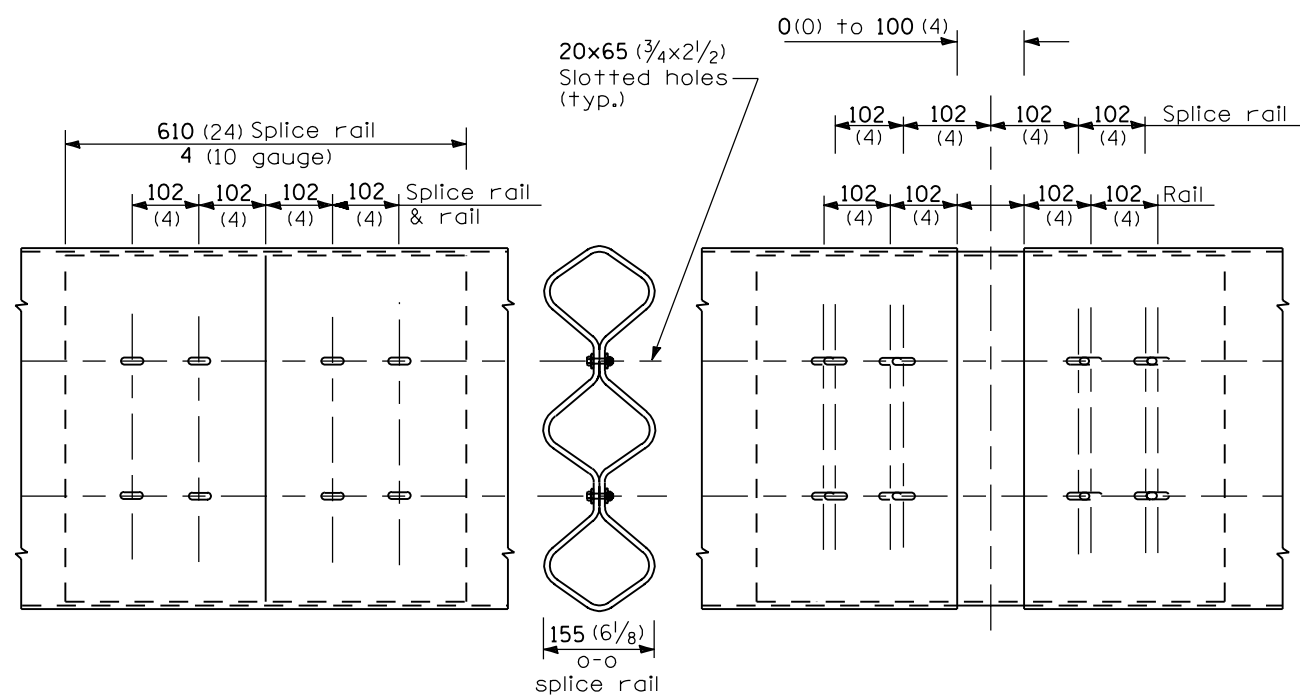
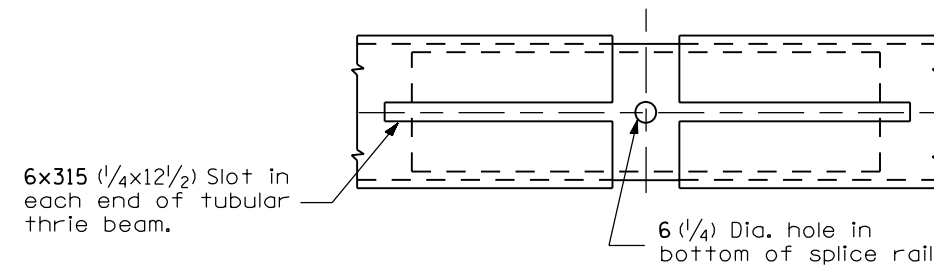


TUBULAR THRIE BEAM FOR INTERNAL SPLICE JOINT



INTERNAL SPLICE JOINT

INTERNAL EXPANSION SPLICE JOINT



BOTTOM VIEW OF INTERNAL EXPANSION SPLICE JOINT

GENERAL NOTES

Plate Washers B are to be placed under both heads and nuts of splicing bolts for internal splice and internal expansion splice joint.

Plate Washers C are to be placed under both heads and nuts of splicing bolts for lap expansion and internal lap splice joint.

See Standard 630001 for details of guardrail not shown.

All dimensions are in millimeters (inches) unless otherwise shown.

Illinois Department of Transportation

PASSED January 1, 1997

ENGINEER OF POLICE AND PROCEDURES

APPROVED January 1, 1997

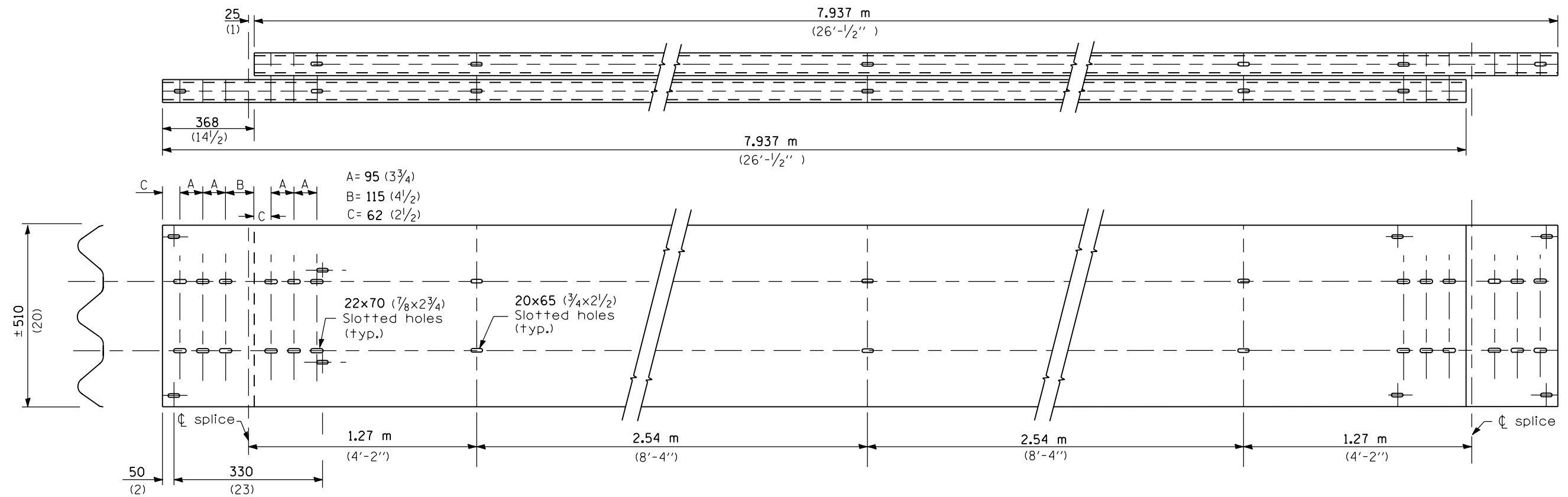
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

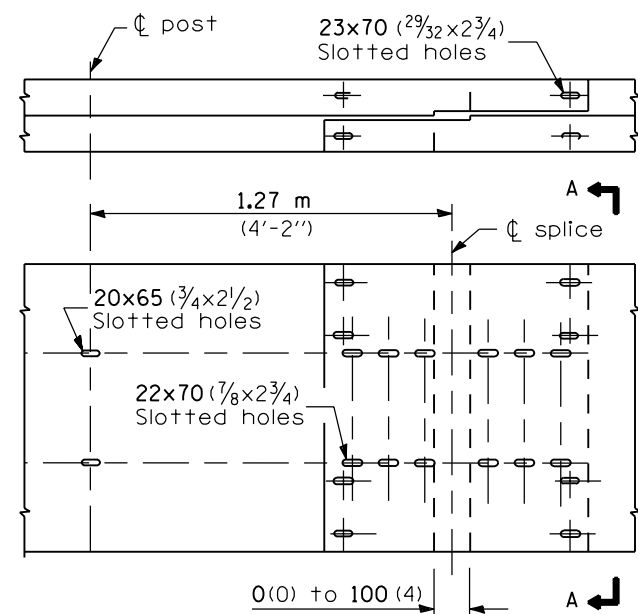
DATE	REVISIONS
1-1-97	Renum. Standard 2348-3. Deleted DN Symbol.
6-15-94	Moved Notes to Specs. Moved DESIGN NOTES. Added Metric.

TUBULAR THRIE BEAM RETROFIT RAIL FOR BRIDGES (Sheet 1 of 3)

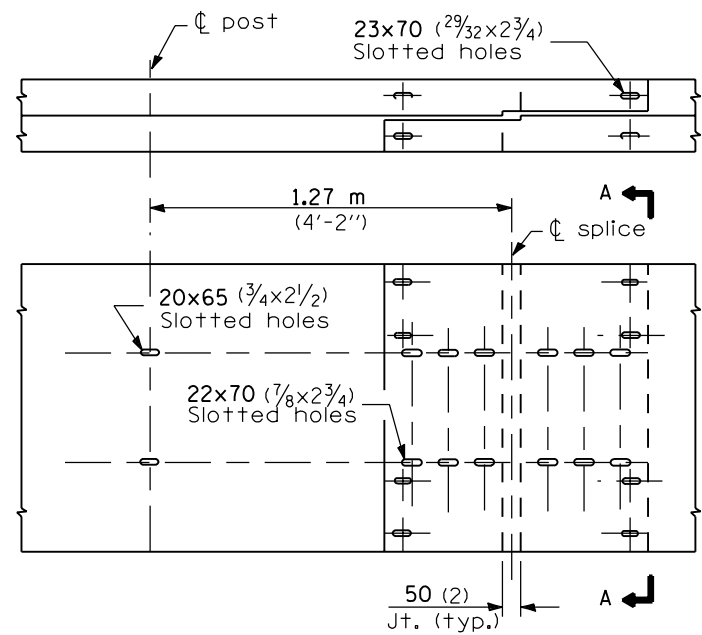
STANDARD 509001



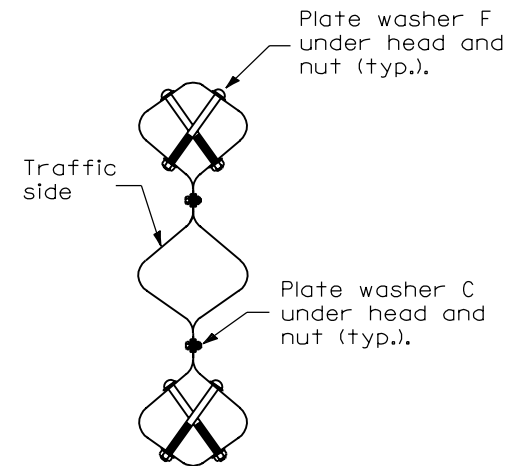
TUBULAR THRIE BEAM FOR LAP SPLICE JOINT



LAP EXPANSION SPLICE JOINT



LAP SPLICE JOINT



SECTION A-A

All dimensions are in millimeters (inches) unless otherwise shown.

**TUBULAR THRIE BEAM
RETROFIT RAIL FOR
BRIDGES** (Sheet 2 of 3)

STANDARD 509001

Illinois Department of Transportation

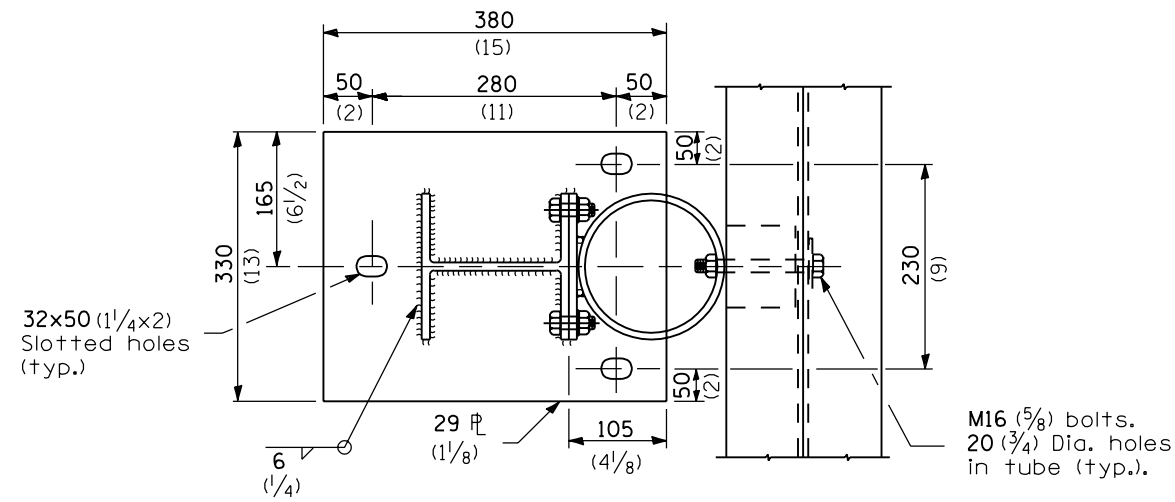
PASSED January 1, 1997

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 1997

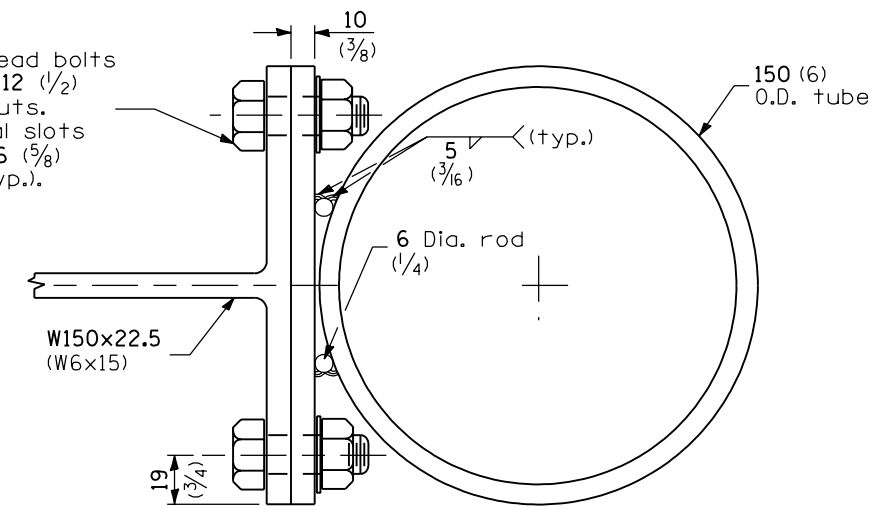
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

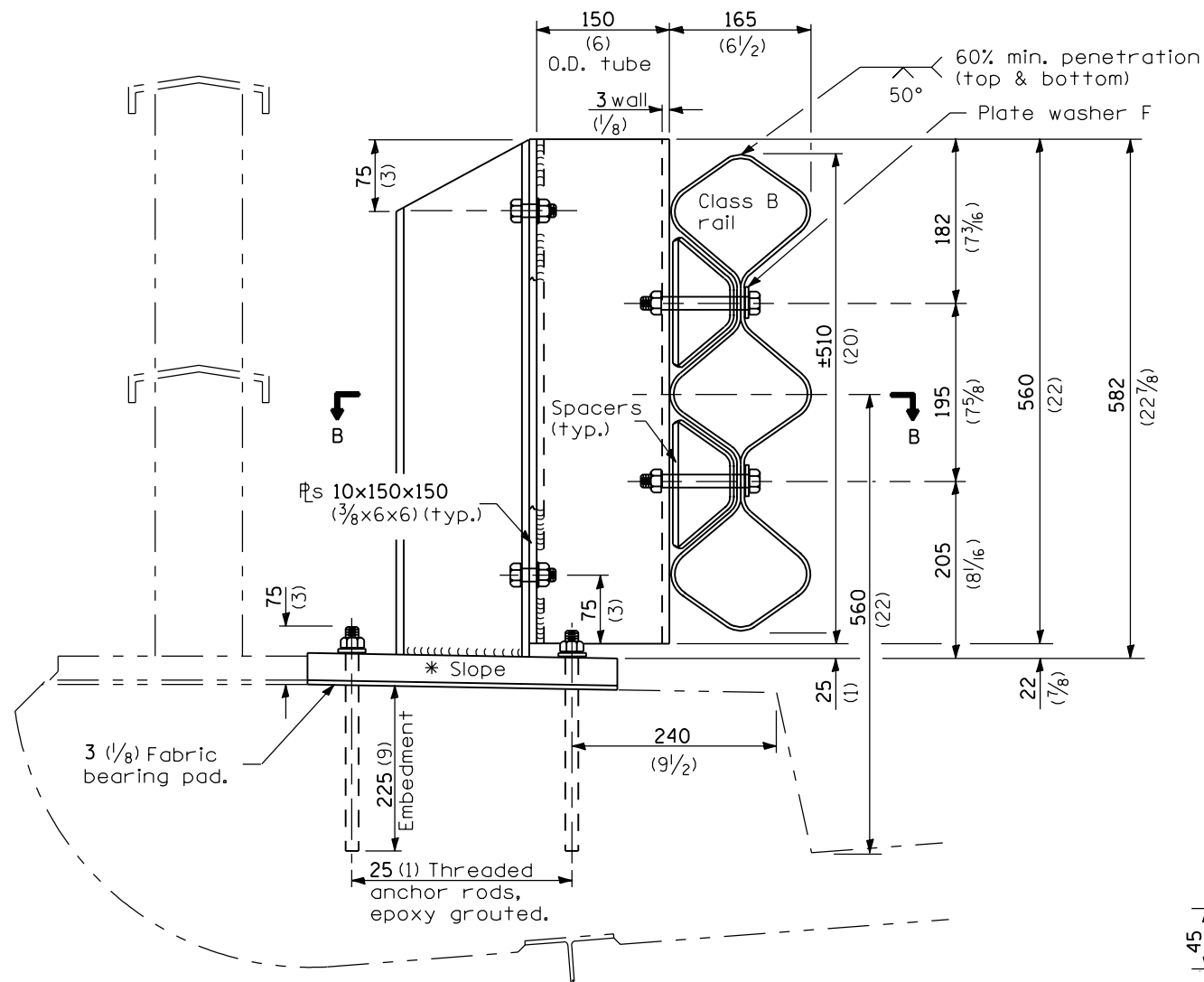


SECTION B-B

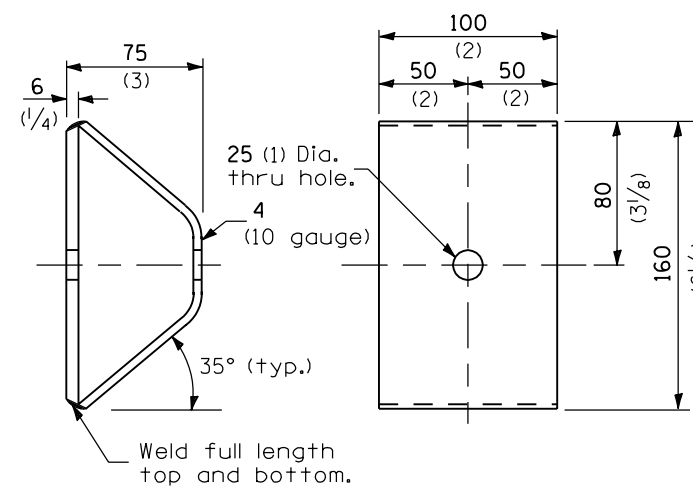
M12x32 (1/2x1 1/4) Hex head bolts with hex nuts and M12 (1/2) flat washer under nuts.
 16x38 (5/8x1 1/2) Vertical slots in 10 (3/8) plate and 16 (5/8) dia. holes in post (typ.).



TUBE TO POST ATTACHMENT



POST



SPACER

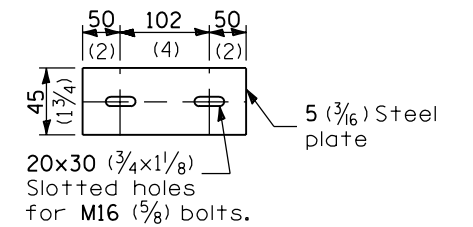


PLATE WASHER B

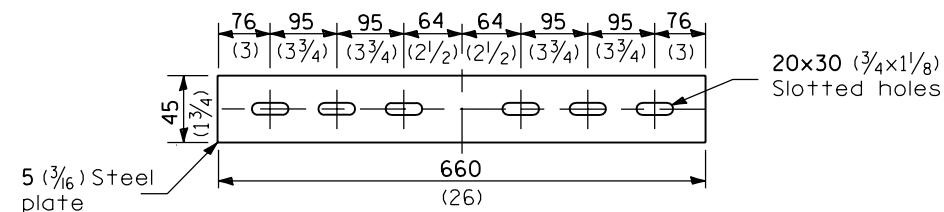


PLATE WASHER C

* Cut bottom of post to slope

All dimensions are in millimeters (inches) unless otherwise shown.

**TUBULAR THRIE BEAM
 RETROFIT RAIL FOR
 BRIDGES** (Sheet 3 of 3)

STANDARD 509001

Illinois Department of Transportation

PASSED January 1, 1997

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APPROVED January 1, 1997

ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 16-1-1