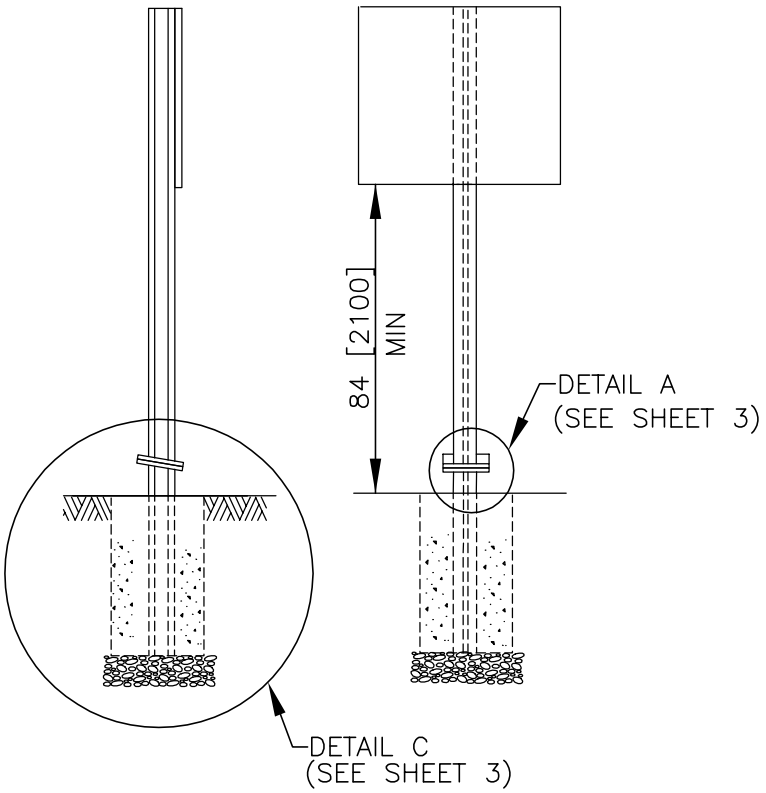

SIGN POST	BASE POST	KEEPER PLT	SLIPBASE BOLTS & NUTS	SLIPBASE WASHER	TORQUE
PWF21a	PWF21b	FPS01	FBX12b	FWC12b	7 [10±2]
PWF22a	PWF22b	FPS02	FBX16b	FWC16b	20 [30±7]
PWF23a	PWF23b	FPS03	FBX20b	FWC20b	35 [50±10]
PWF24a	PWF24b	FPS04	FBX24b	FWC24b	45 [65±16]
PWF25a	PWF25b	FPS05	FBX24b	FWC24b	45 [65± 16]

SLIPBASE WITH WIDE FLANGE POST

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INTENDED USE

The inclined rectangular slipbase sign support system is a single-post (SSS02a) sign support system where wide-flange posts 67 kg/m or lighter (PWF25 and smaller) are acceptable. The inclined base plate is intended to propel the single sign post upward and over the vehicle in an impact. Although the system has been successfully tested with two posts, the inclined slipbase is generally used as a single post system. In a dual-post system the hinge plate system would serve the function of rotating the sign post up and away from the vehicle. In no case, however, should the total mass of all the sign post above the slip-plane be greater than 270 kg. The system has been successfully crash tested with the base embedded in concrete. The system is considered to meet the requirements of the 1985 AASHTO *Standard Specifications for Structural Supports for Highway Signs, Luminaires* and *Traffic Signals.* Careful attention should be given to tightening the slipbase bolts to the appropriate torques shown in the drawing.

COMPONENTS

The inclined rectangular uni-directional slipbase sign support system consists of a base and a sign post (PWF21a-25b), four bolts and nuts each with three washers and a keeper plate. The sign post and base post are connected using four bolts and nuts with two washers under each head and one washer under each nut. The bolts pass through the keeper plate (FPS01-05) fitted between the two slipbase plates. The keeper plate keeps the bolts from sliding out of the assembly in windy conditions. The bolts tear through the keeper plate during a collision allowing the sign post and base post to separate. The post may be leveled by inserting shim (FPPl la-15b) between the keeper plate and upper slipbase as required. The slipbase bolts, coated with a dry lubricant, must be tightened to the torque shown on the drawings to achieve proper performance.

The base-post assembly (PWF21a-25b) shall be embedded in a 20 MPa concrete with a cement conforming to AASHTO M85 (ASTM C150) Type 11. The concrete foundation shall be reinforced with 8 vertical bars of Grade 400 MPa bars conforming to either AASHTO M284M (ASTM D3936D) or AASHTO M31M (ASTM A615M). The spiral reinforcing shall conform to either ASTM A306 or AASHTO M32 (ASTM A82) and shall have 2 flat turns at the top and bottom and a 150 mm pitch.

REFERENCES

H. E. Ross, Jr., D. L. Sicking, W. L. Campise, and R. A. Zimmer . "Small Sign Support Analysis," Texas Transportation Institute, Report No. 7024-1, College Station, TX, January 1986.

L. A. Staron, "Breakaway Sign Supports," Geometric and Roadside Design Acceptance Letter SS-36, Federal Highway Administration, September 3, 1993.

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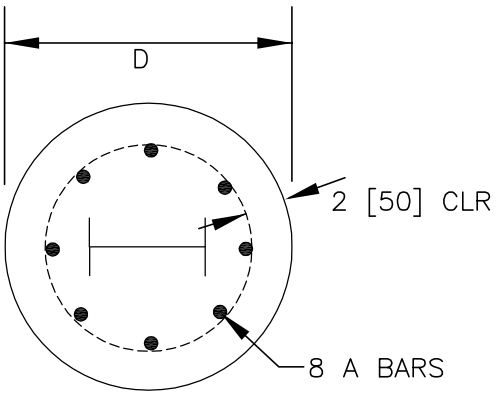
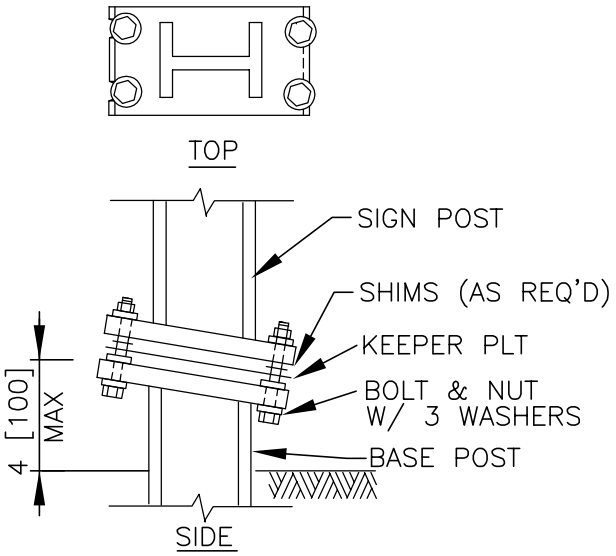
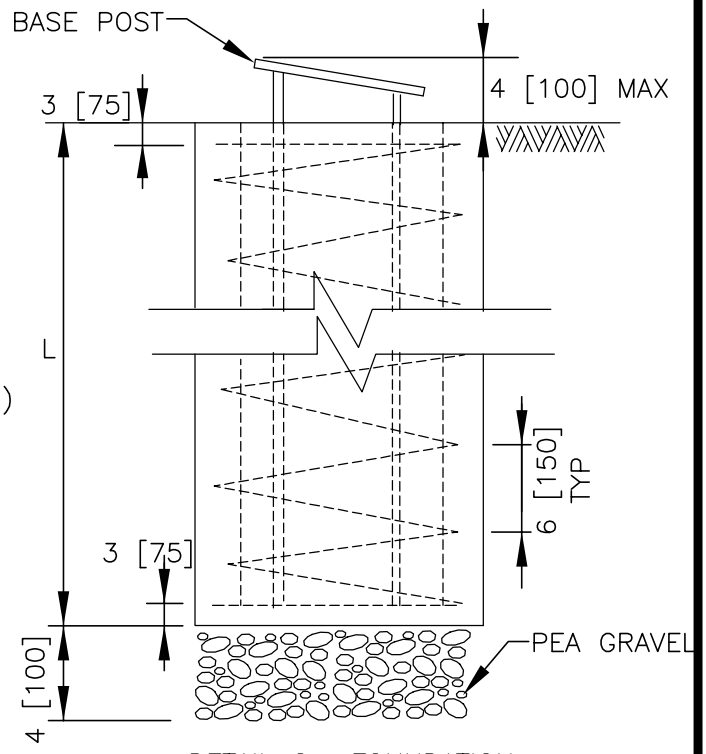




DETAIL B: SLIPBASE ASSEMBLY



DETAIL C: FOUNDATION

SIGN POST	BASE POST	D	L	SHIMS	BAR DIA A
PWF21a	PWF21b	18 [460]	36 [920]	FPP11a–b	NONE
PWF22b	PWF22b	24 [610]	48 [1220]	FPP12a–b	½ [15]
PWF23b	PWF23b	24 [610]	72 [1830]	FPP13a–b	¾ [20]
PWF24b	PWF24b	24 [610]	96 [2440]	FPP14a–b	1¼ [30]
PWF25b	PWF25b	36 [920]	96 [2440]	FPP15a–b	1¼ [30]

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