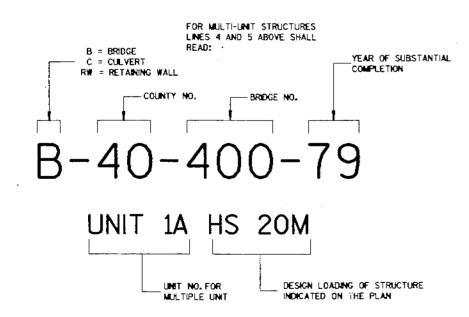


### TYPICAL NAME PLATE (BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING AND LOADING DESIGNATION
MULTI-UNIT STRUCTURES

S.D.D.

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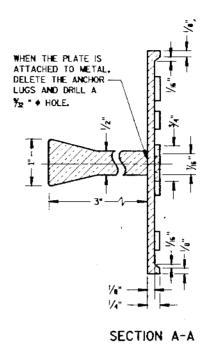
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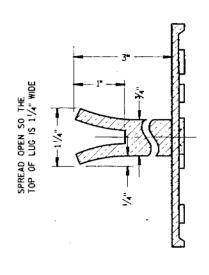
#### GENERAL NOTES

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.

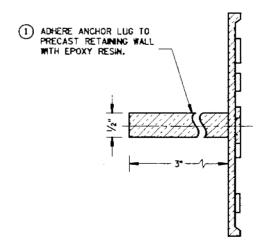
THE BRIDGE NUMBER AND DESIGN LOADING SHOWN ON THIS DRAWING ARE EXAMPLES ONLY, SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND DESIGN LOADING,

1 EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.





ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE
(STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

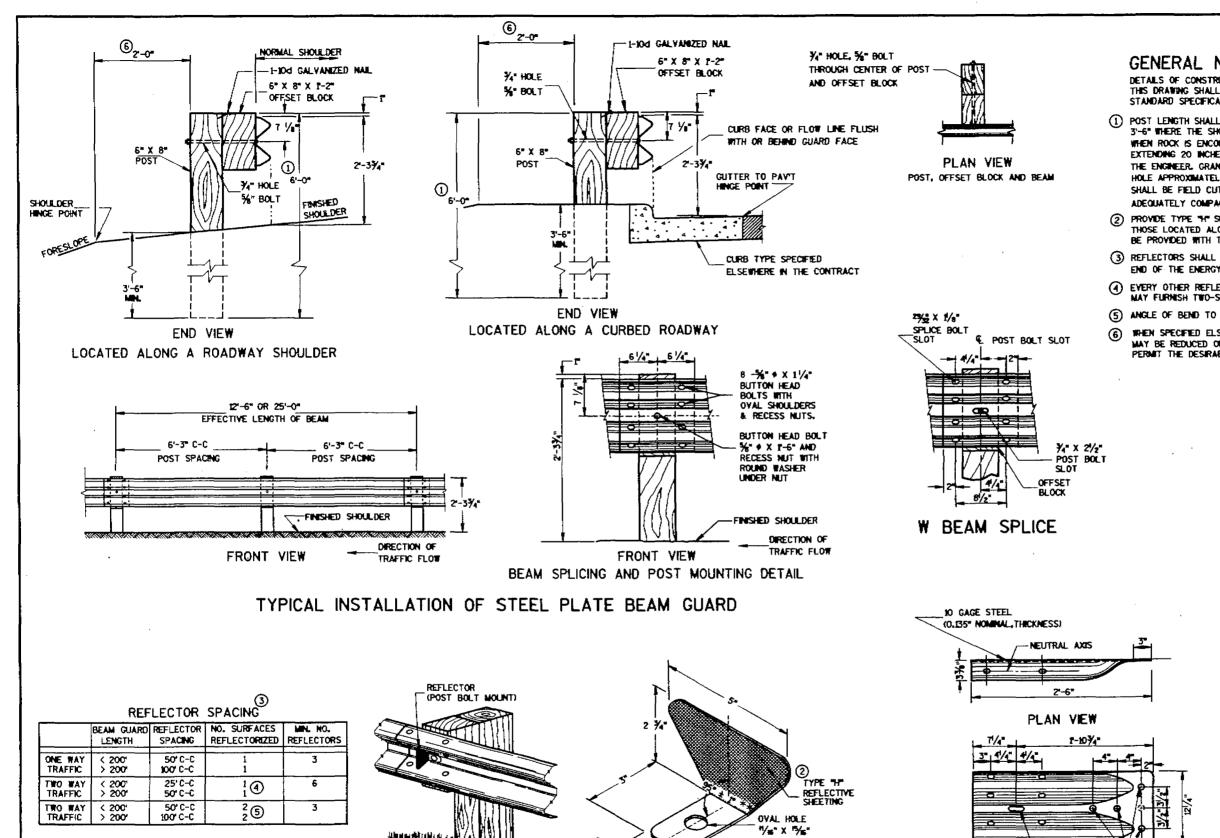
01/21/98

DATE

CHEF ROADWAY DEVELOPMENT ENGINEER

FHWA

S.D.D. 12 A 3-5



REFLECTOR DETAIL AND TYPICAL INSTALLATION

GALVANIZED STEEL (0.089" MIN. BASE

-METAL THICKNESS) OR POLYCARBONATE PLASTIC (0.080" MIN. THICKNESS)

FRONT VIEW W BEAM TERMINAL CONNECTOR RUSE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES!

¾" X 21/2" POST

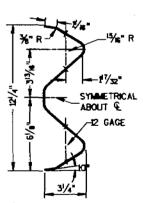
BOLT SLOT (OPTIONAL)

SPLICE BOLT SLOTS

GENERAL NOTES

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

- (1) POST LENGTH SHALL BE INCREASED TO PROVIDE A MINIMUM EMBEDMENT OF 3'-6" WHERE THE SHOULDER HINGE POINT IS LOCATED IN FRONT OF THE POST. WHEN ROCK IS ENCOUNTERED DURING EXCAVATION A 12 INCH DIA, POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGNEER, GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2 INCHES DEEP TO PROVIDE DRAINAGE. THE POSTS SHALL BE FIELD OUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.
- (2) PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "IP YELLOW REFLECTIVE SHEETING.
- (3) REFLECTORS SHALL NOT BE INSTALLED ON THE FIRST 50'OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- EVERY OTHER REFLECTOR REVERSED FOR 2-WAY VISIBILITY, CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
- (5) ANGLE OF BEND TO BE 90° ± 1° FOR TWO-SIDED REFLECTORS.
- WHEN SPECIFIED ELSEWHERE IN THE CONTRACT THE 2-FOOT MINIMUM TO HINGE POINT, MAY BE REDUCED OR ELIMINATED WHERE EXISTING CONDITIONS WILL NOT PERMIT THE DESIRABLE EARTHWORK.

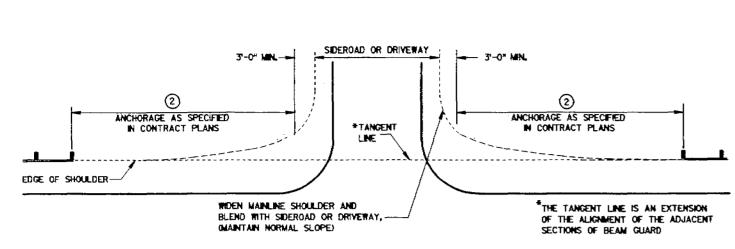


SECTION THRU W BEAM

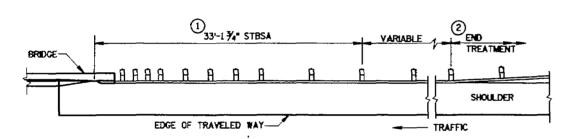
CLASS 'A' STEEL PLATE BEAM GUARD, INSTALLATION & ELEMENTS

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

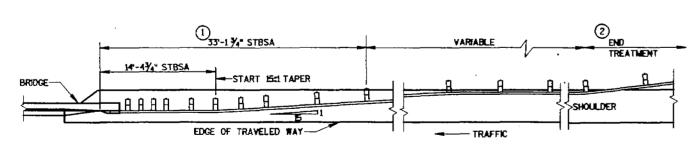
Toy & Thincome CHEF ROADWAY DEVELOPMENT ENGINEER FHRA



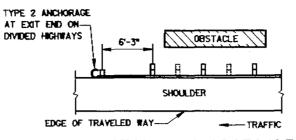
#### BEAM GUARD AT SIDEROADS OR DRIVEWAYS



BEAM GUARD AT FULL WIDTH BRIDGES



BEAM GUARD AT NARROW BRIDGES
(FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)



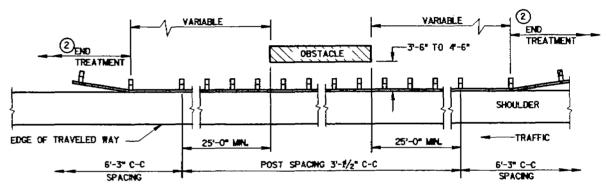
## BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC

#### **GENERAL NOTES**

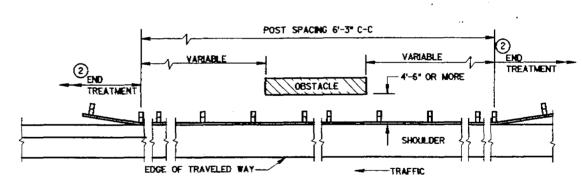
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

BEAN GUARD LOCATIONS AND LENGTHS ARE SHOWN ELSEWHERE IN THE PLAN.

- (1) STEEL THREE BEAM STRUCTURE APPROACH (STBSA).
- (2) FOR TRAFFIC APPROACH SIDE OF BRIDGES/OBSTACLES, TYPE 2 ANCHORAGE SHALL BE USED ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.



BEAM GUARD AT OSBSTACLES - TWO WAY TRAFFIC GRAL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6"



BEAM GUARD AT OSBSTACLES - TWO WAY TRAFFIC (RAIL TO OBSTACLE CLEARANCE 4-6" OR MORE)

CLASS "A" STEEL PLATE
BEAM GUARD
(AT BRIDGES, OBSTACLES
AND SIDEROADS/DRIVEWAYS)
STATE OF WISCONSIN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2/19/99

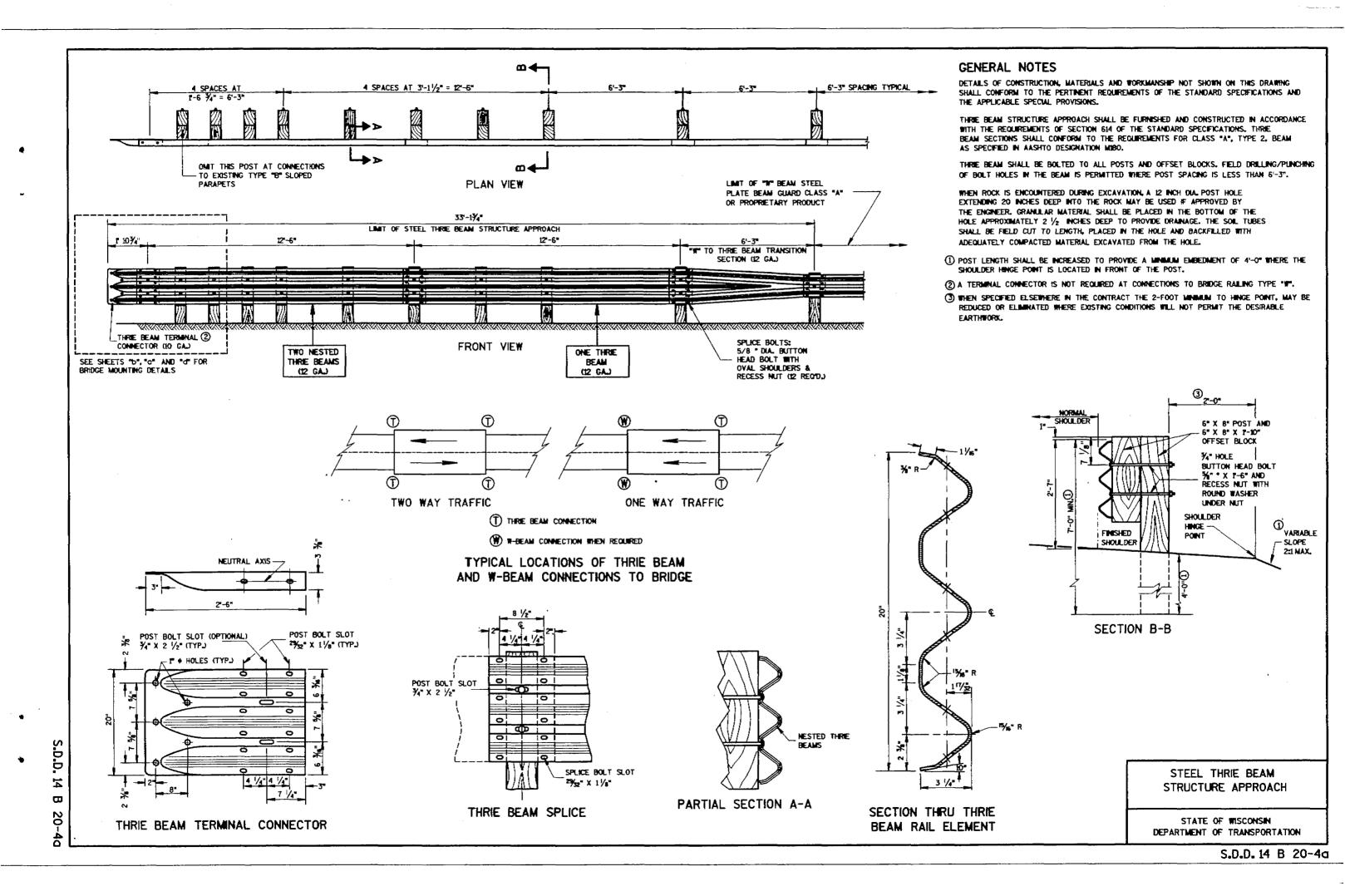
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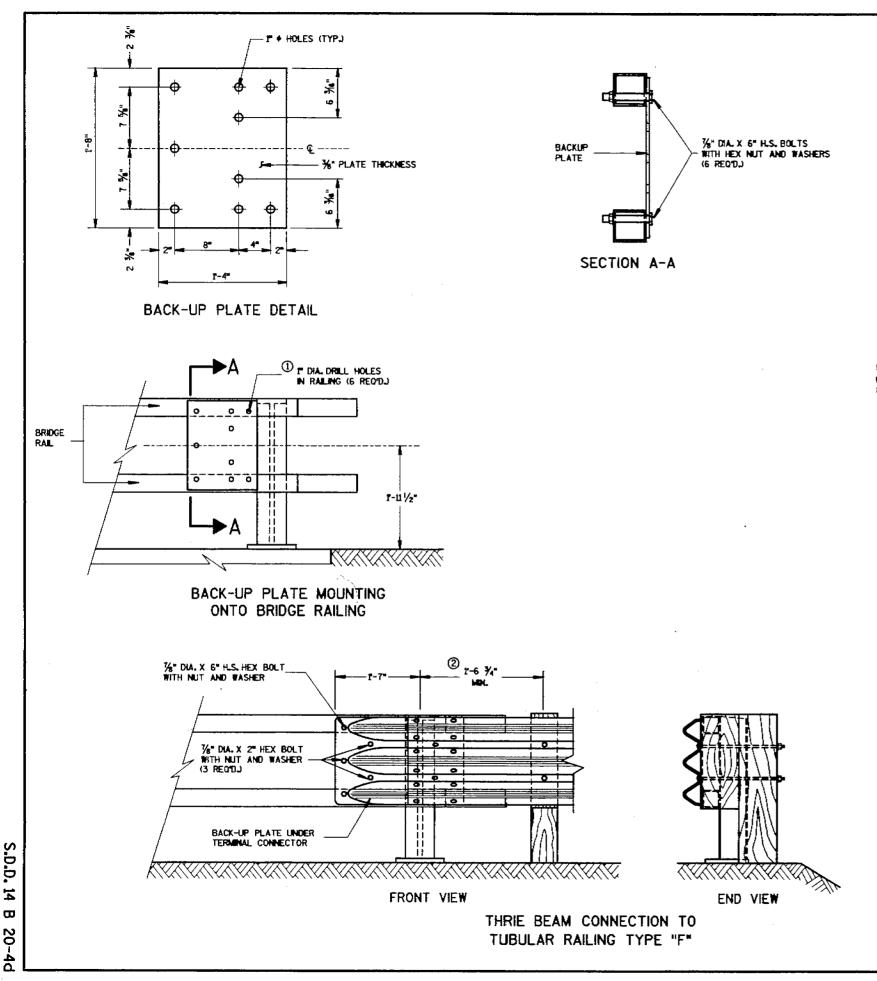
CHEF ROADWAY DEVELOPMENT ENGINEER

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S.D.D. 14 B 18-3

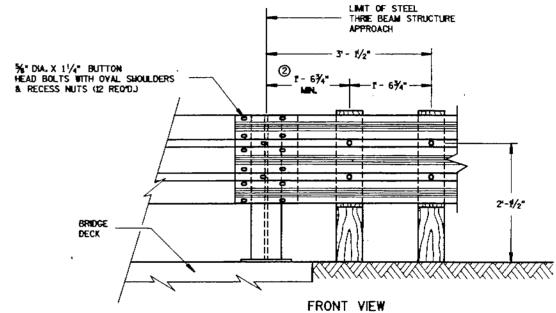




#### GENERAL NOTES

BOLTS, PLATES, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 325 AND BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

- ① PAYMENT FOR DRALLING HOLES IN RAILING SHALL BE INCLUDED IN THE ITEM STEEL THRIE BEAM STRUCTURE APPROACH.
- ② THIS DIMENSION WILL YARY DEPENDING ON ABUTIMENT TYPE, WINGWALL DETAILS, AND SKEW ANGLE. THE FIRST WOOD POST OFF THE BRIDGE SHALL BE PLACED AS CLOSE AS FEASIBLE TO THE STEEL END POST.



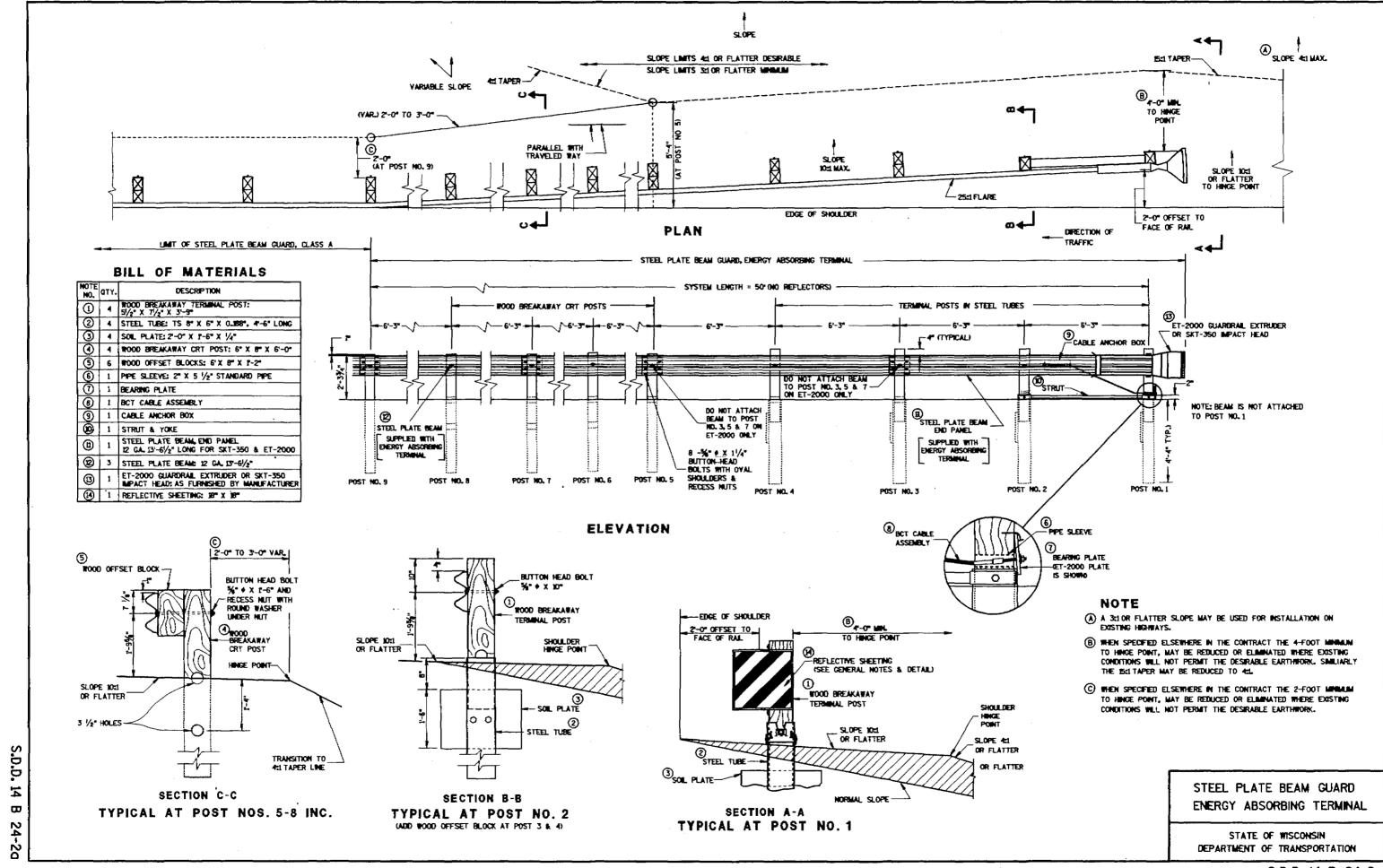
THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"

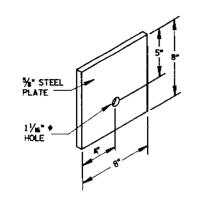
STEEL THRIE BEAM STRUCTURE | APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

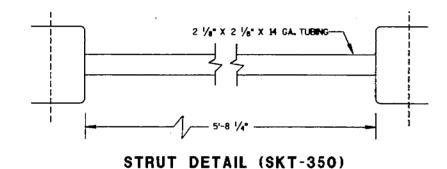
APPROVED
2/19/49
DATE CHEF ROADWAY DEVELOPMENT ENGINEER

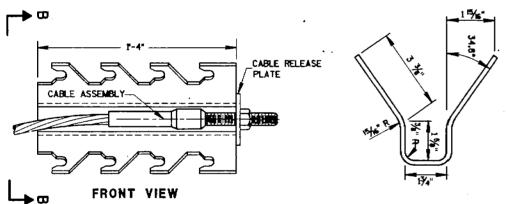
S.D.D. 14 B 20-4d





STEEL BEARING PLATE (SKT-350)



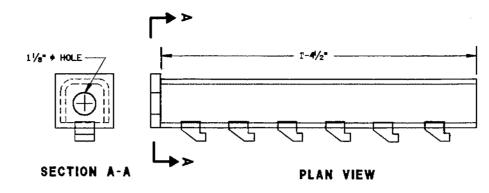


SECTION B-B

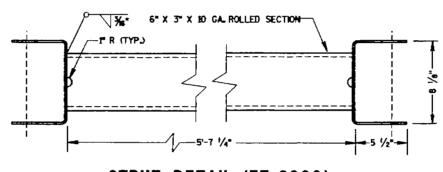
CABLE ANCHOR BOX (SKT-350)

(SKT-350)

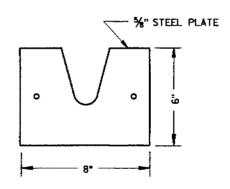
S.D.D. 14



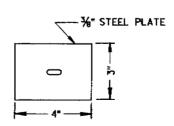
CABLE ANCHOR BOX (ET-2000)



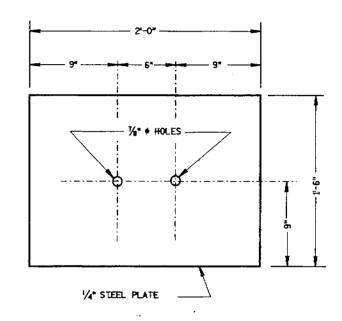
STRUT DETAIL (ET-2000)



STEEL BEARING PLATE (ET-2000)



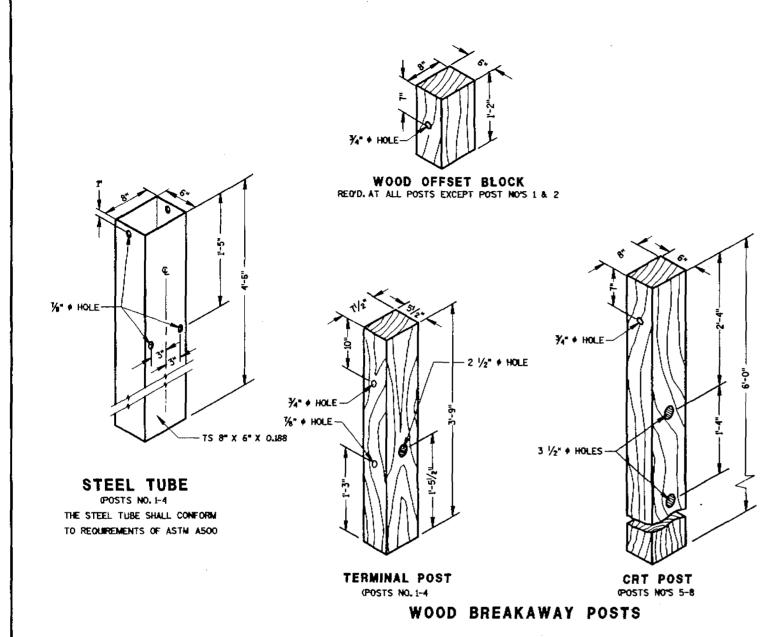
BEARING PLATE WASHER ET-2000)
(ET-2000)



SOIL PLATE (SKT-350 & ET-2000)

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



#### **GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP MOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTIMENT REQUIREMENTS OF THE STAMOARD SPECIFICATIONS, APPLICABLE SPECIAL PROVISIONS AND MANUFACTURERS INSTRUCTIONS.

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL SHALL BE EITHER THE EXTRIDIER TERMINAL GET-2000), OR THE SEQUENTIAL KINKING TERMINAL (SKT-350), THE CONTRACTOR SHALL NOT INTERMIX PROPRIATERY PRODUCT MATERIALS.

THE "ET-2000" IS AVAILABLE FROM SYRO, INC., 2524 N. STEMMONS FREEWAY, DALLAS TEXAS 75207. TELEPHONE 1-800-835-6086 OR 1-800-644-7976

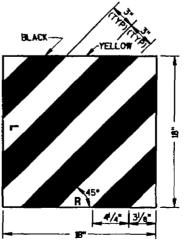
THE "SKT-350" IS AVAILABLE FROM ROAD SYSTEMS, INC., 7631 NEW CASTLE DRIVE, FRANKFORT, ILLINOIS 60423. TELEPHONE (815) 464-5917

THE ET-2000, AND SKT-350 END TERMINALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

STEEL PLATE BEAM GUARD, ENERGY ABSORBING TERMINAL SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH, WHICH SHALL INCLUDE HARDWARE, STEEL PLATE BEAM GUARD, POSTS, REFLECTIVE SHEETING AND INSTALLATION AS SHOWN.

REFLECTIVE SHEETING - SHALL CONFORM TO ASTM SPECIFICATION D4956-93b, REFLECTIVE SHEETING TYPE III, BACKING CLASS 4, PERFORMANCE REGUIREMENT TYPE III. THE MESSAGE AND LINES SHALL BE APPLIED TO THE SIGNS BY THE SILK SCREEN STENCIL PROCESS USING A BLACK OR DARK STENCIL PASTE AS A TYPE APPROVED BY THE MANUFACTURER OF THE FACE MATERIAL TO WHICH IT IS TO BE APPLIED. MESSAGE UNITS CUT FROM NONREFLECTIVE SHEETING AND APPLIED TO THE SIGN FACE ARE NOT ACCEPTABLE. AFTER THE APPROACH END OF THE STEEL PLATE BEAM GUARD INSTALLATION IS COMPLETE, CLEAN THE AREA WHERE THE REFLECTIVE SHEETING WILL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION. ONCE CLEAN, APPLY REFLECTIVE SHEETING DIRECTLY TO THE STEEL PLATE BEAM GUARD AS SHOWN. THE CONTRACTOR SHALL TURN OVER THE MANUFACTURERS WARRANTY FOR THE REFLECTIVE SHEETING TO THE DEPARTMENT FOR POTENTIAL DEALING WITH THE MANUFACTURER. PAYMENT OF REFLECTIVE SHEETING IS INCIDENTAL TO STEEL PLATE BEAM GUARD, EMERGY ABSORBING TERMINAL.

WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA, POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE, THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.



REFLECTIVE SHEETING DETAIL

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

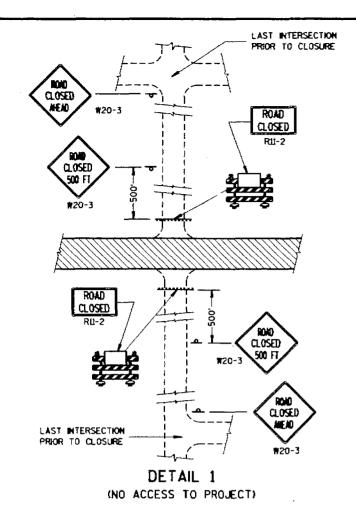
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2/n/99

DATE

CHEF ROADWAY DEVELOPMENT ENGINEER
FHWA

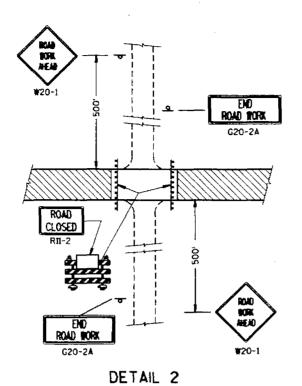


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(PUBLIC CROSS-TRAFFIC MAINTAINED. NO ACCESS TO PROJECT).

# ROAD NORK G20-2A RAND CLOSED 10 THRU TRAFFIC ROAD BORK G20-2A #20-1

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 PERTIMENT REQUIREMENTS OF THE WISCONSIN MANUAL OF TRAFFIC CONTROL DEVICES, THE PLANS, SPECIFICATIONS AND CONTRACT.

SIGN AND BARRICADE LOCATIONS MAY BE ADJUSTED IN THE FIELD AS DIRECTED BY THE 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 SE DISTURBED, EXCEPT WHEN NECESSARY TO COMPLETE THE WORK, THE SIGNS MUST THEN BE MANEDIATELY REESTABLISHED.

ALL TYPE MBARRICADES 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.

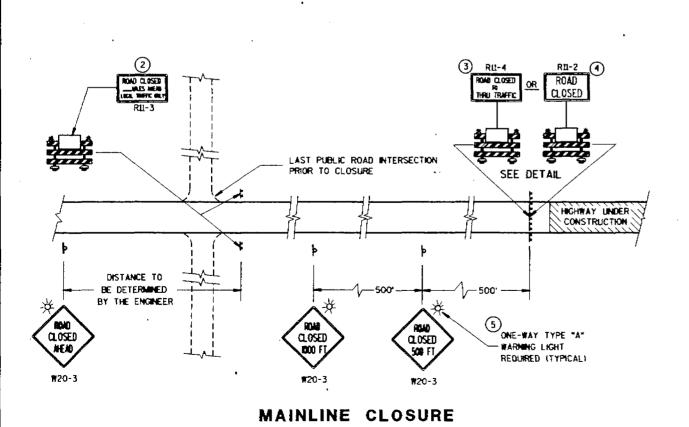
THE ROAD CLOSED SIGN (R11-2), ROAD CLOSED \_\_\_\_ MILES AHEAD SIGN (R11-3) AND THE ROAD CLOSED TO THRU TRAFFIC SIGN (RII-4) SHALL BE ATTACHED ONLY TO THE TOP RAIL OF THE TYPE IN BARRICADE, THE SIGNS SHALL NOT COVER MIDDLE RAIL.

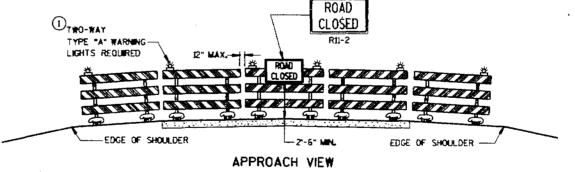
TYPE "H" REFLECTIVE SHEETING SHALL BE USED ON ALL BARRICADES, TYPE I, II AND III, AND ON ALL RII-2, RII-3 AND RII-4 SIGNS.

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". G20-2A SIGNS SHALL BE 48" X 24".

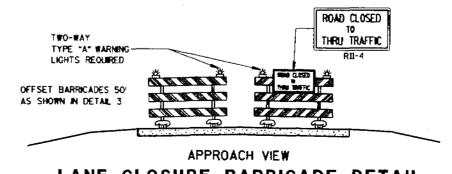
- (1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND AT LEAST ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS, SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY
- (2) THESE SIGNS AND BARBICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- (3) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL
- (4) FOR ROAD CLOSURE <u>WITHOUT</u> 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

#### SIDEROAD CLOSURES





#### ROAD CLOSURE BARRICADE DETAIL



LANE CLOSURE BARRICADE DETAIL

#### LEGEND

- P POST MOUNTED WARNING SIGN
- TYPE #BARRICADES WITH TYPE THE REFLECTIVE SHEETING
- TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK AREA

BARRICADES AND SIGNS FOR ROAD CLOSURES

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED 8-10-95 DATE

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