

GENERAL NOTES

GRADE 60 REINFORCING STEEL IS REQUIRED.

ALL REINFORCING STEEL SHALL BE EPOXY COATED UNLESS OTHERWISE NOTED.

THE FOLLOWING TABLE GIVES THE MINIMUM LAP SPLICE LENGTH FOR EPOXY COATED REINFORCING BARS PLACED IN ACCORDANCE WITH SUBSECTION 602.06. THESE SPLICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED AT LESS THAN 6" ON CENTER.

BAR SIZE #4 #5 #8

SPLICE LENGTH FOR CLASS D CONCRETE 1'-3" 1'-6" 3'-8"

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.

E.F. = EACH FACE
F.F. = FAR FACE
N.F. = NEAR FACE

CERTAIN DIMENSIONS CONTAINED IN THESE PLANS ARE CALCULATED FROM THE "AS CONSTRUCTED PLANS". THESE DIMENSIONS MAY BE ADJUSTED TO MEET THE EXISTING STRUCTURE. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIAL.

ALL SAW WATER, CORING WASTE, CONCRETE WASHOUT, AND OTHER CONSTRUCTION DEBRIS SHALL BE COLLECTED AND DISPOSED OF OFFSITE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS, AT NO ADDITIONAL COST TO THE PROJECT. UNDER NO CIRCUMSTANCES SHALL SUCH MATERIAL BE ALLOWED TO ENTER ANY NATURAL OR MANMADE WATER WAY OR STORM SEWER.

DESIGN DATA

AASHTO, 16th EDITION WITH CURRENT INTERIMS

REINFORCED CONCRETE:

CLASS D CONCRETE: $f'_c = 4,500$ psi

REINFORCING STEEL: $f_y = 60,000$ psi

THE GROUT USED FOR PATCHING COLUMNS SHALL BE A MORTAR MIX. PORPORTIONED BY VOLUME:

- ONE PART PORTLAND CEMENT
- TWO (2) TO THREE (3) PARTS FINE AGGREGATE, CONFORMING TO THE REQUIREMENTS OF ASTM C-144
- A LATEX ADMIXTURE THAT CONFORMS TO THE REQUIREMENTS OF ASTM C-1059, TYPE. II, (NON-REDISPERSABLE). A MINIMUM OF 12% LATEX SOLIDS BY WEIGHT OF CEMENT SHALL BE ADDED TO THE MORTAR MIX.
- ENOUGH WATER TO PROVIDE A PLASTIC WORKABLE MIX. APPLY CONCRETE SEALER PRIOR TO PATCHING OF COLUMNS.

SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	F-16-ER	F-17-GA	F-16-FL	E-16-FJ	E-17-GE	TOTAL
210	REBUILD PORTIONS OF PRESENT STRUCTURE	EACH	2	2	1			5
① 601	CONCRETE (PATCHING)	SQ. FT.				160	135	295

- ① CONCRETE PATCHING FOR COLUMNS. THE WORK AREAS AND QUANTITIES ARE APPROXIMATE AND SHALL BE ADJUSTED ACCORDING TO THE CONDITIONS AS DIRECTED BY THE ENGINEER.

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BRIDGE LOCATIONS

F-16-ER (US OVER GARRISON ST.)
F-17-GA (US 40 OVER TOLLGATE CREEK)
F-16-FL (US 6 OVER SHERIDAN BLVD.)
E-16-FJ (US 287 OVER I-70)
E-17-GE (I-70 OVER SAND CREEK)


WORK DESCRIPTION

THIS WORK CONSISTS OF INSTALLING CORBELS UNDER CERTAIN GIRDERS OF THREE (3) BRIDGES, WHICH INCLUDES SANDBLASTING REINFORCING STEEL, CLEANING SURFACES TO RECEIVE CONCRETE, PATCHING OF PIER CAP FACES AS DIRECTED BY THE ENGINEER, INSTALLING CORBELS PER PLANS AND DETAILS, AND PAINTING OF STEEL AS DIRECTED BY THE ENGINEER. THIS WORK ALSO CONSISTS OF REPAIRING SPALLING ON CERTAIN PIER COLUMNS ON TWO (2) BRIDGES AND INCLUDES SANDBLASTING REINFORCING STEEL, CLEANING CONCRETE SURFACES TO RECEIVE CONCRETE, REPLACING OF REINFORCING STEEL AS NEEDED, AND PATCHING OF COLUMNS.

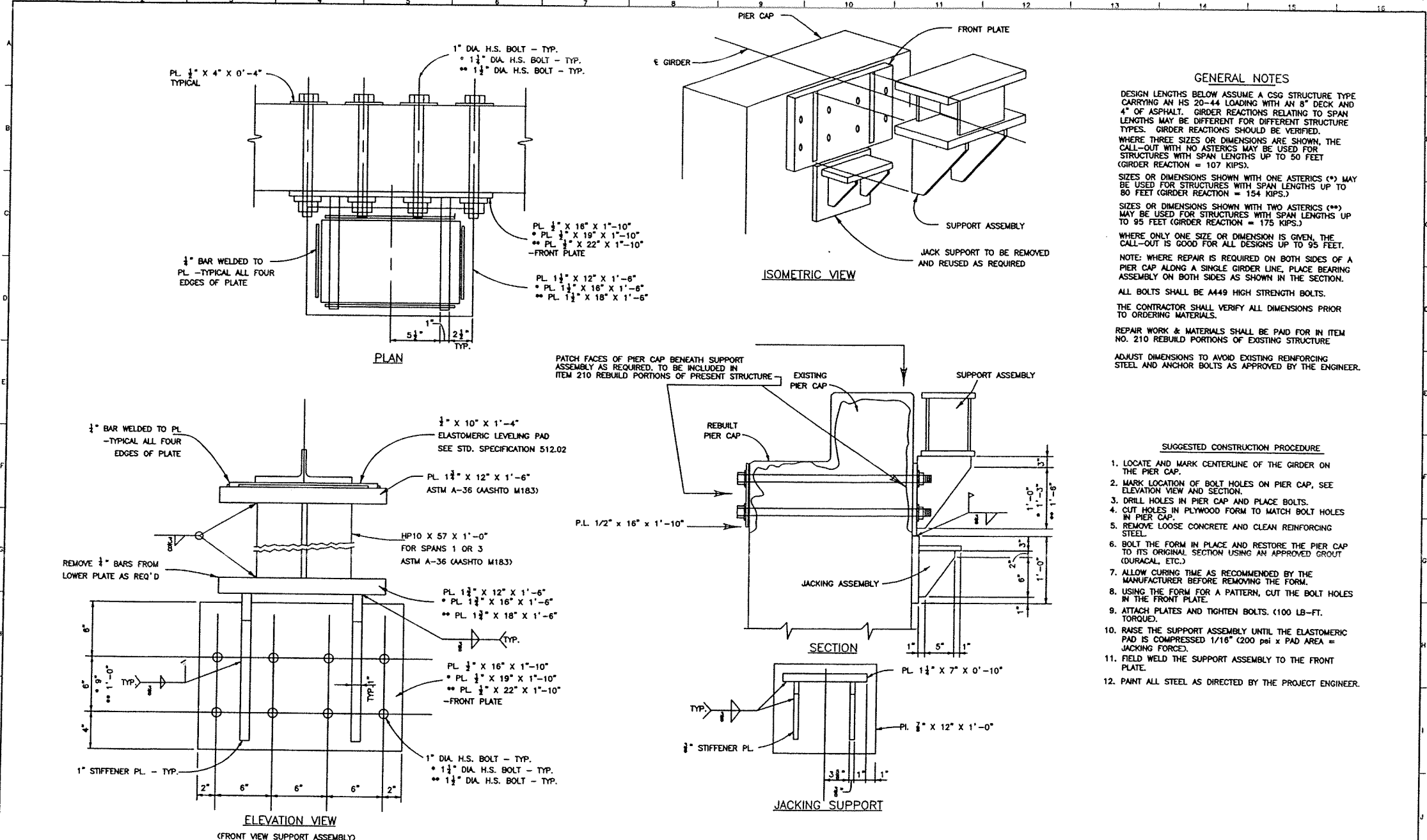
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SECTION OR DETAIL IDENTIFICATION

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GENERAL NOTES

DESIGN LENGTHS BELOW ASSUME A CSG STRUCTURE TYPE CARRYING AN HS 20-44 LOADING WITH AN 8" DECK AND 4" OF ASPHALT. GIRDER REACTIONS RELATING TO SPAN LENGTHS MAY BE DIFFERENT FOR DIFFERENT STRUCTURE TYPES. GIRDER REACTIONS SHOULD BE VERIFIED.

WHERE THREE SIZES OR DIMENSIONS ARE SHOWN, THE CALL-OUT WITH NO ASTERISCS MAY BE USED FOR STRUCTURES WITH SPAN LENGTHS UP TO 50 FEET (GIRDER REACTION = 107 KIPS).

SIZES OR DIMENSIONS SHOWN WITH ONE ASTERISCS (**) MAY BE USED FOR STRUCTURES WITH SPAN LENGTHS UP TO 80 FEET (GIRDER REACTION = 154 KIPS.)

SIZES OR DIMENSIONS SHOWN WITH TWO ASTERISCS (***) MAY BE USED FOR STRUCTURES WITH SPAN LENGTHS UP TO 95 FEET (GIRDER REACTION = 175 KIPS.)

WHERE ONLY ONE SIZE OR DIMENSION IS GIVEN, THE CALL-OUT IS GOOD FOR ALL DESIGNS UP TO 95 FEET.

NOTE: WHERE REPAIR IS REQUIRED ON BOTH SIDES OF A PIER CAP ALONG A SINGLE GIRDER LINE, PLACE BEARING ASSEMBLY ON BOTH SIDES AS SHOWN IN THE SECTION.

ALL BOLTS SHALL BE A449 HIGH STRENGTH BOLTS.


THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO ORDERING MATERIALS.

REPAIR WORK & MATERIALS SHALL BE PAID FOR IN ITEM NO. 210 REBUILD PORTIONS OF EXISTING STRUCTURE

ADJUST DIMENSIONS TO AVOID EXISTING REINFORCING STEEL AND ANCHOR BOLTS AS APPROVED BY THE ENGINEER.

SUGGESTED CONSTRUCTION PROCEDURE

1. LOCATE AND MARK CENTERLINE OF THE GIRDER ON THE PIER CAP.
2. MARK LOCATION OF BOLT HOLES ON PIER CAP, SEE ELEVATION VIEW AND SECTION.
3. DRILL HOLES IN PIER CAP AND PLACE BOLTS.
4. CUT HOLES IN PLYWOOD FORM TO MATCH BOLT HOLES IN PIER CAP.
5. REMOVE LOOSE CONCRETE AND CLEAN REINFORCING STEEL.
6. BOLT THE FORM IN PLACE AND RESTORE THE PIER CAP TO ITS ORIGINAL SECTION USING AN APPROVED GROUT (DURACAL, ETC.).
7. ALLOW CURING TIME AS RECOMMENDED BY THE MANUFACTURER BEFORE REMOVING THE FORM.
8. USING THE FORM FOR A PATTERN, CUT THE BOLT HOLES IN THE FRONT PLATE.
9. ATTACH PLATES AND TIGHTEN BOLTS. (100 LB.-FT. TORQUE).
10. RAISE THE SUPPORT ASSEMBLY UNTIL THE ELASTOMERIC PAD IS COMPRESSED 1/16" (200 psi x PAD AREA = JACKING FORCE).
11. FIELD WELD THE SUPPORT ASSEMBLY TO THE FRONT PLATE.
12. PAINT ALL STEEL AS DIRECTED BY THE PROJECT ENGINEER.

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