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<td>Special Signs for Restricted Width Traffic Control Zones</td>
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Type 3 installation is intended to show the requirements for a Type 'A' sign when installed in an island or median (where traffic passes on both sides of the sign) as well as for locations where the Type 'A' sign is installed adjacent to a curbed roadway (sign may be located on either side of a roadway as specified in project plans).

Possible Contract Items:
- Remove and Reinstall Sign as per plan
- Wood Posts for Type A or B signs, 4 in x 6 in
- Perforated Square Steel Tube Post (Anchor Series)
- Type A Signs, Sheet Aluminum
- Install Type A Sign

Possible Tabulations:
- 190-51
- 190-61
- 190-62
- 190-65

Final sign location will be at the discretion of the Engineer.

Use the Type 1 installation in any case except where:
- (A) Specified otherwise in the plans
- (B) Directed otherwise by the Engineer
- (C) A Type 3 installation is required due to location in an island or gore area.

Possible Tabulations:
- Install Type A Sign

Type 3 installation is intended to show the requirements for a Type 'A' sign when installed in an island or median (where traffic passes on both sides of the sign) as well as for locations where the Type 'A' sign is installed adjacent to a curbed roadway (sign may be located on either side of a roadway as specified in project plans).
Modification of plan requirements will be permitted only as physical conditions require and are subject to the following limitations:

- Provide breakaway sign posts that are a minimum length of 7'-4" plus the height of the sign, unless noted otherwise in the tabulations.
- Obtain the Engineer’s approval for spacing between signs less than 800 feet.
- Set all signs level.
- Do not modify sign location without approval of the Engineer.

Possible Contract Items:
- Install Type B Sign
- Perforated Square Steel Tube Posts
- Perforated Square Steel Tube Post Anchor (series)
- Remove and Reinstall Signs as Per Plan
- Type B Signs
- Wood Posts for Type A or B Signs, 4 in. x 6 in.
- Steel Breakaway Sign Post for Type A or B Signs
- Concrete Footing for Breakaway Sign Post

Possible Tabulations:
- 190-50
- 190-81

License:
- SI-102

APPROVED BY DESIGN METHODS ENGINEER

STANDARD ROAD PLAN

LOCATIONS - TYPE 'B' SIGNS

REVISED: 04-15-16

IOWA DOT

Sheets 1 of 2
Details indicated are for an installation adjacent to a curbed roadway. The sign may be located on either side of the roadway, or in a gore area where curbed roadways pass on both sides, such as an urban freeway exit ramp. When located in a gore area, install where the width between curbs is no less than 12 feet plus sign width.

Details indicated are for an installation in a gore area where traffic on non-curbed roadways passes on both sides of the sign, such as the exit ramp for a rural type interchange.

Refer to the Office of Bridges and Structures' Sign Truss Standards as detailed in the contract documents. Cantilevers are special designs detailed elsewhere in the contract documents.
Possible Contract Item:
Wood Posts for Type A or Type B Signs, 4 in. x 6 in.

Possible Tabulations:
- Wood Posts
  - 190-51
  - 190-50

Possible Revision:
- Embedment added
- Possible tabulations added
- DOT logo replaced
- "Nominal" added to wood post dimensions
Construct the footing as shown for normal footing in earth. Where solid rock is encountered, the alternate design for footing in solid rock may be used with the approval of the Engineer.

Dispose of all excavation for the footing in the area adjacent to the footing and map to normal ground contour, unless directed otherwise by the Engineer.

Hold the stub post in proper position by an approved device to ensure that it remains in proper position upon completion of concrete placement.

The contract price for size of footing required is full compensation for footing as detailed hereon, including all necessary excavation. Excavation in Unexpected Rock will be paid for according to Article 2524.05, l, of the Standard Specifications.

1. Lengths are for normal footings. Required length may vary where alternate rock design is used.

2. Refer to the contract documents for post size.

3. Set vertical bars in solid rock as follows:
   1. Drill holes twice bar diameter and fill with water.
   2. When hole is fully saturated, blow water out and fill two-thirds depth with sand cement mortar.
   3. Insert bar and consolidate mortar.
   4. Fill hole to top with mortar.

Possible Contract Item:
Concrete Footing for Breakaway Sign Post

FOOTING REINFORCING DATA

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PLAN
(Reinforcing Placement and Sign Orientation)
**SIGN INSTALLATION**

**STUB & SIGN POSTS**

**SIDE VIEW**

Post Length

Footing

**STUB POST & SIGN POSTS**

3d View

**FUSION PLATE ASSEMBLY**

Not for single post installations.

Refer to Standard Road Plan SI-112 for footing information.

Plumb signpost by installing brass stock or strip shims complying with ASTM B36. Furnish two shims each of 0.012" and 0.032" thickness (total of 4 per post).

**Fuse Plate and Splice Plate Data**

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**Possible Contract Item:**

Steel Breakaway Sign Post for Type A or B Signs

**REVISIONS:**

- Modified to dimension for W 6 x 12 post in BREAKAWAY BASE DATA.
- SI-112 of Sheet 2

**APPROVED BY DESIGN METHODS ENGINEER**

**SUPPORT STRUCTURES - STEEL BREAKAWAY POSTS**
The following Base Plate alternates are considered equivalent:

Alternate 1 - Weld base plate (2 each) to sides of signpost and stub post flanges.

Alternate 2 - Weld base plate (1 each) to end of sign post and stub post. Properly match and align the bolt holes and notches in the stub post plate and the sign post plate as indicated herein.

Grind smooth all welds and galvanizing between Base Plates.
Plumb signpost by installing brass stock or strip shims complying with ASTM B 36. Furnish two shims each of 0.012" and 0.032" thickness (total of 4 per post).

Refer to Standard Road Plan SI-112 for footing information.

Possible Contract Item:
Steel Breakaway Sign Post, Rectangular Tube

36"

BREAKEWAY BASE (Refer to details on sheet 2)

W8 x 21 Stub Post

W8 x 21 Stub Post

SECTION A-A

SI-114

STANDARD ROAD PLAN
FREEWAY/EXPRESSWAY
SHEET 1 of 2
SPEED LIMIT
APPROVED BY DESIGN METHODS ENGINEER
3 04-15-16
REVISION
SI-112
REVISED:
Moved footing information to SI-112. Changed title and added oblique views.
The following Base Plate alternates are considered equivalent:

**ALTERNATE 1** - Weld base plates (2 each) to sides of stub post flanges.

**ALTERNATE 2** - Weld base plate (1 each) to end of stub post. During assembly, properly match and align the bolt holes and notches in the stub post plate and the sign post plate as indicated herein.

Grind smooth all welds and galvanizing between Base Plates.

2 1/2" dia. x 32"
Torque = 62.50 ft. lbs.
SIGN MOUNTING BAR

AUXILIARY
SIGN MOUNTING BAR
Type 1

Pipe Detail
(Bracket F)
Type 4A

Pipe Detail
(Bracket F')
Type 4B

One Post
SIGN MOUNTING BRACKET
FOR 24" ROUTE SHIELDS
Type 2

One Post
SIGN MOUNTING BRACKET
FOR 36" ROUTE SHIELDS
Type 5

The bid price for the brackets is to include the necessary mounting bolts, washers, nuts, and set screws.
Existing Stop Sign Mounting Bolt

Washer

R5-1 Sign

FOR SINGLE WOOD POST INSTALLATION

TYPICAL MOUNTING BRACKET ARRANGEMENT

SECTION A-A

1. Mount the wood post so that the top is flush with the top of the sign panel.
2. Extend the Auxiliary Sign Mounting Bracket to the full length of the proposed mounted sign assembly.
3. Maintain a 3 inch space between Route Shields. This should be accomplished by using different drilled holes specified on the brackets, and will vary depending on the number of 2 or 3 digit signs in the assembly.
4. Perforated square steel tube (PST) posts may be substituted for wood posts if approved by the Engineer.

Field drill 3/4" dia. holes. Locate top hole 3" below and perpendicular to existing top sign mounting bolt. Bottom hole will be 18" below top hole as shown.

2" Dia. Galvanized Steel Pipe

Dia hex head bolt, Length 7"

Washer

Existing Stop Sign Mounting Bolt

2" Post Clamps

Pipe Bracket 'F'

Bracket Assembly ‘H’

(2 Sign Mounting Bars Required Per Sign)

Mounting Bracket Type 2/Type 5 Sign

2 mounting bar

Auxiliary sign

R6-1A & R6-1C signs.

Attach R6-1A & R6-1C sign even with top of pipe using approved pipe post clamps. Mount sign perpendicular to approaching traffic, install Sign Mounting Bar as bracing for R6-1A & R6-1C signs.

BACK OF SIGN

FOR TWO WOOD POST INSTALLATION

TYPICAL MOUNTING BRACKET ARRANGEMENT

Auxiliary sign mounting bar

Type 3/4 type 5 Sign Mounting Bracket

Mount the wood post so that the top is flush with the top of the sign panel.

Maintain a 3 inch space between Route Shields. This should be accomplished by using different drilled holes specified on the brackets, and will vary depending on the number of 2 or 3 digit signs in the assembly.

Perforated square steel tube (PST) posts may be substituted for wood posts if approved by the Engineer.

2" ID Galvanized steel pipe

(See Section A-A for detail of attaching pipe to post.)

(See BACK OF SIGN)

Sign Mounting Bar for R5-1

substituted for wood posts if approved by the Engineer.

SI-119

STANDARD ROAD PLAN

SHEET 2 of 2

APPROVED BY DESIGN METHODS ENGINEER

SUPPORT STRUCTURES - MOUNTING BRACKETS
**INTERSTATE ROUTE MARKERS**

**Series 2000 Standard Alphabets**

**Optically space numerals about vertical center line.**

All dimensions are in inches unless otherwise designated.

**COLORS:**
- Text: White
- Border: White
- Background (Interstate): Red
- Background (Route No.): Blue

---

### Sign Legend Components

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*REVISED 10-12-18*

*ADDED 15" TALL ROUTE SHIELDS FOR INTERSTATES, U.S. HWYS, & IOWA HWYS.*

*ADDENDUM 2 TO SHEET A.*

*APPROVED BY DESIGN METHODS ENGINEER.*

*SIGN LEGEND COMPONENTS*

FABRICATION - SIGN LEGEND COMPONENTS
### US ROUTE MARKERS

#### Sign Legend Components

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#### 3 Digit Routes

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All dimensions are in inches unless otherwise designated.

**COLORS:**
- Text: White
- Shield: White

Black borders added to route shields will not be accepted.

SI-121

STANDARD ROAD PLAN

FABRICATION - SIGN LEGEND COMPONENTS
**Sign Legend Components**

<table>
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<th>Sign</th>
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</table>

* Series 2000 Standard Alphabets

** Optically space numerals about vertical center line

All dimensions are in inches unless otherwise designated.

COLORS:
- Text: Black
- Shield: White

Black borders added to route shields will not be accepted.
### COUNTY ROUTE MARKER

#### SIGN LEGEND COMPONENTS

<table>
<thead>
<tr>
<th>Sign</th>
<th>Height</th>
<th>Bottom Width</th>
<th>Border Thick &amp; indent</th>
<th>County Top Offset</th>
<th>County Text Hgt &amp; Font</th>
<th>Numerical Height &amp; Font</th>
<th>County Bottom Offset</th>
<th>Radius Vertical Offset</th>
<th>Corner Vertical Offset</th>
<th>Corner Lateral Offset</th>
<th>County Name Lt &amp; Rtl</th>
<th>County Text Left</th>
<th>County Text Right</th>
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</table>

**COLORS:**
- Text: Yellow
- Border: Yellow
- Shield: Blue
- Background: White

All dimensions are in inches unless otherwise designated.

---

* Series 2003 Standard Alphabets
** Optically space numerals about vertical center line
*** County shield centered horizontally and vertically on white background plaque

Yellow sheeted background plaque will not be accepted.
Type II-A arrows should be used in all typical "down arrow" applications except where not practical due to size constraints.

**Type I**

Each arrow used on a guide sign is identified by a two part code as follows:
- Part 1 is the arrow ID number
- Part 2 is the angle in degrees between the center line of the arrow and the horizontal

**ARROW DESIGNATION**

<table>
<thead>
<tr>
<th>ID</th>
<th>Length</th>
<th>Head Width</th>
<th>Head Length</th>
<th>Draft</th>
<th>Radius</th>
<th>Tip</th>
<th>Shaft Width at Head</th>
<th>Shaft Width at Tail</th>
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**All dimensions are in inches unless otherwise designated.**

**Type II**

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<th>Radius</th>
<th>Tip</th>
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<th>Shaft Width at Tail</th>
<th>Shaft Length</th>
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**All dimensions are in inches unless otherwise designated.**
Panel bolt slotted holes spaced at 12 inch centers shall be located along the full length of each panel, such that the outermost slots are of equal distances (not to exceed 6 inches) from the ends of the panel.

Signs shall be made up of full panels unless a half panel is required, in which case it shall be placed at the top edge of the sign.

Refer to detail project plans and summary sheet for exact data for individual sign fabrication requirements.

**Actual Length of Panels = Design Length + 1.5”**

Edge molding shall be installed full length of each vertical side of each sign. Attach in accordance with current specifications.

Full Panel Section

Half Panel Section

**ASSEMBLY DETAIL**

**STANDARD STRUCTURAL SIGN PANELS**

**EDGE MOLDING**

Metal Edge Molding

No overlap of edge molding or border strip permitted.

Two washers per panel bolt, one each side of sign.
Possible Contract Items:

- Wood Sign Post
- Steel Breakaway Sign Post

**SIGN POST**

- **C Post**
  - 3" x 6" Rectangular Tube
  - Nominal Depth
  - 1" OD Washer
  - " Thick
  - 8" x 1" Bolt (Typ.)

**SIGN FACE**

- 36" Height
- " Wide (Typ.)

**SECTION A-A**

- Back Elevation Attachment Details for Flags
  - 1" OD Washer
  - 8" x 1" Bolt
  - Nylon Lock Nut
  - 1" OD Washer
  - 8" x 1" Bolt
  - Nylon Lock Nut
  - Flag Bracket

**SECTION B-B**

- Back Elevation Attachment Details
  - 1" OD Washer
  - 8" x 1" Bolt
  - Nylon Lock Nut
  - 1" OD Washer
  - 8" x 1" Bolt
  - Nylon Lock Nut
  - Flag Bracket

**SECTION C-C**

- Rectangular Tube Post Attachment
  - 12" x 36"
  - 2.5" x 1.5"
  - Aluminum Zee Bar

**SECTION D-D**

- Back Elevation Attachment Details
  - 1" OD Washer
  - 8" x 1" Bolt
  - Nylon Lock Nut
  - 1" OD Washer
  - 8" x 1" Bolt
  - Nylon Lock Nut
  - Flag Bracket

**WOOD OR PERFORATED SQUARE TUBE POST ATTACHMENT**

- *NOTE: Treated Wood or Perforated Square Tube Post"

Refer to **SI-114** for details of steel breakaway sign post rectangular tube.
CLIP INSTALLATION

1. Post Clip Bolt - place bolts near top and bottom of sign plus 1 bolt per sign panel with a minimum of 3 bolts per post.

2. Post Bolts - place bolts near top and bottom of sign plus 1 bolt per sign panel.

3. Washers and nuts for post clips meeting the requirements of Article 4186.09, B of the Standard Specifications.

4. Use cast aluminum post clips and stainless steel nuts, bolts, and washers for post clips.

5. Type 4 Attachment shall be used for all signs with wood posts.

6. Type 1 Attachment shall be used for all signs placed on metal breakaway posts.

7. Type 3 Attachment shall be used for all signs placed on metal breakaway posts.

8. Use Type 3 Attachment for all signs with wood posts.

9. Position the EXIT NUMBER PANEL above the guide sign indicating direction of exit.

10. If the bolt holes in the top panel and the bottom panel of the two signs line up, panel bolts are to be used.

11. If the angle fasteners cannot be horizontally placed as shown, they can be moved so as to securely hold the top sign.

12. A post clip is required on each angle at top of panel and each extrusion joint.

13. The aluminum angles are considered part of the mounting hardware and are to be furnished by the Contractor as an incidental item. No separate payment will be made for aluminum angles.

14. Use cast aluminum post clips and stainless steel nuts, bolts, and washers for post clips.

15. The aluminum angles are considered part of the mounting hardware and are to be furnished by the Contractor as an incidental item. No separate payment will be made for aluminum angles.

16. Use cast aluminum post clips and stainless steel nuts, bolts, and washers for post clips.
GUIDE SIGNS

Do not allow the aluminum L to extend below the bottom of the major sign.

Sign height added above existing supports.

Maximum Spacing

Top of existing support

Existing sign support or Breakaway steel posts.

Aluminum L's

\[
\frac{7}{8}'' \times \frac{2}{3}'' \times \frac{3}{4}'
\]

Length = 3H + 3'' or to bottom of panel.

Aluminum L's

\[
\frac{7}{8}'' \times \frac{2}{3}'' \times \frac{3}{4}'
\]

8'' x 2½'' x 2½'' (3H+3'')

2½'' x 2½'' x 2½'' (3H+3'')
NOTE: FOR SINGLE POST WITH SIGN WIDTH > 24" AND HEIGHT > 24"
FOR SHEET ALUMINUM SIGNS ONLY
Furnish Type 1 delineator posts for each location unless specified otherwise in the plans.

4 or \( \frac{1}{4} \) holes in delineators are acceptable.

All dimensions are in inches unless otherwise designated.

Install post of sufficient length to provide a minimum of 30 inches of embedment when installed at the specified mounting height.

Other features could be light poles, street signs, truss legs, etc.

Attach to feature with stainless steel bands.

All dimensions are in inches unless otherwise designated.

"O.D. x 0.091".

"I.D. x 0.115".

"- 18 NC hex bolts and hex self-locking nuts, and washers.

Hot dipped galvanized steel bolts, 1/2" O.D. x 0.091". Hot Dipped Galvanized Washer.

Holes in delineators are acceptable.

Furnish Type 1 delineator posts for each location unless specified otherwise in the plans.

All dimensions are in inches unless otherwise designated.
**DELINERATORS**

Place delineators at a constant distance from the edge of traveled way and/or the edge of shoulder.

The delineator height is measured from the edge of traveled way or the face of curb.

When placed behind curb, the delineator offset is measured from the face of curb. Allowable offsets are 2 feet minimum and 8 feet maximum. If the curb is part of a shoulder, maintain at least a minimum 8 foot offset from the edge of traveled way.

When placed on the foreslope, the delineator offset is measured from the edge of shoulder. Allowable offsets are 2 feet minimum and 8 feet maximum. However, for shoulders less than 6 feet in width, maintain a minimum 8 feet to the edge of traveled way.

Refer to the project plans for specific offset dimensions.

Furnish white, yellow, and/or red reflectors as specified in the project plans.

Furnish Type I delineator posts. Post lengths are to be sufficient to ensure the proper installation height and provide a minimum of 2'-6" embedment. See Table I for post lengths for various slope and offset conditions.

3/8" or 7/16" holes in the delineators are acceptable.

Install delineators truly vertical.

Delineators placed along freeways and expressways are to be spaced every 0.05 mile along the thru roadway. Placements are based on the reference post marker. A Delineator Reference Point Plaque is required on each delineator for both directions of travel.

Fabricate plaques from 0.063" thick sheet aluminum of the appropriate dimensions. Use non-reflectorized sheeting. White for the background, and black for the numerals.

Attach single reflectors to the post with an aluminum, brazed head, blind rivet of 1/8" inch diameter and a grip range of 0.376 to 0.625 inches, and an aluminum flat washer of 0.193 in. ID x 0.750 in. OD x 0.091 in. thickness.

Attach back to back reflectors to the post with an aluminum 3/16" dia x 2" length hex head bolt with a matching self-locking nut.

Attach plaques to the post with an aluminum, brazed head, blind rivet of 1/8" inch diameter and a grip range of 0.126 to 0.250 inches, and an aluminum flat washer of 0.193" ID x 0.750" OD x 0.091" thickness.

Furnish materials complying with Section 4106 of the Standard Specifications.

Possible Contract Items:
- Delineator, Rigid - Type I
- Delineator, Rigid - Type IA
- Delineator, Rigid - Type II
- Delineator, Rigid - Type III

Possible Tabulation:
- 190-25

---

**RIGID DELINERATOR MOUNTINGS**

**ATTACHMENTS**

**Post Lengths for Shoulder Installation**

<table>
<thead>
<tr>
<th>Offset</th>
<th>Fore slope Rate (FS:1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

**Attach plaques to the post with an aluminum, brazed head, blind rivet of 1/8" inch diameter and a grip range of 0.376 to 0.625 inches, and an aluminum flat washer of 0.193" ID x 0.750" OD x 0.091" thickness.**

**Furnish materials complying with Section 4106 of the Standard Specifications.**

Possible Contract Items:
- Delineator, Rigid - Type I
- Delineator, Rigid - Type IA
- Delineator, Rigid - Type II
- Delineator, Rigid - Type III

Possible Tabulation:
- 190-25
Fabricate object markers from materials complying with Section 4186 of the Standard Specifications.

Buttons on Type 1 Object Markers may consist of yellow reflectors or yellow reflective sheeting. Do not mix types on any single object marker. When reflectors are used, attach to sign blank with an aluminum, brazed head, blind rivet of \( \frac{3}{8} \) inch diameter and a grip range of ½ to ¾ inches.

Install object markers truly vertical.

Ensure top of post does not extend above top of object marker.

Galvanize in accordance with AASHTO M 111.
INSTALLATION AT GUARDRAIL LOCATIONS

STANDARD ATTACHMENT

OFFSET BRACKET ATTACHMENT

1. Install Type 3 Object Markers so the inside edge of the marker is in line with the inner edge of the obstruction.
2. Attach object marker or offset bracket to the delineator post at two locations. Use the following per bolt hole location:
   - one galvanized 7/16 in. dia x 2-1/2 in. length hex head bolt with matching self locking nut.
   - galvanized steel washer, 1-1/4 ID, 1-1/2 OD, 1/8" thick under the head of the bolt.
3. When Type 3 Object Marker is installed on an offset bracket, attach marker to bracket at two locations. Use the following per bolt hole location:
   - one 7/16 in. dia x 1-1/2 in. length hex head bolt with matching self locking nut.
   - galvanized steel washer, 1-1/4 ID, 1-1/2 OD, 1/8" thick under the head of the bolt.
Furnish Type 1 delineator posts for each location unless specified otherwise in the plans.

1/8" holes in delineators are acceptable.

All dimensions are in inches unless otherwise designated.

Install post of sufficient length to provide a minimum of 30 inches of embedment when installed at the specified mounting height.

Type 1

Shoulder Installation

Type 2

Curb Installation

Type 3

Bridge Barrier Rail Installation

Type 4

Attachment to Other Feature

Type 5

Depressed Median Installation

Type 6

Raised Median Installation

Type 7

Full Median Barrier Rail Installation

Type 8

Split Median Barrier Rail Installation

Type 9

Split Median Barrier Rail Installation with Grade Differential

Emergency Management Sign Assembly

Top View

Emergency Management Sign

1 1/2" O.D. 1 1/8" thick
Hot Dipped Galvanized Washer

Hot Dipped Galvanized Washer

1 1/2" O.D. 0.091" Stainless

" I.D. x 0.091" hex bolts and
self-locking nuts, and washers.

" I.D. x 0.091" hex self-locking nuts with washers.

Center post

in the median

Center post

in the median

Center post

in the median

Center post

in the median

8 ft Typical
2 ft Minimum

8 ft Typical
2 ft Minimum

8 ft Typical
2 ft Minimum

8 ft Typical
2 ft Minimum

Other features could be light poles, sign truss legs, etc.

Attach to feature with stainless steel bands.

" O.D. x 0.091".

Emergency Management Sign Assembly

Type 1 Delineator
1.5" Radius, 0.5" Border, White on Green;
[RAMP] B 2K;
To be effective, Chevron Sign Panels should be visible for at least 500 feet. Attach Chevron Sign Panels to the adjustable brackets at an angle so headlight beams are not reflected back into the driver's eye.

Furnish adjustable brackets in all aluminum or all galvanized steel products. Include locking devices on all bolts.

Each correctly installed "Guidance Marker, Chevron W1-8 (Special)" will be counted and paid for at the contract unit price. Payment is full compensation for furnishing and installing one wood post, two chevrons W1-8 sign panels, approved mounting brackets, braces, and all work necessary to install as shown.

1. Adjust chevron locations as necessary to meet as near as possible.
2. Possible delineators.
3. Align horizontal placement of Chevrons with roadway delineators if applicable.
4. Perforated Square Steel Tube (PSST) may be substituted for the wood post if allowed by the Engineer.

Possible Contract Item:
Guidance Marker, Chevron W1-8 (Special)

Possible Tabulation:
108-34

CHEVRON SIGN PANEL (W1-8)
Colors: Chevron - Black (non-reflective)
Background - Yellow (reflective)
DEAD END

Existing R.O.W. for Local Road

Barricade

Place sign panel on the approach side of closure barricade

Wood Frame Assembly

Sign Panel Fabrication

Sign Panel Installation

Washers - ASTM F884
Nuts - ASTM A563
Bolts - ASTM A307

Dip galvanized bolts, nuts and washers according to the following specifications:

Price bid for "Permanent Road Closure, Rural, SI-181" includes furnishing and installing the barricade, signs, posts, and hardware.

The length will be measured in linear feet based on the width of standard sign panels installed.

The Contractor will be paid the contract unit price per linear foot.

Minimum Barricade length = design width (W).

1. Design width (W) equals width of existing roadway and shoulders.
2. Install posts according to Section 2524.03.B.1 of the Standard Specifications.
3. Assemble the wood frame with standard strength, hot dip galvanized bolts, nuts and washers according to the following specifications:

Minimum 3 Posts, Equal Spaces (5'Maximum)

Sufficient length to span at least 2 posts.

Possible Contract Item:
Permanent Road Closure, Rural, SI-181

Possible Tabulation:
102-4

Replaced old Iowa DOT logo with new logo.

APPROVED BY DESIGN METHODS ENGINEER

PERMANENT ROAD CLOSURE - RURAL
Price bid for "Permanent Road Closure, Urban, SI-182" includes furnishing and installing the closure, signs, posts, and hardware.

Closures will be counted and the contractor will be paid the contract unit price for each closure.

1. Width includes the width of the existing roadway and shoulders.
2. Type I delineator posts.
3. Use 0.063 inch aluminum blank with Type IV retro reflective sheeting for sign panel.

Possible Contract Item: Permanent Road Closure, Urban, SI-182
Possible Tabulation: 102-4

**TYPE 1:**
Beginning 25 feet from the approach end of guardrail, install Type 2 Object Markers at 25 foot intervals behind the guardrail. Install Type 3 Object Marker at the bridge ends. On paved roadways only, install 7 Single White Delineators at 200 foot spacing beginning 200 feet in front of the approach end of the guardrail. For ramp terminals see note 2.

**TYPE 2:**
Beginning 25 feet from the approach end of guardrail, install Type 2 Object Markers at 25 foot intervals behind the guardrail. Install Type 3 Object Marker at the bridge ends.

**TYPE 3:**
Install Type 3 Object Markers at the bridge ends. Not required on projects where delineators are proposed or installed throughout the length of the project.

At ramp terminals only, install Single White Delineators as follows: Place first delineator at location where near ramp terminal radius meets the edge of the through pavement. Place additional delineator(s) spaced equally (spacing not to exceed 200 feet) between first delineator and guardrail.

**LEGEND**
- Type 3 Object Marker, Left (OM-3L)
- Type 3 Object Marker, Right (OM-3R)
- Type 2 Object Marker
- Rigid Delineator, Type 1 White
TYPE 4: MARKING SIDE OBSTACLES
(Steel Beam Guardrail On The Shoulder)

TYPE 5: MARKING SIDE OBSTACLES
(Steel Beam Guardrail Less Than 2 Ft. From The Shoulder Line)

TYPE 6: MARKING SIDE OBSTACLES
(Steel Beam Guardrail 2 Ft. Or More From The Shoulder Line)

INSTALLATION AT SIDE OBSTACLES

LEGEND
- Type 3 Object Marker, Left (OM-3L)
- Type 3 Object Marker, Right (OM-3R)
- Type 2 Object Marker
- Rigid Delineator, Type 1 White

REVISIONS:
- Removed OM-3L from Type 8.

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STANDARD ROAD PLAN
SI-211

OBJECT MARKER AND DELINEATOR PLACEMENT WITH GUARDRAIL
TYPE 7:  
Beginning 25 feet from the approach end of guardrail, install Type 2 Object Markers at 25 foot intervals behind the guardrail. Beginning 200 feet in front of approach end of the outside guardrail, install 3 Single White Delineators at 200 foot spacing.

TYPE 8:  
Beginning 25 feet from the approach end of guardrail, install Type 2 Object Markers at 25 foot intervals behind the guardrail. Beginning 200 feet in front of approach end of the right guardrail, install 3 Single White Delineators at 200 foot spacing.

Not required on projects where delineators are proposed or installed throughout the length of the project.
For pavement marking information, see PM-240 and PM-242.

**LEGEND**

- Traffic Sign

**TWO-LANE CROSSING WITH CROSSBUCK**

**TWO-LANE CROSSING WITH CROSSING SIGNAL**
FOUR-LANE CROSSING WITH CROSSING SIGNAL

<table>
<thead>
<tr>
<th>POSTED SPEED LIMIT</th>
<th>L</th>
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<tbody>
<tr>
<td>25 MPH</td>
<td>325</td>
</tr>
<tr>
<td>30 MPH</td>
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<tr>
<td>65 MPH</td>
<td>1299</td>
</tr>
</tbody>
</table>

LEGEND
- Traffic Sign

crossing signal (typ.)

approaching a railroad crossing

standard road plan

iowa dot

sign placement
SPECIAL SIGNS FOR WORKZONES
G40-1

**WET YELLOW PAINT**

- 1.50" Radius, 0.63" Border, 0.38" Indent, Black on Orange;

G40-2

**WET WHITE PAINT**

- 1.50" Radius, 0.63" Border, 0.38" Indent, Black on Orange;

G40-3

**WET PAINT**

- 1.50" Radius, 0.63" Border, 0.38" Indent, Black on Orange;
- [WET PAINT] E 2K.

G40-4

**END PAINTING**

- 1.50" Radius, 0.63" Border, 0.38" Indent, Black on Orange;
- [END] E 2K, [PAINTING] E 2K.

G23-1

**FRESH OIL**

- 2.25" Radius, 0.88" Border, 0.63" Indent, Black on Orange;
- [FRESH] D 2K specified length;
- [OIL] D 2K specified length.

G21-2

**FRESH OIL**

- 2.25" Radius, 0.88" Border, 0.63" Indent, Black on Orange;
- [FRESH OIL] C 2K;

SPECIAL SIGNS FOR WORKZONES
SPECIAL SIGNS FOR WORKZONES
RESTRICTED WIDTH

MILES AHEAD

USE NEXT EXIT

WIDE LOADS OVER

EXIT HERE

NO WIDE LOADS OVER

EXIT HERE

RESTRICTED WIDTH AHEAD

See TC-81 for requirement of restricted width dimension.

REVISIONS:
Replaced old Iowa DOT logo with new logo.

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STANDARD ROAD PLAN

SPECIAL SIGNS FOR RESTRICTED WIDTH

TRAFFIC CONTROL ZONES

IOWA DOT

REVISION: SI-882

REV/VER: 10-18-16

SHEET 1 of 2
RESTRICTED WIDTH AHEAD

2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange.

ARMS 1.7, 2.7, and 3.0

[RESTRICTED WIDTH] D 2K, [MILES AHEAD] D 2K.

WIDE LOADS OVER EXIT HERE

2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange.

[EXIT HERE] D 2K.

NO WIDE LOADS OVER

2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange.

(NO WIDE) D 2K, [LOADS OVER] D 2K.

See TC-81 for requirement of restricted width dimension.

Replaced old Iowa DOT logo with new logo.

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STANDARD ROAD PLAN

SPECIAL SIGNS FOR RESTRICTED WIDTH

TRAFFIC CONTROL ZONES