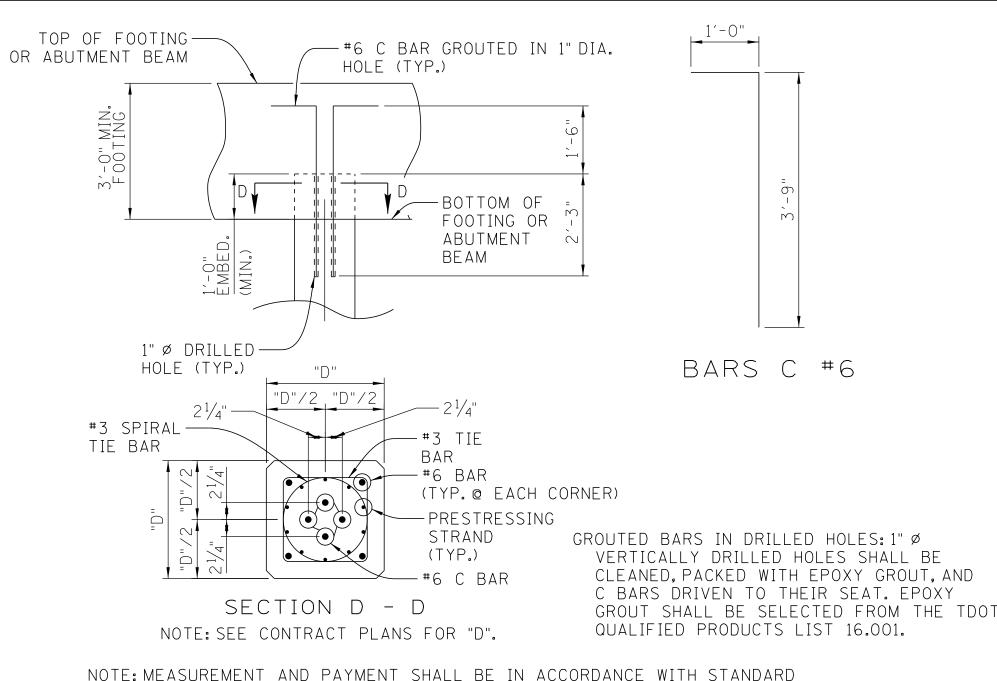


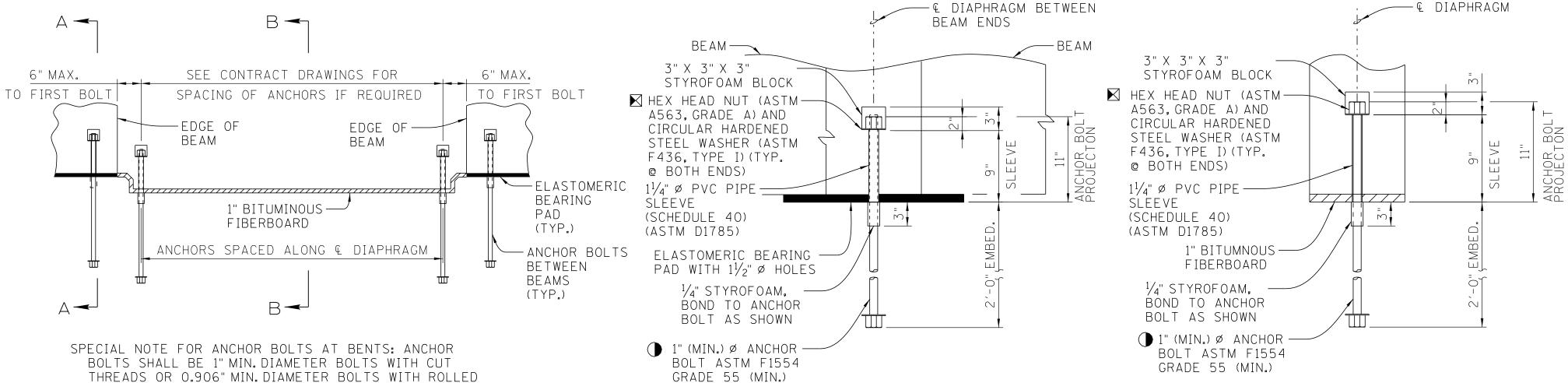
STEEL PILE SEISMIC ATTACHMENT DETAILS



NOTE: MEASUREMENT AND PAYMENT SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS EXCEPT THE COST OF PREPARATION OF THE TOP OF THE PILE FOR SEISMIC REQUIREMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM NO. 606-12.01, PILE ANCHORAGE SYSTEM (SEISMIC) (EA.). THE CONTRACTOR SHALL BE PAID FOR PILING BASED ON THE FINAL LENGTH OF PILING IN PLACE BELOW THE PILE CUT-OFF ELEVATION.

NOTE: THE COST OF REINFORCING, DRILLING, PREPARING, AND GROUTING THE HOLES TO BE INCLUDED IN ITEM NO. 606-12.01, PILE ANCHORAGE SYSTEM (SEISMIC) (EA.).

ALTERNATE CONCRETE PILE SEISMIC ATTACHMENT DETAILS



NOTE: ATTACHMENT DETAIL NOT FOR

BENTS (REFER TO STD-5-2).

LATERAL RESISTANCE AND HOLDDOWN FOR SEISMIC LOADS

REQUIRED FOR SDC A, B, C, AND D

USE WITH CONCRETE FILLED PIPE PILE

THREADS OR 0.906" MIN. DIAMETER BOLTS WITH ROLLED THREADS WITH A MINIMUM YIELD STRENGTH OF 55 KSI. THE ANCHOR BOLT PROJECTION SHALL HAVE A $1\frac{1}{4}$ " DIAMETER PVC SLEEVE (SCHEDULE 40) CAPPED BY A HEX HEAD NUT AND WASHER. THE NUT AND WASHER SHALL BE TIGHTENED SNUG AGAINST THE PVC PIPE WITH THE THREADS OF THE ANCHOR BOLT BURRED. THE PROJECTING ANCHOR BOLT, NUT, AND WASHER SHALL BE PAINTED WITH EPOXY PAINT. THE TOP OF THE ANCHOR BOLT SHALL BE COVERED WITH A 3" X 3" X 3" STYROFOAM BLOCK GLUED SECURELY TO THE TOP OF THE

ASSEMBLY. NOTE: WHEN THE NUT IS TIGHTENED AGAINST THE TOP OF THE PVC PIPE SLEEVE, THE BOTTOM OF THE SLEEVE SHALL BEAR UNIFORMLY ON THE TOP OF THE BENT CAP OR RISER BLOCK.

NOTE: THE COST OF DRILLING THE HOLES IN THE TOP

PILES.

OF THE PILES TO BE INCLUDED IN THE COST OF THE

NOTE: ALL ANCHOR BOLTS, HEX HEAD NUTS, WASHERS, SCHEDULE 40 PVC PIPE, STYROFOAM BLOCKS, AND LABOR NECESSARY FOR INSTALLATION OF THE ANCHOR BOLT ASSEMBLY TO BE INCLUDED IN THE COST OF CLASS 'A' CONCRETE.

SECTION A - A

DENOTES: ANCHOR BOLT DIAMETER AND GRADE MAY BE INCREASED BY THE DESIGNER. SEE CONTRACT DRAWINGS FOR DIAMETER AND GRADE TO BE USED. INCREASE OTHER BOLT-RELATED DIMENSIONS AS NECESSARY.

DENOTES: FOR ASTM F1554 GRADE 105 BOLTS, USE HEAVY HEX NUTS (ASTM A563) GRADE DH)

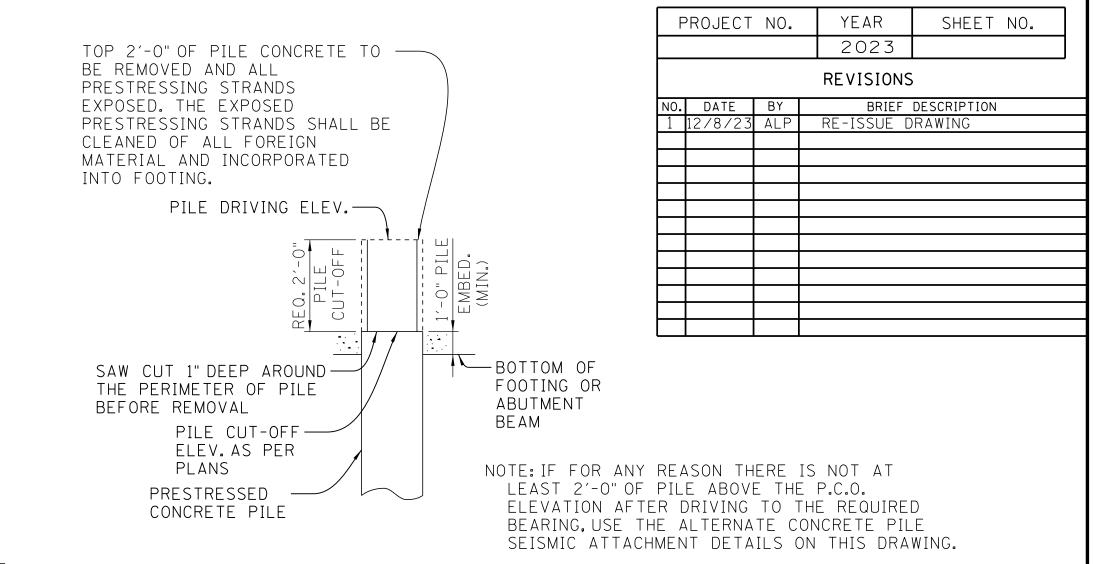
SECTION B - B

SPECIFICATIONS FOR LRFD SEISMIC BRIDGE

DESIGN SPECIFICATIONS: AASHTO GUIDE

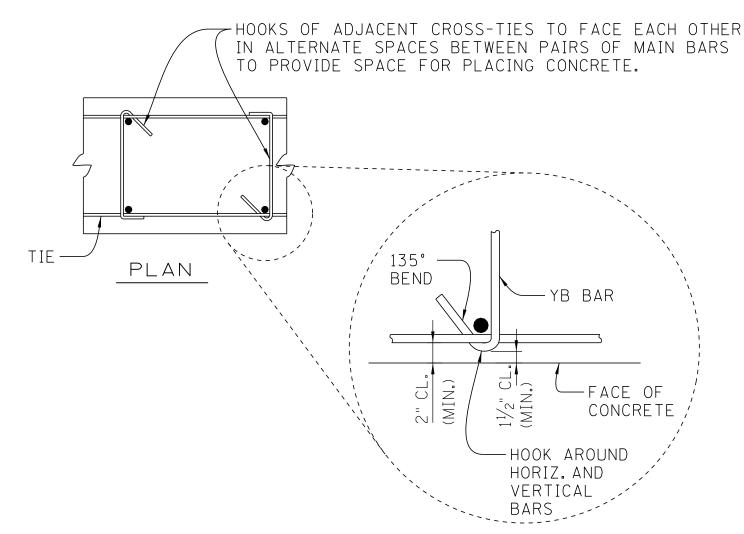
DESIGN WITH INTERIMS

SEISMIC DESIGN	1 SECOND PERIOD DESIGN
CATEGORY (SDC)	SPECTRAL ACCELERATION (SD1)
А	S _{D1} < 0.15
В	0.15 <u><</u> S _{D1} < 0.30
С	0.30 <u><</u> S _{D1} < 0.50
D	050 / 5



NOTE: SEISMIC ATTACHMENT REQUIRED FOR SDC A.B.C. AND D. SPLICING OF CONCRETE PILES SHALL NOT BE ALLOWED.

CONCRETE PILE SEISMIC ATTACHMENT DETAILS



SUPPLEMENTARY TIES FOR COLUMN STEEL: SUPPLEMENTARY TIES (YB BARS) MUST ENGAGE HOOP (OUTSIDE HORIZONTAL BAR) AND BE TIED SECURELY TO LONGITUDINAL REINFORCEMENT.

SUPPLEMENTARY TIES FOR COLUMNS

REQUIRED FOR SDC A, B, C, AND D

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION



STANDARD SEISMIC DETAILS 2023

DRAWN BY MCLAUGHLIN

DESIGNED BY MCLAUGHLIN & PRICE DATE 8-23 __ DATE <u>8-23</u> SUPERVISED BY T. KNIAZEWYCZ DATE 8-23 0.50 <u><</u> 5_{D1} CHECKED BY T. KNIAZEWYCZ DATE 9-23

STD-6-1