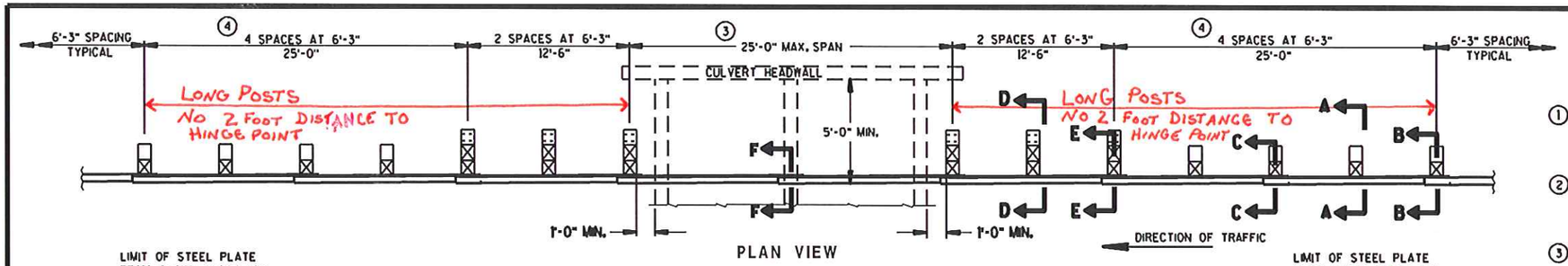
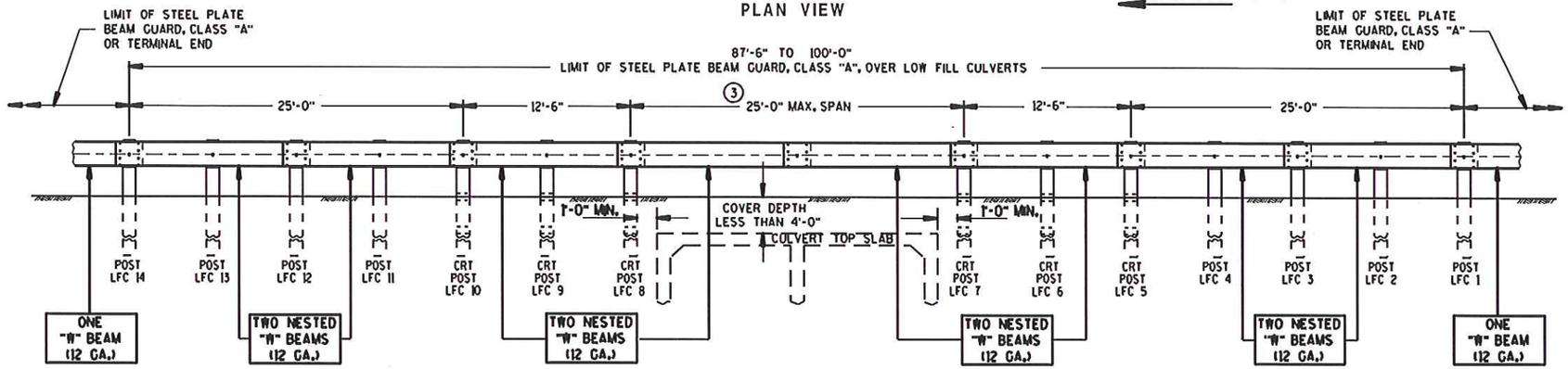
PROPOSED BEAM GUARD AT BOLTONVILLE ROAD OPTION #1



PLAN VIEW



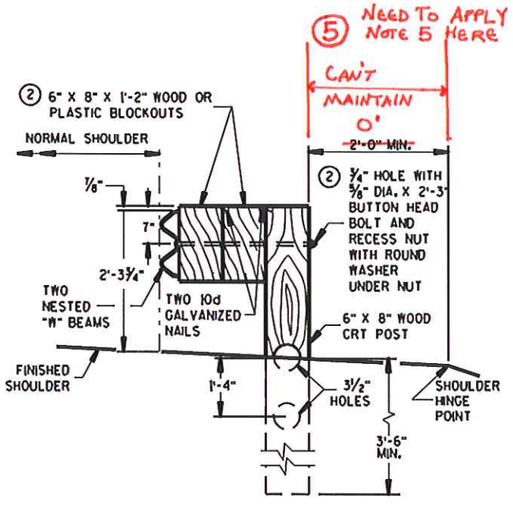
FRONT VIEW

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD OVER LOW FILL CULVERTS

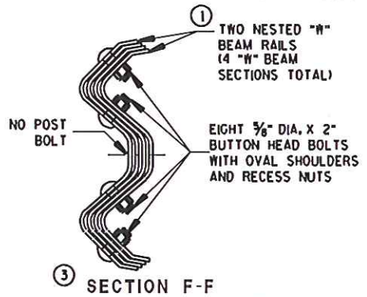
GENERAL NOTES

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.

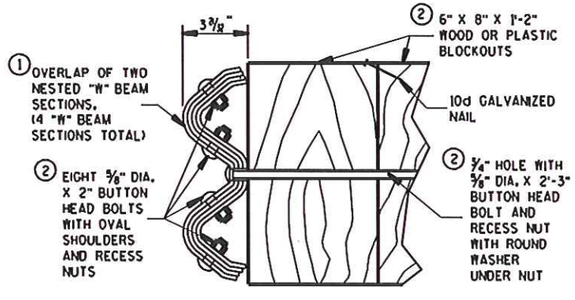
1. MAINTAIN THE NESTING OF EACH NESTED PAIR OF "W" BEAM SECTIONS THROUGH SPLICES. ORIENTATE NESTED "W" BEAM SPLICES IN THE DIRECTION OF TRAFFIC AS THE PLAN VIEW SHOWS. SEE S.D.D. 14 B 15 FOR SPLICE INSTALLATION.
2. THE CONTRACTOR MAY USE APPROVED PLASTIC BLOCKOUTS IN LIEU OF WOOD BLOCKOUTS. SEE S.D.D. 14 B 15 FOR TYPICAL BLOCKOUT, SPLICE AND REFLECTOR INSTALLATIONS. USE BOLT SIZES AND LENGTHS AS SHOWN ON THIS DETAIL.
3. PROVIDE 12'-6", 18'-9" AND 25'-0" SPANS ONLY. USE A MAXIMUM OF ONE SPLICE LOCATED ANYWHERE WITHIN THE SPAN SECTION. LOCATE ALL OTHER SPLICES AT BEAM GUARD POSTS.
4. IN THE FIRST AND LAST 25 FOOT SECTIONS (POSTS LFC 1-4 & LFC 11-14), THE CONTRACTOR MAY USE W6 X 9 OR W6 X 8.5 STEEL POSTS WITH NOTCHED PLASTIC BLOCKOUTS OR 6" X 8" WOOD POSTS WITH EITHER WOOD OR PLASTIC BLOCKOUTS. DO NOT MIX STEEL POSTS WITH NOTCHED PLASTIC BLOCKOUTS AND WOOD POSTS WITH EITHER WOOD OR PLASTIC BLOCKOUTS IN THE SAME INSTALLATION.
5. WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK, THE PLAN TYPICAL SECTIONS OR DETAILS MAY SHOW, OR THE ENGINEER MAY ALLOW, THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. BUILD AS THE PLAN SHOWS OR ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST SOIL DEPTH TO 4'-6" OR MORE.



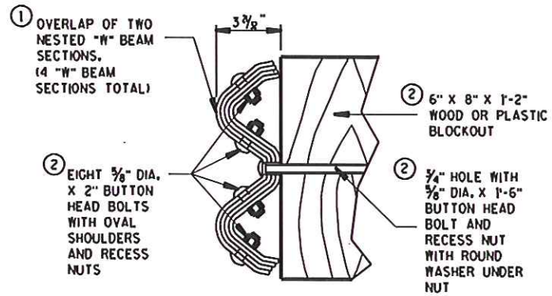
SECTION D-D
TYPICAL CRT POST LFC 6 AND 9



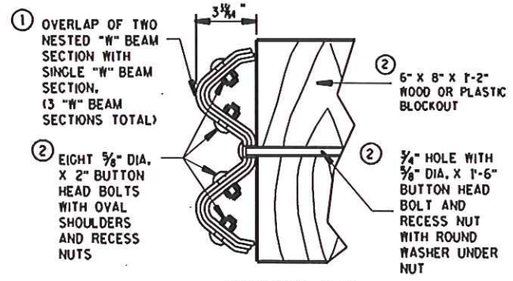
3 SECTION F-F
BEAM SPLICE IN SPAN OVER CULVERT



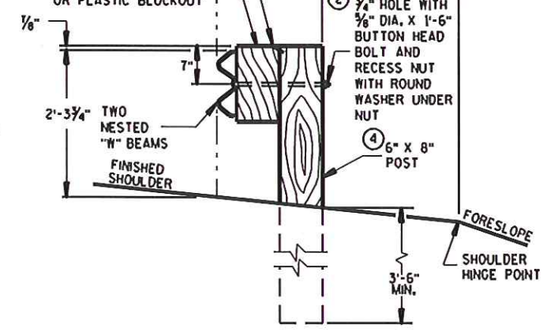
SECTION E-E
TYPICAL CRT POST LFC 5, 7, 8 AND 10



SECTION C-C
TYPICAL AT POSTS LFC 3 AND 12



SECTION B-B
TYPICAL AT POSTS LFC 1 AND 14



SECTION A-A
TYPICAL AT POST LFC 2,4,11,13

STEEL PLATE BEAM GUARD, CLASS "A", OVER LOW FILL CULVERTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

DATE — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

S.D.D. 14 B 25-1

S.D.D. 14 B 25-1

Standard Detail Drawing 14B25-1

References: FDM Procedure 11-45-1
AASHTO Roadside Design Guide

Bid items associated with this drawing:

Item #	Title
614.0305	Steel Plate Beam Guard Class A (LF)

Standardized Special Provisions associated with this drawing: None. Specification to be included in 2001 Edition of the Supplemental Specifications to be out in July 2001. For use prior, contact Will Anderson at the telephone number listed below for an electronic Special Provision.

Other SDD's associated with this drawing: This drawing must be supplemented with sheet 14B15 when this drawing is called for in the plans.

Design Notes: Spans greater than 25'-0" are not permitted under this installation. For spans greater than 25'-0", other installations such as S.D.D. 14 B 15 sheet c, concrete barriers or steel railings should be used. Contact the DTID Structures Design Section.

The Steel Plate Beam Guard, Class A, Over Low Fill Culverts shall be constructed in one of three span lengths; 12'-6", 18'-9" and 25'-0". The designer should calculate the effects of skew and horizontal curvature when determining the needed span length. Sharp horizontal curvature may require shop bending of nested beam guard. Sharp horizontal curvatures and large skews may prevent the use of this installation. All of the above span lengths must use the same upstream and downstream post configurations as shown on the detail drawing.

For cover depths over culverts greater than 4'-0", use the standard Steel Plate Beam Guard, Class A, installation (S.D.D. 14 B 15). Use drilled holes for post installation when the depth of cover is less than 4'-6".

A minimum distance of 5'-0" shall be provided between the front face of the beam guard and the back of the culvert headwall as shown in the detail to allow adequate distance for beam guard deflection. The designer should consult with DTID Structures Design Section to make sure the culvert(s) is designed long enough to provide this deflection distance. The 2-foot to hinge point behind posts LFC 1-4 & 11-14 may be reduced or eliminated under special situations where the appropriate earthwork cannot be provided, but the 2-foot minimum to hinge point behind posts LFC 5-7 & 8-10 must be provided at all times for the CRT posts to operate properly.

HAVE TO USE LONG POSTS
CAN'T HAVE 2-FOOT
TO HINGE POINT

Contact Person: Peter Amakobe (608) 266-2842

April 18, 2003