

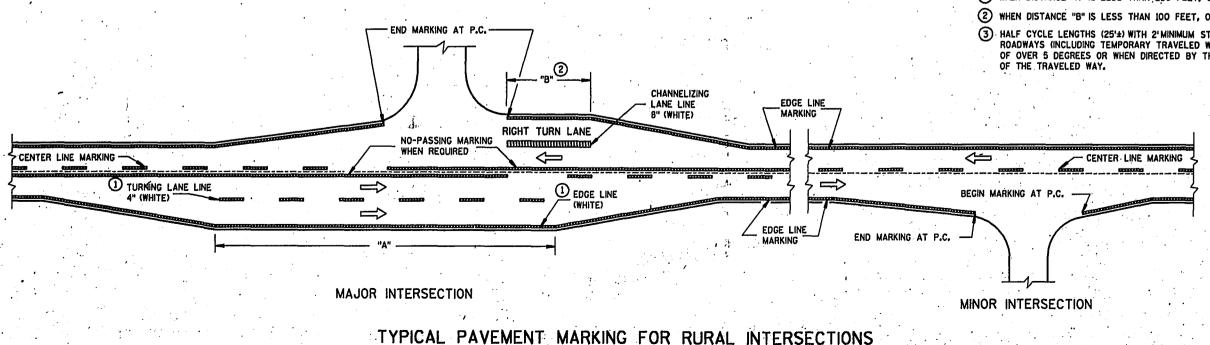
TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

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

- 1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT TURNING LANE MARKING.
- (2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- 3 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.

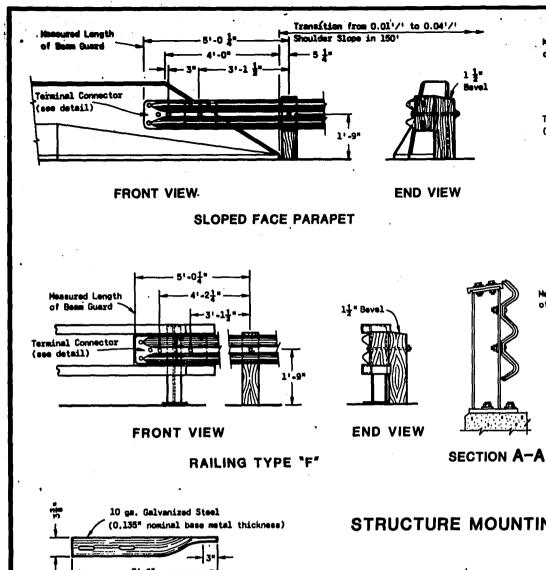


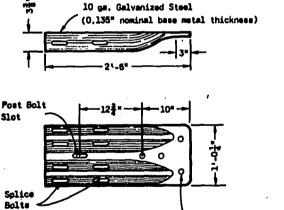
PAVEMENT MARKING

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED. 3-10-89 DATE

STATE TRAFFIC ENGINEER FOR HWYS





Holes, 1" .

Slote

S.D.D. 14

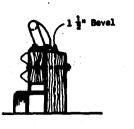
W

2-8a

1" I.D., 2" O.D. (0.134" Nominal thickness) galvanized metal washer required under the head of splice bolts used in the Terminal Connector only.

TERMINAL CONNECTOR

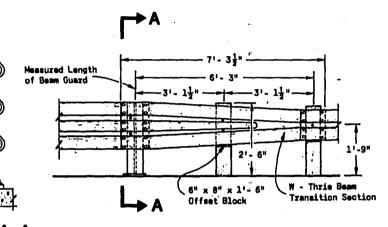
Measured Lenst) Terminal Connector (see detail)



FRONT VIEW

END VIEW

VERTICAL FACE PARAPET



FRONT VIEW

SECTION THRU RAIL ELEMENT

12 ga. Galvanized Steel

SLOTTED HOLES

FOR SPLICES

SLOTTED HOLES FOR

POST MOUNTING

(0.105" nominal base

metal thickness)

GENERAL NOTES

this drawing shall conform to the pertinent requirements of the Standard Specifications, the applicable Special Provisions

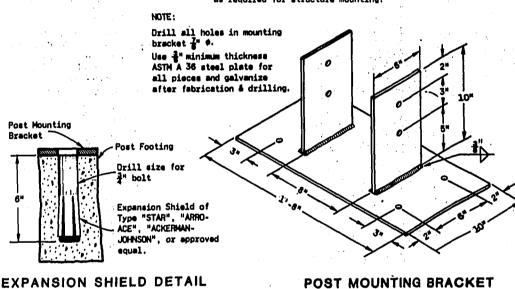
The type of anchorage and the exact location of the beginning and end of each beam guard installation shall be as shown on the plans or as directed by the Engineer.

Shoulder widening to accommodate the anchored end of the beam guard'shall be accomplished at a rate of widening not to exceed 5 to 1.

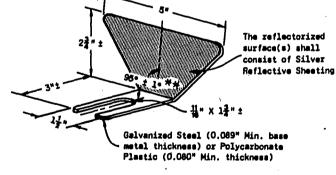
Standard Anchorages - Upon approval of the Engineer, the 6 foot offset may be reduced to nothing where existing conditions will not permit the desirable offset. However, when no offset greater than or equal to 3 feet can be provided, the minimum length of guardrail in advance of an obstacle (obstacle to anchor) shall

The "Post Footing Details at Piers" shall be used when beam quard posts are over structure footings and less than 3 feet-6 inches of earth is provided over the top of the footing.

- 1) The minimum clearance from the front face of beam guard to obstacle shall be 4 feet unless otherwise shown on contract plans. When clearance is less than 4 feet, post spacing shall be reduced to 3 feet-ly inches C-C.
- 2 This section shall include at least one 12'-6" Rail Element and a Terminal Connector or W-Thrie Beam Transition Section as required for structure mounting.



STRUCTURE MOUNTING DETAILS

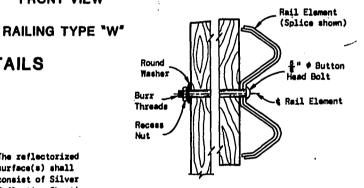


REFLECTOR SPACING

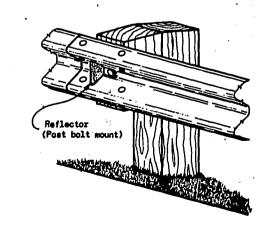
NEI EEG TON GFACING					
	Beam Guard Length		No. Surfaces Reflectorized		
One Way Traffic		50' C-C 100' C-C	1	3 .	
	< 200' * > 200' *	25' C-C 50' C-C	1 #	6	
Two Way Traffic	< 200' > 200'	50' C-C	2 # # 2 # #	3	

- * Every other reflector reversed for 2-may visibility. Contractor may furnish two-sided reflectors in lieu of one-sided reflectors.
- ## Angle of bend to be 90° 1 1° for two-sided reflectors.

REFLECTOR DETAIL

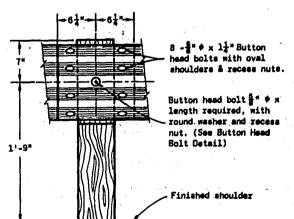


BUTTON HEAD BOLT DETAIL



TYPICAL INSTALLATION

POST FOOTING DETAIL AT PIERS



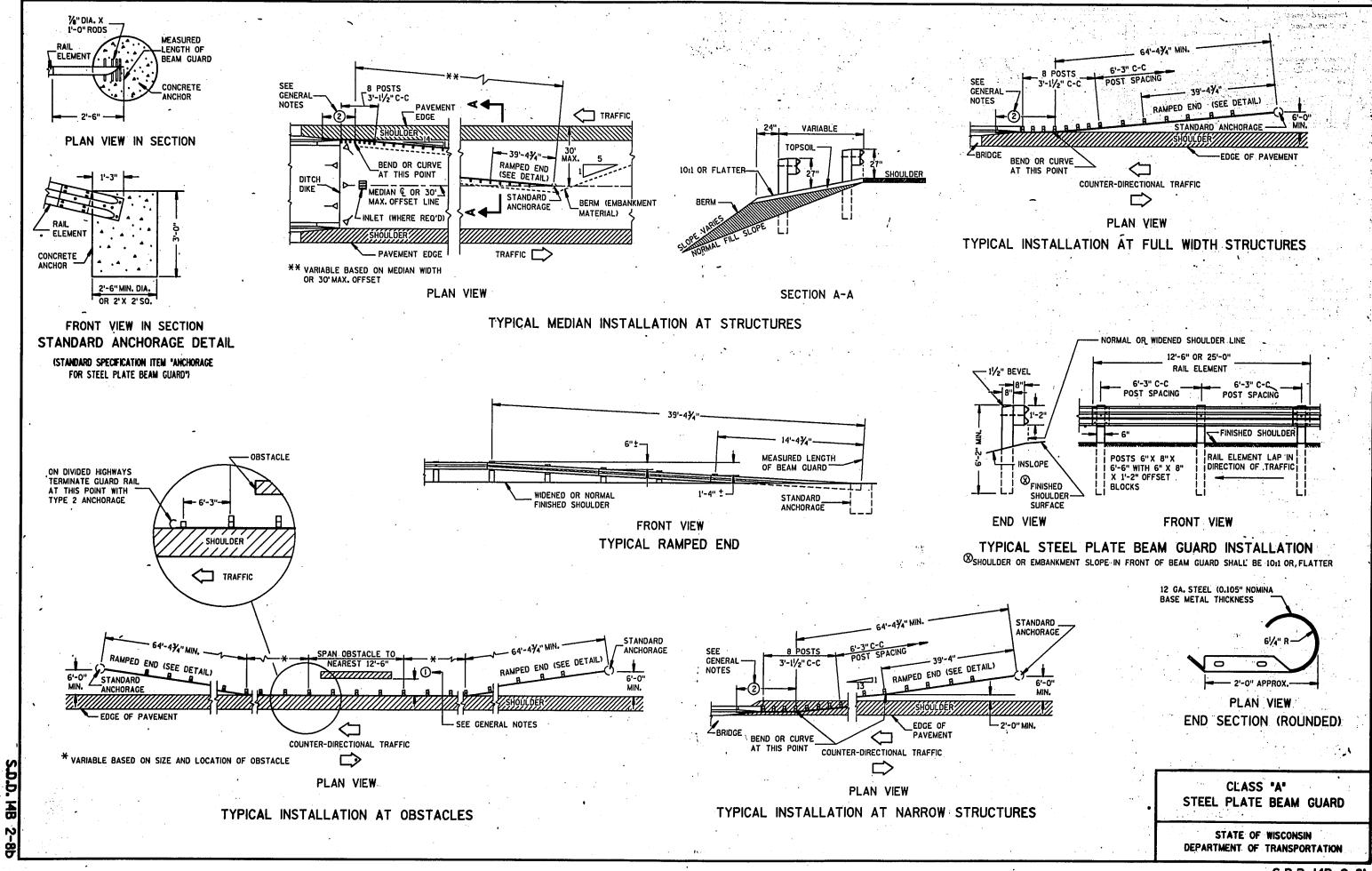
RAIL ELEMENT SPLICING AND POST MOUNTING DETAIL

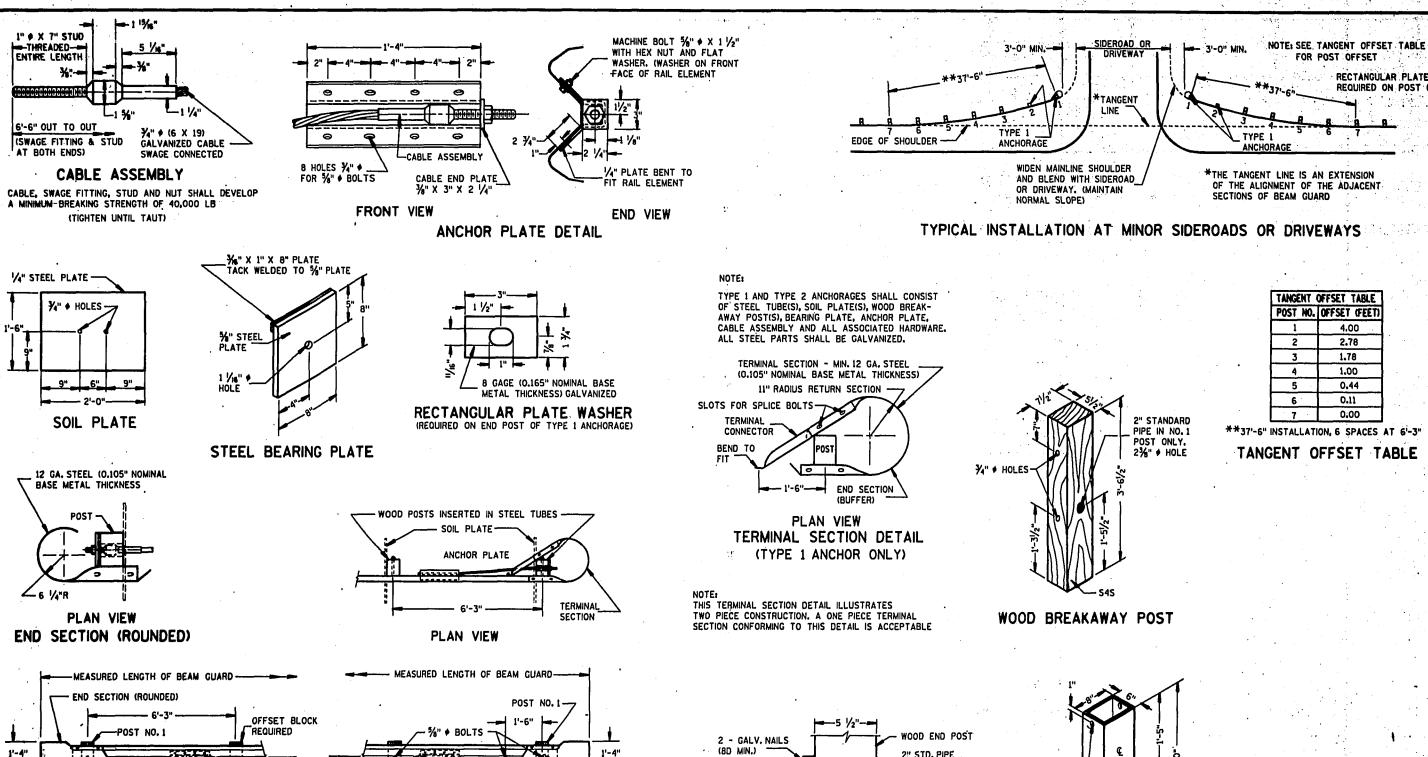
THIS STANDARD DETAIL DRAWING CONSISTS OF TWO SHEETS AND BOTH SHEETS ARE REQUIRED WHEN THIS DRAWING IS CALLED FOR IN CONTRACT PLANS.

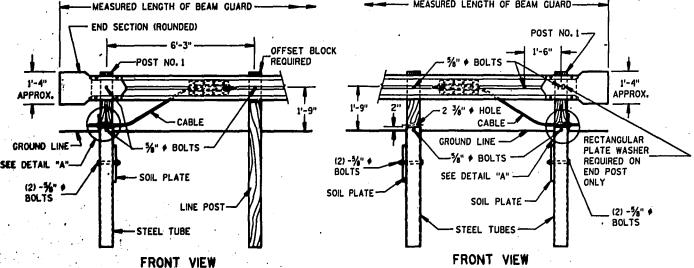
CAUTION: WHEN SPECIAL ANCHORAGES ARE SPECIFIED SHEET 8c IS ALSO REQUIRED.

CLASS "A" STEEL PLATE BEAM GUARD î-31-85

S.D.D. 14 B 2-8a

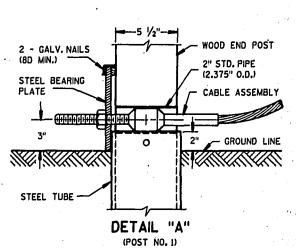


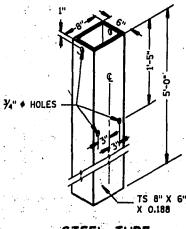




TYPE 2 ANCHORAGE

TYPE 1 ANCHORAGE





STEEL TUBE THE STEEL TUBE SHALL CONFORM TO REQUIREMENTS OF ASTM A501

THIS SHEET SUPPLEMENTS SDD 14 B 2-80 AND SDD 14B 2-85 WHEN SPECIAL ANCHORAGES ARE SPECIFIED. ALL THREE SHEETS ARE REQUIRED WHEN THIS DRAWING IS CALLED FOR IN CONTRACT PLANS.

4.00

2.78 1.78

1.00

0.44

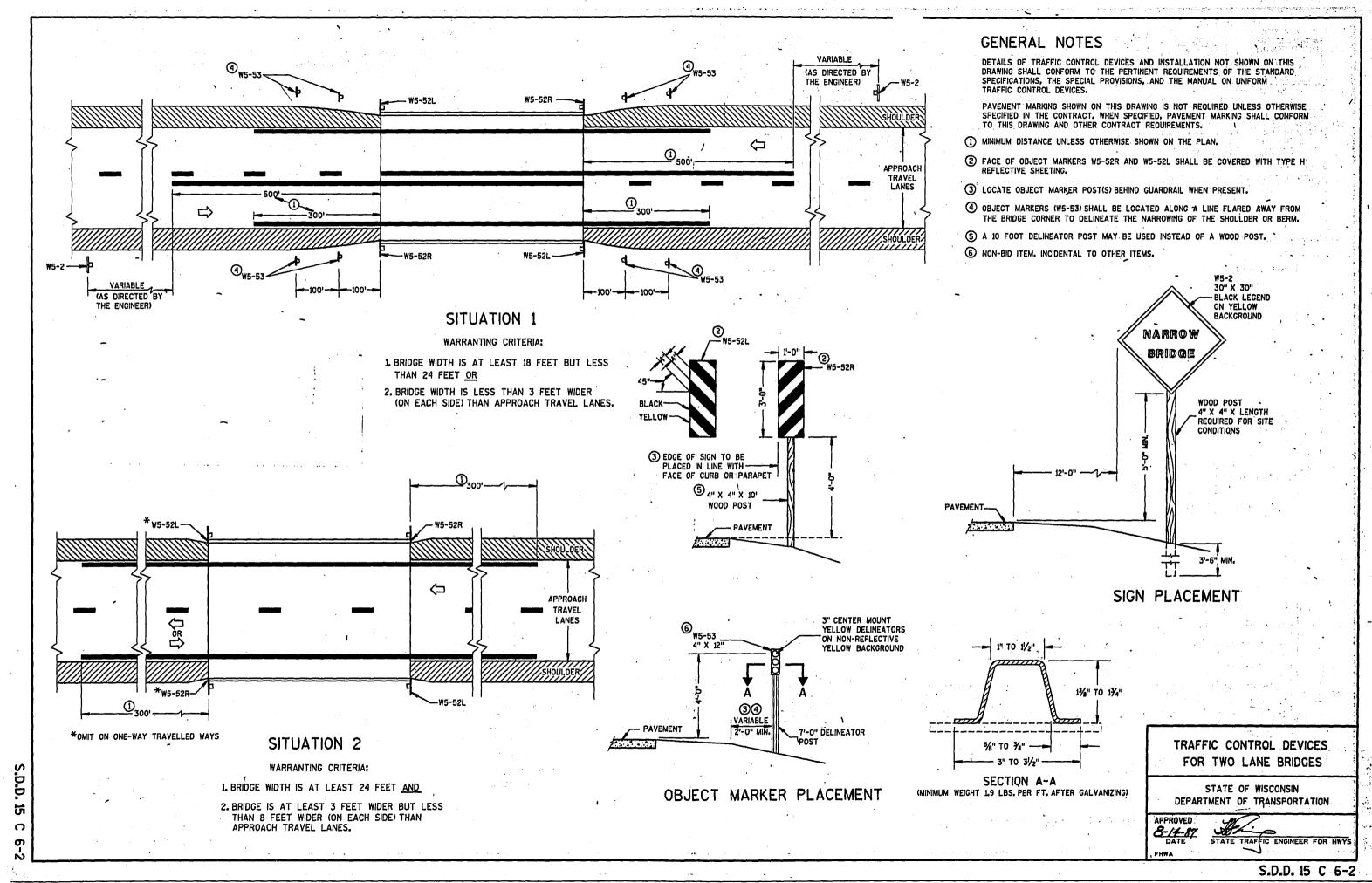
0.11

0.00

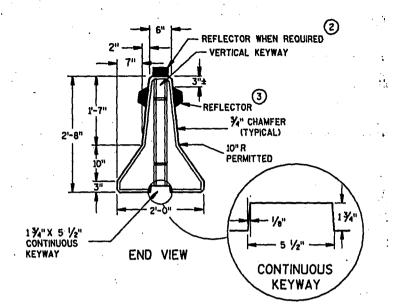
RECTANGULAR PLATE WASHER REQUIRED ON POST (1)

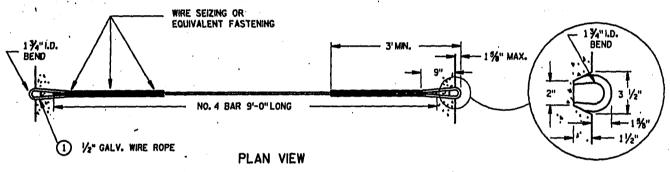
CLASS 'A' STEEL PLATE BEAM GUARD SPECIAL ANCHORAGES

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

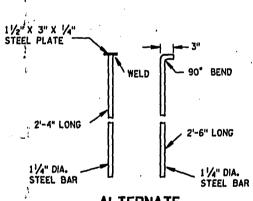








TOP & BOTTOM CONNECTOR ASSEMBLY (1)



ALTERNATE CONNECTING PINS

GENERAL NOTES

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

CONCRETE MASONRY SHALL BE EITHER GRADE MAN OR THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION MI99.

BARRIERS SHALL BE REINFORCED WITH EITHER BAR STEEL REINFORCEMENT OR WELDED STEEL WIRE FABRIC SHALL BE 6X6 - W4XW4, WEIGHING APPROXIMATELY 58 LBS. PER 100 SQ. FEET.

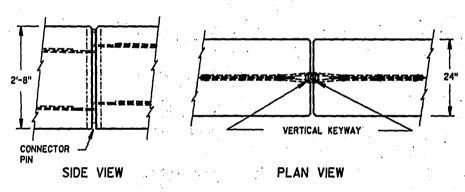
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE

ALTERNATIVE EQUIVALENT DESIGNS FOR BARRIERS MAY BE SUBMITTED TO THE ENGINEER

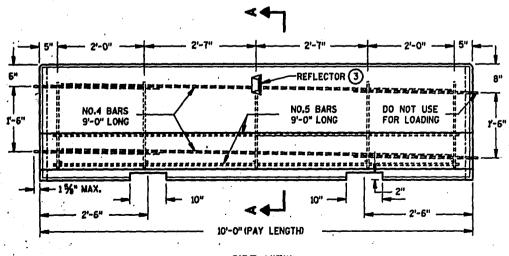
GALVANIZED WIRE ROPE SHALL BE 6 X 19 CLASS 2 IWRC WITH A MINIMUM BREAKING STRENGTH OF 20,000 LBS., AND SHALL CONFORM TO FEDERAL SPECIFICATION RR-W-410. THE ZINC COATING SHALL CONFORM TO TABLE II OF THE FEDERAL SPECIFICATIONS.

REFLECTORS SHALL CONFORM TO SECTION 633 OF THE STANDARD SPECIFICATIONS EXCEPT THE SHAPE SHALL BE AS SHOWN ON THIS DRAWING. ALTERNATIVE SHAPES MAY BE USED WHEN APPROVED BY THE ENGINEER. CONCRETE SURFACE PREPARATION, ADHESIVE AND METHOD OF APPLICATION SHALL BE AS RECOMMENDED BY THE REFLECTOR MANUFACTURER. THE COLOR OF REFLECTORS SHALL BE YELLOW, MAXIMUM SPACING SHALL BE 20 FEET.

- 1 CONNECTOR ASSEMBLIES MAY, AT THE CONTRACTORS OPTION, BE FORMED FROM A CONTINUOUS SECTION OF 1/2 INCH GALV. WIRE ROPE (16'-5" MIN. LENGTH). THE NO. 4 CONNECTOR STEEL BARS
- 2 TOP MOUNTED REFLECTORS SHALL BE PROVIDED IN ADDITION TO THE SIDE MOUNTED REFLECTORS ON ALL BARRIER INSTALLATIONS LOCATED ON CURVED ALIGNMENT LONGER THAN 200 FEET.
- 3 BARRIERS USED TO SEPARATE OPPOSING TRAFFIC SHALL HAVE REFLECTORS ON BOTH SIDES. TOP MOUNTED REFLECTORS SHALL BE DOUBLE FACED FOR THIS CONDITION.

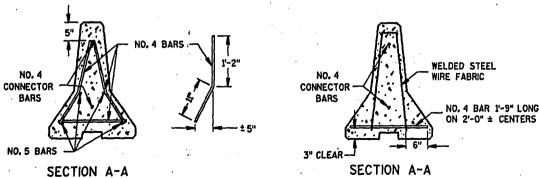


CONNECTION DETAILS



SIDE VIEW

LOCATION OF REINFORCEMENT STEEL



BAR STEEL REINFORCEMENT

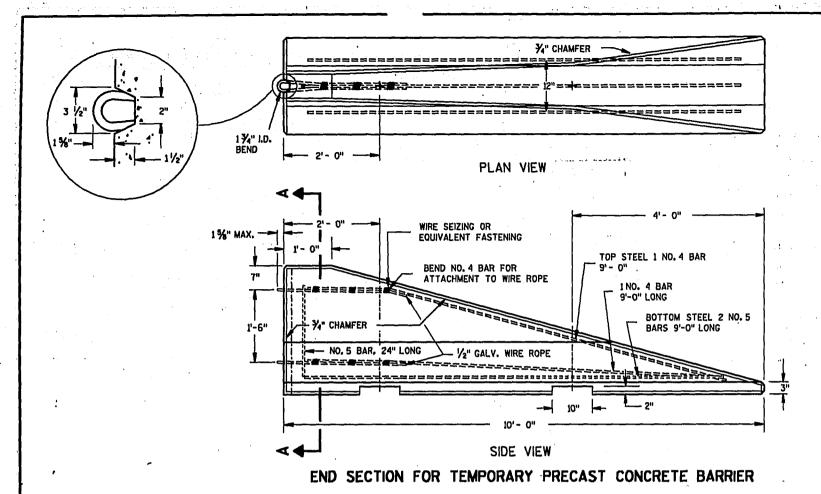
SECTION A-A

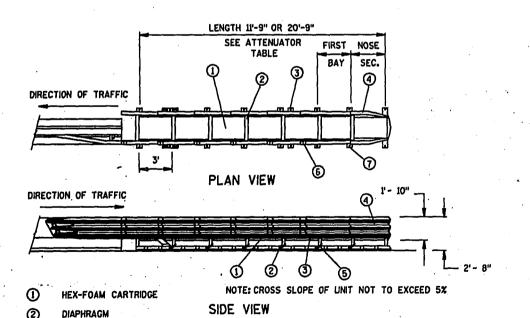
WELDED STEEL WIRE FABRIC REINFORCEMENT

TEMPORARY PRECAST CONCRETE BARRIER

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

S.D.D.







ATTENUATOR LENGTH	NO. OF BAYS	DESIGN SPEED MPH
11' - 9"	3	40 OR LESS
20' - 9"	6	40 TO 55

GENERAL NOTES

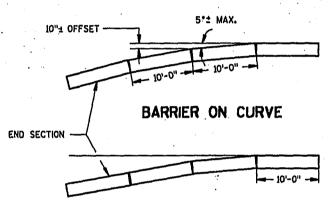
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

THE PORTABLE CRASH CUSHION SHALL BE THE G-R-E-A-T CZ IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC. ONE EAST WACKER DRIVE,

THE CRASH CUSHION SHALL BE MANUFACTURED, ASSEMBLED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS DETAILED ELSEWHERE IN THE PLANS OR AS SHOWN ON THE APPROVED SHOP DRAWINGS. THE CRASH CUSHION PLATFORM SHALL BE ANCHORED TO EITHER 6 INCH MINIMUM CONCRETE PAVEMENT OR 3 INCH MINIMUM ASPHALTIC SURFACES THAT HAVE A PREPARED COMPACTED SUBBASE IN ACCORDANCE WITH THE MANUFACT-

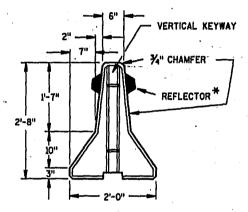
GALVANIZED WIRE ROPE SHALL BE 6 X 19 CLASS 2 IWRC WITH A MINIMUM BREAKING STRENGTH OF 20,000 LBS., AND SHALL CONFORM TO FEDERAL SPECIFICATION RR-W-410. THE ZINC COATING SHALL CONFORM TO TABLE II OF THE FEDERAL SPECIFICATIONS.

#WHEN BARRIERS ARE USED TO SEPARATE OPPOSING TRAFFIC, REFLECTORS ARE REQUIRED ON BOTH SIDES.



FLARE AT BARRIER END

OPERATING SPEED, MPH	FLARE RATE
40 OR LESS	10 : 1
50 OR MORE	15:1



END VIEW SECTION A-A

THIS DRAWING CONSISTS OF TWO SHEETS. BOTH SHEETS ARE REQUIRED WHEN THIS DRAWING IS CALLED FOR IN THE PLANS.

PRECAST CONCRETE BARRIER END SECTION AND PORTABLE CRASH CUSHION

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

STATE DESIGN ENGINEER FOR HWYS

CONSTRUCTION ZONE PORTABLE CRASH CUSHION

ANCHORAGE DEVICE (WHERE ONE-WAY TRAFFIC EXISTS)

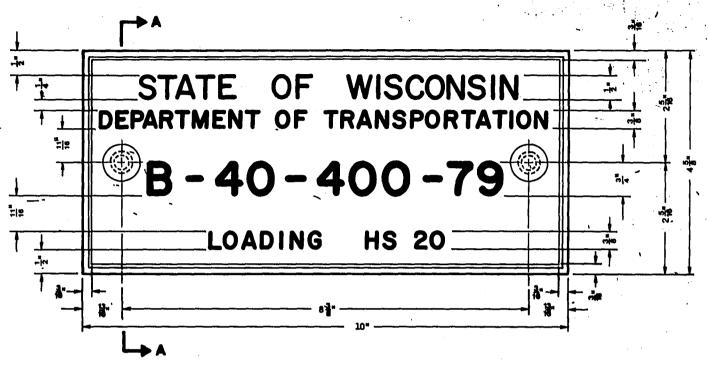
THRIE BEAM FENDER PANEL

NOSE COVER

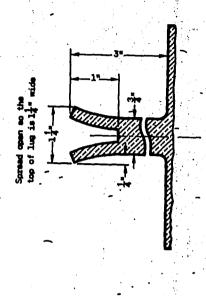
STABILIZING CHAIN

DEFLECTOR PANEL

D.D. 148



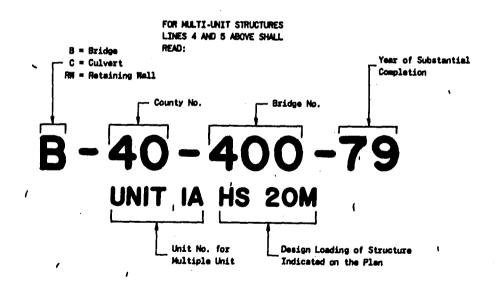
When the plate is attached to metal, delete the anchor lugs and drill a 32" • hole.



ALTERNATE LUG.

TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING AND LOADING DESIGNATION MULTI-UNIT STRUCTURES

GENERAL NOTES

Name Plates to be installed on Bridges, Culverts, and Retaining Walls shall conform to the requirements of Section 506,2.4 of the Standard Specifications.

The Bridge Number and Design Loading shown on this drawing are examples only. See Construction Plans for individual numbering and design loading.

NAME PLATE (STRUCTURES)

State of Wisconsin

Department of Transportation

Division of Transportation Facilities

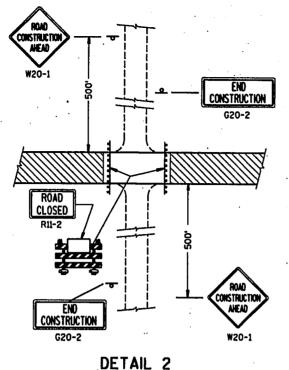
9-27-79

CHIEF DESIGN ENGINEER

S.D.D.

ថ

C



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

END CONSTRUCTION W20-1 ROAD CLOSED 10 THRU TRAFFIC ROAD CONSTRUCTION AHEAD CONSTRUCTION G20-2 th W20-1

DETAIL 3 (PUBLIC CROSS-TRAFFIC MAINTAINED, CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND THEIR LOCATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE WISCONSIN MANUAL OF TRAFFIC CONTROL DEVICES, THE PLANS, SPECIFICATIONS AND CONTRACT.

ENGINEER, ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS WORK SHALL BE COVERED AS DIRECTED BY THE ENGINEER. ALL "STOP" OR OTHER REGULATORY SIGNS ON THE SIDE ROADS SHALL NOT BE DISTURBED, EXCEPT WHEN NECESSARY TO COMPLETE THE WORK. THE SIGNS MUST THEN BE IMMEDIATELY REESTABLISHED.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL FOR FULL' ROAD CLOSURES. TYPE "A" LOW INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

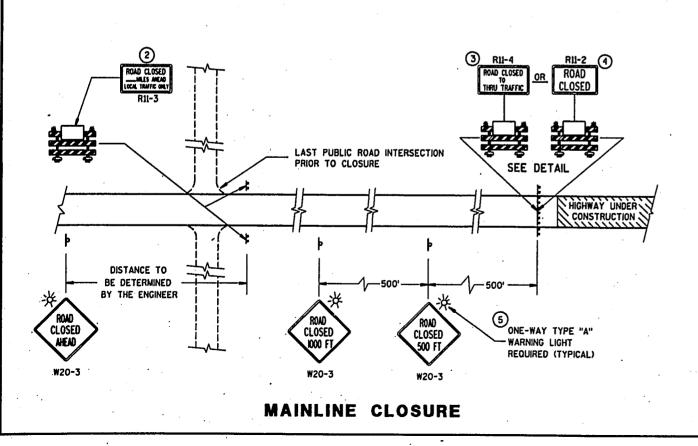
THE ROAD CLOSED SIGN (R11-2), ROAD CLOSED_ _ MILES AHEAD SIGN (R11-3) AND THE ROAD CLOSED TO THRU TRAFFIC SIGN (RII-4) SHALL BE ATTACHED ONLY TO THE TOP RAIL OF THE TYPE III BARRICADE. THE SIGNS SHALL NOT COVER MIDDLE RAIL.

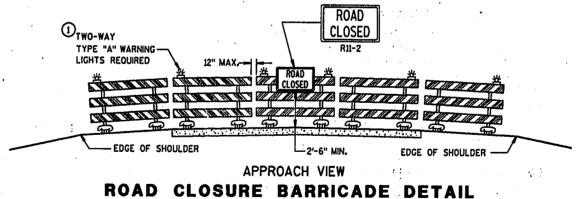
TYPE "H" REFLECTIVE SHEETING SHALL BE USED ON ALL BARRICADES, TYPE I, II AND III. AND ON ALL RII-2, RII-3 AND RII-4 SIGNS.

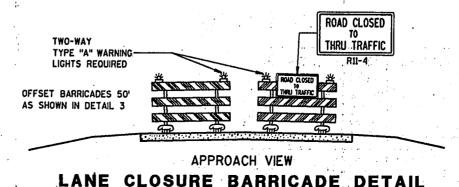
ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW: RII-2, "ROAD CLOSED" SIGNS SHALL BE 48" X 30". RII-3, AND RII-4 SIGNS SHALL BE 60" X 30". G20-2 SIGNS SHALL BE 60" X 24".

- (1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND AT LEAST ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY
- (2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- (3) FOR ROAD CLOSURE <u>WITH</u> LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL.
- 4 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT. SEE ROAD CLOSURE BARRICADE DETAIL
- 5 ONE-WAY LIGHTS SHALL BE PROVIDED ON ALL ADVANCE WARNING SIGNS. THE UNIT SHALL BE POSITIONED SUCH THAT THE LIGHT SOURCE IS OUTSIDE THE SIGN FACE AND AT THE TOP OF THE SIGN.

SIDEROAD CLOSURES







LANE CLOSURE BARRICADE DETAIL

LEGEND

POST MOUNTED WARNING SIGN

TYPE III BARRICADES WITH TYPE "H" REFLECTIVE SHEETING

TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)

WORK AREA

BARRICADES AND TRAFFIC CONTROL FOR **ROAD CLOSURES**

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED 10-31-89

STATE TRAFFIC ENGINEER FOR HWYS