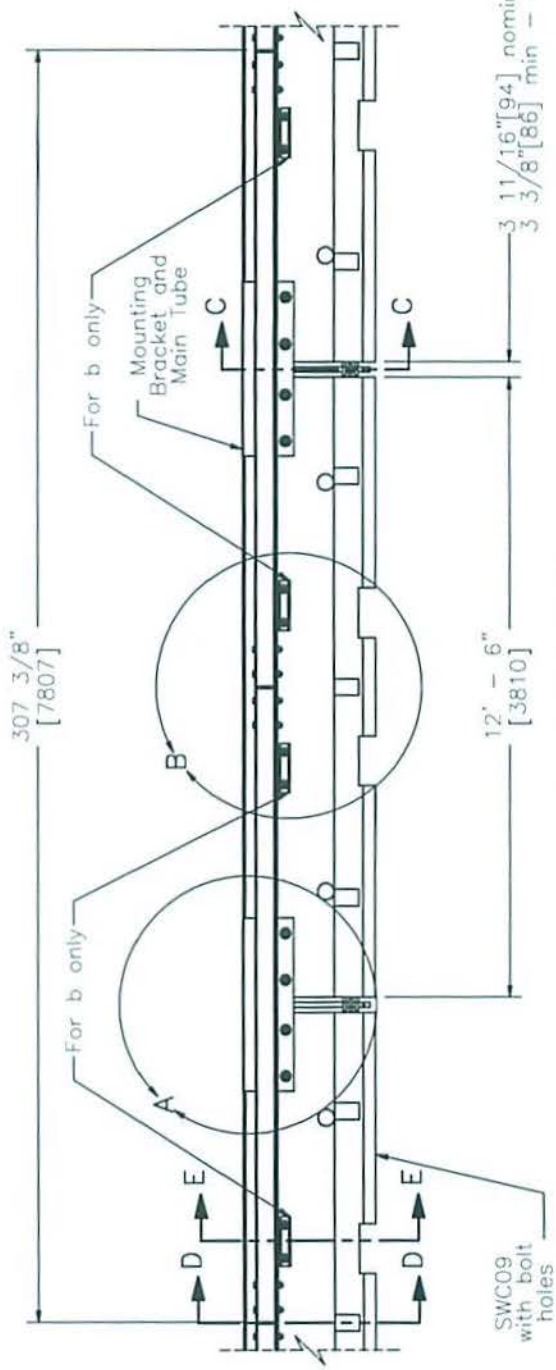
PLAN VIEW



ELEVATION VIEW

RETROFIT, LOW-DEFLECTION, PORTABLE CONCRETE BARRIER

MwRSF

SWC20a-b

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INTENDED USE

Retrofit, Low-Deflection, Portable Concrete Barrier is a non-proprietary system and is to be used in situations where limited system deflection is required. The Retrofit, Low-Deflection, Portable Concrete Barrier should be used in locations where a maximum dynamic deflection of 43.0" [1,092] or less is acceptable and where a working width of 55.1" [1,400] is provided. The Retrofit, Low-Deflection, Portable Concrete Barrier with L-Brackets should be used in locations where a maximum dynamic deflection of 40.7" [1,034] or less is acceptable and where a working width of 51.9" [1,318] is provided. The system should be placed with a minimum distance of 24" [610] between the back face of the concrete barrier and the edge of the bridge deck or drop off. Retrofit, Low-Deflection, Portable Concrete Barrier may be used on a concrete or asphalt surface. The Retrofit, Low-Deflection, Portable Concrete Barrier system is intended for use with the Portable F-shape Concrete Barrier Element (SWC09) and the Portable Concrete Barrier Connector Pins with or without the retainer bolt (FMW02 or FMW03). The Portable F-shape Concrete Barrier Elements (SWC09) are to be placed in a straight line or a large radius curve where the existing design tolerances can accommodate the small angles between adjacent Portable F-shape Concrete Barrier Elements (SWC09). The Retrofit, Low-Deflection, Portable Concrete Barrier has been crash tested under Test Level 3 (TL-3) conditions of the Manual for Assessing Safety Hardware (MASH) and deemed acceptable according to the MASH safety performance criteria.

COMPONENTS

Unit Length = 307 3/8" [7807]

DESIGNATOR	COMPONENT	NUMBER	SYSTEM
FBX20a	6 1/2" [165] Hex Bolt and Nut	16	a-b
FBX20b	13" [330] Hex Bolt and Nut	8	b
or FRS20b	14 1/4" [362] Threaded Straight Anchor Stud and Nuts	8	b
FBX24b	12 3/4" [324] Hex Bolt and Nut	8	a-b
or FRS24b	14" [356] Threaded Straight Anchor Stud and Nuts	8	a-b
FMW02	Connector Pin	2	a-b
or FMW03	Connector Pin with Retaining Bolt	2	a-b
FWC20a	Plain Round Washer	48	a-b
FWC24a	Plain Round Washer	16	a-b
SWC09	Portable Concrete Barrier with Bolt Holes	2	a-b
- - -	10-Gauge Mounting Bracket	2	a-b
- - -	Main Tube	2	a-b
- - -	Splice Tube Insert	2	a-b
- - -	L-Bracket	8	b

ELIGIBILITY

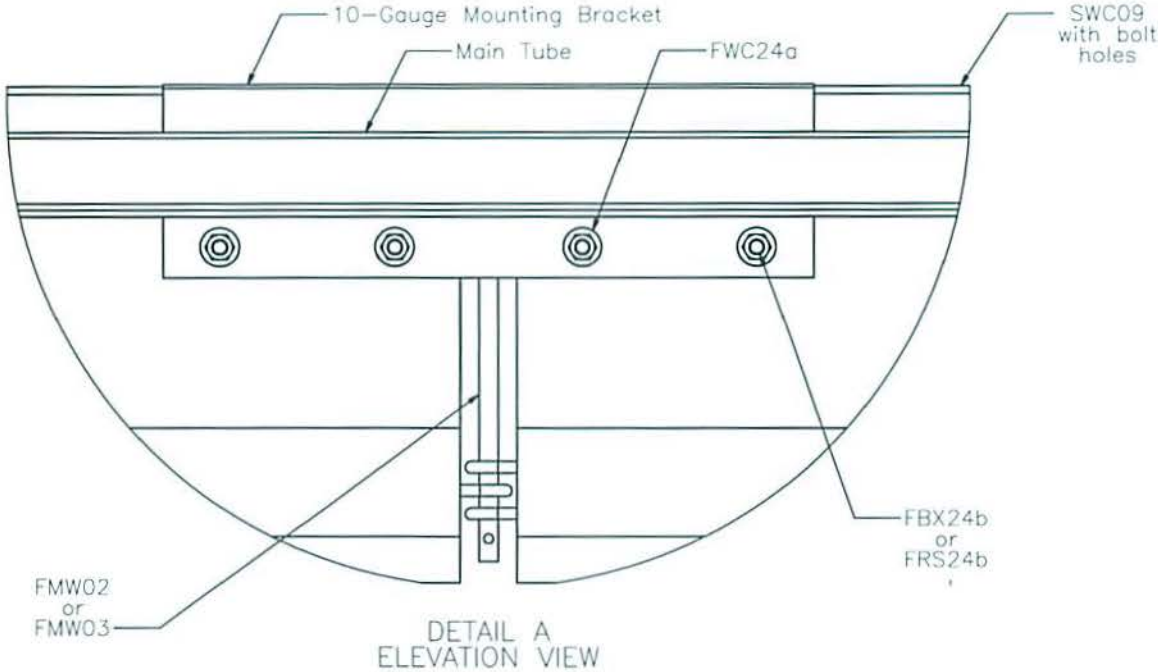
FHWA eligibility will be pursued.

REFERENCES

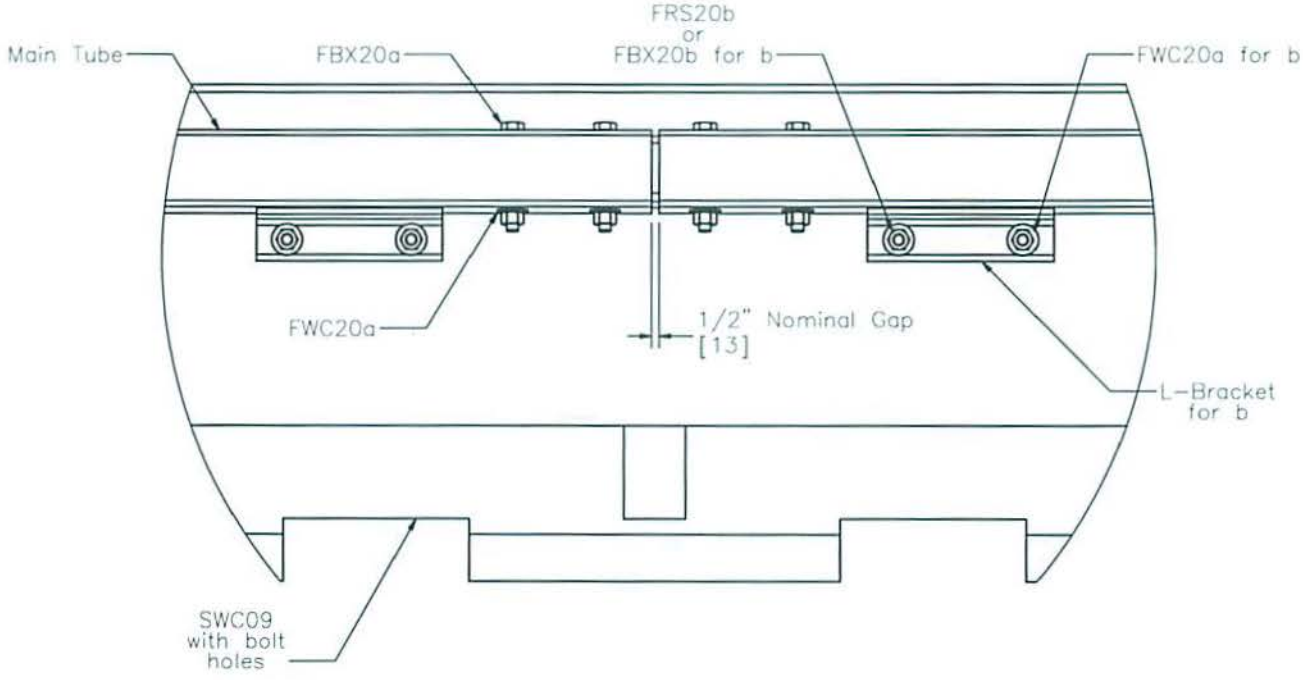
Bielenberg, R.W., Quinn, T.E., Faller, R.K., Sicking, D.L., and Reid, J.D., *Development of a Retrofit, Low-Deflection, Temporary Concrete Barrier System*, Final Report to Wisconsin Department of Transportation, Transportation Research Report No. TRP-03-295-14, Project No. TPF-5(193) Suppl. #15, Project Code RPFP-WISC-4, Midwest Roadside Safety Facility, University of Nebraska-Lincoln, March 31, 2014.

CONTACT INFORMATION

Midwest Roadside Safety Facility
Nebraska Transportation Center
University of Nebraska-Lincoln
130 Whittier Research Center
2200 Vine Street



DETAIL A
ELEVATION VIEW



DETAIL B
ELEVATION VIEW

RETROFIT, LOW-DEFLECTION, PORTABLE CONCRETE BARRIER

MwRSF

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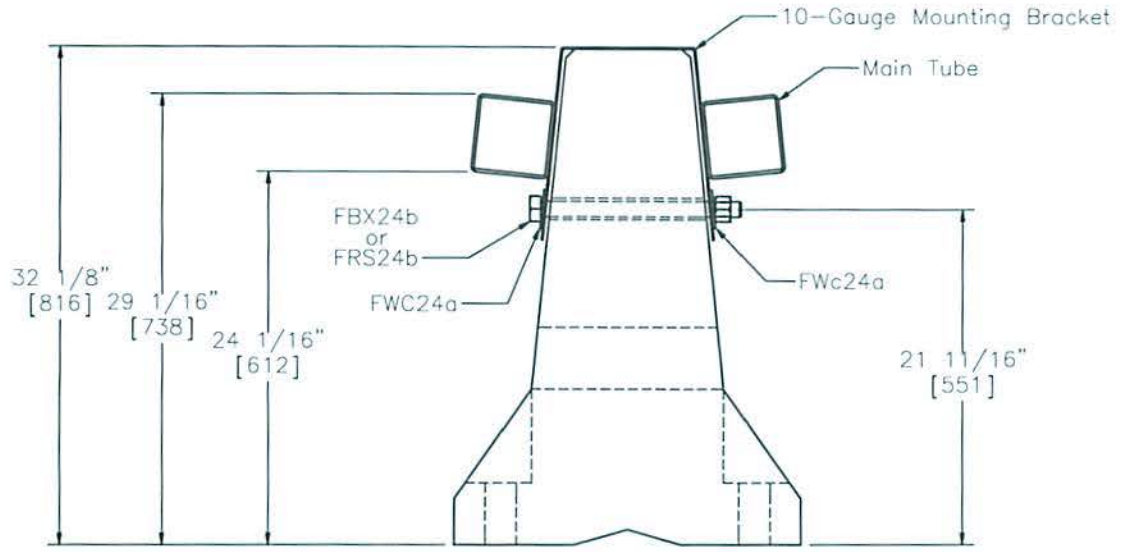
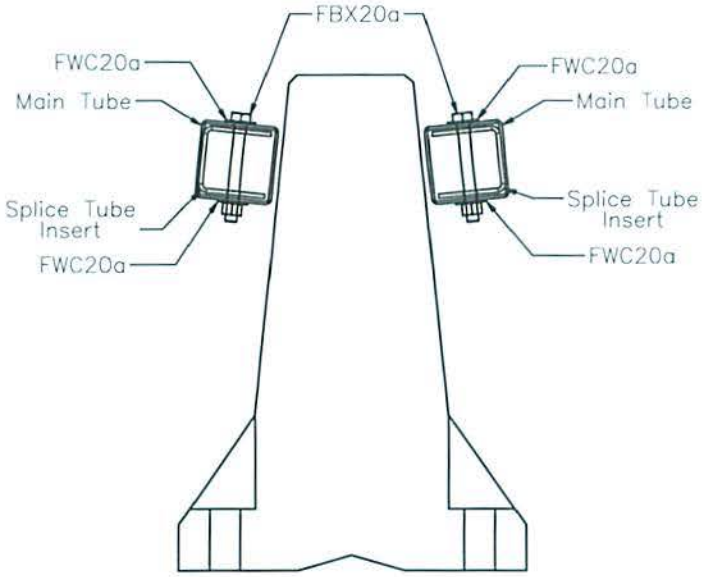


SECTION C-C



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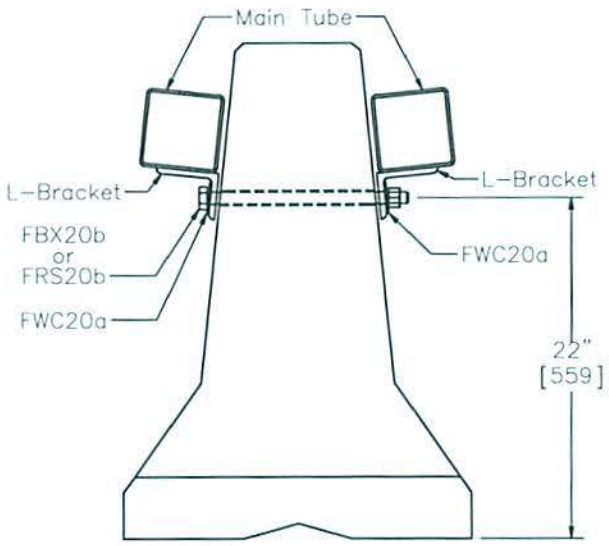

SECTION E-E
for b

RETROFIT, LOW-DEFLECTION, PORTABLE CONCRETE BARRIER

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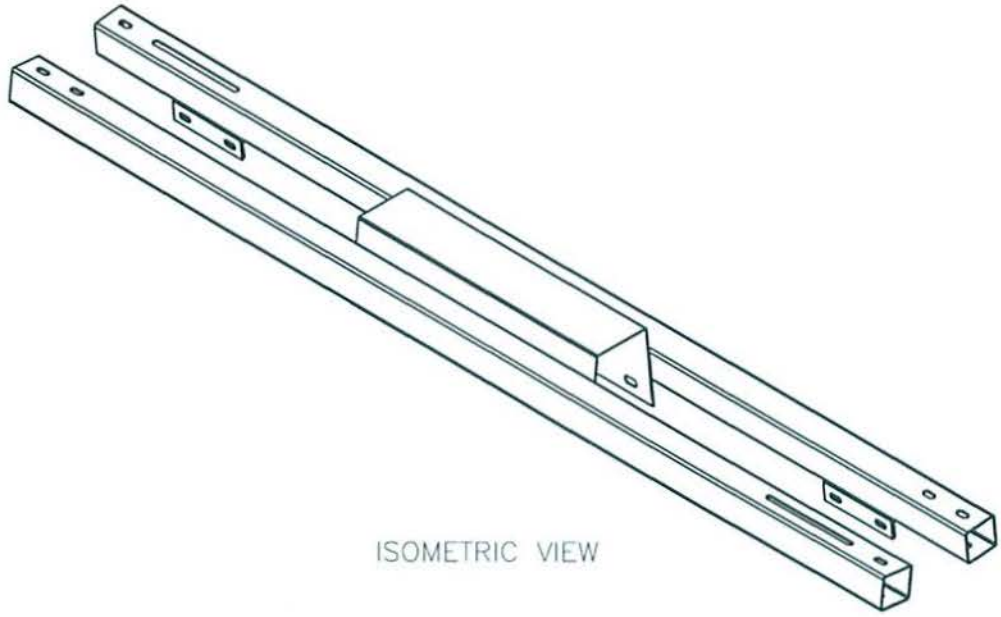
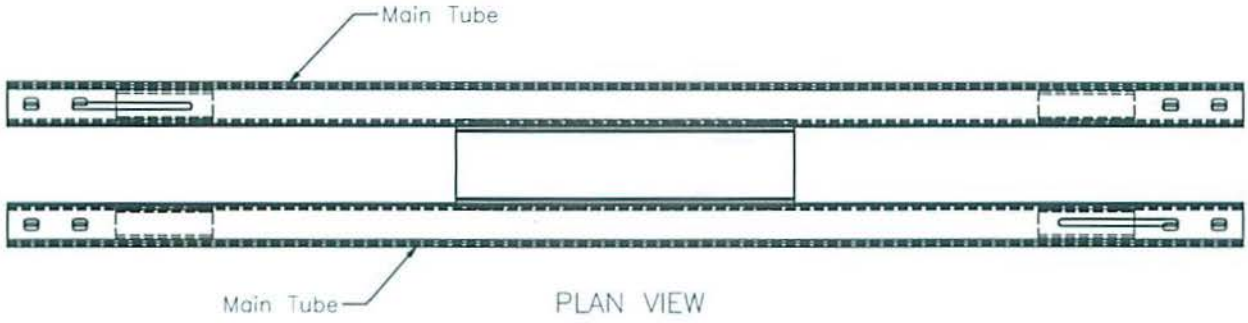
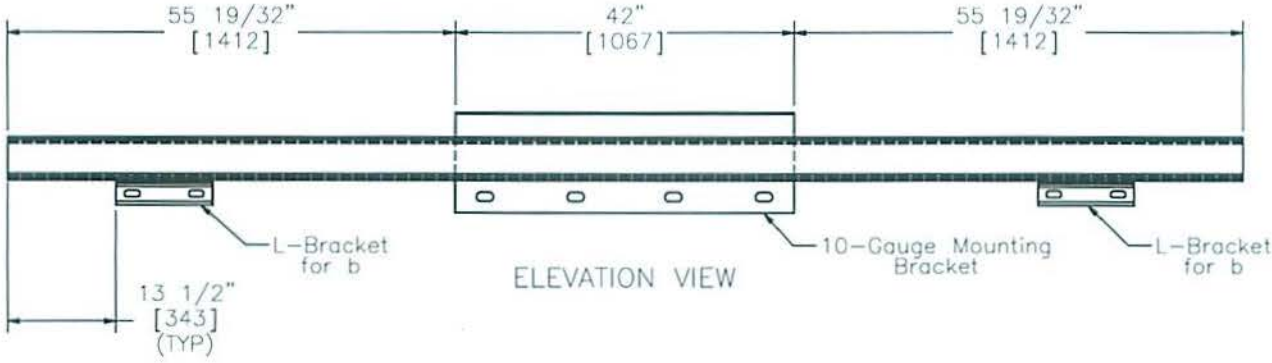


ISOMETRIC VIEW



PLAN VIEW



ELEVATION VIEW

RETROFIT, LOW-DEFLECTION, PORTABLE CONCRETE BARRIER

MwRSF

SWC20a-b

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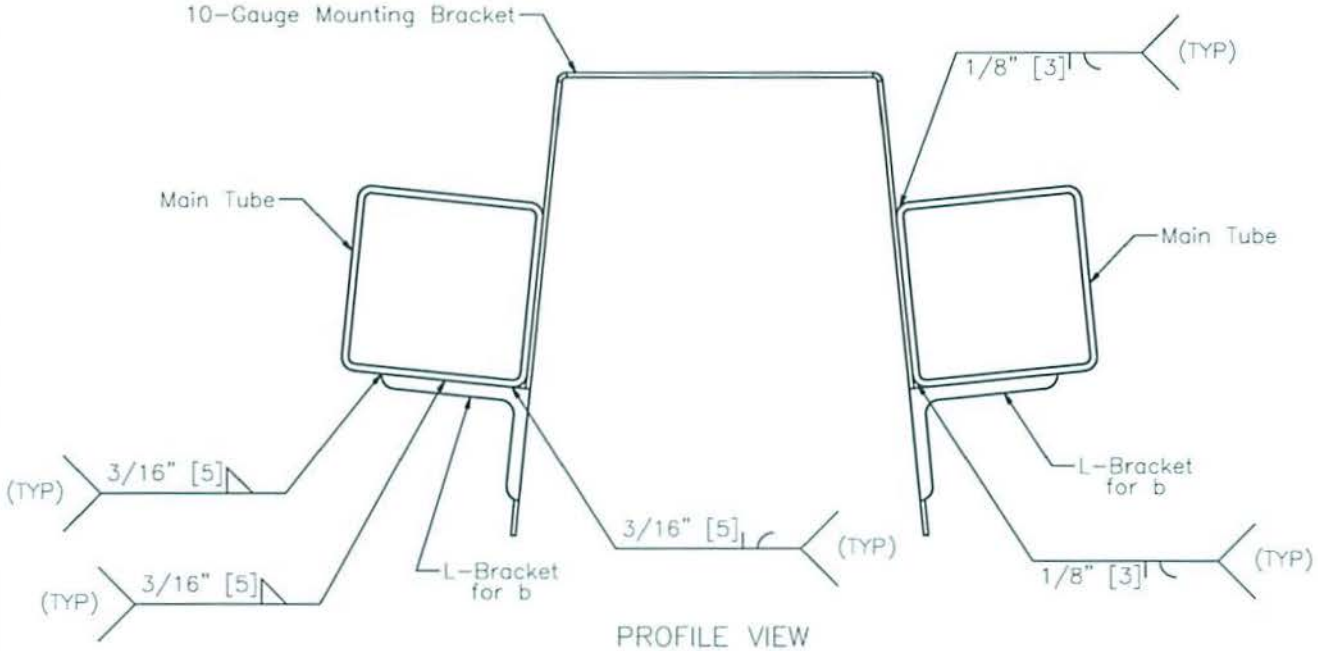
SPECIFICATIONS

The Main Tube shall be manufactured using ASTM A500 Grade B steel. The Splice Tube Insert shall be manufactured using ASTM A572 Grade 50 steel or equivalent, and the 10-Gauge Mounting Bracket shall be manufactured using ASTM A1011 Grade 50 steel.

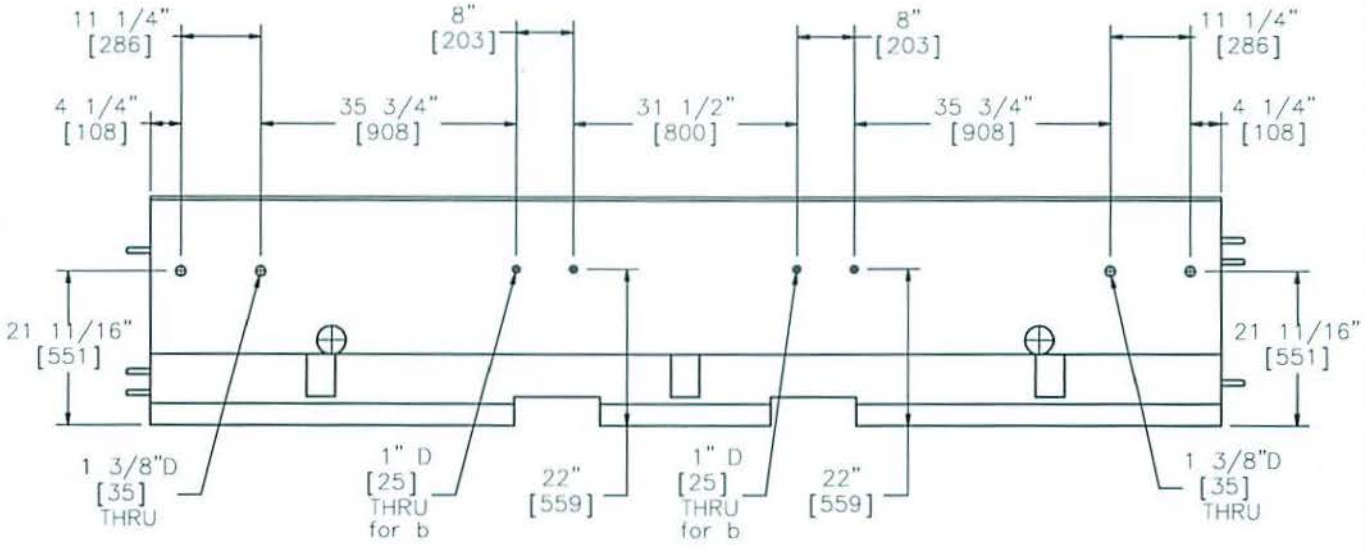
The L-Bracket should be a pre-manufactured piece made from ASTM A529 Grade 50 steel and meeting the dimension specifications herein.

The Main Tube, Mounting Bracket, L-Bracket assembly, and the Splice Tube Insert should be zinc-coated according to AASHTO M111 (ASTM A123) except when corrosion resistant steel is requested.

Dimension tolerances not shown or implied are intended to be those consistent with the proper functioning of the part, including its appearance and accepted manufacturing practices.



PROFILE VIEW



SWC09 BOLT HOLE PLACEMENT
ELEVATION VIEW

RETROFIT, LOW-DEFLECTION, PORTABLE CONCRETE BARRIER

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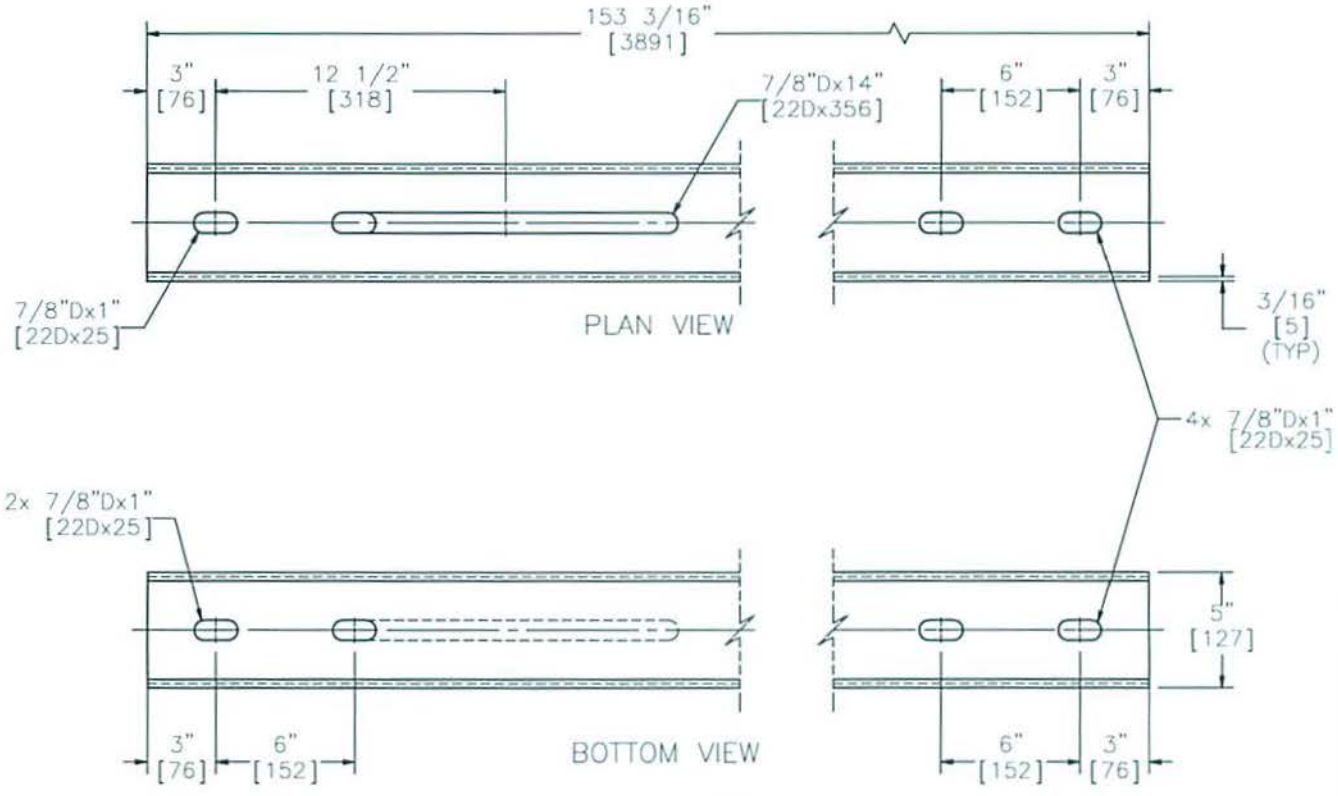
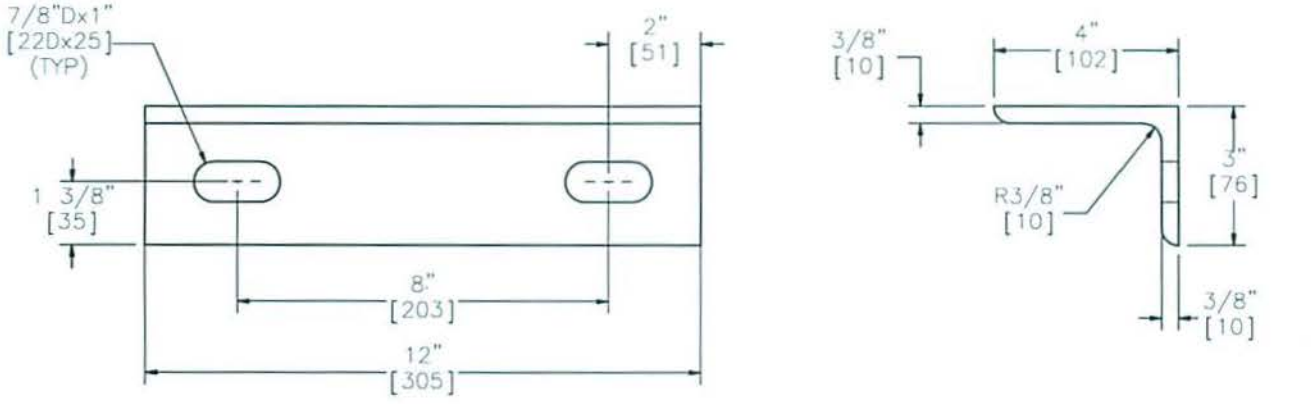


MAIN TUBE



L-BRACKET
for b

RETROFIT, LOW-DEFLECTION, PORTABLE CONCRETE BARRIER

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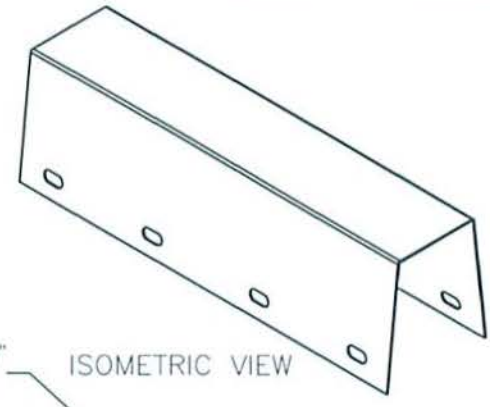
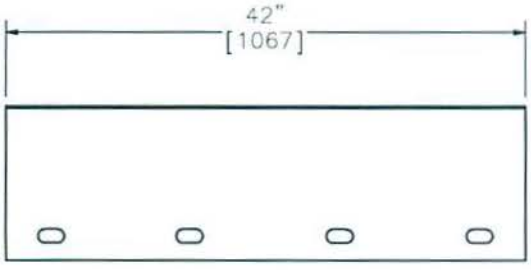
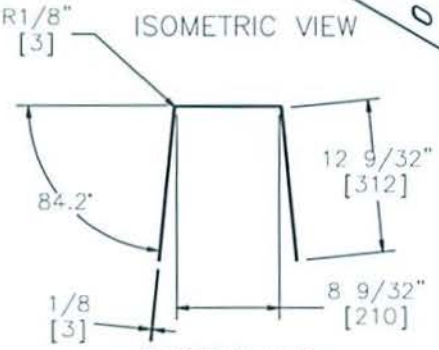
PLAN VIEW



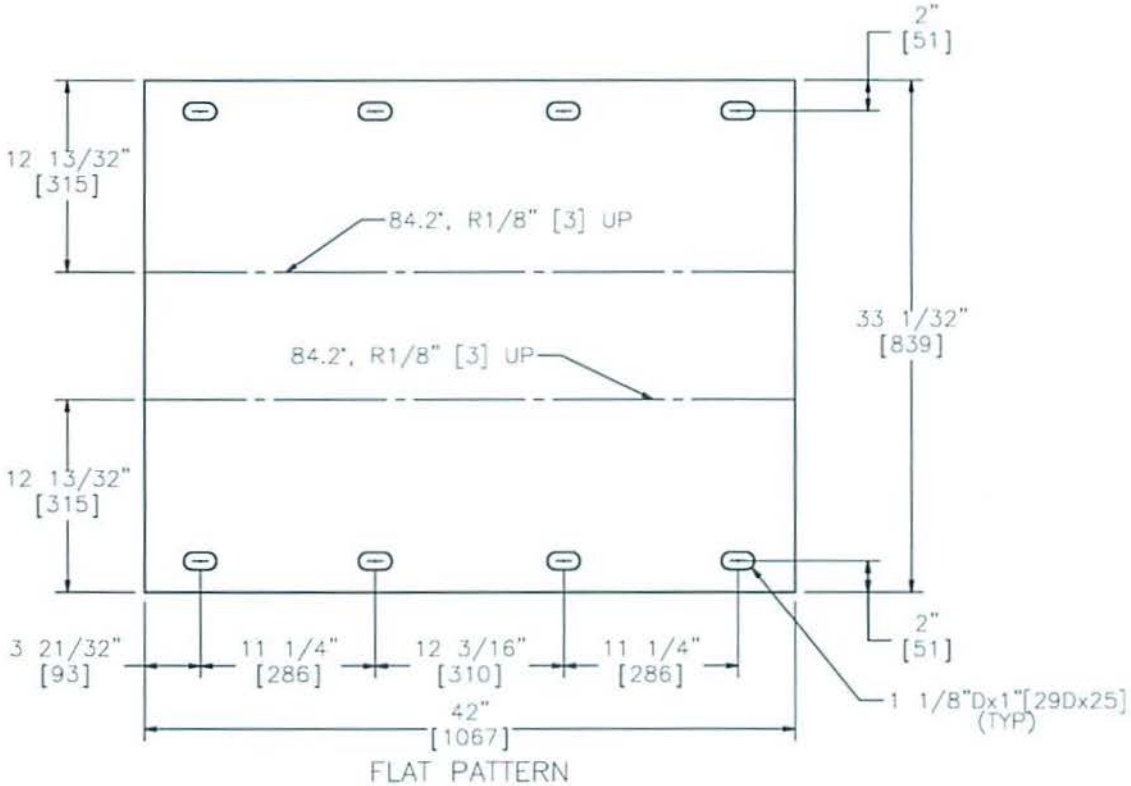
ISOMETRIC VIEW



ELEVATION VIEW



PROFILE VIEW



FLAT PATTERN

10-GAUGE MOUNTING BRACKET PLATE

RETROFIT, LOW-DEFLECTION, PORTABLE CONCRETE BARRIER

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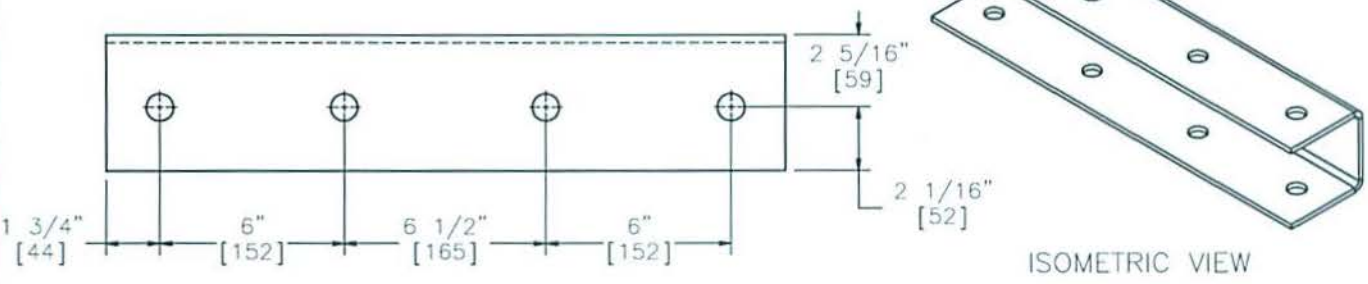
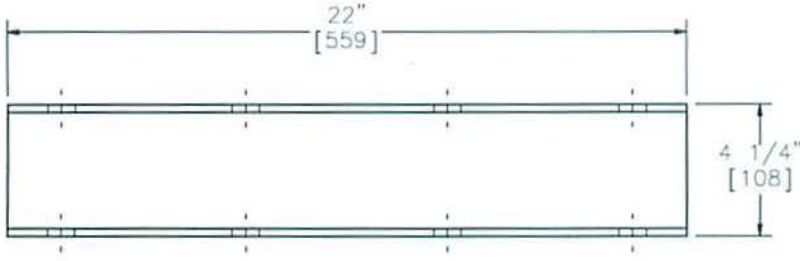


PLAN VIEW

ISOMETRIC VIEW



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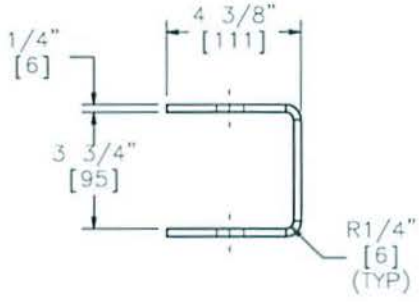
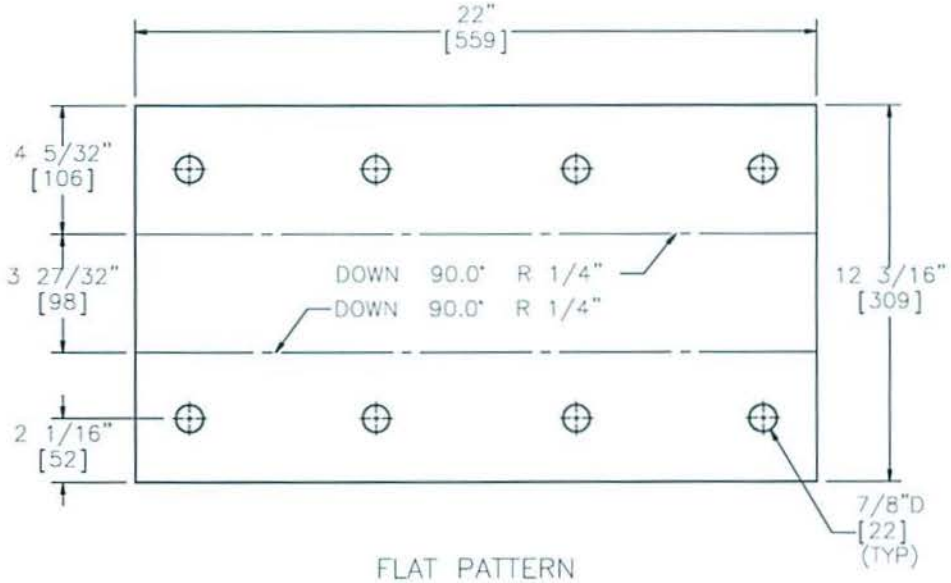


PROFILE VIEW



FLAT PATTERN

SPLICE TUBE INSERT

RETROFIT, LOW-DEFLECTION, PORTABLE CONCRETE BARRIER

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