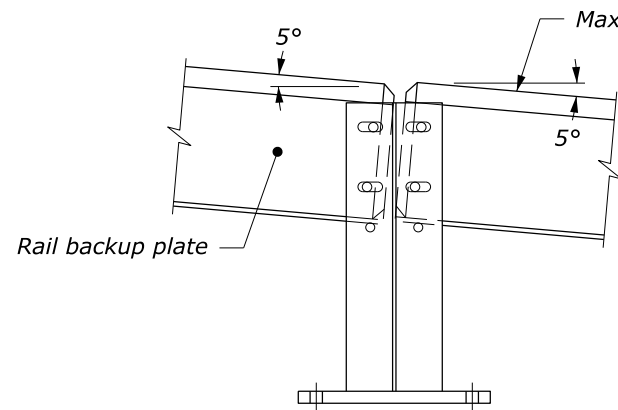


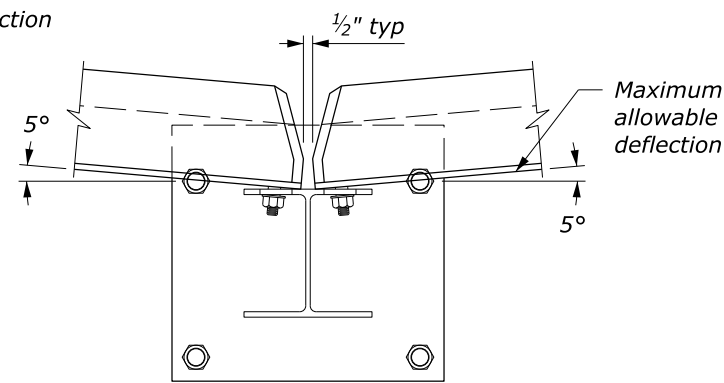
**PLAN VIEW**

**NOTE:**

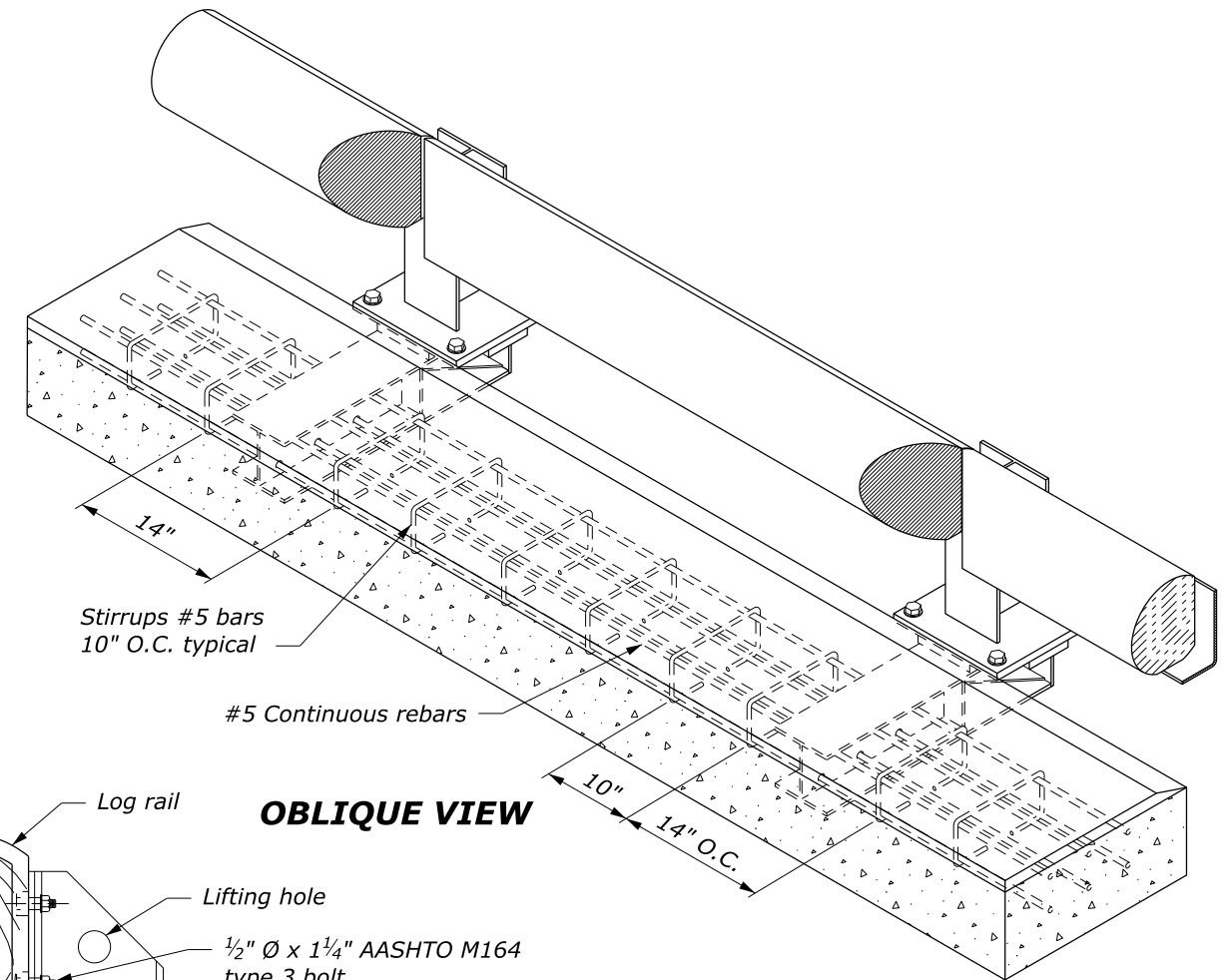
1. Steel is ASTM A242 or A588, Grade 50.
2. Concrete: minimum  $f_c' = 3500$  psi



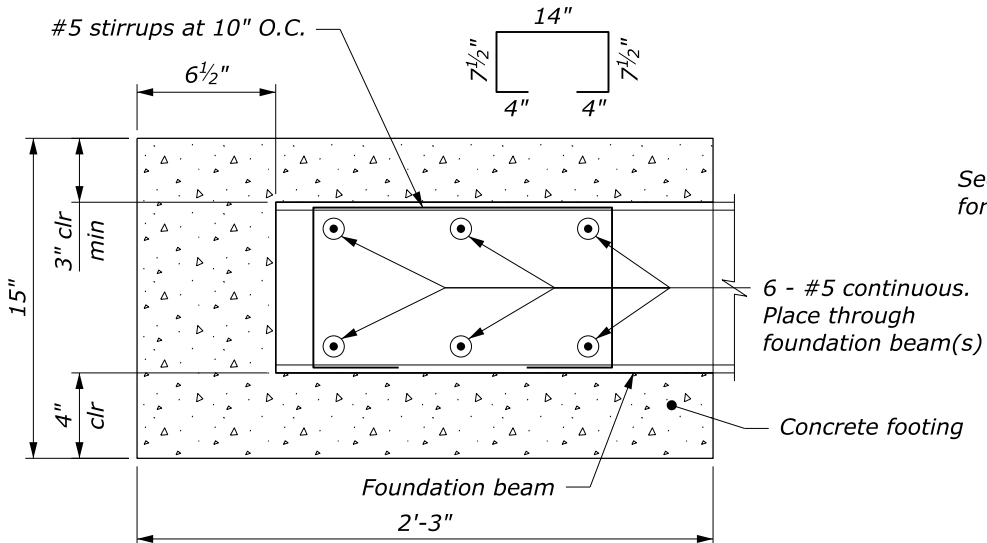
**ENDS OF RAILS AT POST:  
MAXIMUM VERTICAL  
DEFLECTION ALLOWABLE  
ELEVATION**



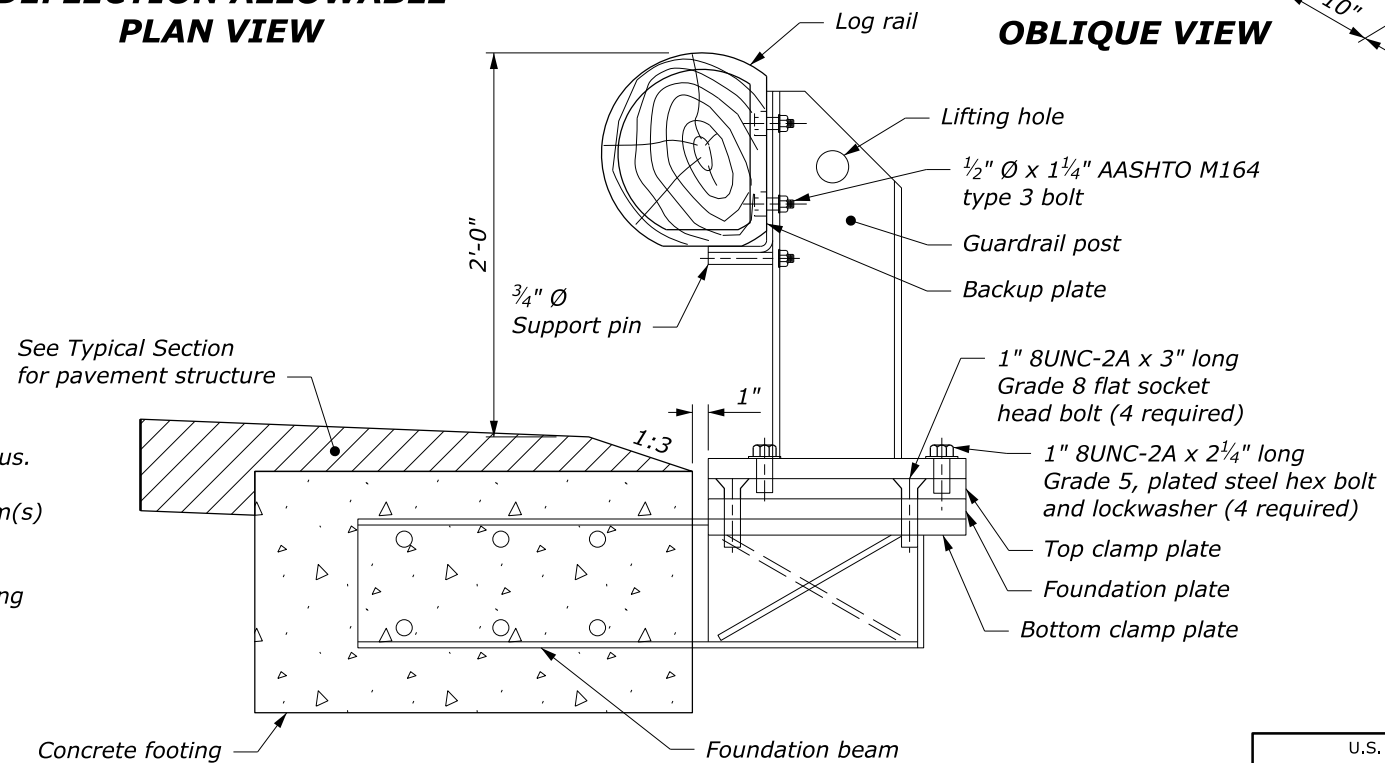
**MAXIMUM HORIZONTAL  
DEFLECTION ALLOWABLE  
PLAN VIEW**



**OBLIQUE VIEW**



**FOOTING DETAIL  
TYPICAL SECTION**



**TYPICAL SECTION**

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION, FHWA  
OFFICE OF FEDERAL LANDS HIGHWAY

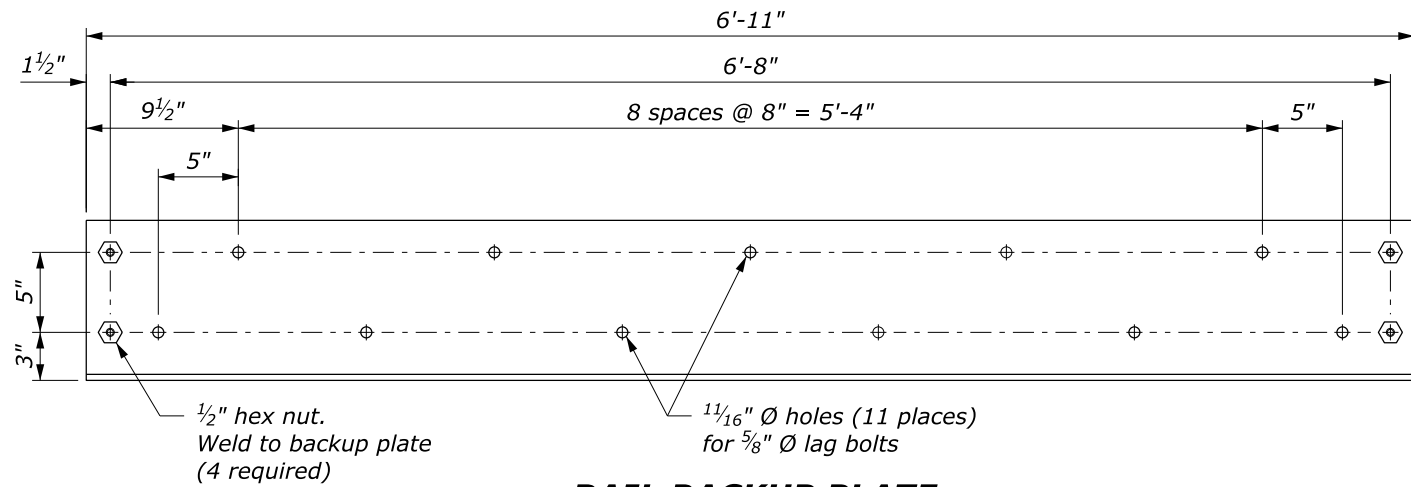
**REMOVABLE  
STEEL-BACKED LOG RAIL**

Sheet 1 of 3

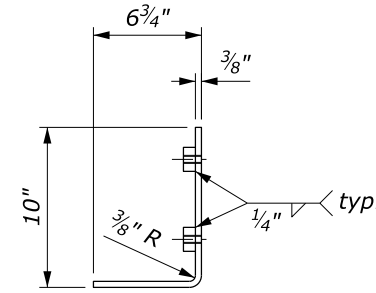
WFLHD DETAIL  
W617-83

SPECIFICATION  
FP-24, FP-14

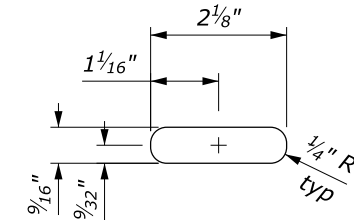
APPROVED FOR USE  
10/2024



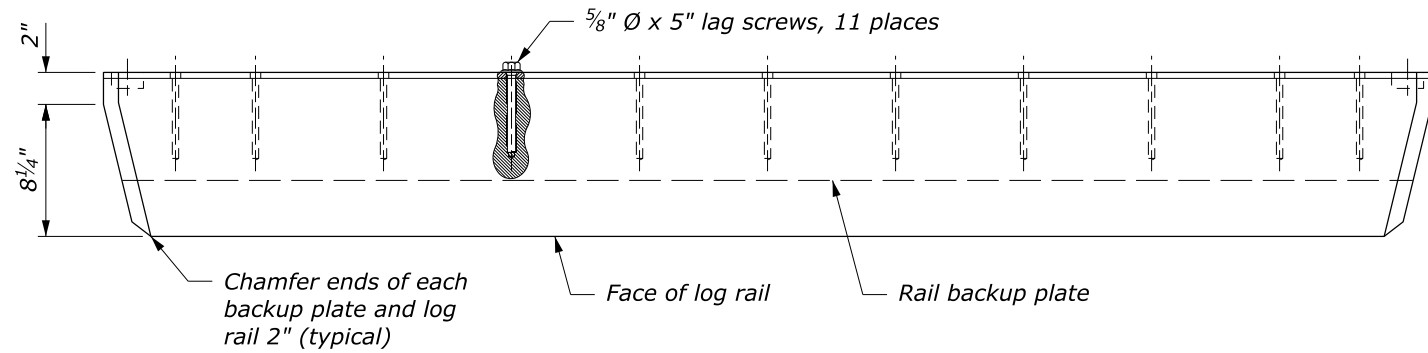
**RAIL BACKUP PLATE  
ELEVATION VIEW**



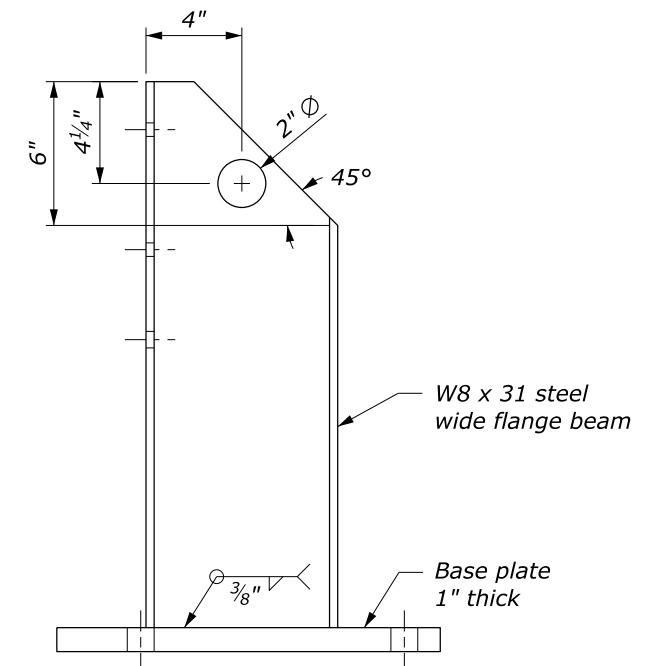
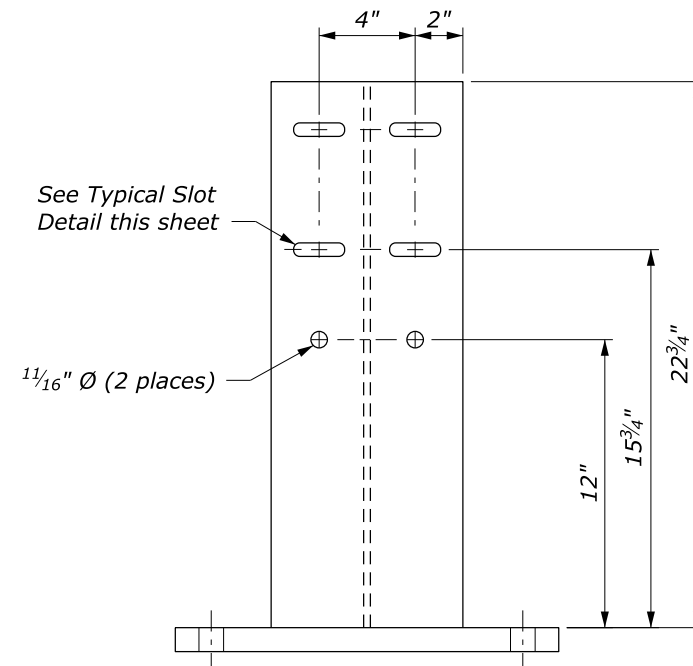
**RAIL BACKUP PLATE  
SECTION VIEW**



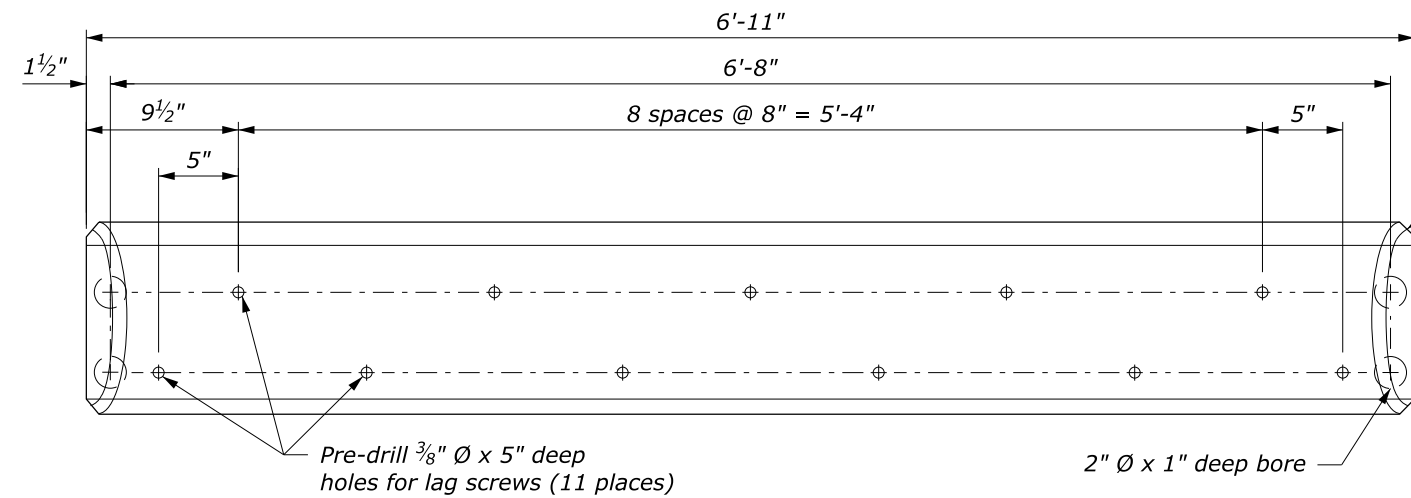
**TYPICAL SLOT DETAIL**



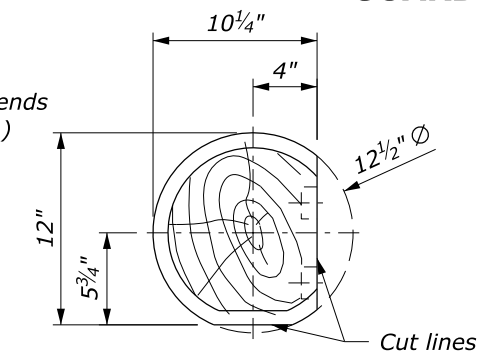
**LOG RAIL & RAIL BACKUP PLATE  
PLAN VIEW**



**GUARDRAIL POST**



**LOG RAIL  
ELEVATION VIEW**



**LOG RAIL  
SECTION VIEW**

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION, FHWA  
OFFICE OF FEDERAL LANDS HIGHWAY

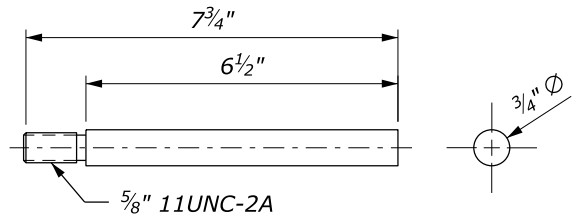
**REMOVABLE  
STEEL-BACKED LOG RAIL**

Sheet 2 of 3

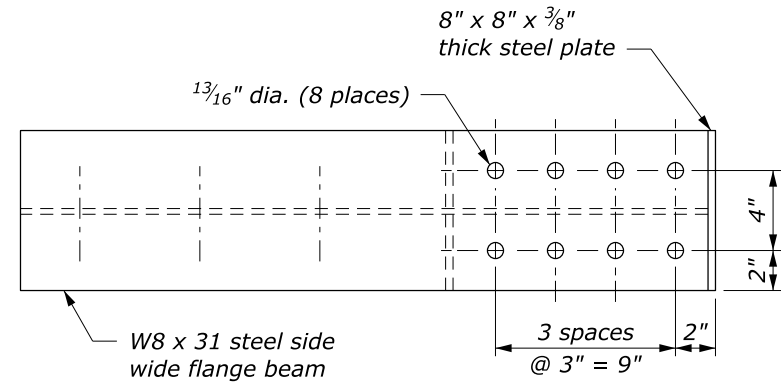
WFLHD DETAIL  
W617-83

SPECIFICATION  
FP-24, FP-14

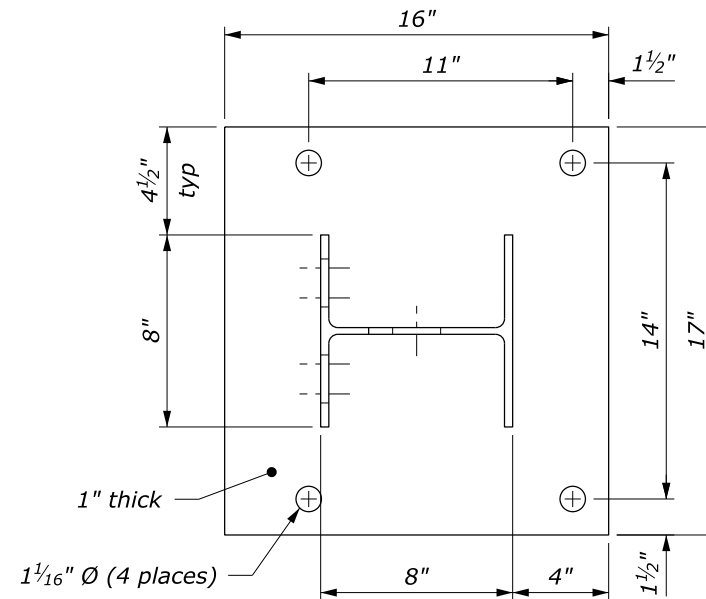
APPROVED FOR USE  
10/2024



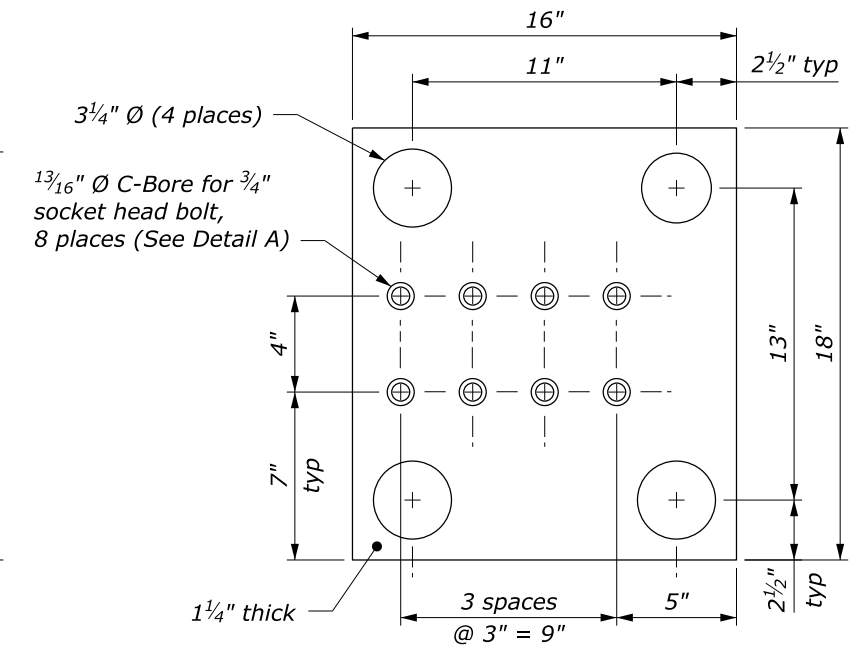
**SUPPORT PIN**



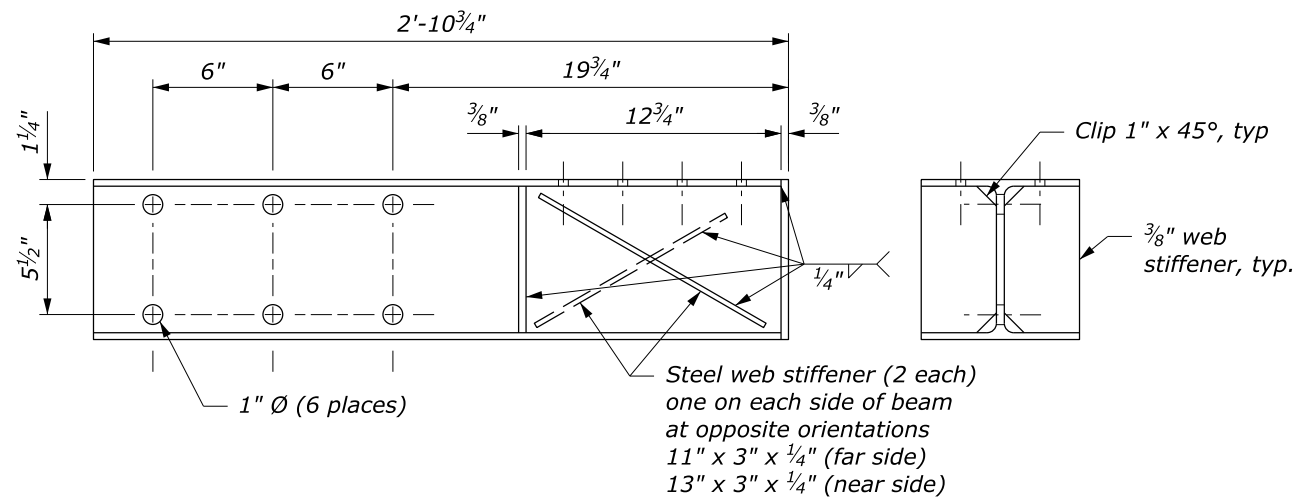
W8 x 31 steel side wide flange beam



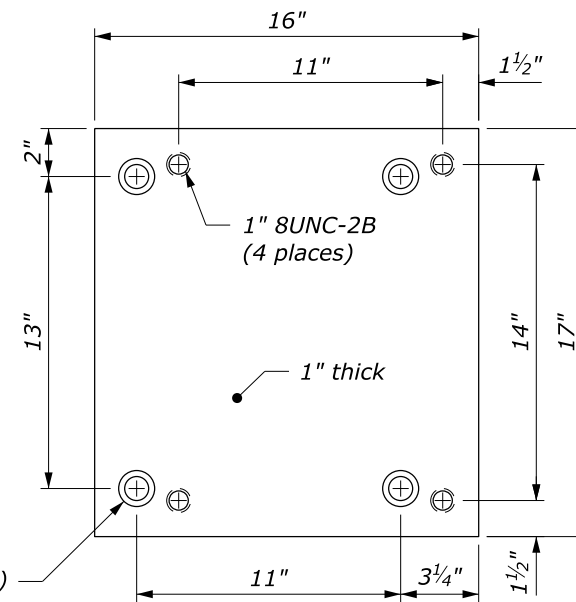
**RAIL POST BASE PLATE**



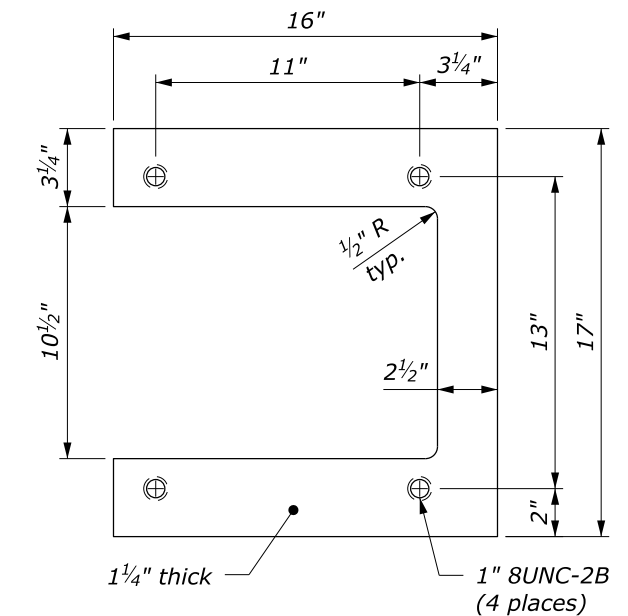
**FOUNDATION PLATE**



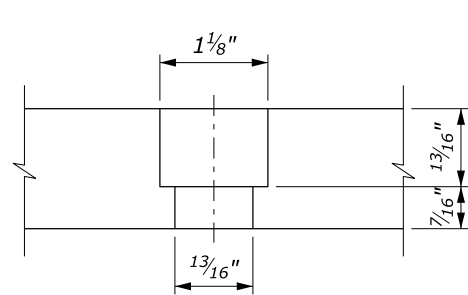
**FOUNDATION BEAM**



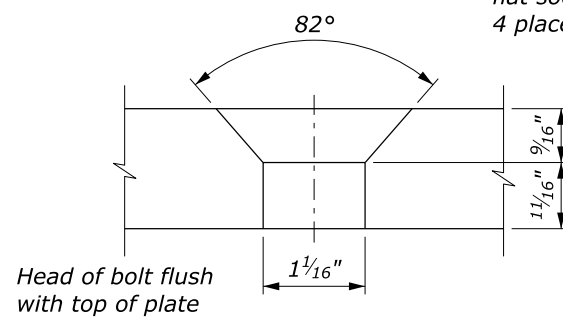
**TOP CLAMP PLATE**



**BOTTOM CLAMP PLATE**



**DETAIL A**



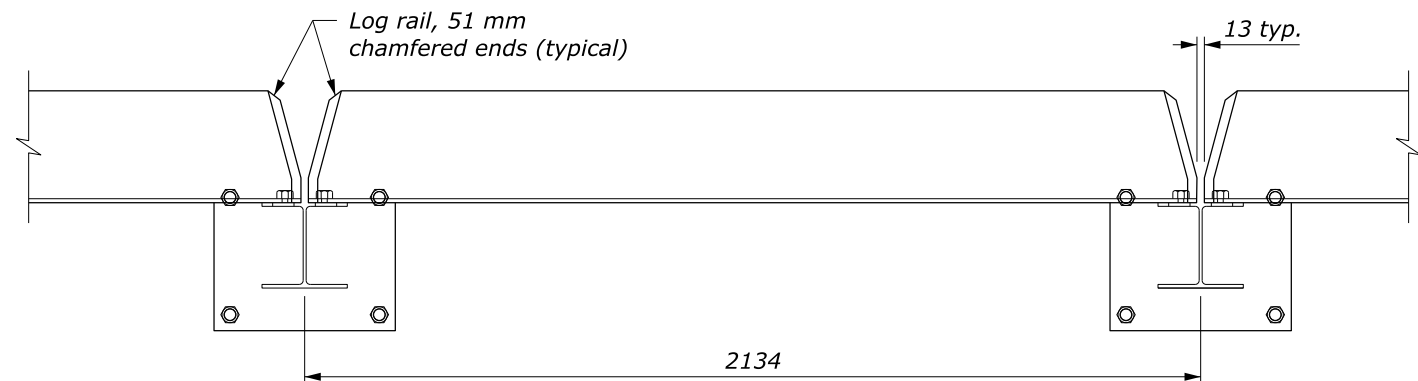
**DETAIL B**

Head of bolt flush with top of plate

1 1/16" Ø C-Sink for 1" flat socket head bolt, 4 places (See Detail B)

NO SCALE

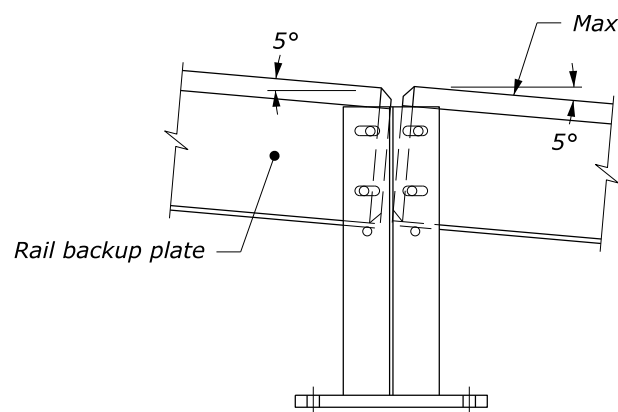
U.S. DEPARTMENT OF TRANSPORTATION, FHWA OFFICE OF FEDERAL LANDS HIGHWAY	WFLHD DETAIL W617-83
<b>REMOVABLE STEEL-BACKED LOG RAIL</b>	SPECIFICATION FP-24, FP-14
Sheet 3 of 3	APPROVED FOR USE 10/2024



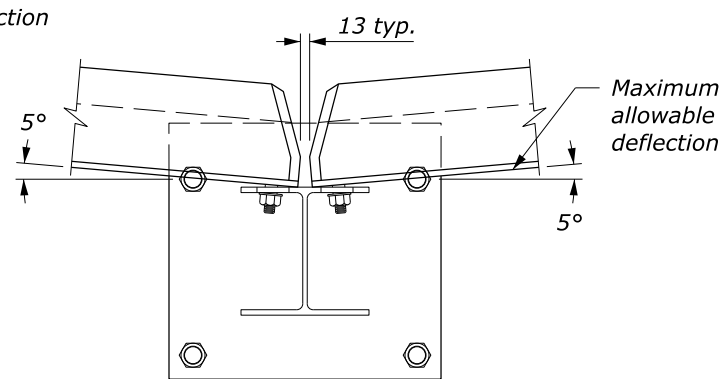
**PLAN VIEW**

**NOTE:**

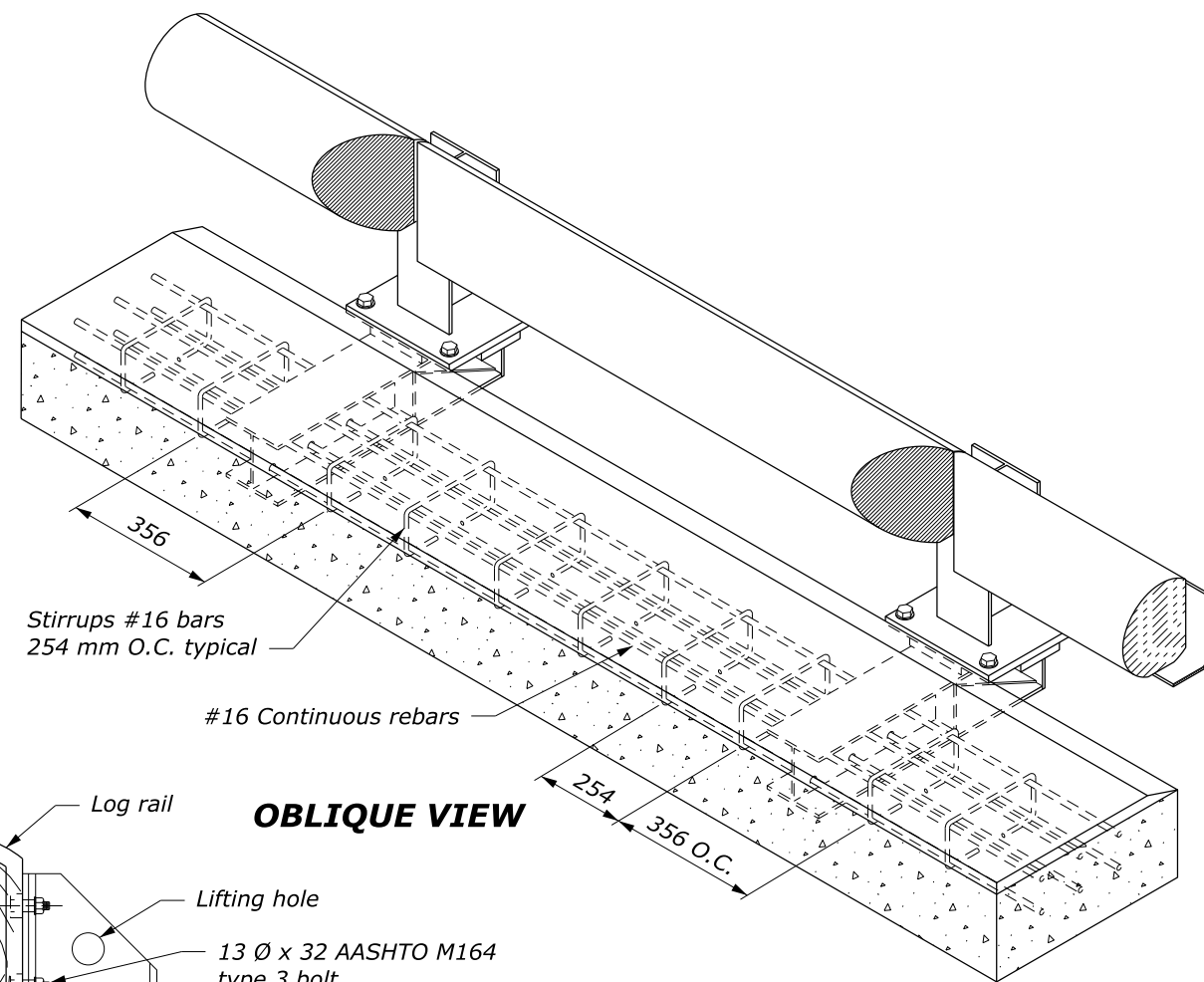
1. Steel is ASTM A242 or A588, Grade 50.
2. Concrete: minimum  $f_c' = 24$  MPA
3. Furnish hardware in equivalent US Customary sizes.



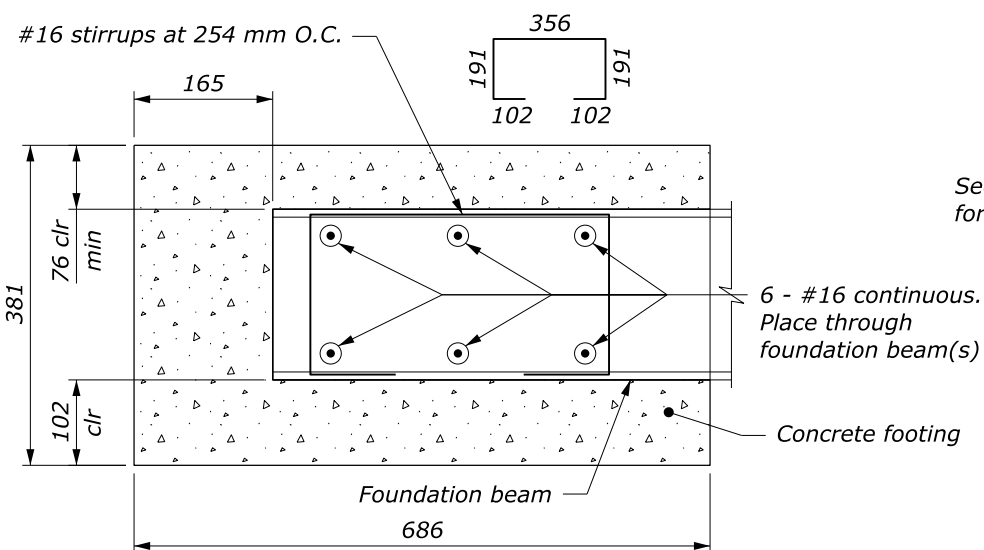
**ENDS OF RAILS AT POST:  
MAXIMUM VERTICAL  
DEFLECTION ALLOWABLE  
ELEVATION**



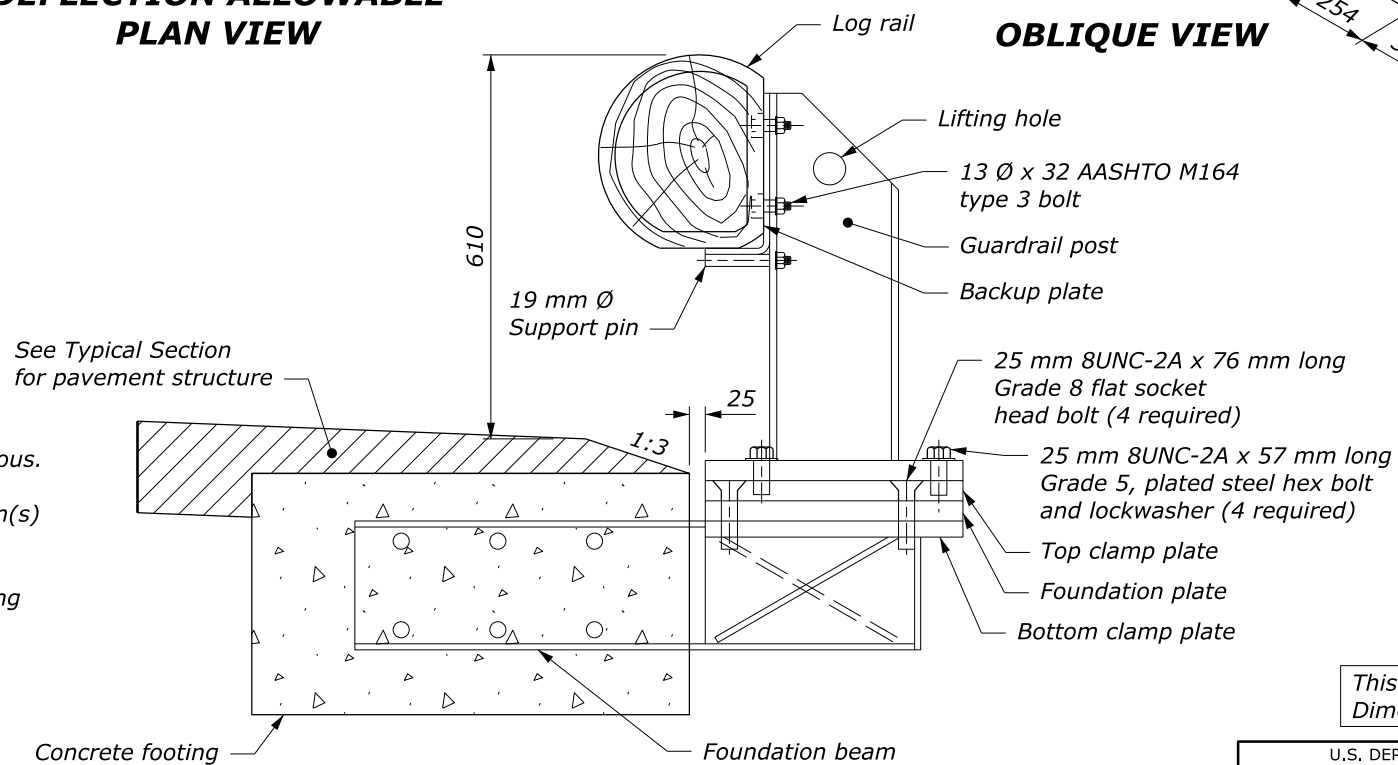
**MAXIMUM HORIZONTAL  
DEFLECTION ALLOWABLE  
PLAN VIEW**



**OBLIQUE VIEW**



**FOOTING DETAIL  
TYPICAL SECTION**



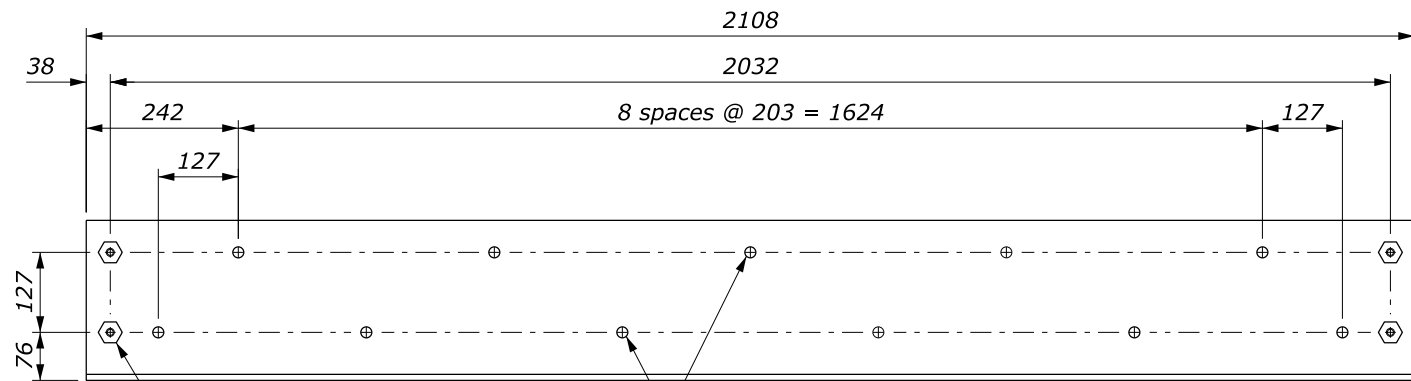
**TYPICAL SECTION**

This drawing contains **Metric** units of measure. Dimensions without units are millimeters.

U.S. DEPARTMENT OF TRANSPORTATION, FHWA OFFICE OF FEDERAL LANDS HIGHWAY	WFLHD DETAIL WM617-83
<b>REMOVABLE STEEL-BACKED LOG RAIL</b>	SPECIFICATION FP-24/FP-14
Sheet 1 of 3	APPROVED FOR USE 10/2024

NO SCALE

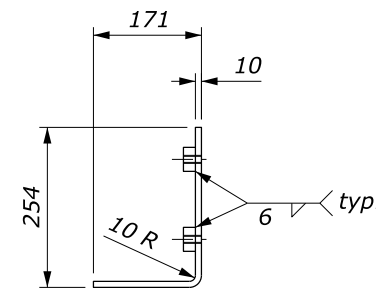
c:\pwwork\0588909\W617-83.dgn [Det WM617-83a] 16 October 2024 1:49 PM



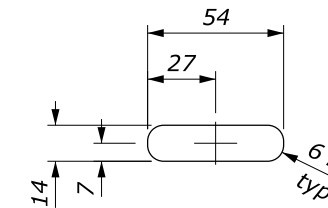
13 mm hex nut. Weld to backup plate (4 required)

17 mm Ø holes (11 places) for 16 mm Ø lag bolts

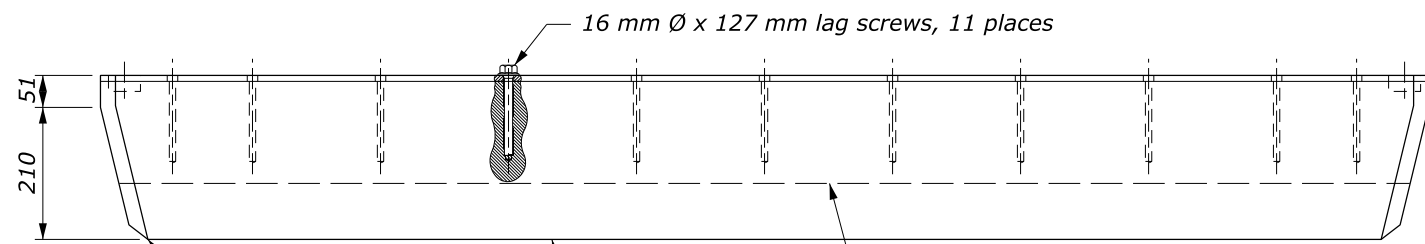
**RAIL BACKUP PLATE ELEVATION VIEW**



**RAIL BACKUP PLATE SECTION VIEW**



**TYPICAL SLOT DETAIL**



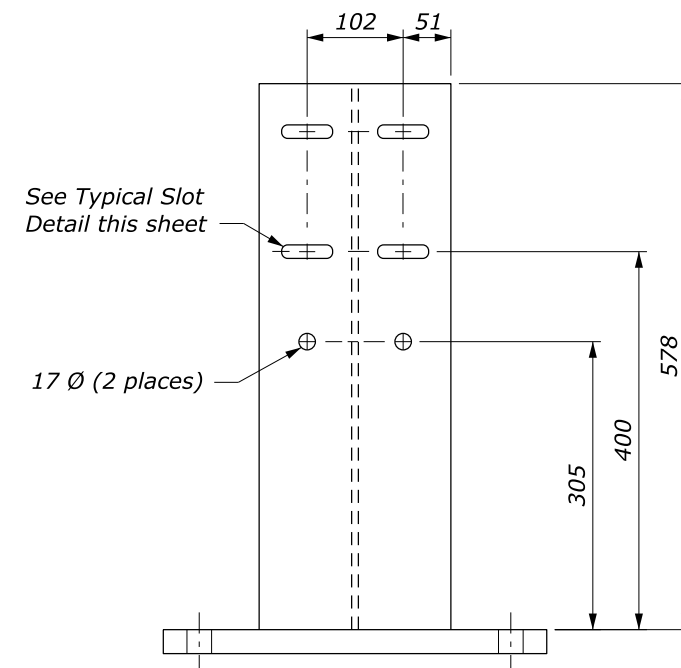
16 mm Ø x 127 mm lag screws, 11 places

Chamfer ends of each backup plate and log rail 51 mm (typical)

Face of log rail

Rail backup plate

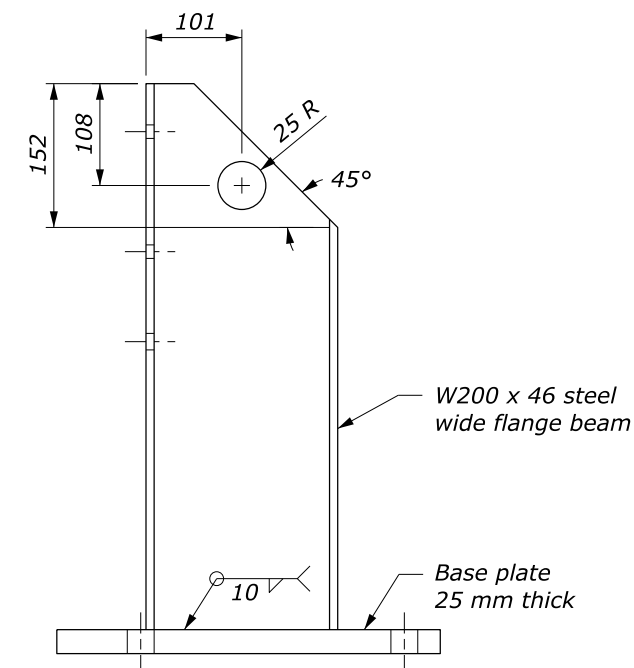
**LOG RAIL & RAIL BACKUP PLATE PLAN VIEW**



See Typical Slot Detail this sheet

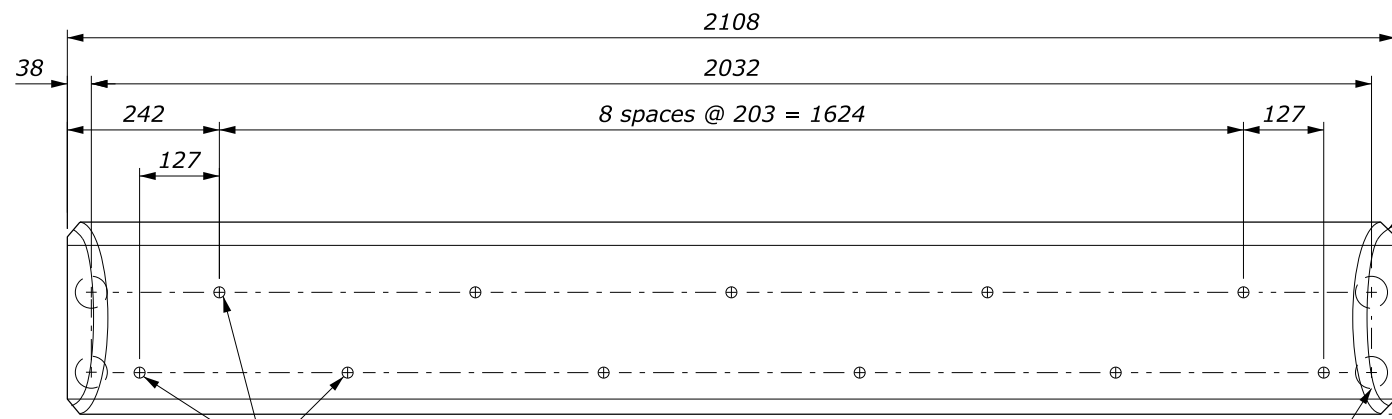
17 Ø (2 places)

**GUARDRAIL POST**



W200 x 46 steel wide flange beam

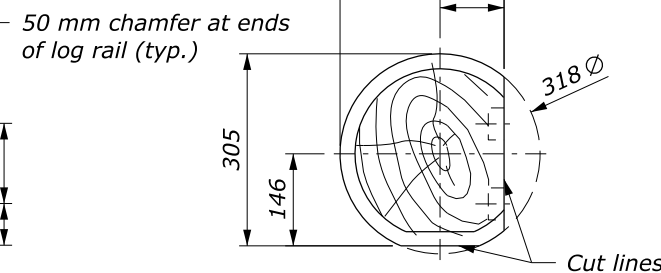
Base plate 25 mm thick



Pre-drill 10 mm Ø x 127 mm deep holes for lag screws (11 places)

51 mm Ø x 25 mm deep bore

**LOG RAIL ELEVATION VIEW**



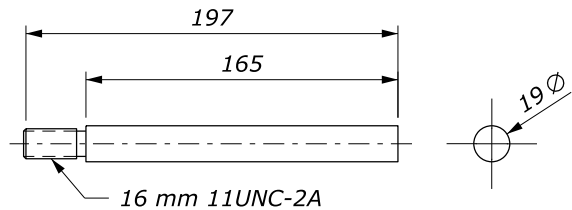
50 mm chamfer at ends of log rail (typ.)

**LOG RAIL SECTION VIEW**

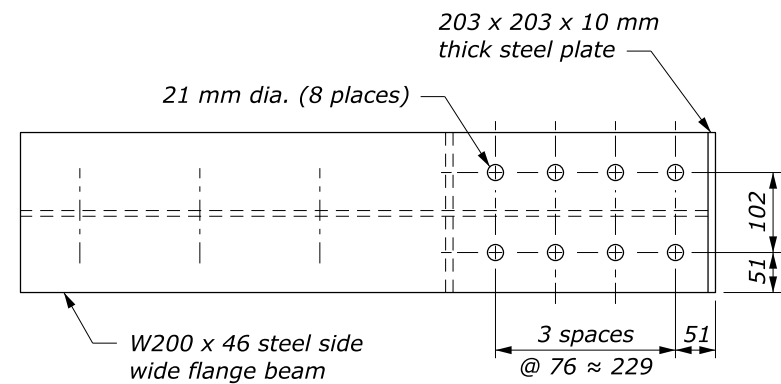
NO SCALE

This drawing contains **Metric** units of measure. Dimensions without units are millimeters.

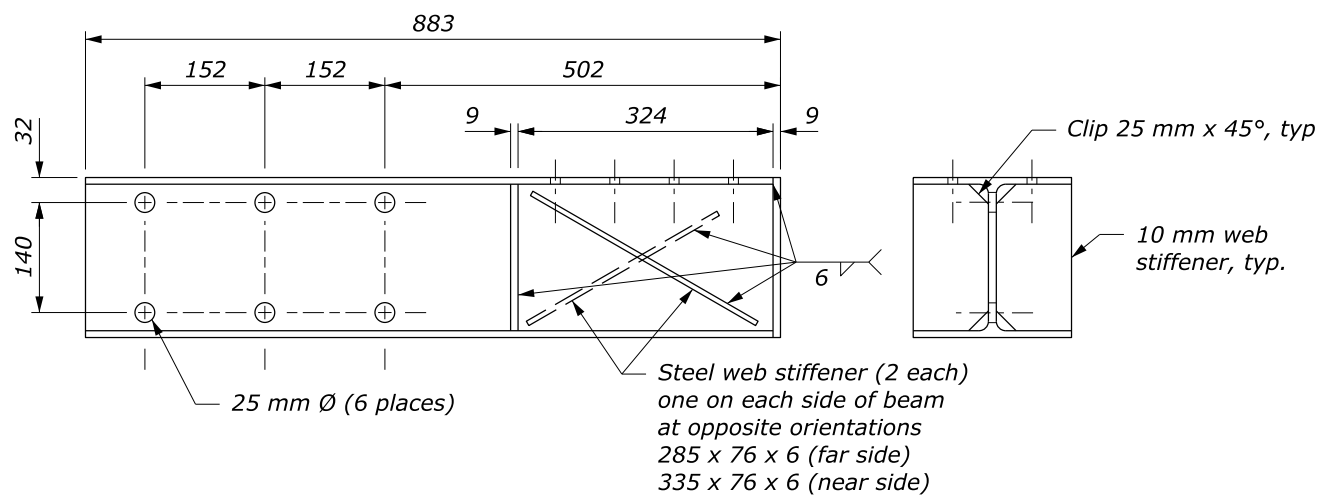
U.S. DEPARTMENT OF TRANSPORTATION, FHWA OFFICE OF FEDERAL LANDS HIGHWAY	WFLHD DETAIL WM617-83
<b>REMOVABLE STEEL-BACKED LOG RAIL</b>	SPECIFICATION FP-24/FP-14
Sheet 2 of 3	APPROVED FOR USE 10/2024



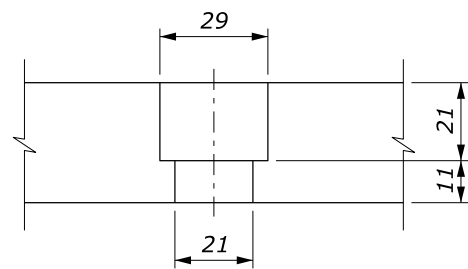
**SUPPORT PIN**



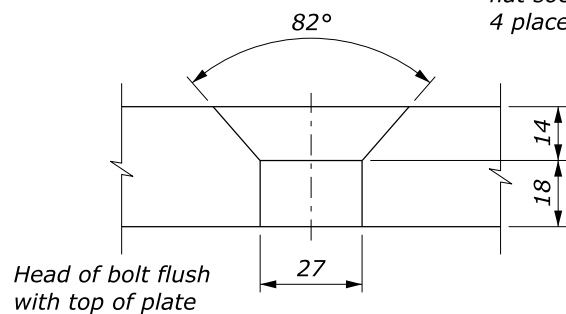
**FOUNDATION BEAM**



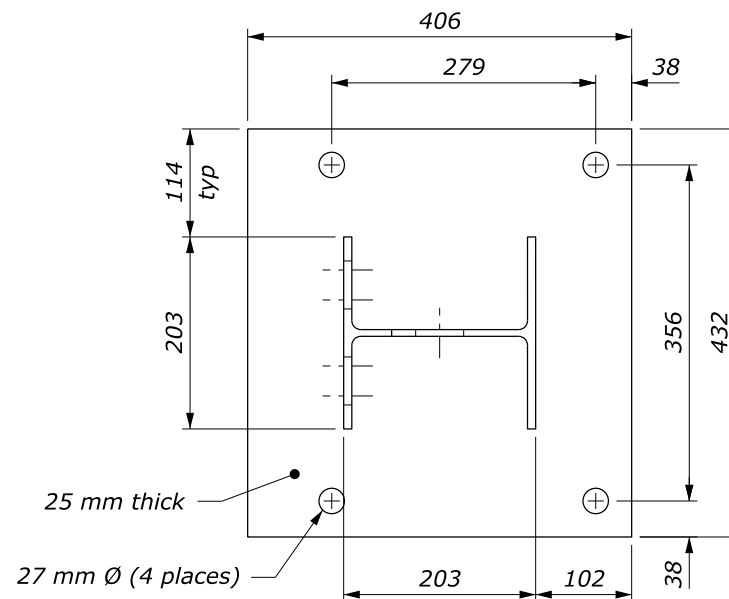
**FOUNDATION BEAM**



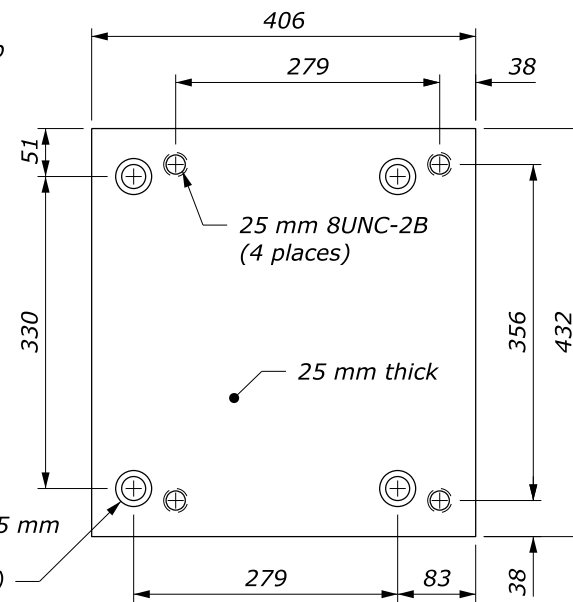
**DETAIL A**



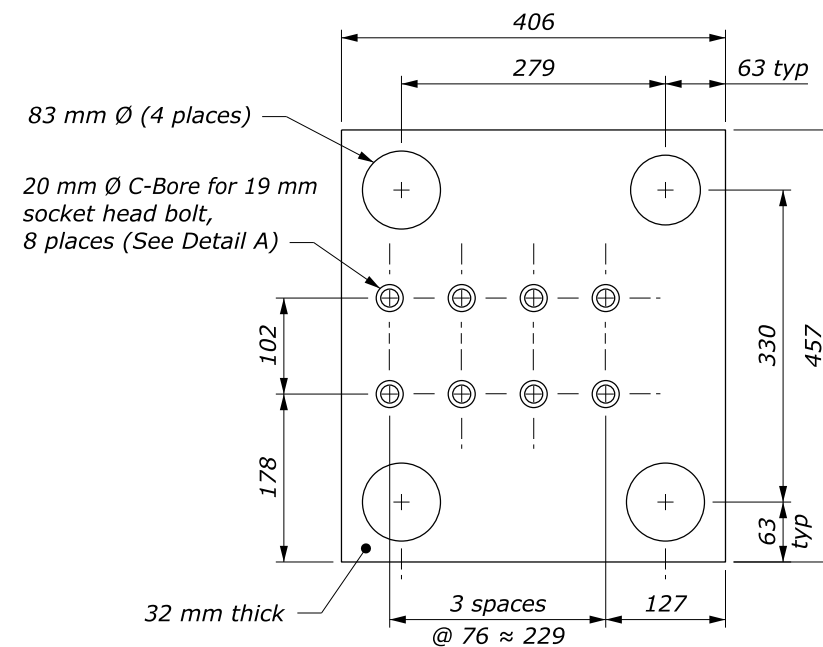
**DETAIL B**



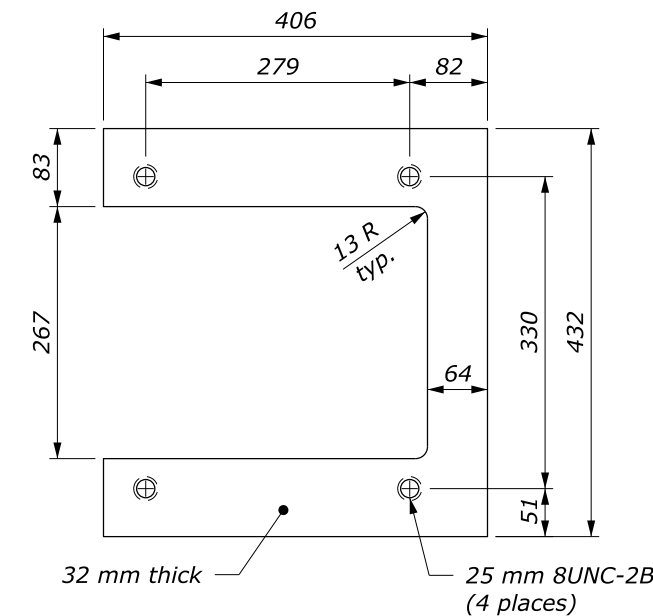
**RAIL POST BASE PLATE**



**TOP CLAMP PLATE**



**FOUNDATION PLATE**



**BOTTOM CLAMP PLATE**

This drawing contains **Metric** units of measure. Dimensions without units are millimeters.

U.S. DEPARTMENT OF TRANSPORTATION, FHWA OFFICE OF FEDERAL LANDS HIGHWAY	WFLHD DETAIL WM617-83
<b>REMOVABLE STEEL-BACKED LOG RAIL</b>	SPECIFICATION FP-24/FP-14
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NO SCALE