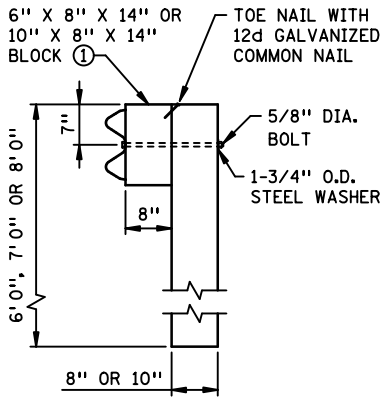
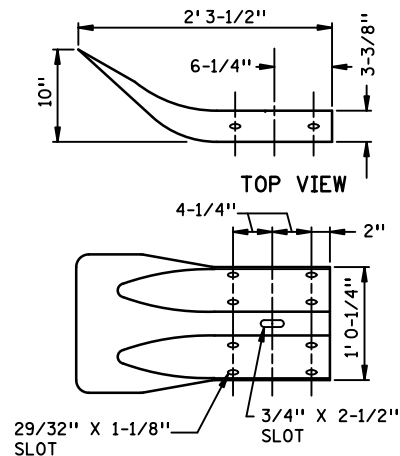


INSTALLATION

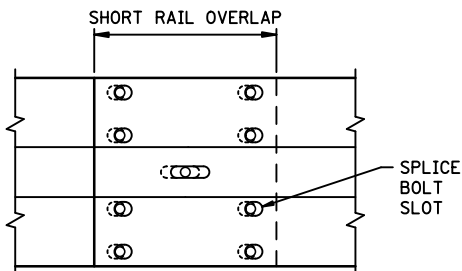
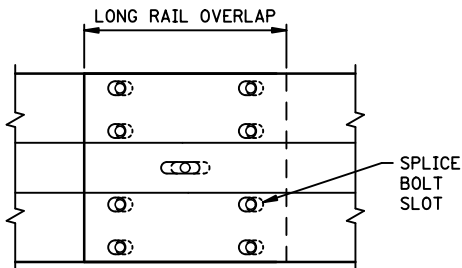


SAWED WOOD POST
6" X 8" OR 10" X 10"



ELEVATION

W-BEAM FLARED END SECTION



DEFINITION OF APART AND CLOSED SPLICES

NOTES:

SEE CHAPTER 10 IN THE ROAD DESIGN MANUAL FOR END TREATMENT INFORMATION.

STEEL PLATE BEAM GUARDRAIL, TERMINAL SECTION, RAIL SPLICE, SPLICE BOLT SHAPES AND DIMENSIONS SHALL CONFORM TO AASHTO M 180. ALL GUARDRAIL SHALL BE CLASS A (12 GAUGE).

GUARDRAIL INSTALLED ON CURVES WITH RADIUS OF 150 FT. OR LESS SHALL HAVE RAIL ELEMENTS SHOP CURVED.

USE THE SAME TYPE OF POST THROUGHOUT, ON NEW INSTALLATIONS.

WHEN RAIL SECTIONS USED FOR AN INSTALLATION ARE 12' 6" LONG, CENTER THE 8 SPLICE BOLTS ON TOP OF EACH OTHER (OR 1/2 APART AND 1/2 CLOSED). SEE DEFINITION OF APART AND CLOSED SPLICES.

WHEN 25 FT. LONG RAIL SECTIONS ARE USED FOR AN INSTALLATION, SET THE 8 SPLICE BOLTS ACCORDING TO THE AIR TEMPERATURE AS FOLLOWS:

BELOW 10° F. - SET 3/4 OF THE SPLICES APART AND 1/4 CLOSED.

10° F. TO 95° F. - CENTER THE SPLICE BOLT SLOTS OR SET 1/2 OF THE SPLICES APART AND 1/2 CLOSED.

ABOVE 95° F. - SET 1/4 OF THE SPLICES APART AND 3/4 CLOSED.

① USE A WOOD BLOCK OR AN APPROVED ALTERNATE.

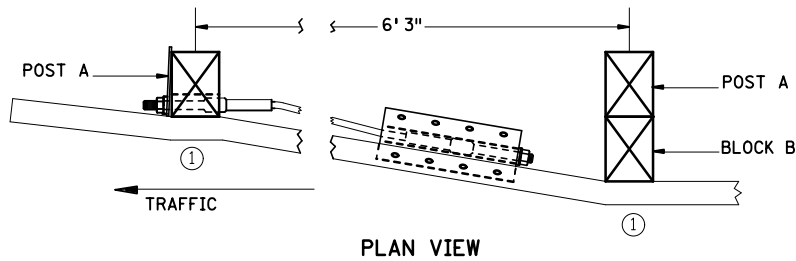
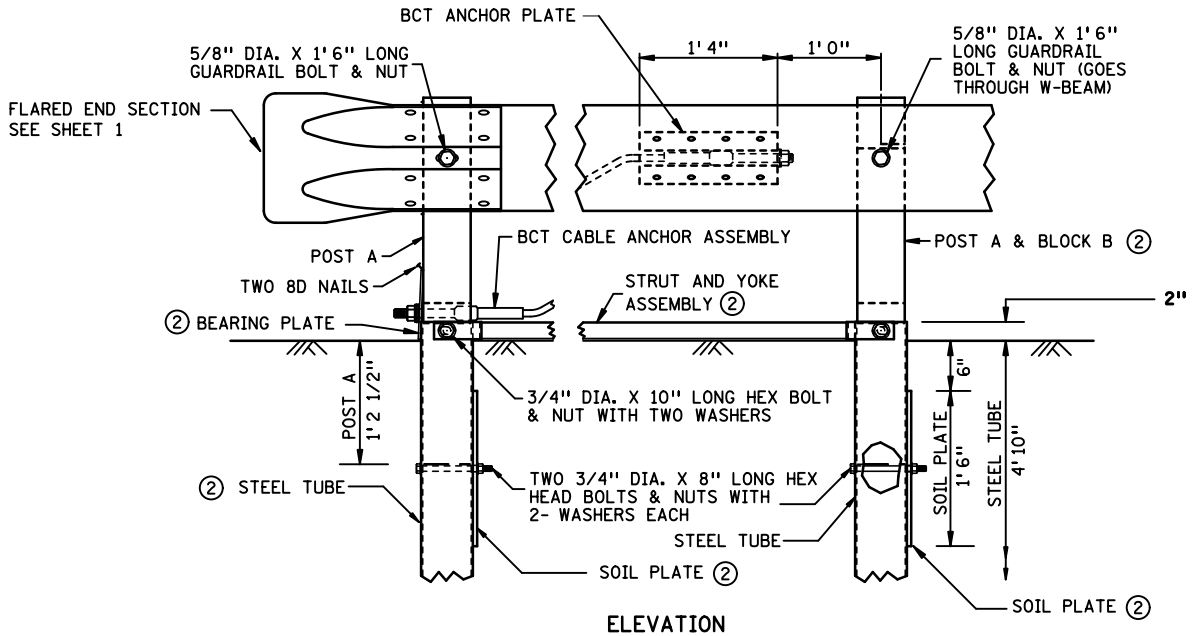
APPROVED MARCH 23, 2011

Michael J. Henneman
STATE DESIGN ENGINEER

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION
**W-BEAM GUARDRAIL &
END ANCHORAGES**
INSTALLATION WITH WOOD POSTS

SPECIFICATION
REFERENCE
2554

STANDARD
PLATE
NO.
8307S
1 OF 4



STRUT ANCHORAGE ASSEMBLY

NOTES:

STRUT ANCHORAGE ASSEMBLY IS BASED ON THE ECCENTRIC LOADER BREAKAWAY CABLE TERMINAL (ELT) SHOWN ON STANDARD PLATE 8329.

STRUCTURAL STEEL AS PER SPEC. 3306, UNLESS OTHERWISE NOTED. GALVANIZE STRUCTURAL STEEL AS PER SPEC. 3392 & 3394 AFTER FABRICATION, UNLESS OTHERWISE NOTED.

① W-BEAM TO BE FIELD FIT, NOT SHOP BENT.

② SEE DETAILS ON SHEET 3.

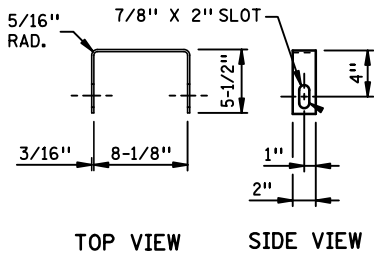
APPROVED MARCH 23, 2011

M. J. Henn
STATE DESIGN ENGINEER

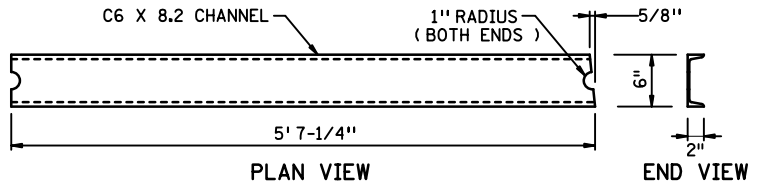
STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION
**W-BEAM GUARDRAIL &
END ANCHORAGES**
STRUT ANCHORAGE ASSEMBLY DETAILS (WOOD POSTS)

SPECIFICATION
REFERENCE
2554

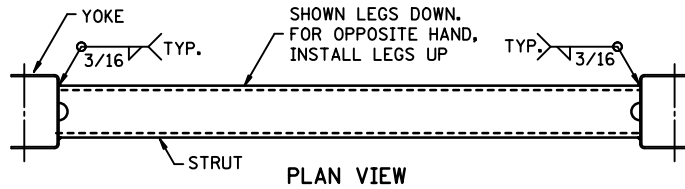
STANDARD
PLATE
NO.
8307S
2 OF 4



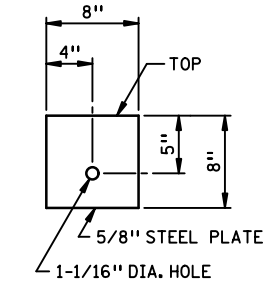
YOKE DETAILS
(2 REQUIRED)



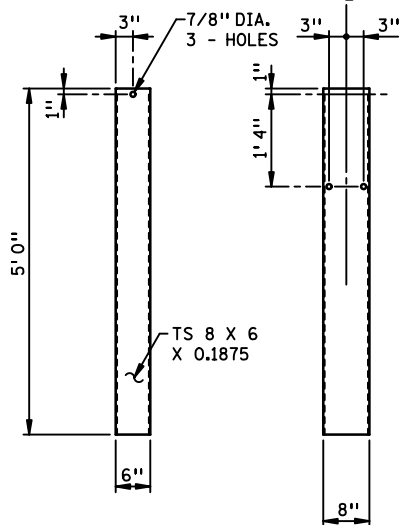
STRUT DETAILS



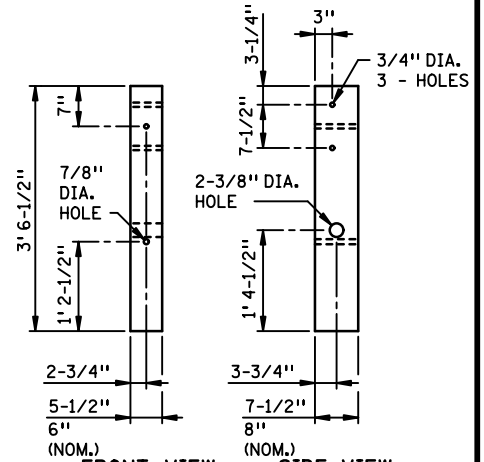
STRUT AND YOKE ASSEMBLY



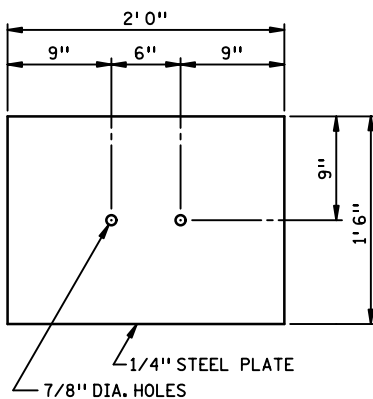
BEARING PLATE



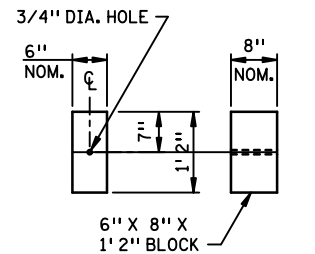
STEEL TUBE (POST A)



WOOD BREAKAWAY POST A



SOIL PLATE (POST A)
(2 REQUIRED)



WOOD BLOCK B
(STANDARD BLOCKOUT)

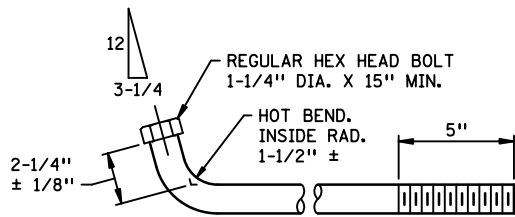
APPROVED MARCH 23, 2011

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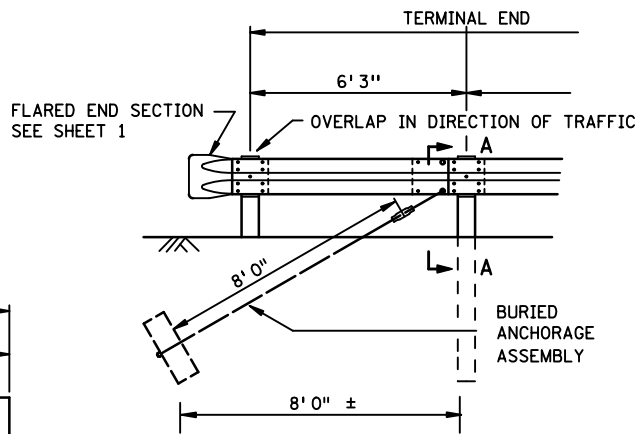
STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION
**W-BEAM GUARDRAIL &
END ANCHORAGES**
STRUT ANCHORAGE ASSEMBLY DETAILS (WOOD POSTS)

SPECIFICATION
REFERENCE
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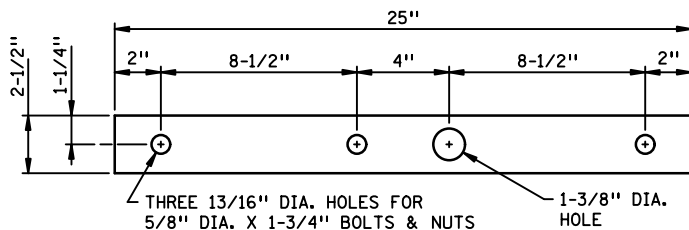
STANDARD
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ANCHORAGE BOLT

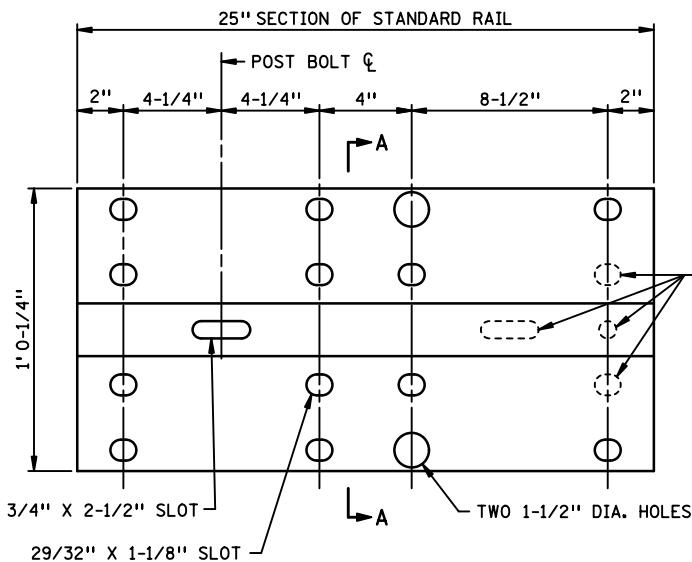


ANCHORAGE ASSEMBLY ELEVATION VIEW

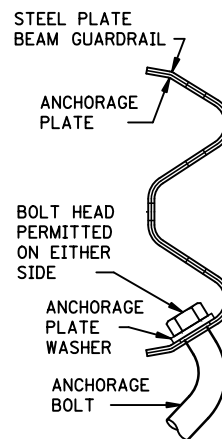


ANCHORAGE PLATE WASHER

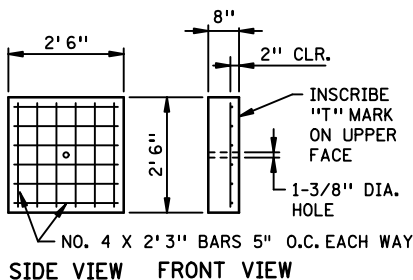
3/8" X 2-1/2" X 25"



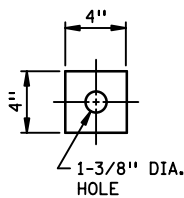
ANCHORAGE PLATE



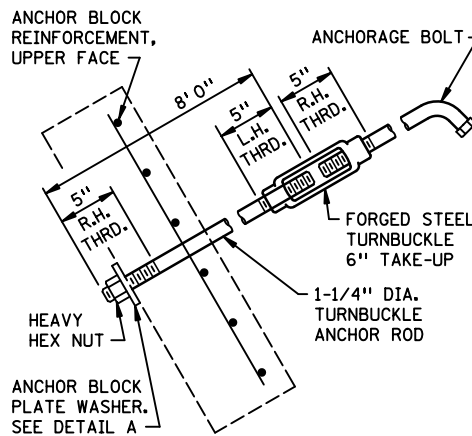
**SECTION A-A
SHOWING ASSEMBLY**



**ANCHOR BLOCK
PRECAST REINFORCED CONCRETE**



**DETAIL A
ANCHOR BLOCK PLATE WASHER
1/2" THICK X 4" SQUARE**



TURNBUCKLE ANCHOR ROD ①

① THE ANCHORAGE ASSEMBLY TURNBUCKLE SHOULD BE INSTALLED SO THAT THERE IS FULL THREAD CONTACT AT BOTH ENDS OF THE TURNBUCKLE ANCHOR ROD.

BURIED ANCHORAGE ASSEMBLY

APPROVED MARCH 23, 2011

Michael J. Henn
STATE DESIGN ENGINEER

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION
**W-BEAM GUARDRAIL &
END ANCHORAGES**
BURIED ANCHORAGE ASSEMBLY DETAILS (WOOD POSTS)

SPECIFICATION
REFERENCE
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REVISED
3-22-2013 M.J.E.

STANDARD
PLATE
NO.
8307S
4 OF 4