

**DESIGNER NOTES**

ALL BAR SPLICES TO BE BASED ON "CLASS C" TENSION LAP SPLICE UNLESS OTHERWISE SHOWN.

SEE STANDARDS 4.02, 4.03 AND 4.05 FOR ACCEPTABLE AESTHETICS.

SLOPE TOP OF COLUMNS TO MATCH CAP WHEN THE BOTTOM OF THE CAP IS SLOPED. DETAIL BOTTOM OF CAP REINFORCEMENT TO CLEAR VERTICAL COLUMN REINFORCEMENT.

CAPS MAY BE MORE THAN 3" WIDER THAN COLUMNS IF THE EXTRA WIDTH IS NECESSARY TO SATISFY THE MINIMUM EDGE DISTANCE CRITERIA ADJACENT TO BEARINGS

BEARING SEAT AREAS SHALL BE LEVEL EXCEPT FOR THE TWO CASES LISTED BELOW:

1. FOR GIRDERS WITH 1/2" ELASTOMERIC BEARING PADS WHEN THE BOTTOM OF THE GIRDERS SLOPE MORE THAN 1% SEE STANDARD 19.01.
2. WHEN A CAP IS USED FOR CONCRETE SLAB SUPERSTRUCTURES MAKE THE TOP OF THE CAP PARALLEL TO GRADE. SEE STANDARD 19.01.

BEAM SEATS MAY BE ANGLED TO MATCH SKEW AT THE DESIGN ENGINEER'S DISCRETION.

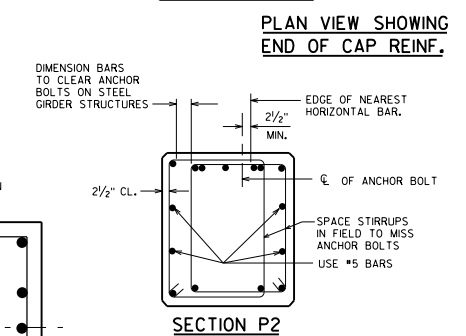
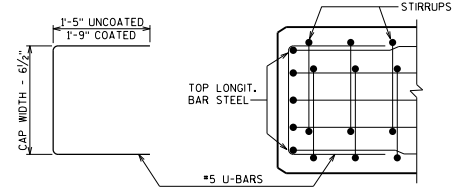
SEE STANDARD 12.01 FOR ADDITIONAL REINFORCING STEEL IN BEARING AREA FOR BEAM SEATS OF NON-SLOPED CAPS THAT ARE 4" OR MORE ABOVE LOWEST BEAM SEAT.

EPOXY COAT BAR STEEL DOWN TO TOP OF FOOTINGS IN ALL PIERS UNDER EXPANSION JOINTS AND ON ALL PIERS AT GRADE SEPARATIONS.

BAR STEEL REQUIRED FOR BENDING IN PIER CAP SHALL BE DETAILED IN LENGTHS AS REQUIRED FOR CONSTRUCTIBILITY AND BY DESIGN SPECIFICATIONS. MAXIMUM REQUIRED BAR STEEL IN THE TOP OF THE PIER CAP (NEGATIVE MOMENT STEEL) MAY BE DETAILED FULL LENGTH IF A MINOR COST INCREASE.

SEE BRIDGE MANUAL 13.4.10 FOR MULTI-COLUMN PIER DESIGN REGARDING VEHICULAR COLLISION FORCE. THE PIER AS DETAILED ON THIS STANDARD IS ADEQUATE TO RESIST THE REQUIREMENTS OF AASHTO LRFD 3.6.5 FOR VEHICULAR COLLISION FORCE PROVIDED THAT RUSTICATIONS DO NOT EXCEED 1 1/2 INCH.

△ NORMALLY THIS LAP IS OMITTED AND FOOTING DOWELS EXTENDED INTO THE CAP IF THE LAP IS GREATER THAN ONE-HALF THE COLUMN HEIGHT.



**MULTI-COLUMN PIER WITH RECTANGULAR COLUMNS**

**BUREAU OF STRUCTURES**

APPROVED: *Laura Shadewald* DATE: 7-21