

Evaluation Table:

PEP ID:	
Manufacturer:	
Product Name:	

607 Breakaway Assembly
 ADOT Specifications: 607, Standard Drawing S-3 (16/16)

Product Property	Specification/ Test Method	Requirement	Results	Pass/ Fail
Breakaway Sign Post Shapes:	607-2.02 ASTM A572, A588	Posts shall be fabricated from structural steel conforming to the requirements of ASTM A572, Grade 50 or ASTM A588.		
Breakaway Sign Post Shapes:	607-2.02	Base plates for the breakaway connections and friction fuse plates and back plates for the post hinge assembly shall be fabricated from the same type structural steel as the sign posts.		
Breakaway Sign Post Shapes:	607-2.02	All plate holes shall be drilled and all plate notches shall be saw cut, except that flame cutting will be permitted provided all edges are ground. Flange holes shall be drilled or sub-punched and reamed.		
Breakaway Sign Post Shapes:	607-2.02 ASTM A325	Bolts, nuts, and washers shall conform to the requirements of ASTM A325.		
Breakaway Sign Post Shapes:	607-2.02 ASTM A123	Posts and plates shall be galvanized after fabrication in accordance with the requirements of ASTM A123.		
Breakaway Sign Post Shapes:	607-2.02 607-2.03 607.204 ASTM B633 ASTM B766	Bolts, nuts, and washers shall be cadmium plated in accordance with the requirements of ASTM B766, or zinc plated in accordance with the requirements of ASTM B633.		
Perforated Sign Posts:	607-2.03	Single and telescoping perforated posts shall be square tube fabricated from galvanized sheet steel.		
Perforated Sign Posts:	607-2.03	The sheet steel shall have a thickness of 0.105 inches (12 gauge) or 0.135 inches (10 gauge).		

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Perforated Sign Posts:	607-2.03 ASTM A653	Sheet steel shall conform to the requirements of ASTM A653 for either SQ Grade 40 or SQ Grade 50 Class 1, and be galvanized in accordance with the requirements of Coating Designation G-90.		
Perforated Sign Posts:	607-2.03	The posts shall have a wall thickness, including coating, of 0.097 to 0.116 inches for 12 gauge and 0.127 to 0.146 inches for 10 gauge.		
Perforated Sign Posts:	607-2.03	Posts shall be welded directly in the corner by high frequency resistance welding or equal.		
Perforated Sign Posts:	607-2.03	The outside edges of the posts shall be scarfed as necessary to product a standard corner radii of $5/32 \pm 1/32$ inch.		
Perforated Sign Posts:	607-2.03	External welding surfaces and scarfed areas shall be re-galvanized after fabrication.		
Perforated Sign Posts:	607-2.03	Holes $7/16 \pm 1/64$ inch in diameter shall be provided on 1-inch centers along all four sides over the entire length of the post. The holes shall be laterally centered on the longitudinal centerline of each face. Hole positioning and spacing shall be the same on all four faces, such that the hole centerlines for each group of four holes shall pass through a common point on the longitudinal centerline of the tube. For telescoping posts, holes shall be in proper alignment to allow 3/8-inch diameter bolts to pass through the entire post.		
Perforated Sign Posts:	607-2.03	The finished posts shall be straight and have a smooth, uniform finish.		
Perforated Sign Posts:	607-2.03	All consecutive sizes of posts shall be freely telescoping for not less than 10 feet of their length without the necessity of matching any particular face to any other face.		

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Perforated Sign Posts:	607-2.03 SAE Spec J429 ASTM A499	Bolts shall conform to the requirements of SAE Specification J429, Grade 5, or ASTM A499, Type 1.		
Perforated Sign Posts:	607-2.03 ASTM A563	Nuts shall conform to the requirements of ASTM A563, Grade A.		
Perforated Sign Posts:	607-2.03 AST, F844	Washers shall conform to the requirements of ASTM F844.		
U-Channel Sign Posts:	607-2.04	U-channel posts shall be fabricated from rerolled rail steel or hot-rolled carbon steel bars.		
U-Channel Sign Posts:	607-2.04 ASTM A1	Prior to rerolling the rail steel, the rail nominal weight shall be 91 pounds per yard and shall meet the requirements of ASTM A1 pertaining to quality assurance.		
U-Channel Sign Posts:	607-2.04	Yield Point of the steel shall be 80,000 pounds per square inch minimum.		
U-Channel Sign Posts:	607-2.04	The cast heat analysis of the steel shall conform to the following requirements:	See below	
		Element	Composition (%)	Result
		Carbon	0.67-0.82	
		Manganese	0.70-1.10	
		Phosphorus: Max.	0.04	
		Sulfur: Max.	0.05	
		Silicon	0.10-0.25	
U-Channel Sign Posts:	607-2.04	Posts shall be a uniform, modified, flanged channel-section.		
U-Channel Sign Posts:	607-2.04	Weight of the posts shall be three pounds per linear foot \pm 5 percent.		
U-Channel Sign Posts:	607-2.04	The post shall be punched with continuous 3/8-inch diameter holes on 1-inch centers.		
U-Channel Sign Posts:	607-2.04	The first hole shall be 1 inch from top and bottom of post.		

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U-Channel Sign Posts:	607-2.04	The post shall consist of two parts, a sign post and a base post.		
U-Channel Sign Posts:	607-2.04	The sign post lengths shall be supplied in 6-inch increments up to 12 feet.		
U-Channel Sign Posts:	607-2.04	The base posts shall be 42 inches in length, pointed at one end, and have at least 18 holes in the base post, starting 1 inch from the top and continuing at 1-inch increments.		
U-Channel Sign Posts:	607-2.04	Posts shall be machine straightened to have a smooth uniform finish, free from defects affecting their strength, durability, or appearance. The permissible tolerance for straightness shall be within 1/16 inch in 3 feet.		
U-Channel Sign Posts:	607-2.04	All holes and rough edges shall be free from burrs.		
U-Channel Sign Posts:	607-2.04 ASTM123	Posts shall be galvanized after fabrication in accordance with the requirements of ASTM A123.		
U-Channel Sign Posts:	607-2.04	For shipment, the posts shall be nested and fastened in such a manner that they will not slip. Care shall be taken during shipping to minimize the rubbing of posts together resulting in damage to the galvanized surface. Posts shall be bundled in groups of no more than 100.		
Slip Base:	607-2.06	Slip bases shall be manufactured by an approved manufacturer.		
Square Tube Post Slip Base Details	S-3 (16/16)	All slip bases shall be pre-assembled by the manufacturer.		
Square Tube Post Slip Base Details	S-3 (16/16)	Anchor tube and bottom slip base shall be welded together in a one-piece assembly installed in the foundation.		