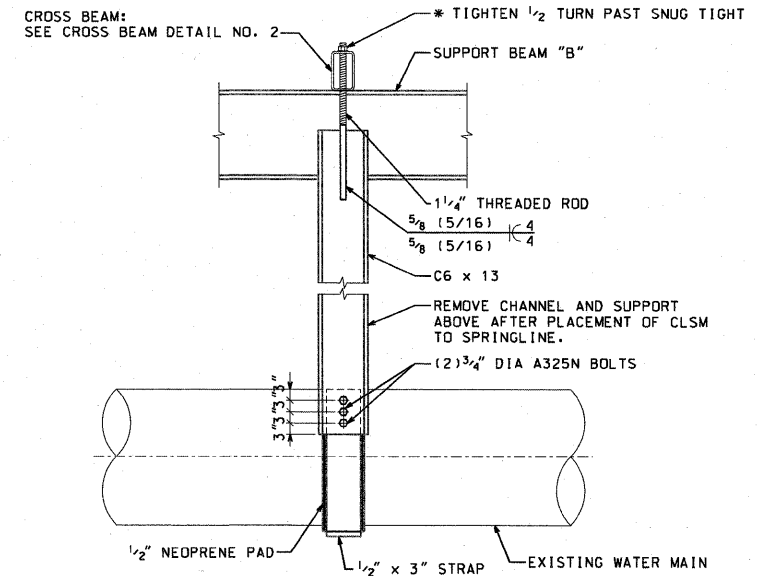
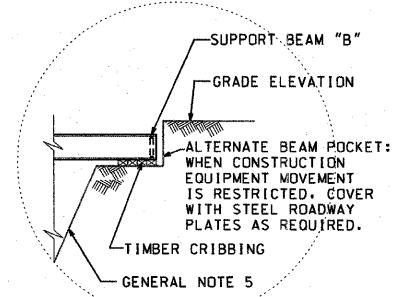
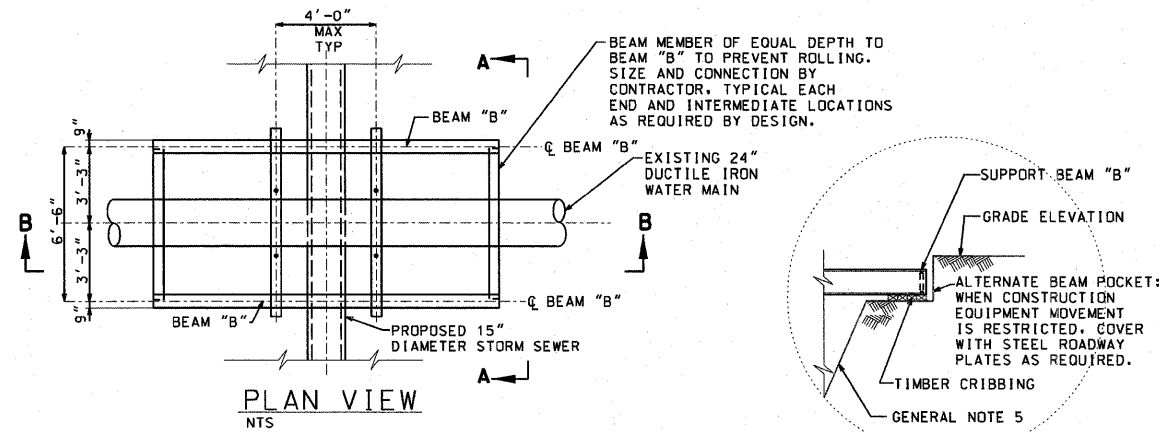
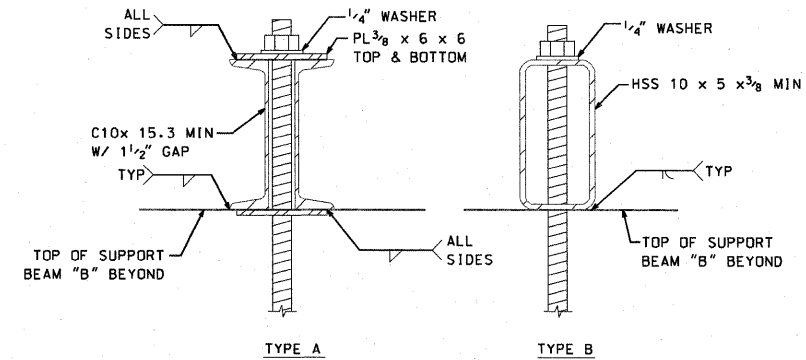
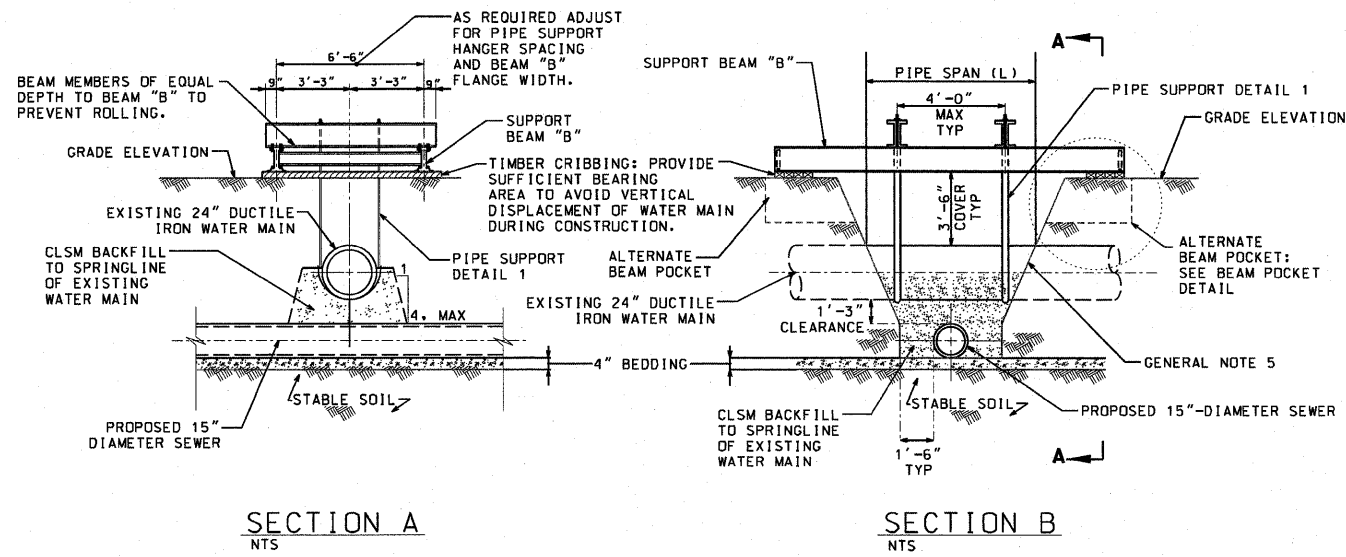


WATER MAIN SUPPORT STRUCTURE



① PIPE SUPPORT DETAIL
NTS
1. MINIMUM TWO PIPE SUPPORTS REQUIRED.



NOTE: CONTRACTOR MAY SELECT CROSS BEAM TYPE.

② CROSS BEAM DETAIL

- NTS
- CONTRACTOR WILL TACK WELD NUT OR SUPPLY A SECOND NUT AS APPROPRIATE FOR LOCKING NUT ROTATION ON THREADED RODS USED FOR PERMANENT AND TEMPORARY WATER MAIN SUPPORT.
 - CONTRACTOR WILL RECORD SUPPORT BEAM AND WATER MAIN ELEVATIONS AND THEN MONITOR ELEVATIONS DURING CONSTRUCTION FOR ANY SETTLEMENT. UNEVEN SETTLEMENT SHOULD BE ANTICIPATED AND SHIMS PROVIDED.

GENERAL NOTES:

- THESE DETAILS ARE PROVIDED FOR REFERENCE ONLY AND DO NOT REPRESENT A COMPLETE DESIGN. THE CONTRACTOR MUST COMPLETE THE DESIGN FOR EACH LOCATION WHERE WATER MAIN SUPPORT IS TO BE IMPLEMENTED.
- THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS AND CALCULATIONS FOR THE SUPPORT METHOD USED STAMPED BY A LICENSED STRUCTURAL ENGINEER IN THE STATE OF ILLINOIS. THE DESIGN MUST TAKE INTO ACCOUNT THE ACTUAL FIELD VERIFIED DIMENSIONS, SPANS, AND TRIBUTARY LOADING WHICH MAY EXCEED VALUES SHOWN.
- THE DESIGN OF THE MAIN SUPPORT BEAM "B" MUST LIMIT TOTAL DEFLECTION OF THE PIPE TO L/480 OF THE PIPE SPAN (L).
- MATERIAL PROPERTIES MUST MEET THE FOLLOWING CRITERIA:

W-SHAPES	ASTM A992 GRADE 50
CHANNELS	ASTM A36
PLATES & BARS	ASTM A36
THREADED RODS	ASTM A36
HSS SHAPES	ASTM A500 GRADE B
HIGH STRENGTH BOLTS	ASTM A325 N-BOLTS
CLSM	IDOT STANDARD SPECIFICATIONS SECTION 1019 MIX 2
- THE CONTRACTOR MUST SLOPE TRENCH WALLS OR SHORE EXCAVATIONS FOR CONSTRUCTION SAFETY AND IN ACCORDANCE WITH CURRENT OSHA REQUIREMENTS. THE OVERALL WIDTH OF EXCAVATION MUST BE SUBMITTED TO THE DEPARTMENT FOR REVIEW PRIOR TO THE START OF CONSTRUCTION.
- SUPPORT BEAMS, CROSS BEAMS, PIPE SUPPORT, AND TIMBER CRIBBING MUST BE REMOVED AFTER CLSM BACKFILL HAS ATTAINED THE COMPRESSIVE STRENGTH THAT SATISFIES THE ENGINEER.

USER NAME = HanaoC	DESIGNED - KLK	REVISED -
PLOT SCALE = 10.000' / 1in.	DRAWN - KLK	REVISED -
PLOT DATE = #DATE#	CHECKED - DBM	REVISED -
	DATE - 3-18-11	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DRAINAGE DETAIL 3

SCALE: NONE SHEET NO. 3 OF 4 SHEETS STA. TO STA.

F.A.I. RTE. 70	SECTION 82-1-B-1	COUNTY ST. CLAIR	TOTAL SHEETS 319	SHEET NO. 291A
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 76C75	