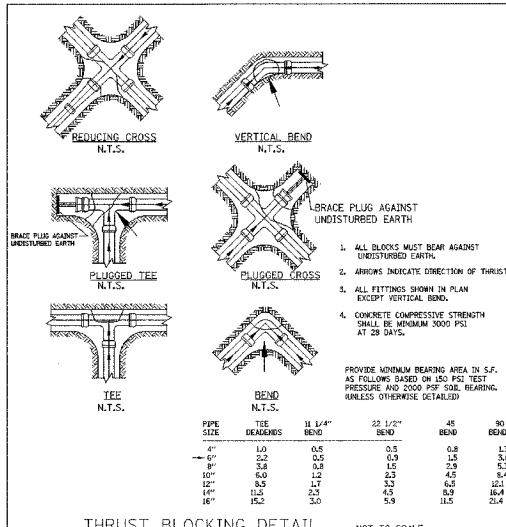


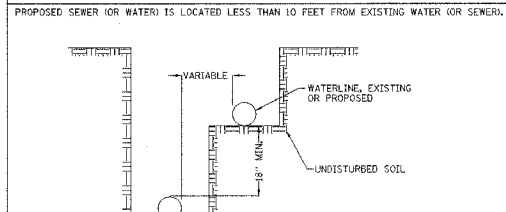
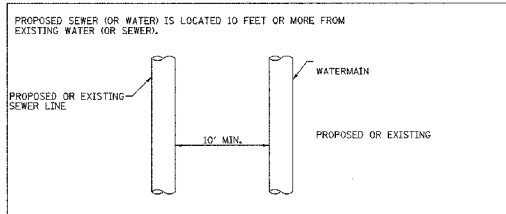
STANDARD WATERMAIN NOTES - 2005 - CITY OF WENONA

GENERAL NOTES FOR WATERMAIN

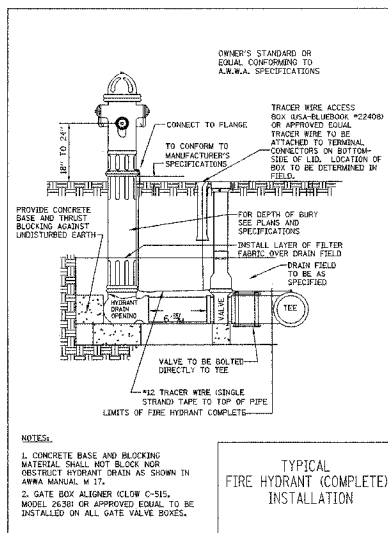
F.A.P. RITE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
649	67(DRS 2&I	MARSHALL	74	74
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
		D-93-053-03 CONTRACT NUMBER 66403		



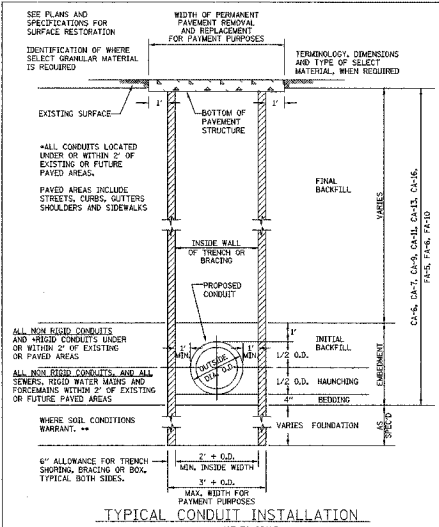
THRUST BLOCKING DETAIL
NOT TO SCALE



WATER & SEWER SEPARATION REQUIREMENTS
NOT TO SCALE



TYPICAL FIRE HYDRANT (COMPLETE) INSTALLATION
NOT TO SCALE



TYPICAL CONDUIT INSTALLATION
NOT TO SCALE

IDENTIFICATION OF WHERE SELECT GRANULAR MATERIAL IS REQUIRED

ALL CONDUITS LOCATED UNDER OR WITHIN 2' OF EXISTING OR FUTURE PAVED AREAS.

PAVED AREAS INCLUDE: STREETS, CURBS, CUTTERS, SHOULDERS AND SIDEWALKS.

ALL NEW RIGID CONDUITS AND RIBBED CONDUITS UNDER OR WITHIN 2' OF EXISTING OR FUTURE PAVED AREAS.

ALL NEW RIBBED CONDUITS AND ALL STREETS, ROAD WATER MAINS AND FOREMANS WITHIN 2' OF EXISTING OR FUTURE PAVED AREAS.

WHERE SOIL CONDITIONS WARRANT **

6" ALLOWANCE FOR TRENCH WIDTH ON EACH SIDE OF CONDUIT.

MIN. INCH WIDTH

3" + C.D.

MAX. WIDTH FOR PAYMENT PURPOSES

CONC. CH-7, C-8, C-9, CH-10, CH-11, CH-12 PER PLAN, PER STD.

TERMINOLOGY, DIMENSIONS AND TYPE OF SLACK MATERIAL, WHEN REQUIRED

FINAL BACKFILL

INSIDE WALL OF TRENCH OR BRACING

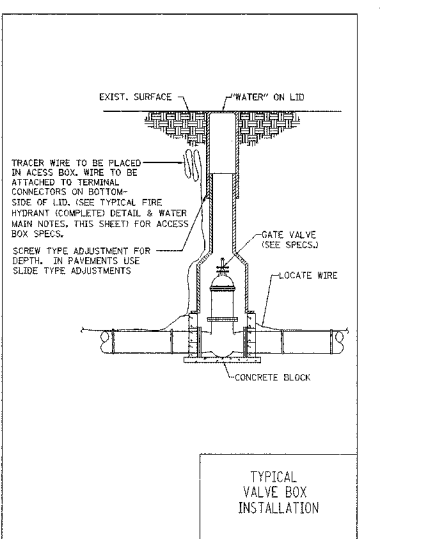
DROPPED CONDUIT

INITIAL BACKFILL

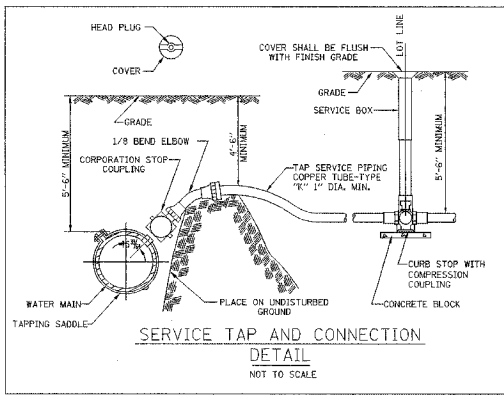
REINFORCING

VARIES FOUNDATION

CONC. CH-7, C-8, C-9, CH-10, CH-11, CH-12 PER PLAN, PER STD.



TYPICAL VALVE BOX INSTALLATION
NOT TO SCALE



SERVICE TAP AND CONNECTION DETAIL
NOT TO SCALE

WATERMAIN CONSTRUCTION

- WATER SERVICE LINES SHALL BE PROTECTED FROM SANITARY SEWERS, STORM SEWERS, COMBINED SEWERS, SEWER SERVICE CONNECTIONS AND DRAINS IN ACCORDANCE WITH TITLE 35, ENVIRONMENTAL PROTECTION AGENCY SUBTITLE 2, PUBLIC WATER SUPPLIES, CHAPTER 11, ENVIRONMENTAL PROTECTION AGENCY, PARTS 651-654 TECHNICAL POLICY STATEMENTS, SECTION 653.13.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER OF ANY DIFFERENCES IN, OR CONTRADICTIONS BETWEEN THE PLANS AND THE SPECIFICATIONS.
- THE COST OF EXPLORATORY EXCAVATION FOR UTILITY LOCATIONS INCLUDING EXISTING WATER SERVICES SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR WATER AND/OR SEWER MAIN UNLESS SPECIFICALLY CALLED FOR AT LOCATIONS SHOWN ON THE PLANS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY FOR DEWATERING WHERE NECESSARY. THE COST FOR THIS ITEM SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR WATER AND/OR SEWER MAIN.
- ALL RUBBLE AND EXCESS EXCAVATED MATERIAL GENERATED BY CONSTRUCTION SHALL BE KEPT SEPARATE AND DISPOSED OF BY THE CONTRACTOR AT LOCATIONS SECURED BY THE CONTRACTOR.
- TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" IN EFFECT ON THE DATE OF THE INVITATION FOR BIDS. THE COST OF TRAFFIC CONTROL SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR WATER AND/OR SEWER MAIN.

FOUNDATION MATERIAL

- FOUNDATION MATERIAL WHERE REQUESTED SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER CUBIC YARD FOR FOUNDATION MATERIAL.
- TRENCH BACKFILL SHALL BE REQUIRED FOR ALL UTILITIES THAT ARE CONSTRUCTED UNDER OR WITHIN TWO FEET (2') OF THE EDGE OF THE PROPOSED PAVEMENTS, SIDEWALKS OR CURB AND CUTTER.
- WHERE INDICATED ON THE PLANS, CONTROLLED LOW-STRENGTH MATERIAL (CLSM) SHALL BE USED FOR FINAL BACKFILL IN ACCORDANCE WITH THE MINIMUM MIX DESIGN IN THE IDOT SUPPLEMENTAL SPECIFICATION AND REQUIRING SPECIAL PROVISIONS.
- CLSM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER CUBIC YARD FOR CLSM FLOWABLE FILL.
- TRENCH BACKFILL SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR SELECT GRANULAR BACKFILL.
- CLSM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER CUBIC YARD FOR CLSM FLOWABLE FILL.

CONNECTION TO EXISTING WATER MAIN

- THIS ITEM SHALL CONSIST OF ALL WORK, MATERIALS AND TOOLS NECESSARY TO CONNECT THE PROPOSED WATER MAIN TO THE EXISTING.
- THE CONNECTIONS SHOULD BE MADE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
- ALL UNGROUNDED FITTINGS NECESSARY TO SECURE THE CONNECTION SHALL BE INCLUDED IN THIS ITEM EXCEPT FOR THE FITTINGS SHOWN, WHICH SHALL BE PAID FOR SEPARATELY.
- THIS ITEM SHOULD BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER EACH FOOT FOR CONNECTION TO EXISTING WATER MAIN.

PIPE

- ALL WATERMAIN PIPING SHALL BE POLYVINYL CHLORIDE (PVC) TYPE DR-18, CLASS 150 PRESSURE PIPE IN ACCORDANCE WITH ANRW C-902 OR POLYETHYLENE GLYCOL (PE) TYPE SR-24 CLASS 200 PRESSURE PIPE IN ACCORDANCE WITH ASTM D2241, ASTM D1784 FOR PVC COMPOUNDS AND ASTM D3515 WITH PUSH-ON JOINTS, AND SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE "STANDARD SPECIFICATIONS" FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, FIFTH EDITION, DATED MAY, 1996. ALL WATERMAIN SHALL HAVE A MINIMUM COVER OF FIVE FEET (5').
- WATERMAIN SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR THE SIZE AND TYPE INDICATED.

FITTINGS AND BENDS

- FITTINGS SHALL BE MECHANICAL JOINT CAST IRON CONFORMING TO ANSI/AWWA-C10/A2110 AND ANSI/AWWA-C11/A2111 STANDARDS SPECIFICATION A21.0. RETAINER GLANDS SHALL BE USED WITH ALL MECHANICAL JOINT CONNECTIONS AND SHALL BE DESIGNED FOR INSTALLATION ON PVC WATER PIPE. CONCRETE THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS. ALL FITTINGS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE "STANDARD SPECIFICATIONS" FOR WATER AND SEWER MAIN CONSTRUCTION.
- FITTINGS AND BENDS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER EACH FOR THE SIZE AND TYPE INDICATED. THE COST OF RETAINER GLANDS AND THRUST BLOCKS SHALL BE INCIDENTAL TO THE FITTING.

TRACING WIRE

- THE CONTRACTOR WILL BE REQUIRED TO FURNISH AND BURY WITH THE WATERMAIN A SUITABLE DETECTOR WIRE MEETING THE APPROVAL OF THE ENGINEER TO ENABLE LOCATING THE WATERMAIN IN THE FUTURE. THIS WIRE MAY BE 12 GAUGE SINGLE STRAND WIRE THAT IS COVERED AND INSULATED. ALL WIRES SHALL BE TAPED AROUND THE WATERMAIN AT 20 FOOT MAXIMUM INTERVALS AND BROUGHT TO THE SURFACE AND LOOPED AT ALL VALVE BOXES.
- TRACER WIRE SHALL EXTEND OUTSIDE ALL VALVE BOXES TO TRACER WIRE ACCESS BOX.
- TRACING WIRE SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR TRACING WIRE.

VALVES

- ALL VALVES SHALL BE EPXY COATED RESILIENT WEDGE MECHANICAL JOINT GATE VALVES AS MANUFACTURED BY "MUELLER" OR "CLOW" AND SHALL MEET ALL APPLICABLE REQUIREMENTS OF AWWA SPECIFICATION C-509 COVERING RESILIENT SEATED GATE VALVES AND APPROVED BY IEPA.
- VALVES SHALL HAVE NON-RISING STEMS, OPENING BY TURNING LEFT AND PROVIDED WITH A TWO INCH (2") CAST NUT WITH ARROW CAST IN METAL TO INDICATE DIRECTION OF OPENING.
- EACH VALVE SHALL HAVE MAKER'S NAME, PRESSURE RATING AND YEAR IN WHICH MANUFACTURED CAST ON THE BODY. PRIOR TO SHIPMENT FROM THE FACTORY, EACH VALVE SHALL BE TESTED BY HYDROSTATIC PRESSURE EQUAL TO TWICE THE SPECIFIED WORKING PRESSURE.
- EACH VALVE TO HAVE BOX ALIGNER INSTALLED ON BOTTOM AND ALIGNMENT RING (CLOW C-515, MODEL 2638) OR APPROVED EQUAL.

BITUMINOUS CONCRETE PAVEMENT REMOVAL AND REPLACEMENT - 3" ASPHALT OVER 8\"/>

- WHERE SHOWN ON THE DRAWINGS THE CONTRACTOR SHALL REMOVE THE EXISTING BITUMINOUS ROADWAY (BITUMINOUS CONCRETE OR BUILDUP OF MANY A-3 BITUMINOUS SURFACE TREATMENTS) AND AGGREGATE BASE AS REQUIRED TO CONSTRUCT THE PROPOSED IMPROVEMENTS. ALL SUCH SURFACES OVER THE TRENCH SHALL BE REPLACED WITH BITUMINOUS CONCRETE SURFACE COURSE OVER AGGREGATE BASE COURSE AS DESCRIBED HEREIN.
- ALL EXISTING BITUMINOUS PAVEMENT WHICH IS REMOVED SHALL BE HALLED FROM THE SITE AND NOT MIXED WITH TRENCH BACKFILL MATERIAL. PRIOR TO INSTALLING NEW BITUMINOUS CONCRETE OVER THE TRENCH, THE EXISTING BITUMINOUS CONCRETE PAVEMENT SHALL BE SAW CUT ALONG A STRAIGHT LINE WHERE IT SHALL BE ADJACENT TO THE NEW BITUMINOUS CONCRETE. EXISTING BITUMINOUS TREATED SURFACES (OIL AND CHIP) SHALL NOT REQUIRE SAW CUTTING BUT SHALL HAVE A REASONABLY STRAIGHT LINE WHERE IT ADJUTS THE NEW BITUMINOUS CONCRETE MATERIAL.
- WHERE SELECT GRANULAR BACKFILL IS USED AS FINAL BACKFILL THE MATERIAL SHALL BE IN PLACE FOR 30 DAYS AND SHALL BE JETTED PRIOR TO INSTALLATION OF THE BITUMINOUS CONCRETE SURFACE COURSE OVER THE TRENCH. THE AGGREGATE BASE COURSE SHALL BE INSTALLED AND COMPACTED PRIOR TO INSTALLING THE BITUMINOUS CONCRETE SURFACE. IF A TEMPORARY SURFACE OVER TRENCH HAS BEEN INSTALLED, IT SHALL BE REMOVED PRIOR TO INSTALLING THE BITUMINOUS CONCRETE SURFACE. THE PROPER SHAPE AND ELEVATION ARE ACHIEVED SUCH THAT WHEN THE PROPOSED BITUMINOUS CONCRETE SURFACE COURSE IS INSTALLED TO THE THICKNESS DESIGNATED ON THE DRAWINGS, IT SHALL MATCH THE ELEVATION AND CROSS SECTION OF THE EXISTING PAVEMENT.
- AGGREGATE BASE COURSE MATERIAL SHALL BE CRUSHED STONE MEETING THE CA-6 OR CA-10 GRADATION AND THE CLASS D OR BETTER QUALITY CONFORMING TO THE CURRENT SPECIFICATIONS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION FOR ROAD AND BRIDGE CONSTRUCTION. AGGREGATE BASE COURSE SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE STANDARD PROCTOR TEST.
- THE MATERIALS AND INSTALLATION OF THE BITUMINOUS CONCRETE SHALL BE DONE IN ACCORDANCE WITH SECTION 406 OF THE CURRENT EDITION OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- THE CONTRACTOR SHALL INSTALL THE BITUMINOUS CONCRETE SURFACE AT A WIDTH SO THAT IT BEARS ON A LEDGE 1'-0" WIDE OF UNDISTURBED EARTH FOR THE ENTIRE LENGTH OF THE TRENCH ON EACH SIDE OF THE TRENCH. ALL BITUMINOUS CONCRETE SURFACES SHALL BE PLACED WITH AN APPROVED SPREADING AND FINISHING MACHINE AS OUTLINED IN THE STANDARD SPECIFICATIONS.
- TEMPORARY SURFACE OVER TRENCH IT IS THE INTENT OF THESE SPECIFICATIONS THAT ALL STREETS BE OPENED TO TRAFFIC IMMEDIATELY FOLLOWING THE INSTALLATION OF THE PROPOSED CONDUIT AND UNTIL SUCH TIME THAT THE PERMANENT SURFACE IS INSTALLED.
- MATERIAL FOR TEMPORARY SURFACE OVER TRENCH SHALL BE CRUSHED STONE CONFORMING TO THE CURRENT SPECIFICATIONS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION FOR CLASS D QUALITY OR BETTER MEETING GRADATION CA6 OR CA10.
- AT LOCATIONS WHERE A BITUMINOUS CONCRETE SURFACE COURSE WILL BE INSTALLED, THE TEMPORARY SURFACE OVER TRENCH SHALL BE INSTALLED OVER THE REQUIRED AGGREGATE BASE COURSE AND SHALL HAVE A THICKNESS EQUAL TO THE PROPOSED THICKNESS OF THE BITUMINOUS CONCRETE SURFACE COURSE. AT LOCATIONS WHERE THE SURFACE COURSE WILL BE CONCRETE, THE TEMPORARY SURFACE OVER TRENCH SHALL BE INSTALLED OVER THE FINAL BACKFILL AND SHALL BE AT LEAST SIX INCHES (6") THICK.
- THE TOP OF THE TEMPORARY SURFACE OVER TRENCH SHALL BE SMOOTH AND MEET THE GRADE OF ADJACENT UNDISTURBED SURFACE. THE SURFACE SHALL BE MAINTAINED AT THE CONTRACTOR'S EXPENSE UNTIL FINAL RESTORATION OF THE STREET SURFACE IS COMPLETED AS SPECIFIED HEREIN IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL BE REQUIRED TO ADD MATERIAL, AT HIS OWN EXPENSE, IF SETTLEMENT OF THE TRENCH BACKFILL OCCURS AND CAUSES A DEPRESSION IN THE TEMPORARY SURFACE OVER TRENCH.
- THE TEMPORARY SURFACE MATERIAL SHALL BE CURED OUT TO THE REQUIRED DEPTH IN ORDER TO CONSTRUCT THE PERMANENT SURFACE JUST PRIOR TO INSTALLATION OF THE PERMANENT SURFACE COURSE AND SHALL BE HALLED AWAY FROM THE JOBSITE.
- PAYMENT FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE TEMPORARY SURFACE SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR "BITUMINOUS CONCRETE PAVEMENT REMOVAL AND REPLACEMENT." NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR ADDITIONAL LABOR OR MATERIALS USED IN THE CONSTRUCTION OF THE TEMPORARY SURFACE.
- BITUMINOUS PAVEMENT REMOVAL AND REPLACEMENTS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER LINEAR FOOT MEASURED ALONG THE CENTERLINE OF THE INSTALLED CONDUIT AND SHALL INCLUDE REMOVAL OF THE EXISTING SURFACE, INSTALLATION, CONSTRUCTION AND MAINTENANCE OF A TEMPORARY SURFACE, PRIMING, FURNISHING, INSTALLING, COMPACTING AND SHAPING OF THE MATERIAL.

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ILLINOIS PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-00993

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		STANDARD WATERMAIN NOTES 2005 CITY OF WENONA
		SCALE: 1:200 DRAWN BY DR
		DATE: MARCH, 2005 CHECKED BY JMH

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