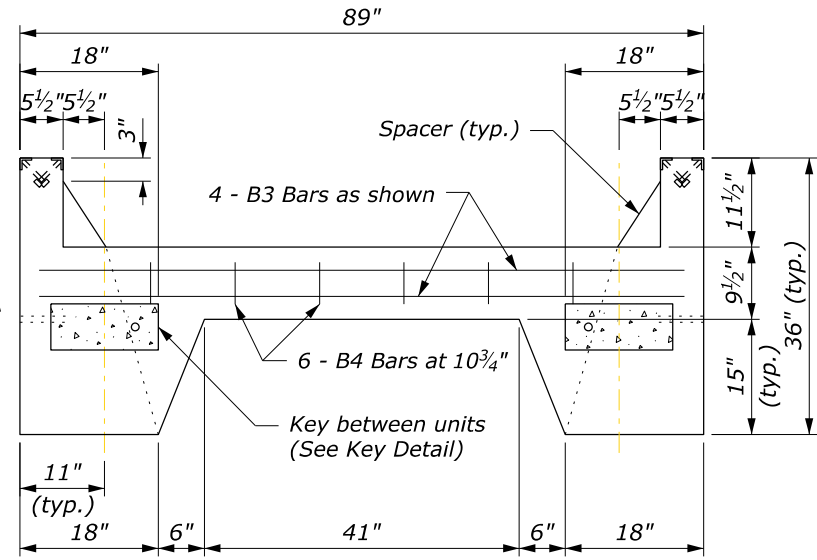
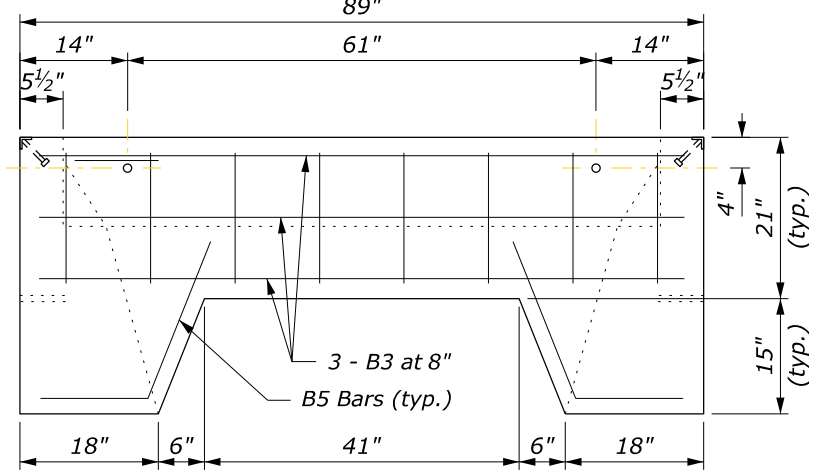


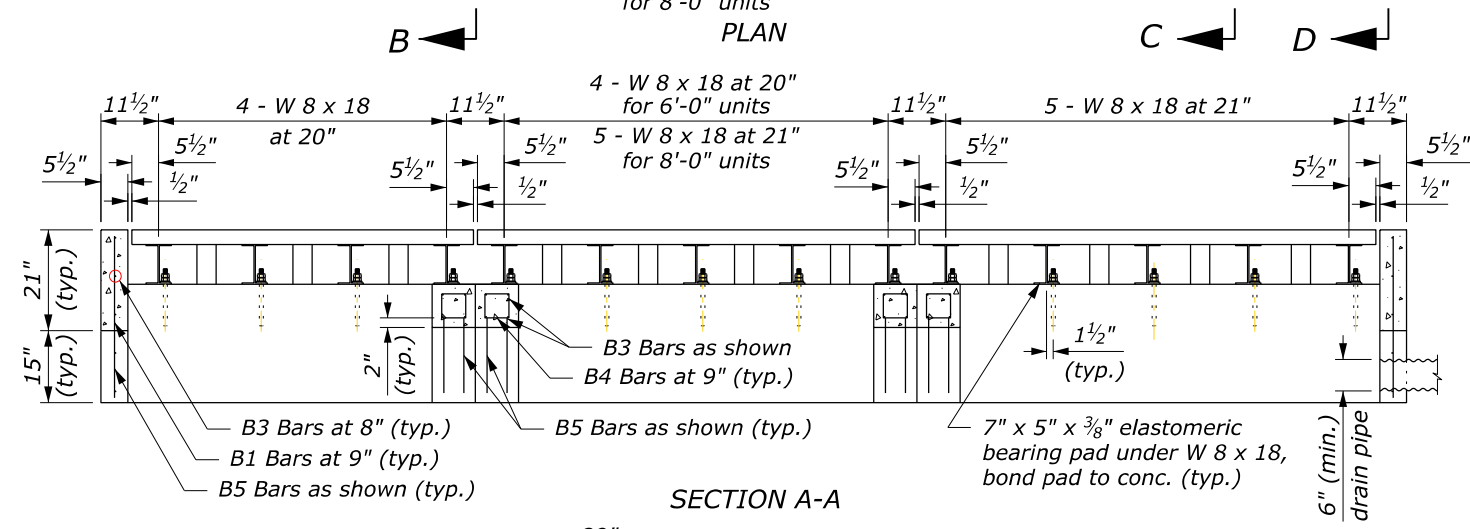
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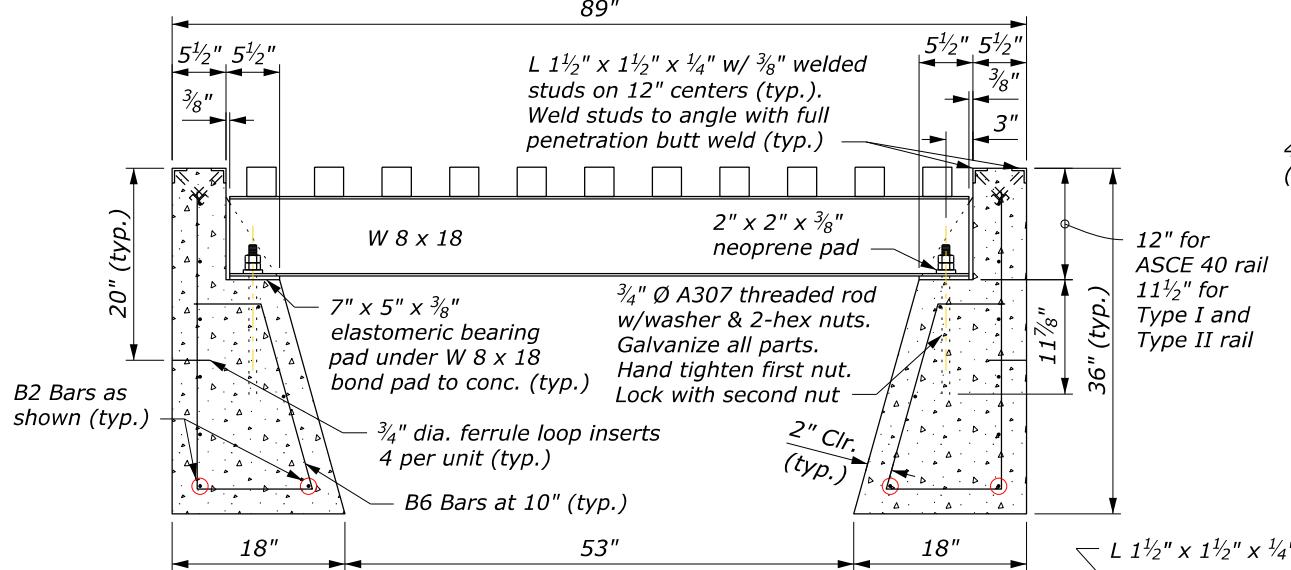
SECTION B-B



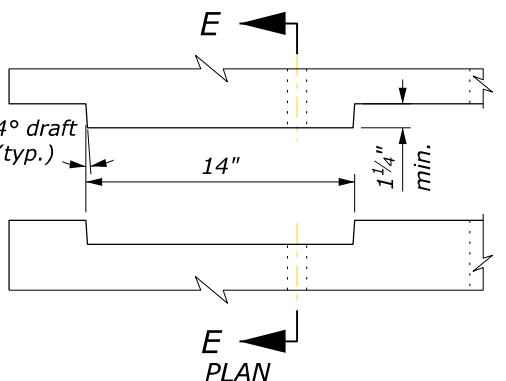
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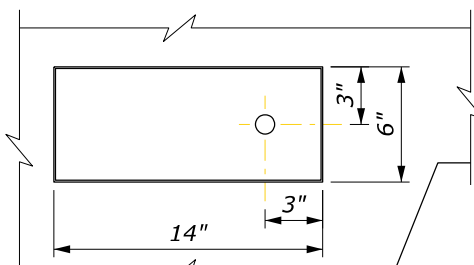
SECTION A-A



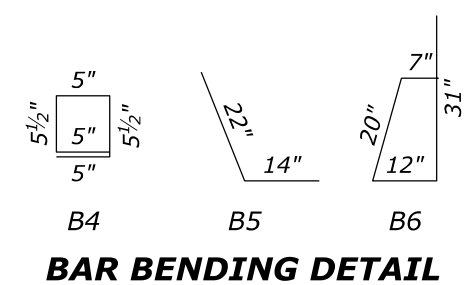
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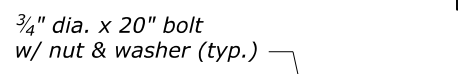
ELEVATION



KEY DETAIL



BAR BENDING DETAIL



SECTION E-E

NOTE:

1. See Standard 619-1 for reinforcing steel size and grade.
2. See Standard 619-1 and 2 for cattle guard wing details. Fabricate end units to accommodate selected cattle guard wing.
3. Minimum soil bearing 4,000 lb/ft². Place units in fine aggregate bed 3 inch thick over hand leveled soil compacted to not less than 95% density.
4. Chamfer exposed concrete edges 3/4" unless otherwise shown. Give all concrete surfaces a Class 1 finish.
5. Approved alternate designs may be used.

PRECAST CATTLE GUARD					
REINFORCING STEEL AND CONCRETE					
UNIT	No. of BARS	BAR MARK	LENGTH	MASS LB	CONCRETE CUYD
6'-0" END	7	B3	85"	33.1	1.89
	10	B2	74"	41.2	
	8	B1	17"	7.6	
	6	B4	26"	8.7	
	18	B6	70"	70.1	
6'-0" INTERIOR	6	B5	36"	12.0	1.90
	8	B3	85"	37.9	
	10	B2	68"	37.9	
	12	B4	26"	17.4	
	18	B6	70"	70.1	
8'-0" INTERIOR	8	B5	36"	16.0	2.34
	8	B3	85"	37.9	
	10	B2	92"	51.2	
	12	B4	26"	17.4	
	20	B6	70"	77.9	
8'-0" END	7	B3	85"	33.1	2.32
	10	B2	98"	54.6	
	8	B1	17"	7.6	
	6	B4	26"	8.7	
	20	B6	70"	77.9	
6	B5	36"	12.0		

U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 OFFICE OF FEDERAL LANDS HIGHWAY

FLH STANDARD

**CATTLE GUARD
 PRECAST FOUNDATION**

STANDARD APPROVED FOR USE 6/2005
 STANDARD 619-3

REVISOR: 10/2016
 DRAFT: 10/2016

22 February 2023 12:56 PM c:\pwwork\0420180\Std619-3.dgn [Std 619-3]