

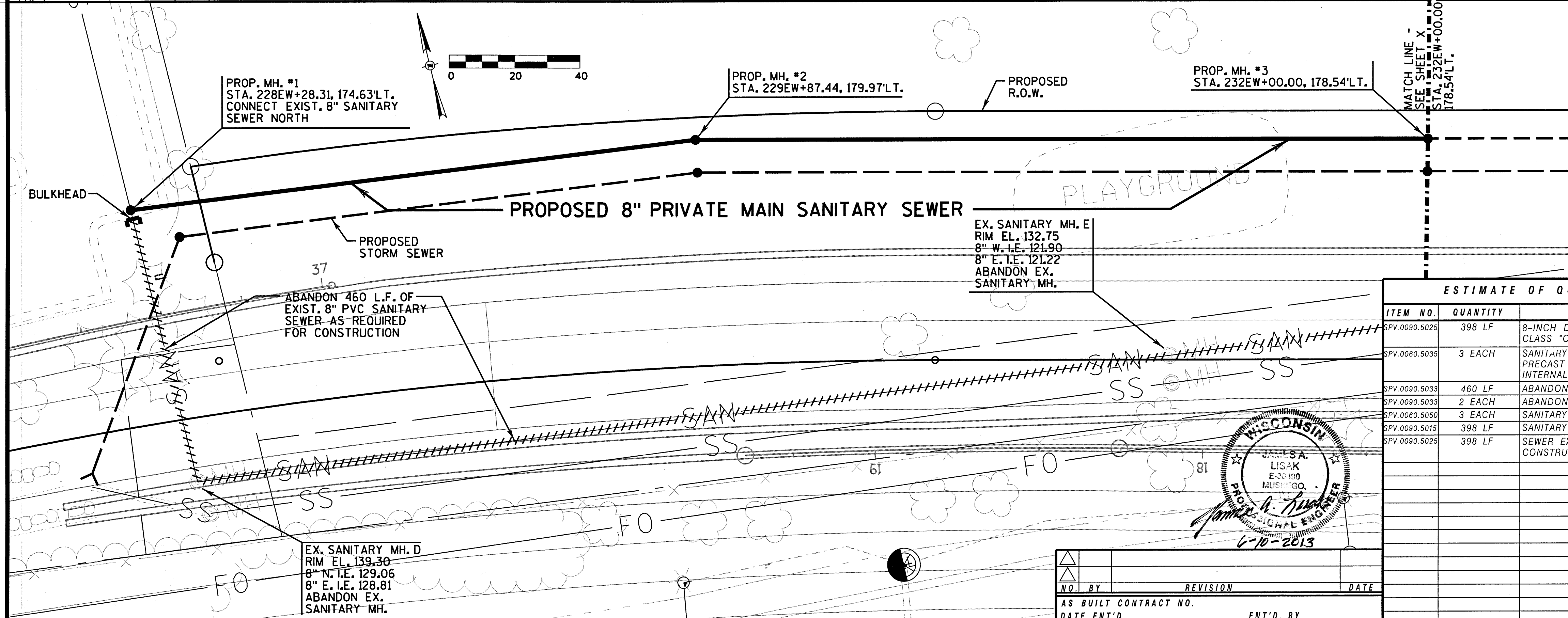
GENERAL NOTES

1. VERTICAL DATUM IS MILWAUKEE METROPOLITAN SEWERAGE DISTRICT (MMSD) DATUM. APPROXIMATE ELEVATIONS BASED ON DOT DATUM NAVD88 (2007) CAN BE OBTAINED BY ADDING 580.33 FEET ALGEBRAICALLY TO THE MMSD DATUM ELEVATIONS.
2. WORKING POINTS FOR MANHOLES ARE AT CENTER OF MANHOLE BARREL.
3. ALL INVERT ELEVATIONS ARE ALONG PROFILE CENTER LINE. INVERTS FOR MAIN LINE SEWER ARE AT MANHOLE WORKING POINTS.
4. SURFACE RESTORATIONS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR 8-INCH AND 10-INCH SANITARY SEWER PER SECTION 5.10.17 OF THE CITY OF MILWAUKEE SPECIFICATIONS.

SPECIAL PROVISIONS

1. THIS PROJECT HAS BEEN SUBMITTED TO THE MILWAUKEE METROPOLITAN SEWERAGE DISTRICT (MMSD) FOR APPROVAL. NO WORK SHALL BE PERFORMED ON THIS SEWER UNTIL MMSD APPROVAL HAS BEEN OBTAINED. THE CONTRACTOR SHALL CONTACT MR. PATRICK COE (MMSD) AT (414) 225-2219 TO CONFIRM THAT THE APPROVALS HAVE BEEN GRANTED.
2. STANDARD SPECIAL PROVISIONS (PLAN FILE NO. 52-4-5), DATED MAY 1, 2013 OR LATEST VERSION THEREOF ARE PART OF THIS CONTRACT.
3. A PUBLIC WORKS INSPECTOR WILL BE ASSIGNED TO THE PROJECT. ALL WORK SHALL BE PERFORMED IN THE PRESENCE OF THIS INSPECTOR. COST OF THIS INSPECTION WILL BE BORNE BY THE CONTRACTOR. NO WORK SHALL BE STARTED ON THE PRIVATE MAIN SANITARY SEWER UNTIL THE NECESSARY INSPECTION FEE HAS BEEN DEPOSITED WITH THE DEPARTMENT OF PUBLIC WORKS, CONTRACT & PERMIT SECTION (RM, 507 MUNICIPAL BLDG, 841 N. BROADWAY, MILWAUKEE, WI 53201). THE CONTRACTOR SHALL NOTIFY CONSTRUCTION SECTION, INFRASTRUCTURE DIVISION AT (414) 285-2497, AT LEAST (3) WORKING DAYS PRIOR TO START OF WORK ON THE PRIVATE MAIN SEWER PROJECT SO THE INSPECTION OF WORK CAN BE ARRANGED.
4. THE REQUIRED JOINTS FOR THE SANITARY SEWER SHALL BE IN ACCORDANCE WITH SECTION 3.2.10 OF THE STANDARD SPECIFICATION FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
5. THE CONTRACTOR SHALL PROPERLY RESTRAIN THE 10-INCH PVC PIPE WITHIN THE 20-INCH STEEL CASING PIPE BY ANCHORING TO PREVENT HORIZONTAL AND VERTICAL MISALIGNMENT OF THE SANITARY SEWER.
6. ALL CASTINGS SHALL BE SUPPLIED BY THE CONTRACTOR. THE COST OF THE CASTINGS SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THEIR RESPECTIVE STRUCTURES. THE MANUFACTURING AND WORKMANSHIP OF ALL CASTINGS SUPPLIED SHALL CONFORM TO ASTM 48-83. THE GREY IRON SHALL BE CLASS 30B. ALL SANITARY MANHOLES SHALL HAVE MS 21 FRAME AND MS 58A LID WITH GASKET.
7. THE BENCH OF EACH MANHOLE, WITH THE EXCEPTION OF DEAD END MANHOLES, SHALL BE CONSTRUCTED IN "U" SHAPE TO THE ELEVATION OF THE OUTSIDE TOP OF THE DOWNSTREAM PIPE.
8. THE CONTRACTOR SHALL INSTALL AN INTERNAL FRAME AND CHIMNEY SEAL AS SPECIFIED FOR EACH NEW SANITARY MANHOLE. THE COST OF PROVIDING AND INSTALLING THE SEAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
9. THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE FRAME OF ANY MANHOLE TO THE TOP OF THE CORBEL SECTION OR FLAT SLAB TOP SHALL BE 22 INCHES.
10. ALL MANHOLE STEPS USED ON THE CONTRACT SHALL BE CAPABLE OF WITHSTANDING A MINIMUM DESIGN VERTICAL LOAD OF 800 LBS. WITH A MAXIMUM PERMANENT SET OF 1/2 INCH AFTER APPLICATION OF THE VERTICAL LOAD AND A HORIZONTAL PULL OUT LOAD OF 400 LBS. PER FILE NO. 10 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, DATED DECEMBER 22, 2003 SECTION 4.13.1 (O) OF THE CITY OF MILWAUKEE SEWER AND BUILDING SERVICE SPECIFICATIONS IS REVISED USING A 1/2 INCH DIAMETER REINFORCING BAR (MINIMUM SIZE) INSTEAD OF A 3/8 INCH DIAMETER REINFORCING BAR.
11. ANY COSTS INCURRED IN THE TESTING OF PIPE OR MATERIALS SHALL BE BORNE BY THE CONTRACTOR. ALL MATERIAL TESTS REQUIRED ON THIS CONTRACT SHALL BE PERFORMED AT A TESTING LABORATORY DESIGNATED BY THE CITY OF MILWAUKEE.
12. MECHANICAL COMPACTION OF BACKFILL IS REQUIRED AND SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN SECTION 2.6.14(d). TRENCH MAINTENANCE IS THE RESPONSIBILITY OF THE CONTRACTOR.
13. PIPE LENGTHS ARE GIVEN TO THE CENTER OF THE STRUCTURE UNLESS OTHERWISE NOTED ON THE PLAN.
14. CONTRACTORS SHALL BE RESPONSIBLE FOR NOT TRACKING SEDIMENT ONTO PUBLIC STREETS, SHOULD SEDIMENTATION FROM THE SITE REACH PUBLIC STREET, IT SHALL BE REMOVED BY STREET CLEANING OTHER THAN FLUSHING BEFORE END OF EACH WORKDAY.
15. THE CONTRACTOR SHALL PERFORM LOW PRESSURE SANITARY AIR TESTING OF ALL NEW SANITARY SEWER. THE SANITARY AIR TESTING SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 3.7.3 OF THE "STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN" SIXTH EDITION DATED DECEMBER 22, 2003 AND ADDENDA THERETO. THE COST OF SANITARY AIR TESTING OF THE SANITARY SEWER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE SANITARY AIR TESTING.
16. THE CONTRACTOR SHALL PERFORM MANHOLE VACUUM TESTING OF EACH NEW SANITARY MANHOLE ON THIS SEWER CONTRACT. THE VACUUM TESTING SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 3.7.6 OF THE "STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN" SIXTH EDITION DATED DECEMBER 22, 2003 AND ADDENDA THERETO. THE COST OF VACUUM TESTING OF THE SANITARY MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE SANITARY MANHOLE VACUUM TESTING.
17. THE CONTRACTOR SHALL PROVIDE THE CITY WITH TWO (2) COPIES OF A POST INSTALLATION DVD EXAMINATION AND REPORT OF THE SEWER. THESE RECORDED EXAMS WILL BECOME THE PROPERTY OF THE CITY OF MILWAUKEE. THE POST CONSTRUCTION DVD EXAMINATION AND REPORT SHALL ALSO BE REQUIRED FOR THE SANITARY SEWER BETWEEN MANHOLE NUMBERS 4 AND 5. ONCE THE NEW CHANNEL IS CONSTRUCTED AND RIPRAP IS PLACED UNDER THE CHANNEL, THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE SEWER EXAM BY CCTV POST-CONSTRUCTION.

SPECIAL PROVISIONS CONTINUE ON P.F. NO. PM-294



ESTIMATE OF QUANTITIES

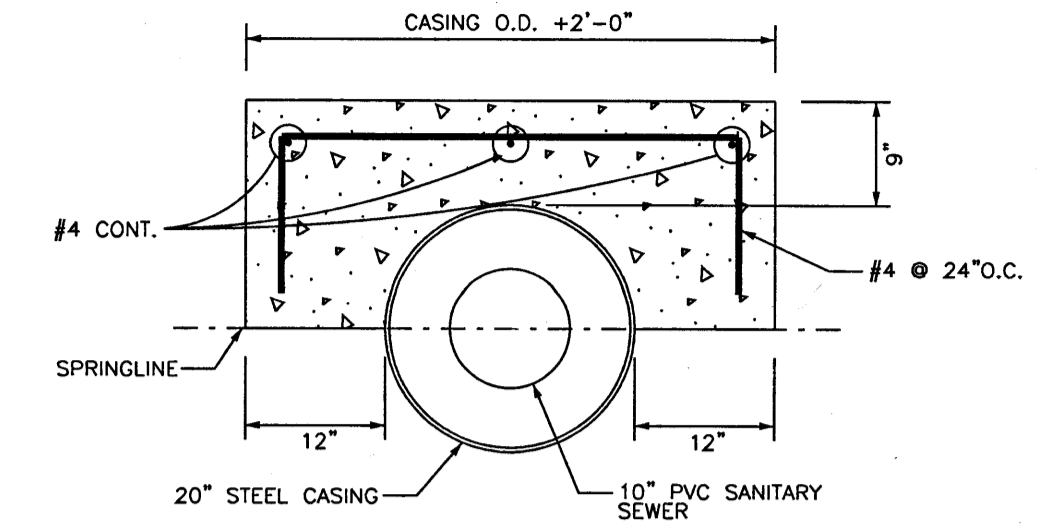
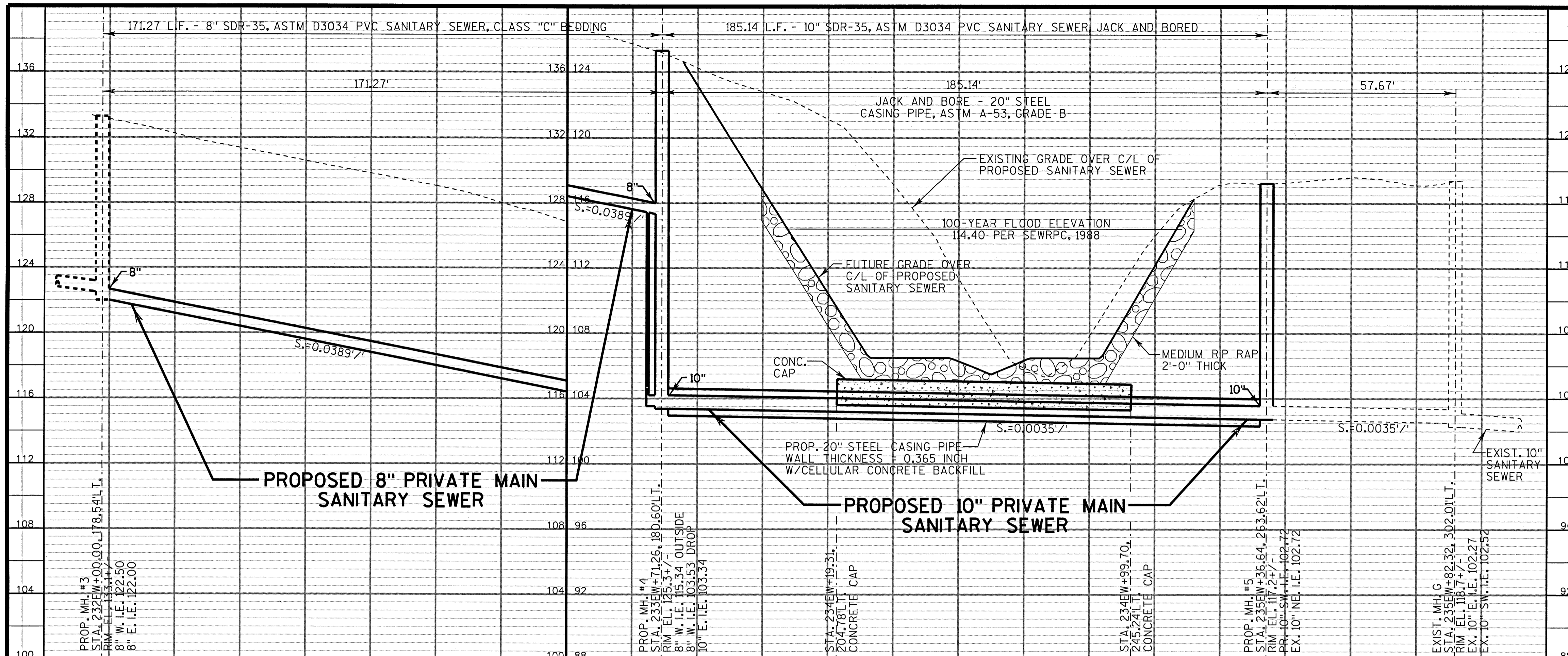
ITEM NO.	QUANTITY	DESCRIPTION
SPV.0090.5025	398 LF	8-INCH DIA. SANITARY SEWER, CLASS "C" BEDDING
SPV.0060.5035	3 EACH	SANITARY SEWER MANHOLE, 48-INCH, PRECAST CONCRETE CASTING AND INTERNAL MANHOLE SEAL
SPV.0090.5033	460 LF	ABANDON SANITARY SEWER 8-INCH
SPV.0090.5033	2 EACH	ABANDON SANITARY MANHOLE
SPV.0060.5050	3 EACH	SANITARY MANHOLE VACUUM TESTING
SPV.0090.5015	398 LF	SANITARY AIR TESTING
SPV.0090.5025	398 LF	SEWER EXAMS BY CCTV POST-CONSTRUCTION

**ENVIRONMENTAL ENGINEERING SECTION
INFRASTRUCTURE SERVICES DIVISION
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE, WISCONSIN**

**SEWER MAIN PLAN
IN EASEMENT
FROM 890' WEST OF S. 84TH STREET
TO 500' WEST OF S. 84TH STREET**

SCALE HORIZONTAL 1"=20' VERTICAL 1"=4'	APPROVED <i>Zafar Yousaf</i> 6/10/2013 DESIGN ENGINEER
DESIGNED BY JAL	DRAWN BY FKO
CHECKED BY JAL	IN CHARGE <i>Timothy J. Thum</i> 6/10/13
SYSTEM NO. 1831	<i>William D. Polonsky</i> 6/10/13 SPECIAL DEPUTY COMMISSIONER OF PUBLIC WORKS
CONTRACT NO. ST320125245	PROJECT NO. OFF. NOTICE NO. DATE ADOPTED

NO.	BY	REVISION	DATE



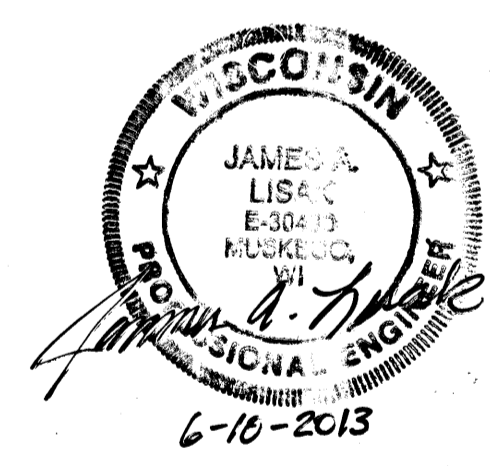
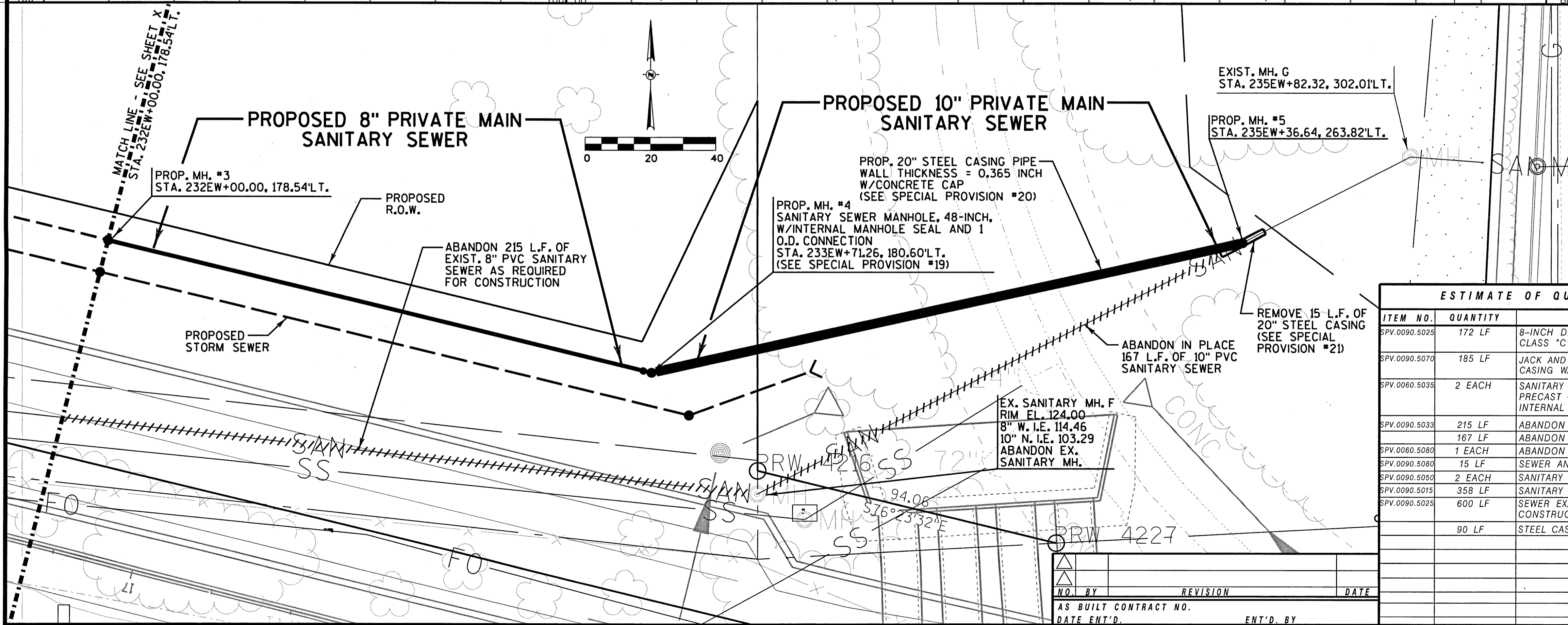
STEEL CASING CONCRETE CAP DETAIL
N.T.S.

GENERAL NOTES

1. VERTICAL DATUM IS MILWAUKEE METROPOLITAN SEWERAGE DISTRICT (MMSD) DATUM, APPROXIMATE ELEVATIONS BASED ON DOT DATUM NAVD83 (2011) CAN BE OBTAINED BY ADDING 580.33 FEET ALGEBRAICALLY TO THE MMSD DATUM ELEVATIONS.
2. WORKING POINTS FOR MANHOLES ARE AT CENTER OF MANHOLE BARREL.
3. ALL INVERT ELEVATIONS ARE ALONG PROFILE CENTER LINE. INVERTS FOR MAIN LINE SEWER ARE AT MANHOLE WORKING POINTS.
4. SURFACE RESTORATIONS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR 8-INCH AND 10-INCH SANITARY SEWER PER SECTION 5.10.17 OF THE CITY OF MILWAUKEE SPECIFICATIONS.
5. CASING PIPE AND CARRIER PIPE SHALL BE INSTALLED UNDER EXISTING CONCRETE CHANNEL AND FLOW ESTABLISHED. CONCRETE CAP SHALL BE INSTALLED OVER CASING PIPE DURING CHANNEL WORK PRIOR TO PLACEMENT OF RIP RAP.

SPECIAL PROVISIONS

- SPECIAL PROVISIONS CONTINUED FROM P.F. NO. PM-293.
18. THE CONTRACTOR SHALL PREPARE AN "AS-BUILT" OF THE PRIVATE MAIN SEWER. ANY CHANGES IN LOCATION, ELEVATION, OR MATERIALS FROM THOSE SHOWN ON THE APPROVED PLANS SHALL BE APPROVED BY THE ENVIRONMENTAL ENGINEERING DIVISION OF THE CITY OF MILWAUKEE AND ONE MARKED UP "AS-BUILT" PRINT SHALL BE FURNISHED UPON COMPLETION OF THE SEWER WORK FOR RECORD PURPOSES.
 19. THE PROPOSED OUTSIDE DROP CONNECTION TO THE SANITARY MANHOLE NUMBER 4 SHALL BE IN ACCORDANCE WITH FILE NO. 22 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN. THE COST OF BUILDING AN OUTSIDE DROP CONNECTION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR SANITARY SEWER MANHOLE, 48-INCH, PRECAST CONCRETE WITH CASTING AND INTERNAL MANHOLE SEAL.
 20. THE CONTRACTOR SHALL JACK AND BORE THE 20-INCH STEEL CASING WITH PVC 10-INCH DIA. SANITARY FROM MANHOLE #4 TO MANHOLE #5 AS SHOWN ON THE PLAN. THE CONTRACTOR SHALL NOT DISTURB THE EXISTING CONCRETE CHANNEL DURING THE JACK AND BORE PROCESS. A REINFORCED CONCRETE CAP SHALL BE INSTALLED OVER THE STEEL CASING PIPE ONCE THE EXISTING CONCRETE CHANNEL IS REMOVED, AND BEFORE THE RIPRAP IS PLACED. A DETAIL DRAWING OF THE CONCRETE CAP IS SHOWN ON PAGE PM-294.
 21. THE PROPOSED CONSTRUCTION OF MANHOLE #5 REQUIRES THE REMOVAL OF AN APPROXIMATELY 15-FOOT SECTION OF EXISTING 20-INCH STEEL CASING. THE CONTRACTOR SHALL REPLACE THIS EXISTING STEEL CASING SECTION WITH THE SAME KIND OF PIPE AND WITH THE SAME SLOPE. THE COST OF REMOVAL AND REPLACEMENT OF THIS STEEL CASING SECTION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE JACK AND BORE 20-INCH STEEL CASING WITH PVC 10-INCH DIA. SANITARY.



CALL DIGGERS HOTLINE
1-800-242-0511
TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND BEFORE YOU DIG. WISCONSIN STATUTE 90.03(1) REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU DIG.

ESTIMATE OF QUANTITIES		
ITEM NO.	QUANTITY	DESCRIPTION
SPV.0090.5025	172 LF	8-INCH DIA. SANITARY SEWER, CLASS "C" BEDDING
SPV.0090.5070	185 LF	JACK AND BORE 20-INCH STEEL CASING W/PVC 10-INCH DIA. SANITARY
SPV.0060.5095	2 EACH	SANITARY SEWER MANHOLE, 48-INCH, PRECAST CONCRETE W/CASTING AND INTERNAL MANHOLE SEAL
SPV.0090.5033	215 LF	ABANDON SANITARY SEWER 8-INCH
SPV.0060.5080	167 LF	ABANDON SANITARY SEWER 10-INCH
SPV.0090.5080	15 LF	ABANDON SANITARY MANHOLE
SPV.0090.5090	2 EACH	SEWER AND STEEL CASING REMOVAL
SPV.0090.5090	2 EACH	SANITARY MANHOLE VACUUM TESTING
SPV.0090.5015	358 LF	SANITARY AIR TESTING
SPV.0090.5025	600 LF	SEWER EXAMS BY CCTV POST-CONSTRUCTION
	90 LF	STEEL CASING CONCRETE CAP

ENVIRONMENTAL ENGINEERING SECTION	
INFRASTRUCTURE SERVICES DIVISION	
DEPARTMENT OF PUBLIC WORKS	
MILWAUKEE, WISCONSIN	
SEWER MAIN PLAN	
EASEMENT	
FROM 500' WEST OF S. 84TH STREET TO S. 84TH STREET	
SCALE	DATE
HORIZONTAL 1"=20'	APPROVED
VERTICAL 1"=4'	DATE 6/10/2013
1/4" SEC. NO. 417	DESIGNED BY Zafar Jorjaf
PLAN DATE 5-9-13	DRAWN BY Timothy J. T...
DESIGNED BY JAL	ENGINEER IN CHARGE
DRAWN BY FKO	DATE 6/10/13
CHECKED BY JAL	
SYSTEM NO. 1831	
EASEMENT NO.	
CONTRACT NO.	
PROJ. ID. ST320125245	OFF. NOTICE NO.
	C.C. FILE NO.
	DATE ADOPTED