

NOTES

SPECIFICATIONS: For design specifications, see General Layout. Design and fabricate the beam to support the dead load and live load stresses and provide a minimum ultimate moment capacity shown on the Erection Plan. Show stresses in the beam under each loading condition that is anticipated in the manufacture, handling and service life of the beam.

PRESTRESSING STEEL: Use 0.500" diameter or 0.600" diameter, 7 wire strand prestressing steel.

HARDWARE: Threaded inserts, hold down devices, lifting devices and any other hardware which is to be incorporated in the beam will be approved by the Engineer before fabrication is begun.

DIAPHRAGMS: See Erection Plan for location of diaphragms when structure is skewed.

BEAM LENGTH: Increase the overall length of the beam to allow for elastic shortening, shrinkage and creep.

SHOES: Paint shoes in accordance to Standard Specifications. See details on Bridge Plans if expansion shoes are required. See General layout for type of shoes required.

REINFORCING STEEL: See General Layout. The suffix E denotes epoxy coated reinforcing.

SHEAR REINFORCING: Fabricator will provide shear and end reinforcement to meet the requirements of the AASHTO code specified on the General Layout.

PAYMENT: Include all costs to furnish and install anchor bolts, nuts, smooth bars, metal expansion caps, shoes, fiber-reinforced pads and embedded plates in the unit price bid for Prestressed Beams Type MTS.

STRUCTURAL STEEL: Use structural steel meeting the requirements of AASHTO M 270 Grade 36 for embedded plates, smooth bars and shoes. Use structural steel meeting the requirements of AASHTO M 314 Grade 55 for anchor bolts. Galvanize the anchor bolts meeting the requirements of AASHTO M 232. Use headed shear studs meeting the requirements of AASHTO M 169 Grades 1010 through 1020.

HORIZONTAL INTERFACE SHEAR REINFORCEMENT: Fabricator will provide spacing that meets the requirements of the AASHTO code specified on the General Layout.

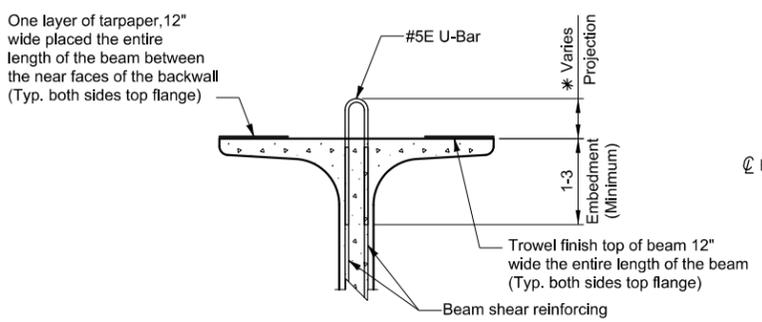
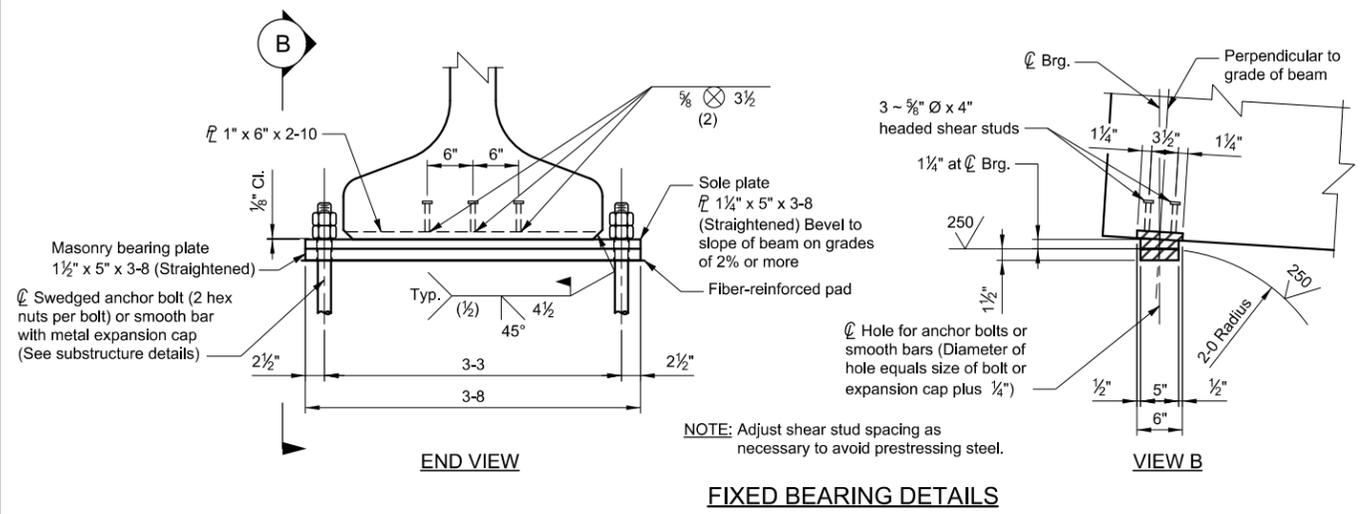
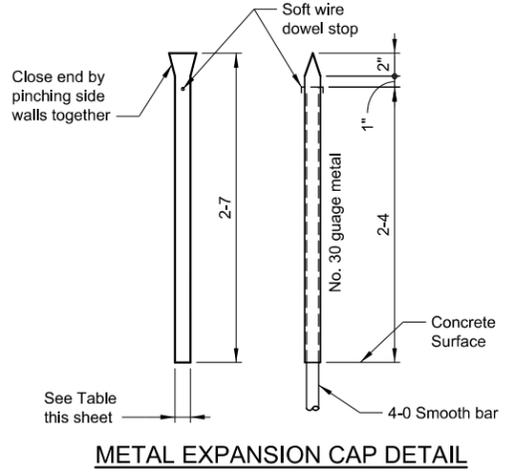
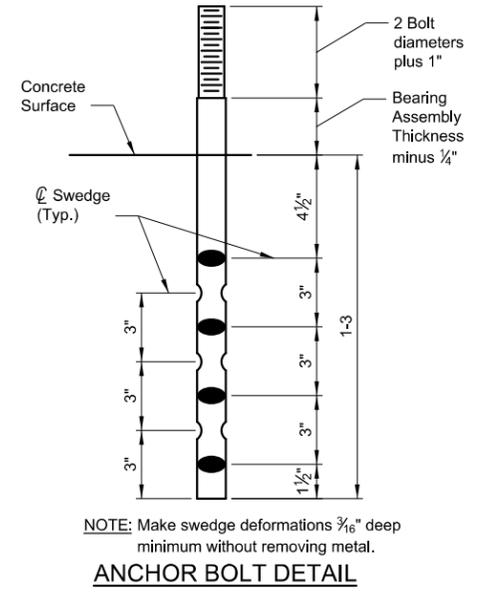
MONTANA SUPER GIRDER PROPERTIES								
NAME	Girder Depth "Height"	"Web"	A (in ²)	Ycg (in)	Ixo (in ⁴)	Sx (Top) (in ²)	Sx (Bot) (in ²)	Weight (lb/ft)
MTS-36	36"	19 3/8"	670	16.44	112 100	5 732	6 818	700
MTS-45	45"	28 3/8"	724	20.28	197 679	7 998	9 746	755
MTS-54	54"	37 3/8"	778	24.22	312 050	10 477	12 886	810
MTS-63	63"	46 3/8"	832	28.22	457 505	13 155	16 210	865
MTS-72	72"	55 3/8"	886	32.29	636 312	16 024	19 706	925
MTS-81	81"	64 3/8"	940	36.41	850 718	19 077	23 368	980
MTS-96	96"	79 3/8"	1030	43.36	1 293 240	24 566	29 829	1075

DIAPHRAGM LOCATIONS	
SPAN LENGTH	DIAPHRAGM LOCATION
0 - 40 ft	NONE
40 - 80 ft	1/2 S
80 - 120 ft	1/3 S
120 - 160 ft	1/4 S
greater than 160 ft	See Erection Plan

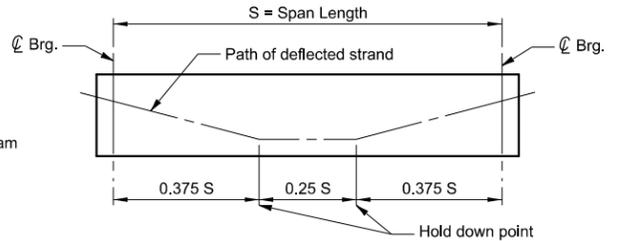
ANCHOR BOLT DIAMETERS		
SPAN LENGTH	ANCHOR BOLT OR SMOOTH BAR DIAMETER	EXPANSION CAP DIAMETER
0 - 50 ft	1"	1 1/8"
50 - 100 ft	1 1/4"	1 3/8"
100 - 150 ft	1 1/2"	1 5/8"
greater than 150 ft	1 3/4"	1 7/8"

WEB THREADED INSERT / HOLE		
CONDITION	EXTERIOR BEAM	INTERIOR BEAM
End Bent Fixed Bearing	Open Hole	Open Hole
End Bent Exp Bearing	Threaded Insert	Open Hole
Intermediate Bent	Threaded Insert	Open Hole
Intermediate Diaphragm	Threaded Insert	Open Hole

NOTE: Place threaded inserts at diaphragm face of beam only.



*NOTE: Extend horizontal interface shear reinforcement such that is located between top and bottom deck mat reinforcing layers.



STANDARD PRESTRESSED CONCRETE BEAM TYPE MTS

MDTA MONTANA DEPARTMENT OF TRANSPORTATION BRIDGE BUREAU

REVISED	REVISED	REVISED	APPROVED	CHECKED	DRAWN	DATE	\$TIMES	FILE/ABBREVS
		5-20-14	D.F.J.	D.F.J.	D.F.J.	3-6-12		
		3-6-12	D.F.J.	D.F.J.	T.J.B.	3-6-12		

DRAWING NO. MTS