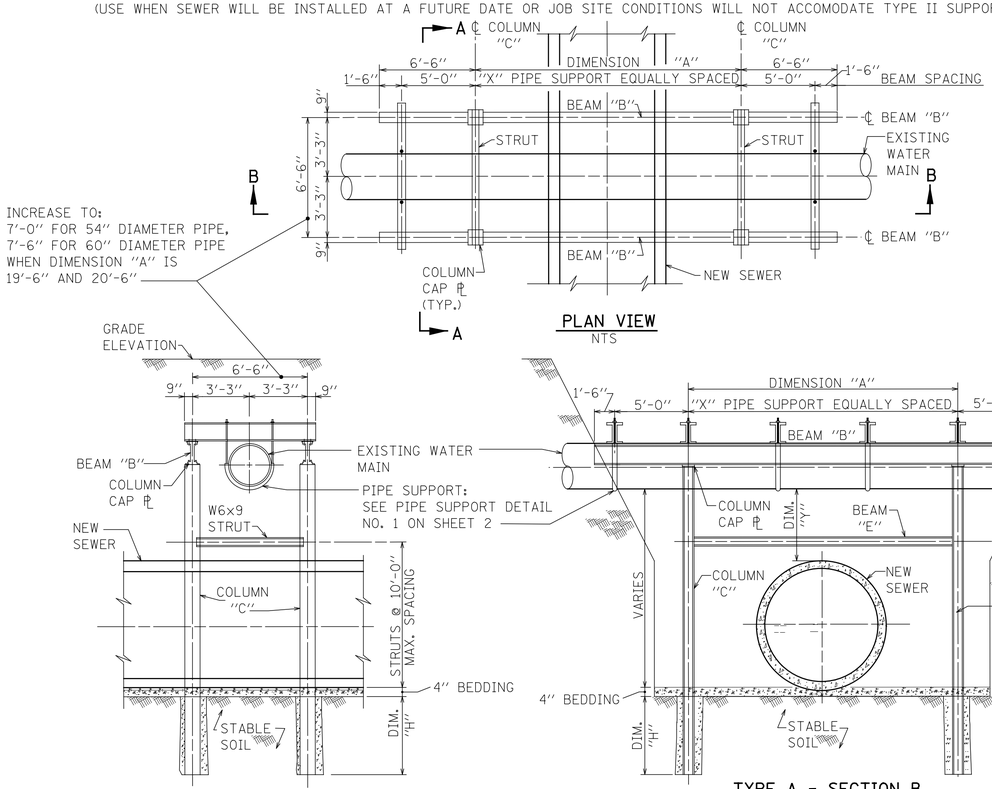
TYPE I SUPPORT- TYPE A & B

TYPE I SUPPORT STRUCTURE REMAINS IN PLACE.
(USE WHEN SEWER WILL BE INSTALLED AT A FUTURE DATE OR JOB SITE CONDITIONS WILL NOT ACCOMODATE TYPE II SUPPORT INSTALLATION)



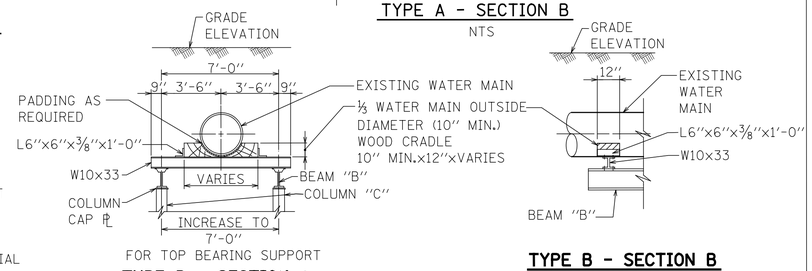
PLAN VIEW
NTS

TYPE A - SECTION A
NTS

TYPE A - SECTION B
NTS

TYPE I SUPPORT NOTES- TYPE A & B:

1. SEE TYPE I SUPPORT TABLE ON SHEET 2 FOR BEAM MEMBER SIZES.
2. TYPE "A" SUPPORTS EXISTING WATER MAIN UNDERHUNG FROM CROSS BEAMS. TYPE "B" SUPPORTS EXISTING WATER MAIN BEARING ON TOP OF CROSS BEAMS. WHEN DIMENSION "Y" IS LESS THAN 2'-6" TYPE "A" SUPPORT MUST BE USED. MINIMUM DIMENSION "Y" FOLLOW IEPA REGULATIONS.
3. BACKFILL WITH CRUSHED STONE FILL MATERIAL OR CLSM AS REQUIRED.

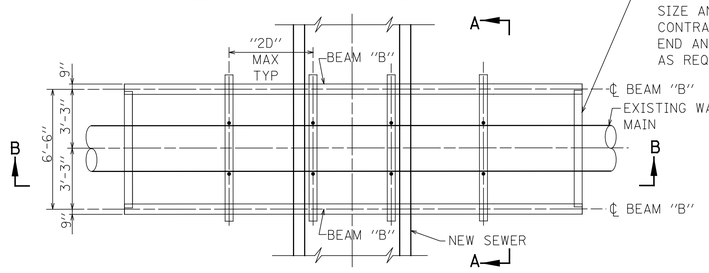


TYPE B - SECTION A
NTS

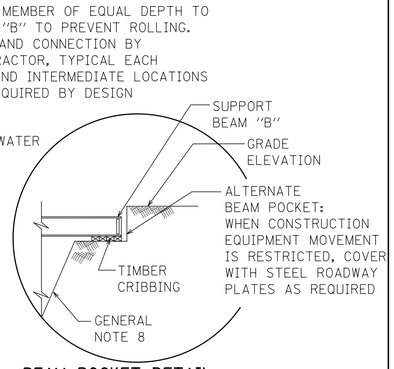
TYPE B - SECTION B
NTS

TYPE II SUPPORT

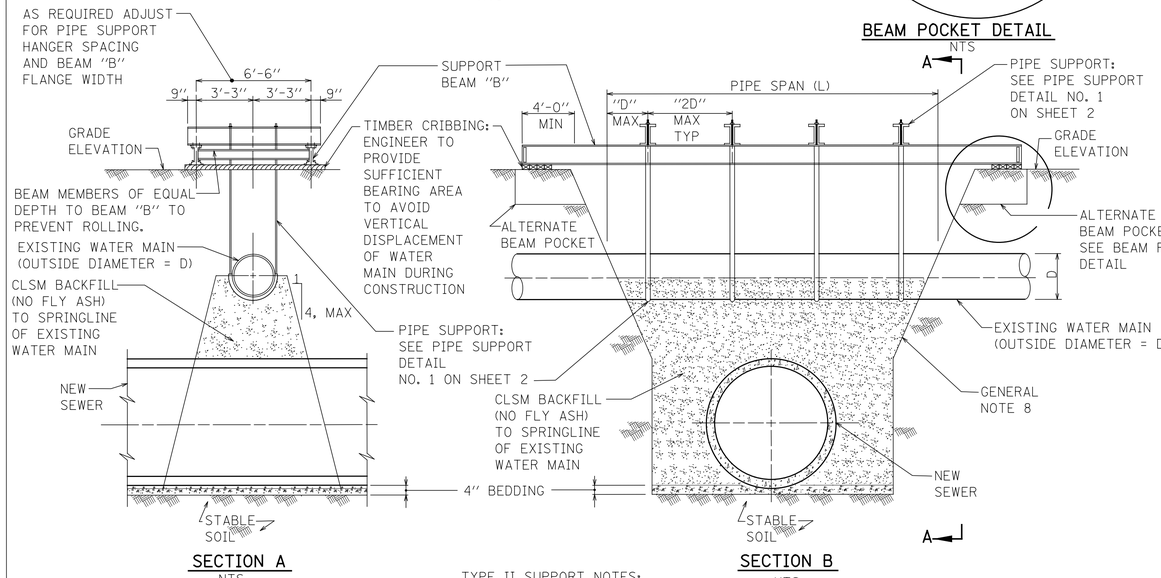
TYPE II SUPPORT STRUCTURE WILL BE REMOVED.
(USE WHEN SEWER WILL BE INSTALLED IMMEDIATELY)



PLAN VIEW
NTS



BEAM POCKET DETAIL
NTS



SECTION A
NTS

SECTION B
NTS

TYPE II SUPPORT NOTES:

1. THIS DETAIL APPLIES TO THE TEMPORARY SUPPORT OF EXISTING WATER MAINS UP TO 60 INCH INSIDE DIAMETER. SUPPORT BEAMS, CROSS BEAMS, PIPE SUPPORT, AND TIMBER CRIBBING MUST BE REMOVED AFTER CLSM BACKFILL HAS ATTAINED THE COMPRESSIVE STRENGTH THAT SATISFIES THE ENGINEER.
2. CONTRACTOR TO MONITOR CCP EXPOSED GROUTED JOINTS FOR SIGNS OF CRACKING WHILE THE PIPE IS SUPPORTED. IF SMALL CRACKS APPEAR, FILL WITH A FAST SETTING, PORTLAND CEMENT WATER STOP (SIKASET PLUG OR APPROVED EQUAL).

SUPPORT OF EXISTING WATER MAIN CAST IRON, DUCTILE IRON OR CONCRETE CYLINDER PIPE

GENERAL NOTES FOR TYPE I & II SUPPORTS:

1. TYPE II SUPPORT IS CDWM PREFERRED SUPPORT METHOD. USE TYPE I SUPPORT WHEN SEWER WILL BE INSTALLED AT A FUTURE DATE REQUIRING A SECOND EXCAVATION. TYPE I SUPPORT MUST ALSO BE INSTALLED WHEREVER JOB SITE CONDITIONS WILL NOT ACCOMODATE TYPE II SUPPORT TO BE INSTALLED (SUCH AS LOCATIONS WHERE THE WIDTH OF EXCAVATION WOULD CREATE EXCESSIVE ROADWAY LANE CLOSURES). IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SELECT THE APPROPRIATE TYPE OF PIPE SUPPORT METHOD FOR CONDITIONS AT THE JOB SITE, OR AS DIRECTED BY THE COMMISSIONER.
2. 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 COMPLETE DESIGN MUST INCLUDE (BUT NOT LIMITED TO) STRUCTURAL STEEL CONNECTION DETAILS, COLUMN BRACE SIZE AND SPACING, CONSIDERATION OF BEAM BEARING LOADS ON EXISTING ROADWAY SURFACES OR GRADE, EFFECTS OF BUOYANCY ON THE NEW SEWER DUE TO FLOWABLE CLSM, FOUNDATION DEPTH AND DIAMETER BASED ON BEST AVAILABLE SOIL DATA, AND DESIGN FOR SUPPORT OF EXCAVATIONS.
3. THESE DETAILS WERE DEVELOPED FOR SUPPORT OF WATER MAINS UP TO 60 INCHES IN DIAMETER, UP TO 6 FEET OF COVER AND AASHTO HS 20-44 WHEEL LOADS.
4. DUCTILE IRON PIPE MUST BE WRAPPED IN POLYETHYLENE PRIOR TO PLACEMENT OF BACKFILL.
5. 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. DMW MAINTAINS A RECORD OF BURIED TYPE I SUPPORT STRUCTURES AND THEIR LOCATIONS. THE CONTRACTOR MUST FURNISH AS - BUILT DRAWINGS FOR THIS RECORD.
6. THE DESIGN OF THE MAIN SUPPORT BEAM "B" MUST LIMIT TOTAL DEFLECTION OF THE PIPE TO L/480 OF THE PIPE SPAN (L).
7. 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

8. THE CONTRACTOR MUST SLOPE TRENCH WALLS OR SHORE EXCAVATIONS FOR CONSTRUCTION SAFETY AND IN ACCORDANCE WITH CURRENT OSHA REQUIREMENTS. THE OVERALL WIDTH OF EXCAVATION, TRAFFIC CONTROL, AND PROTECTION MUST BE SUBMITTED TO CDWM FOR REVIEW PRIOR TO THE START OF CONSTRUCTION.
9. OPEN EXCAVATIONS AND IN PLACE FLOWABLE CLSM BACKFILL MUST BE CORDONED OFF OR COVERED TO PROVIDE PROTECTION AGAINST ACCIDENTIAL FALLING.
10. REFER TO STANDARD SPECIFICATIONS FOR WATER MAIN CONSTRUCTION FOR ADDITIONAL INFORMATION.

STANDARD REVISIONS	
DATE	DESCRIPTION
05/10	

PERCENT COMPLETE	DATE
30	
60	
75	
90	
100	
BULLETIN	

CITY OF CHICAGO
DEPARTMENT OF WATER MANAGEMENT
BUREAU OF ENGINEERING SERVICES

SUPPORT OF EXISTING WATER MAIN, CAST IRON, DUCTILE IRON, OR CONCRETE CYLINDER PIPE

DRAWN: ___
DESIGNED: ___
CHECKED: ___
REVIEWED: ___

1 OF 2

___ OF ___

PN _____

CDWM_Details.cel 12/4/2014 11:39:22 AM