gdr5m_1842_bulbt Revised: Feb. 2001

Concrete for prestressed girders shall be Class A1 with f'c = MPa and f'ci = MPa.

(+) Indicates prestressing strands.

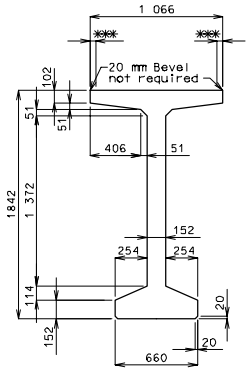
Use strands with an initial prestress force of kN.

Prestressing tendons shall be uncoated, seven-wire, low-relaxation strands, 12.7 mm diameter conforming to AASHTO M203, Grade 1860. See Section 705.4.8 of the Missouri Standard Specifications.

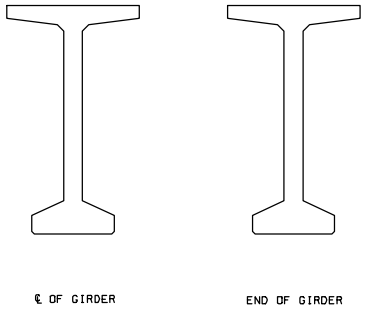
✱✱ At the contractor's option, the location of bent-up strands may be varied from that shown. The total number of bent-up strands shall not be changed.
One strand tie bar is required for each layer of bent-up strands except at end bents, which require one bar on the bottom layer of strands only. No additional payment will be made if additional strand tie bars are required.

✱✱✱ At the contractor's option, a 40 mm to 45 mm smooth finished strip is permitted to facilitate placement of joint filler for prestressed panels.

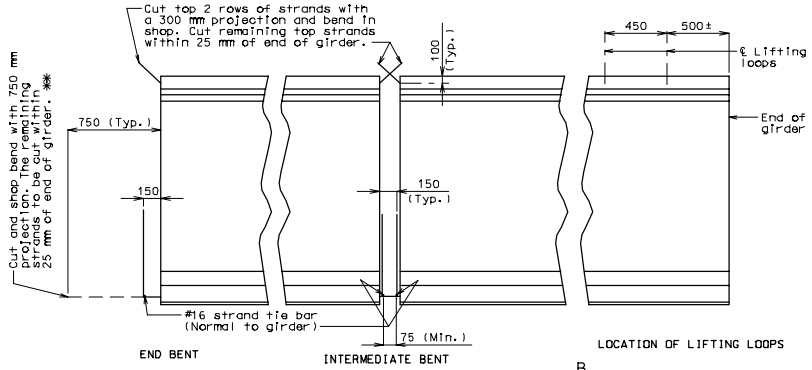
State	Proj. No.	Sheet No.
MO		



GIRDER DIMENSIONS



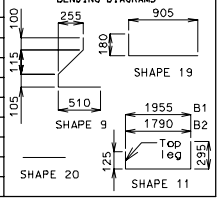
STRAND ARRANGEMENTS



STRAND DETAILS AT GIRDER ENDS

BILL OF REINFORCING STEEL - EACH GIRDER			
NO.	SIZE & MARK	ACTUAL LENGTH	SHAPE
x	# -A1	xxxx mm	20
xxx	# -B1	2330 mm	11
16	#19-B2	2135 mm	11
xxx	#13-C1	1060 mm	19
xxx	#13-D1	945 mm	9

BENDING DIAGRAMS



All dimensions in bending diagram are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

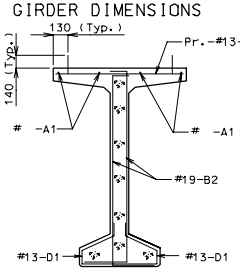
All B1 and C1 bars shall be epoxy coated.

Actual lengths are measured along centerline bar to the nearest 5 millimeters.

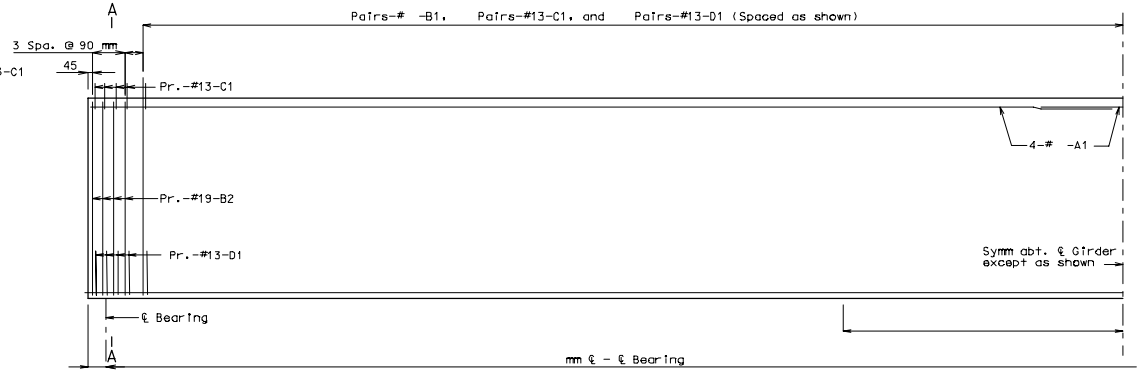
Minimum clearance to reinforcing shall be 25 mm.

All reinforcement shall be Grade 420.

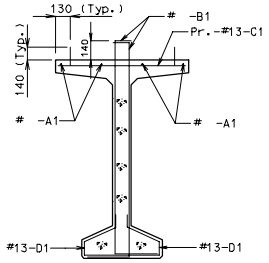
The two D1 bars may be furnished as one bar at the fabricator's option.



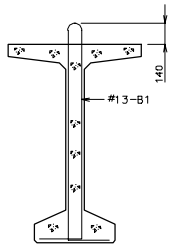
SECTION A-A
Strands not shown for clarity.



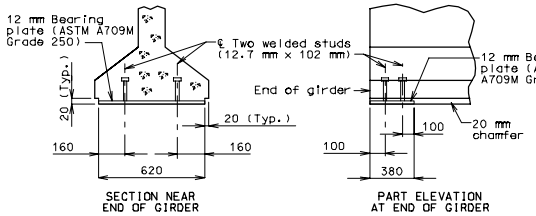
PART ELEVATION OF GIRDER SPAN (-)
(Exterior and interior girders are the same except for coil ties)



SECTION B-B
Strands not shown for clarity.



B1 BAR PERMISSIBLE ALTERNATE SHAPE



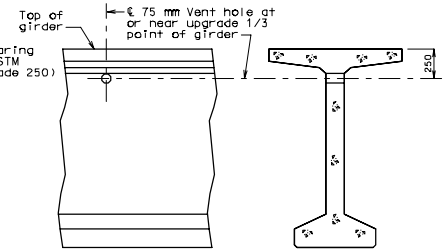
SECTION NEAR END OF GIRDER

PART ELEVATION AT END OF GIRDER

BEARING PLATE DETAILS

Galvanize the 12 mm bearing plate (ASTM A709M Grade 250) in accordance with ASTM A123.

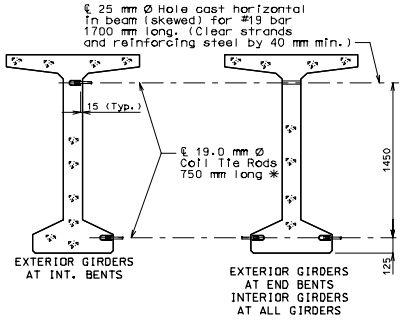
Cost of furnishing, galvanizing, and installing the 12 mm bearing plate (ASTM A709M Grade 250) and welded studs in the prestressed girder shall be included in the price bid for Prestressed Concrete Bulb Tee Girder.



PART ELEVATION OF GIRDER

PART SECTION NEAR VENT HOLE

Place vent holes at or near upgrade 1/3 point of girders and clear reinforcing steel or strands by 40 mm minimum and steel intermediate diaphragm bolt connections by 150 mm min.



DETAILS OF COIL TIES

✱ Length of coil tie rods at exterior girders at end bents = mm.

Cost of 19.0 mm Ø coil tie rods placed in diaphragms is included in the contract unit price for Prestressed Concrete Bulb Tee Girder.

Coil ties shall be held in place in the forms by slotted wire-setting studs projecting thru forms. Studs are to be left in place or replaced with temporary plugs until girders are erected, and then replaced by coil tie rods.

For details of diaphragms, see sheet no. __.

For location of coil inserts at slab drains, see sheet no. __.

The 40 mm Ø holes shall be cast in the web for steel intermediate diaphragm. Drilling is not allowed.

For Girder Camber Diagram, see sheet no. __.

For location of coil ties and 25 mm Ø horizontal holes, see sheet no. .

Created in MicroStation

Detailed
Checked

Sheet No. of

COUNTY

GDR 5M