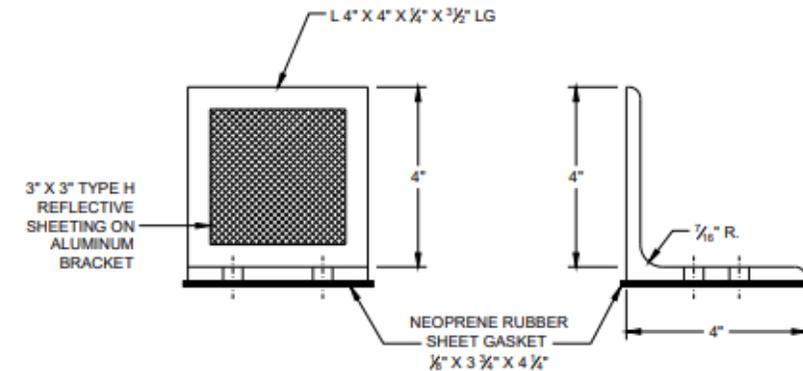
Post Mounted Delineators

- ▶ Yellow Delineators
 - Medians
 - left side of one-way roads and ramps
- ▶ All other delineators must be white
- ▶ Spacing
 - 400' on freeway or expressway mainline
 - 100' along ramps
 - See SDD 15A4
- ▶ 3"x6"
- ▶ WisDOT Supplied Delineators
- ▶ Posts are available on state steel post contract



Non-post Mounted Delineators

- ▶ Beam Guard Delineators
 - Attached to beam guard blockouts – see SDD 14B42
 - 100' Spacing, Min of 3
 - Available from state contract
- ▶ Barrier Wall Delineators
 - Must meet SDD 15A4
 - 100' spacing, Min of 3
 - Available from BTO



Minimum Traffic Control

Single Lane

- Road Work Ahead (both directions)
- Shoulder Work Ahead

Multilane

- Road Work Ahead
- Shoulder Closed Ahead



Detour Signing

Less than 48 hours

- Detour sign on temporary sign support

More than 48 hours

- Installed on individual post



Maintenance Responsibility

Connecting Highway Limits

- Locally Maintained Streets with State Trunk Highway designation
- WisDOT only maintains route markers and D1s at State to State intersections
- Maps are available from WisDOT's website

Rustic Roads

- WisDOT maintains all yellow-on-brown Rustic Road signs along designated Rustic Roads
- Maps are available from WisDOT's website



Maintenance Responsibility- Auto Tours

WisDOT maintains the route markers on State, US, and Interstate **only** for:

- Lake Michigan and Lake Superior Circle Tours
- Kettle Moraine Scenic Drive
- State Scenic Byways

WisDOT maintains **all** route markers for:

- Great River Road
- Green Bay Ethnic Trail
- National Scenic Byways(Only concurrent with GRR)

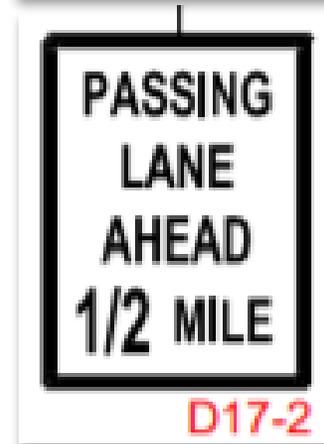
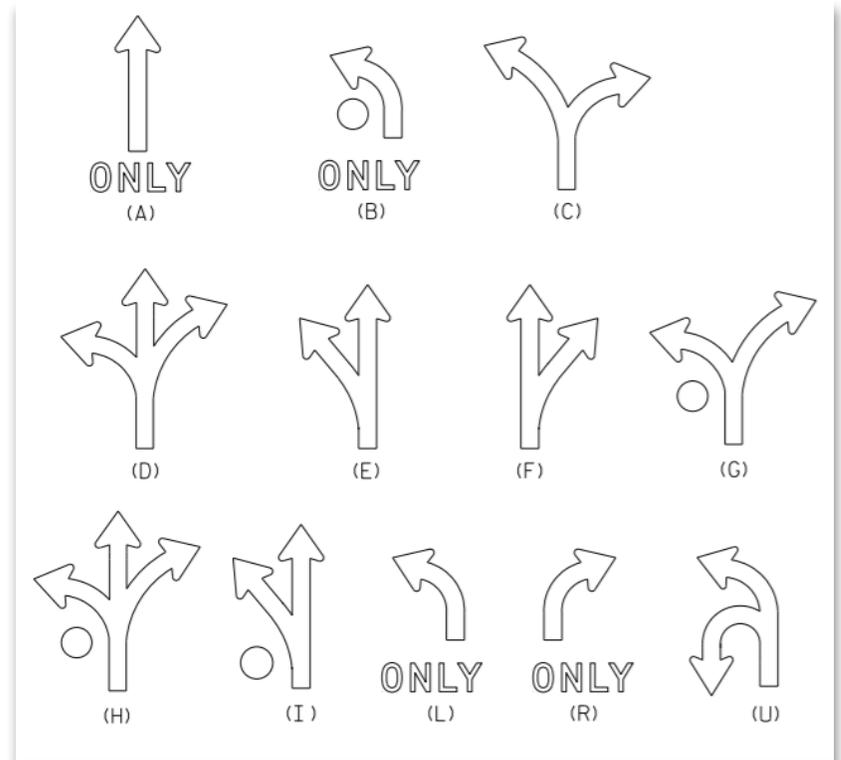
Requestor maintains route markers and are install on individual post for:

- Frank Lloyd Wright
- Rock River Trail



Recent Changes

- ▶ Oncoming traffic uses center lane is now a warning sign.
- ▶ Passing Lane Ahead is now a green sign.
- ▶ Removal of “Road To” Signs
- ▶ Removal of “Centerline Rumble Stripes Next xx Miles”
- ▶ R3-8 Changes (Now 3 sizes)



Corridors

Installation

- 75 calendar days or July 1st

Checking in Signs

- 14 days per TMA contract
- Contact Jon Eldridge if anything is missing or incorrect

Damaged Signs

- Send back to Madison Sign Shop
- Let Jon know so he can get a replacement out

Returns

- Do not send signs back until everything is installed
- Small signs should be banded on a pallet and labeled for Madison Sign Shop
- If you have multiple routes label which routes the signs are coming back from



Knockdowns

Reimbursement

- Provide the Region
 - Motor Vehicle Crash Report
 - Incident Report
 - Damage Tag (contains doc #)
- Provide the DT1785 County Charges Worksheet or DT1692 Damage Tag for repairs to knockdowns to the Region.

DAMAGED PROPERTY TAG **322032**

Wisconsin Department of Transportation
DT1692 11/2008 (Replaces AS1090)



Accident Date 10-30-19	Enforcement Agency Name WSP	Grant Co. Grant Co.
Document Number KRLCORFP55	Incident Number 139-1456	
Driver Name and Address ABIGAIL J. KRAMER		
Property Damage - Description SIGN + POST (DIVIDED HWY)		
Accident Location - Distance to or from RP or intersection 151 @ CLAY HOLLOW		
Town of Paris		

Attach to Police Accident Report



Community Maps

About Search Advanced Analyze Admin TSC Resources Contact Help

Home > Community Maps > Crash > Advanced

Welcome, dotram | Manage Account | Logout | Contact | Help | Release Notes

Search Results

Collection : **Wisconsin DT4000 Crashes**

New Search Edit Search Spot Map
Download CSV

● Fatality ● Injury (A) ● Injury (B) ● Injury (C) ● Property Damage

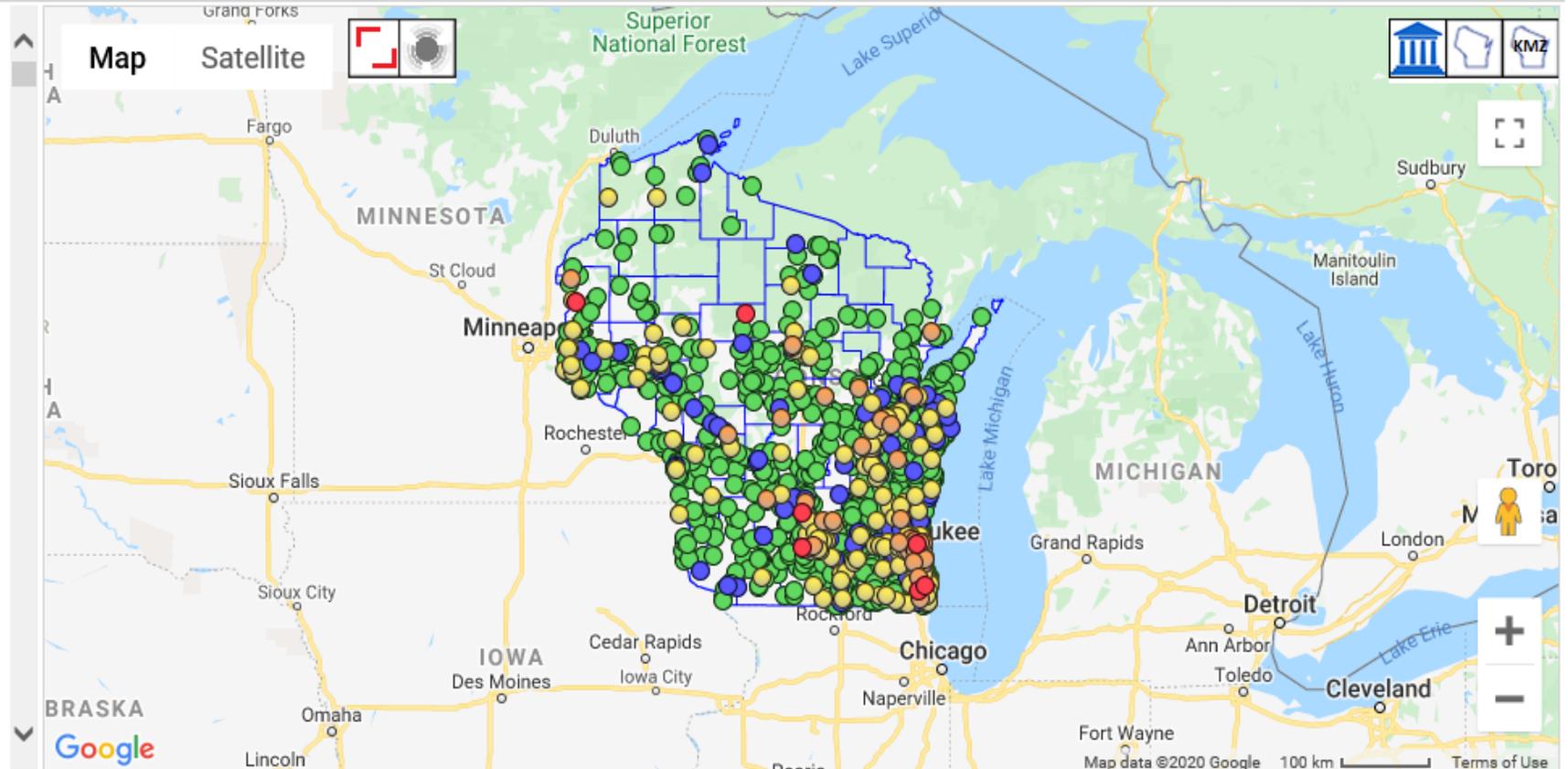
There were **2858** total crashes reported resulting in **8** fatalities and **624** injuries. Of this total, **2831** crashes are mapped. [\[More\]](#)

[Show Search Constraints](#)

[Check ALL](#) | [UnCheck ALL](#) | [Zoom To Selected](#)

Sort By: Display:

- 2PLOSZCGJT**
010 AT TAYCO RD
MENASHA (C), WINNEBAGO County
(C) Possible Injury
01/01/2020
Flags: Government Property **1**
- 2PLOSZCGJS**
010 AT TAYCO RD
MENASHA (C), WINNEBAGO County



Knockdown - MASH

- ▶ STOP and YIELD
 - Temporarily reinstall immediately
 - ▶ All other Regulatory, School, & Warning
 - Temporarily reinstall ASAP
 - ▶ Guide and Recreational
 - Leave down
- Install permanent signs within 10 working days of receiving the sign.



Knockdowns



- ▶ SIS Signs
 - Call Wisconsin Logos and/or Region Coordinator
 - 608-579-1570 or 844-496-9163

- ▶ State Maintained Type I Signs
 - Call Arbor Green if it is an emergency secure
 - Call Region Coordinator for all other cases
 - Do not prop up Signs

- ▶ Type II Sign
 - Stop or Yield Sign
 - Replace Sign Immediately
 - All other signs
 - Notify/Work with Region Coordinator



TODS Signs

Counties can approve all Food/Lodging/Camping and Gas

- Please send all applications to Casey Amans so we can keep a statewide inventory
- All installation checks get sent to Casey

All Attractions go through BTO

- Contact Casey Amans

If there is no break ticket the requestor must pay for the signs

- New Posts=\$250/sign
- Sign Only=\$100/sign
- Send all installation checks to Casey



Charging

Sign Distribution

- 00xx-08-4x Only for Sign Delivery to/from Distribution County

TMA

- 00xx-08-2x Corridor Work Only

Damage Claims

- 0077-0x-00 For damaged signs with a break ticket or obvious vehicular damage

TODS signs

- 0080-02-53

White Arrowboards

- 0080-02-63

Rest Areas/Waysides

- Different IDs for all Rest Areas

No Passing Zone

- 0072-01-81 Moves and changes outside TMA Work

Adopt-a-Highway

- Time: 00xx-01-61 Posts: 0072-01-50

RMA

- 00xx-01-61 all other sign work



MPM

- ▶ Cannot go over your allocation
- ▶ Activity Code/Job ID must match exactly what is in MPM
- ▶ Please be detailed on your invoices

Project : 0014-08-21

Name	Project Totals	
Budget	\$27,500.00	
Revised Budget		

Export to Excel

Activity Code & Description	
086 - Permanent Sign Replacement	▼
032 - Miscellaneous Traffic Control	▼

Export to Excel

Job Id	County in which work will be done	Highway Number	Asset ID	
321-08-20	14 - DODGE ▼	STH 16		



Compliance Dates

- ▶ Horizontal Alignment
 - December 31, 2019
- ▶ One Way Signing
 - December 31, 2019
- ▶ MASH
 - January 1, 2020 for all new installs



Upcoming

- ▶ 2021
 - Population Sign Changes
 - Decals
 - Clean area before placing decal
 - New Signs



Procurement Contracts

Wood Posts	Pine River Group 28 Calendar Day Delivery
Steel Posts	Decker Supply, Inc Tube Steel- 30 Calendar Day Channel Steel – 140 Calendar Day
Rollup Signs	Dickie Safety Products 28 Calendar Day Delivery
Traffic Control Devices	Decker Supply, Inc 28 Calendar Day Delivery
Guardrail Delineators	Lightle Enterprises, LLC 21 Day Delivery



WisDOT Contacts

- ▶ Region Sign Coordinator
 - Questions on sign locations, knockdowns, installation, etc
 - Contacts are located in the signing field guide
- ▶ Distribution Counties
 - Pick up of scrap or red carts
 - Contacts are located in the signing field guide
- ▶ BTO
 - Missing or damaged signs/stringers
 - Jon Eldridge – DOTBTOSignOrders@dot.wi.gov or 608-246-3270
 - SIS/TODS/WAB
 - Casey Amans – 608-245-5344
 - Installation Checks- 3609 Pierstorff St, Madison WI 53704
 - Other
 - Jeannie Silver – 608-246-5408
 - Ryan Mayer – 608-246-3810



Questions



Web Links

- ▶ Post Contracts - <https://wisconsindot.gov/Pages/doing-bus/local-gov/traffic-ops/programs/programs.aspx>
- ▶ WMUTCD - <https://wisconsindot.gov/Pages/doing-bus/local-gov/traffic-ops/manuals-and-standards/wmutcd/wmutcd.aspx>
- ▶ Sign Plate Manual - <https://wisconsindot.gov/Pages/doing-bus/local-gov/traffic-ops/manuals-and-standards/signplate/signplate.aspx>
- ▶ Connecting Limits maps - <https://wisconsindot.gov/Pages/projects/data-plan/plans/res/connecting.aspx>
- ▶ Rustic Road maps - <https://wisconsindot.gov/Pages/travel/road/rustic-roads/maps.aspx>
- ▶ Work Zone Flagger Manual - <https://wisconsindot.gov/dtsdManuals/traffic-ops/manuals-and-standards/flagger.pdf>
- ▶ Flagger's Handbook - <https://wisconsindot.gov/dtsdManuals/traffic-ops/manuals-and-standards/flagger.pdf>
- ▶ Community Maps - <https://transportal.cee.wisc.edu/partners/community-maps/>



Handouts

- ▶ Packet of A-plates and SDDs
- ▶ Introduction section of the Sign Code Manual
- ▶ Laminated “Cheat Sheet”
- ▶ Current Procurement Contract information
- ▶ Sign Delivery Calendar
- ▶ TEOpS 2-25-1 and 2-25-2
- ▶ Rustic Road diagram from TEOpS 2-4-51
- ▶ Intersection Diagrams

