

# CITY OF ANN ARBOR

## FIELD OPERATIONS

### EIGHTH STREET SANITARY SEWER

### MANHOLE REPLACEMENT

APRIL 2014

CITY ITB No. 4337

STANTEC FILE No. 2075128404

**PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR THESE PERMIT FEES.**

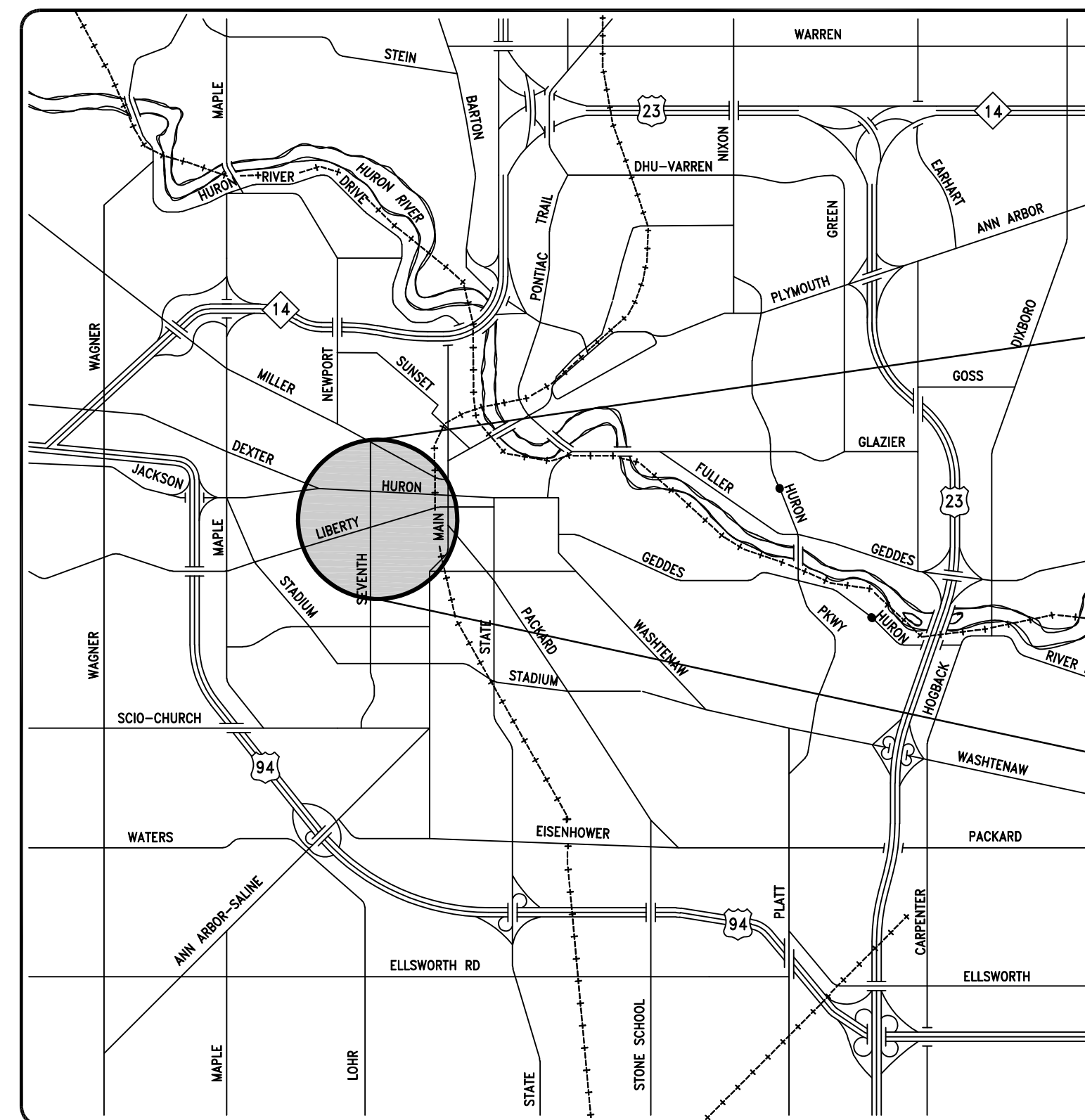
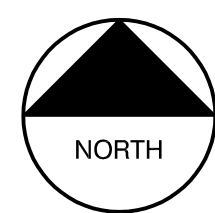
PERMIT	ISSUING AUTHORITY
GRADING/SOIL EROSION & SEDIMENTATION CONTROL PERMIT	CITY OF ANN ARBOR PLANNING AND DEVELOPMENT SERVICES UNIT
LANE CLOSURE PERMIT	CITY OF ANN ARBOR PLANNING AND DEVELOPMENT SERVICES UNIT
RIGHT-OF-WAY PERMIT	CITY OF ANN ARBOR PLANNING AND DEVELOPMENT SERVICES UNIT

**PERMITS REQUIRED TO BE OBTAINED BY THE CITY OF ANN ARBOR PRIOR TO THE BEGINNING OF CONSTRUCTION. THE CITY IS RESPONSIBLE FOR THESE PERMIT FEES.**

PERMIT	ISSUING AUTHORITY
MDEQ WASTEWATER CONSTRUCTION	MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

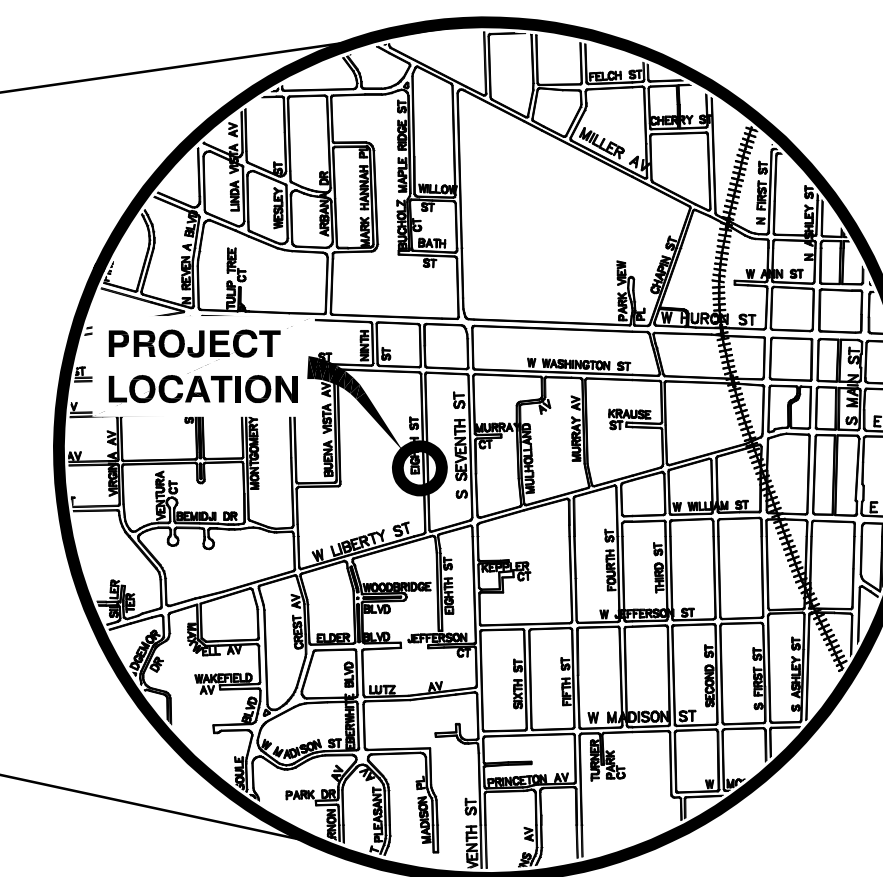
**THE FOLLOWING UTILITIES ARE LOCATED IN OR NEAR THE RIGHT-OF-WAY FOR THIS PROJECT**

PUBLIC UTILITIES	OWNER	CONTACT
WATER SEWER STORM	CITY OF ANN ARBOR FIELD OPERATIONS SERVICE UNIT W.R. WHEELER SERVICE CENTER 4251 STONE SCHOOL ROAD ANN ARBOR, MI 48108	DAN WOODEN (734) 794-6350 MARK COZART (734) 794-6350 KEVIN ERNST (734) 794-6350
SIGNS SIGNALS STREET LIGHTS		CHUCK FOJTIK (734) 794-6361
FORESTRY		STEVE GOEBEL (734) 794-6364
PRIVATE UTILITIES	OWNER	CONTACT
GAS	DTE ENERGY 17150 ALLEN ROAD MELVINDALE, MI 48122	JACK WYHATT (313) 701-1355
ELECTRIC	DTE ENERGY WESTERN WAYNE SERVICE CENTER 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	CLAY COMBEE (734) 397-4112
CABLE	COMCAST 27800 FRANKLIN ROAD SOUTHFIELD, MI 48034	RON SUTHERLAND (313) 999-8300
PHONE	AT&T 550 S. MAPLE ROAD ANN ARBOR, MI 48103	BRIAN BERRY (734) 996-2135
PHONE	MCI 2800 N. GLENFILLE ROAD RICHARDSON, TX 75082	DEAN BOYERS (972) 729-6016



VICINITY MAP

SHEET INDEX		
SHEET	DRAWING No.	TITLE
1	G-01	COVER SHEET
2	G-02	GENERAL NOTES AND LEGEND
3	G-03	STANDARD DETAILS SHEET
4	C-01	SANITARY SEWER PLAN & PROFILE
5	C-02	TRAFFIC CONTROL PLAN



LOCATION MAP

**PREPARED BY:**



Stantec Consulting Michigan Inc.  
3959 Rancho Drive  
Ann Arbor MI U.S.A.  
48108-2771  
Tel. 734.761.1010  
Fax. 734.761.1200  
www.stantec.com

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS AND ITS DETAILS WHICH ARE INCLUDED BY REFERENCE.

THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT. THE WORK SHALL BE PERFORMED IN COMPLETE CONFORMANCE WITH THE CURRENT PUBLIC SERVICES STANDARD SPECIFICATIONS AND DETAILS.

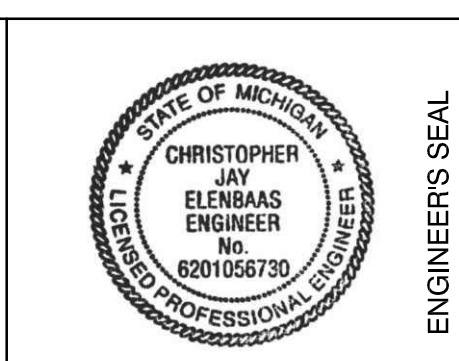
FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 53, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.



Know what's **Below.**  
**CALL** before you dig.

PREPARED UNDER THE SUPERVISION OF

*Chris Elenbaas*  
CHRIS ELENBAAS, P.E., - MI LICENSE No. 56730  
PROJECT MANAGER



04/09/2014

DATE

CITY DEPARTMENTAL REVIEW							DRAWING No.
SURVEY	REVIEW ENGINEER	FIELD OPERATIONS	C.E.S. SUPERVISOR	TRAFFIC	SOIL EROSION	STORM WATER/FLOODPLAIN	2075128404 - G-01
							SHEET No. 1 OF 5

PROJECT NAME; EIGHTH STREET SANITARY SEWER MANHOLE REPLACEMENT - BID No. 4337.

V:\2075128404\civil\drawing\2075128404\_G-01.dwg Dwg Created: 2-Dec-13 --\_a2\_standard.stb - Plot Date: 9-Apr-14

EXISTING WATER SYMBOLS	EXISTING MISC. SYMBOLS	EXISTING UTILITY LINETYPES
FIRE HYDRANT GATE VALVE IN BOX GATE VALVE IN WELL STOP BOX WATER VAULT WELL	UNKNOWN MANHOLE TELEPHONE MANHOLE TELEPHONE RISER GAS VALVE GAS VENT GAS BOX ELECTRICAL RISER TRANSFORMER UTILITY POLE LAMP POLE GUY ANCHOR GUY POLE MONITORING WELL MAILBOX SOIL BORING	WATER MAIN STORM SEWER SANITARY SEWER GAS MAIN  <b>MISC. LINETYPES</b> BOUNDARY BUILDING CENTERLINE OF DITCH CENTERLINE OF ROAD EDGE OF WATER FENCE GRAVEL R.O.W. TREELINE WETLAND
STORM SYMBOLS		MISC. LINETYPES
CATCH BASIN (SO) CATCH BASIN (RD) STORM MANHOLE NON-CURB CATCH BASIN (SO)		BUILDING CENTERLINE OF DITCH CENTERLINE OF ROAD FENCE SILT FENCE LOT/UNIT PHASE LINE CURB TEMPORARY GRADING PERMIT WATER EASEMENT STORM EASEMENT SANITARY EASEMENT R.O.W.
SANITARY SYMBOLS		HATCHING
SANITARY MANHOLE CLEAN-OUT		ASPHALT CONCRETE GRAVEL WETLAND
VEGETATION SYMBOLS		
TREE (DECIDUOUS) TREE (CONIFEROUS) STUMP SHRUB (DECIDUOUS)		
TRAFFIC SYMBOLS	SURVEY SYMBOLS	
POST PEDESTRIAN SIGNAL SIGN HAND HOLE ORNAMENTAL LIGHT FLOOD LIGHT	TRAVERSE POINT BENCHMARK IRON PIPE MON BOX	

PROPOSED WATER SYMBOLS	PROPOSED UTILITY LINETYPES
HYDRANT (PROFILE) HYDRANT (PLAN) WATER GATE WELL WATER GATE VALVE WATER STOP BOX WATER VAULT	WATER MAIN STORM SEWER SANITARY SEWER  <b>MISC. LINETYPES</b> BUILDING CENTERLINE OF DITCH CENTERLINE OF ROAD FENCE SILT FENCE LOT/UNIT PHASE LINE CURB TEMPORARY GRADING PERMIT WATER EASEMENT STORM EASEMENT SANITARY EASEMENT R.O.W.
STORM SYMBOLS	MISC. LINETYPES
INLET DOUBLE INLET INLET JUNCTION CHAMBER ROUND CATCH BASIN STORM MANHOLE DRAIN ARROW FLARED END SECTION (PLAN) FLARED END SECTION (PROFILE)	BUILDING CENTERLINE OF DITCH CENTERLINE OF ROAD FENCE SILT FENCE LOT/UNIT PHASE LINE CURB TEMPORARY GRADING PERMIT WATER EASEMENT STORM EASEMENT SANITARY EASEMENT R.O.W.
SANITARY SYMBOLS	HATCHING
SANITARY MANHOLE CLEAN-OUT	ASPHALT CONCRETE SIDEWALK GRAVEL PAVEMENT/WALK REMOVAL CURB REMOVAL
VEGETATION SYMBOLS	
TREE (DECIDUOUS) TREE (CONIFEROUS)	
TRAFFIC SYMBOLS	
BARREL SIGN PUSH BUTTON DETECTABLE WARNING	

**CONSTRUCTION NOTES:**

- DRIVEWAYS AND ENTRANCES TO BUILDINGS AND PROPERTY SHALL NOT BE BLOCKED EXCEPT FOR SHORT DURATIONS AND ONLY WHEN APPROVED BY THE ENGINEER. VEHICULAR AND PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL NECESSARY DRIVEWAY CLOSURES WITH THE PROPERTY OWNER(S) AND RESIDENT(S) IN THE AREAS OF CONSTRUCTION.
- THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND SERVICE LEADS ARE TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- LOCATION AND DEPTH OF EXISTING UTILITIES AS DEPICTED ON THE PLANS IS APPROXIMATE AND SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXCAVATE AHEAD AND ADJUST DEPTH OF CONFLICT UTILITIES ACCORDINGLY. ANY DAMAGE TO UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY TO AVOID AND/OR REPAIR AS NECESSARY.
- DURING NON-WORKING HOURS NO TRENCH SHALL REMAIN OPEN; ANY OPEN TRENCH SHALL BE PROPERLY SECURED WITH PROTECTIVE FENCING. THIS WORK SHALL BE INCLUDED IN THE ITEM OF WORK "GENERAL CONDITIONS".
- THE CONTRACTOR SHALL BACKFILL TRENCHES IN ACCORDANCE WITH TRENCH DETAIL SPECIFIED ON PLANS. ALL PAVEMENT REMOVALS AND REPLACEMENTS REQUIRED FOR THIS WORK WILL BE PAID SEPARATELY.
- POSTAL DELIVERY AND REFUSE PICKUP SERVICE SHALL BE MAINTAINED AT ALL TIMES BY THE CONTRACTOR.
- WHERE STREET CURBS ARE UNDERMINED DUE TO CONSTRUCTION ACTIVITIES, THEY SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTINUOUS MAINTENANCE OF THE TEMPORARY ROAD SURFACE AND SOIL EROSION CONTROL MEASURES WITHIN THE CONSTRUCTION AREA UNTIL THE FULL COMPLETION OF THE PROJECT.
- ALL CURB, SIDEWALK, DRIVEWAY APPROACH REMOVALS SHALL BE APPROVED BY ENGINEER BEFORE THE WORK IS DONE.
- THE LOCATION OF MATERIAL STOCK PILES AND ON-SITE STAGING AREAS TO BE APPROVED BY THE ENGINEER.
- EXISTING STREET NAME, GUIDE, AND REGULATOR SIGNS, AND MAILBOXES WHICH CONFLICT WITH THE PROPOSED CONSTRUCTION SHALL BE REMOVED PRIOR TO CONSTRUCTION, STORED IN A MANNER WHICH WILL PREVENT DAMAGE, AND RE-SET IN LOCATIONS AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID SEPARATELY, BUT SHALL BE INCLUDED IN "GENERAL CONDITIONS".
- THE CONTRACTOR SHALL SUPPLY PUMPS, CONDUITS, POWER AND OTHER EQUIPMENT TO DIVERT THE FLOW OF SEWAGE AROUND THE SECTION IN WHICH WORK IS TO BE PERFORMED. THE BYPASS SYSTEM SHALL BE OF SUFFICIENT CAPACITY TO HANDLE THE WASTEWATER FLOWS.
- THE CONTRACTOR SHALL IMMEDIATELY REMOVE AND DISPOSE OF ALL OFFENSIVE MATTER SPILLED DURING THE BYPASS PUMPING AT HIS OWN EXPENSE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PAYING ANY FINES IMPOSED AS A RESULT OF SPILLS OR OVERFLOWS THAT OCCUR AS A RESULT OF THE BYPASS PUMPING OPERATIONS.
- THE DISCHARGE OF TRENCH DEWATERING PUMPS MUST BE CONDUCTED TO NATURAL DRAINAGE CHANNELS, DRAINS, OR STORM SEWERS. IF TRENCH WATER IS PUMPED TO NATURAL DRAINAGE CHANNELS OR DRAINS, APPROVED SOIL EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED AND MAINTAINED AT THE POINT OF DISCHARGE. IF TRENCH WATER IS PUMPED INTO STORM SEWERS, FILTERS SHALL BE PROVIDED TO PREVENT THE FLOW OF ROCKS, MUD AND OTHER DEBRIS INTO THE STORM SEWER LINE.

**SOIL EROSION CONTROL NOTES:**

GENERAL:

- THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE SOIL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AT ALL TIMES DURING CONSTRUCTION ON THIS PROJECT. ANY MODIFICATIONS OR ADDITIONS TO THE SOIL EROSION CONTROL MEASURES DUE TO CONSTRUCTION OR CHANGED CONDITIONS SHALL BE COMPLIED WITH AS REQUIRED OR DIRECTED BY THE OWNER, PROJECT ENGINEER, OR THE CITY OF ANN ARBOR. THE CONTRACTOR IS REQUIRED TO OBTAIN A SOIL EROSION CONTROL PERMIT ANYTIME THE DISTURBED AREA EXCEEDS 1 ACRE.
- ALL SOIL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE PERMIT REQUIREMENTS OF THE CITY OF ANN ARBOR, CHAPTER 63, AND THE LAWS OF THE STATE OF MICHIGAN.
- DAILY OR AFTER STORM EVENTS INSPECTIONS SHALL BE MADE BY THE CONTRACTOR. PERIODIC INSPECTIONS MAY BE MADE BY THE OWNER/PROJECT ENGINEER TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES. ANY NECESSARY CORRECTIONS SHALL BE MADE WITHOUT DELAY AND WITHOUT ADDITIONAL COST TO THE OWNER.
- EROSION AND SEDIMENTATION FROM WORK ON THE SITE SHALL BE CONTAINED ON THE SITE AND NOT BE ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR WATERWAYS.
- ALL MUD/DIRT TRACKED ONTO ROADS FROM THE SITE DUE TO CONSTRUCTION, SHALL BE PROPERTY REMOVED BY THE CONTRACTOR. IF SO ORDERED, THE CONTRACTOR SHALL EMPLOY A MECHANICAL STREET SWEEPER AT NO ADDITIONAL COST TO THE OWNER.
- RESTORATION OF ALL DISTURBED AREAS, INCLUDING PLACEMENT OF TOPSOIL, SEED, FERTILIZER AND MULCH AND/OR SOD SHALL BE DONE WITHIN 5 DAYS OF THE COMPLETION OF FINAL GRADE.
- CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE SOIL EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION IN CRITICAL AREAS AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING OPERATIONS.
- SPECIAL PRECAUTIONS WILL BE TAKEN IN USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
- PROPER DUST CONTROL SHALL BE MAINTAINED DURING CONSTRUCTION BY USE OF WATER TRUCKS AND/OR CHLORIDE AS REQUIRED OR AS DIRECTED BY ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND REMOVAL OF SOME UPON AUTHORIZED COMPLETION OF THE PROJECT. COMPLETION OF PROJECT WILL NOT BE AUTHORIZED UNTIL ALL SITE WORK AND UTILITY CONSTRUCTION IS COMPLETE AND ALL SOILS ARE STABILIZED.
- THE CONTRACTOR SHALL NOT GRADE INTO ADJACENT PROPERTIES. SILT FENCE SHALL BE INSTALLED AND MAINTAINED TO PREVENT GRADING, EROSION AND SEDIMENTATION INTO THEM.
- TREE PROTECTION FENCING MUST REMAIN INTACT UNTIL RESTORATION OF THE SITE IS COMPLETE.

SEQUENCE OF EROSION CONTROL:

- INSTALL SILT FENCE, TREE PROTECTION FENCING AND INLET FILTERS ON EXISTING STORM INLETS PRIOR TO ANY CLEARING OR EARTH MOVING OPERATION.
- CONTRACTOR TO CONTINUALLY MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES, AS REQUIRED TO ALLOW DRAINAGE AND SEDIMENT REMOVAL. REMOVE ANY ACCUMULATED SEDIMENT.
- STRIP AND CLEAR - MAINTAIN EROSION CONTROL MEASURES AROUND TEMPORARY STOCK PILES.
- ROUGH GRADE.
- ENSURE ALL SOIL IS STABILIZED. REMOVE ALL TEMPORARY SOIL EROSION CONTROL MEASURES.

TEMPORARY SEEDING:

- SEED IN ACCORDANCE WITH PROJECT DRAWINGS AND SPECIFICATIONS.
- ANY DISTURBED AREA NOT PAVED, SEEDED, MULCHED, SODDED OR BUILT UPON BY NOVEMBER 15TH OR JUNE 30TH IS TO BE TEMPORARILY STABILIZED PER SPECIFICATIONS.

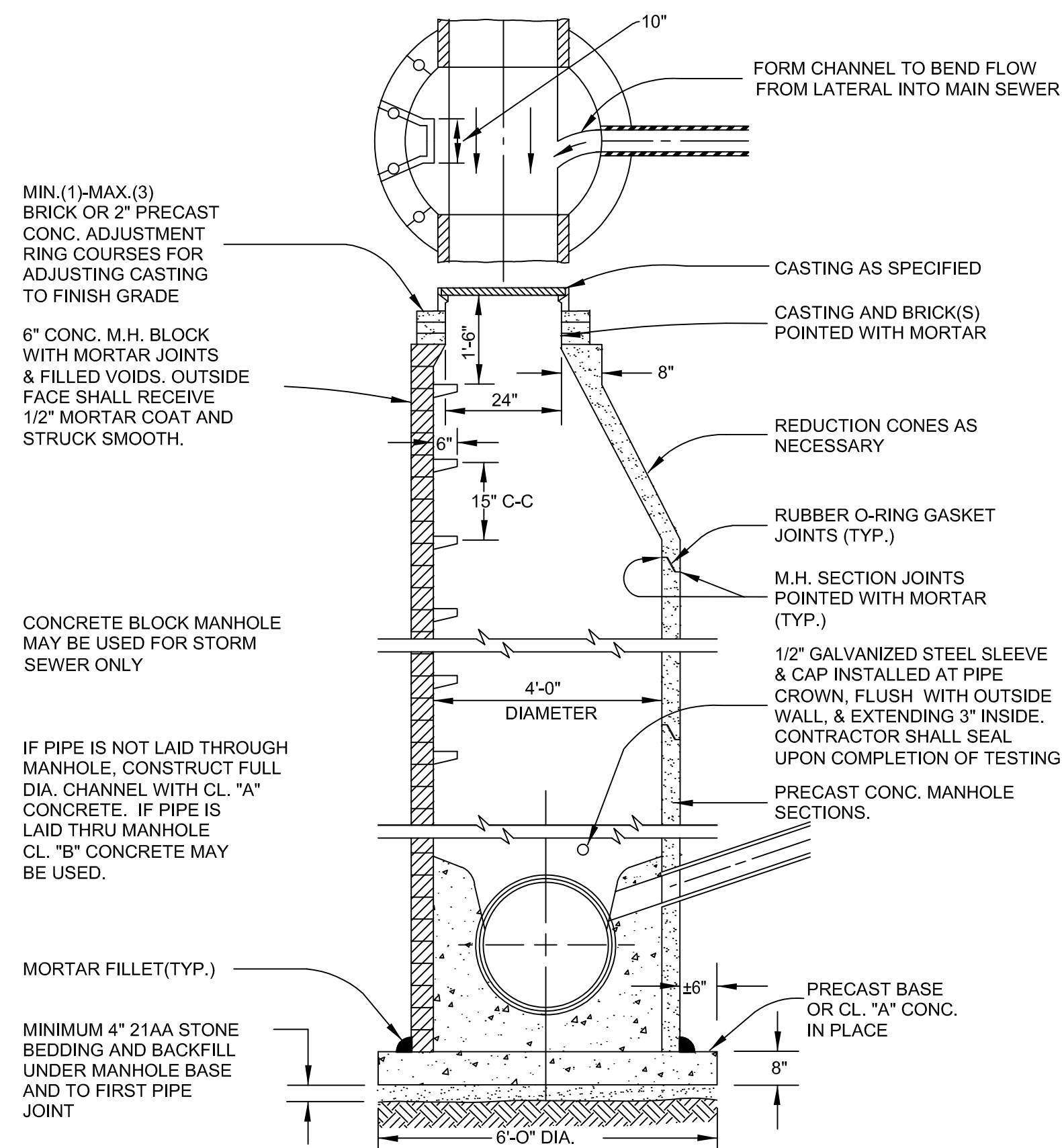
ROAD:

- DURING CONSTRUCTION, ALL ROADS SHALL BE PROTECTED FROM UNVEGETATED AREAS WASHING ONTO ROAD SURFACE BY PLACEMENT OF SILT FENCE BEHIND CURB OR A 10 FOOT WIDE STRAW MULCH BLANKET BEHIND CURB OR OTHER APPROVED METHOD AND/OR AS SHOWN ON THE PLANS.
- DURING CONSTRUCTION OF ANY PORTION OF THE PROJECT, ADJOINING ROADS SHALL BE MAINTAINED FREE OF DIRT, SILT AND CONSTRUCTION DEBRIS. CONTRACTOR REQUIRED TO USE VACUUM SWEEPER EQUIPMENT FOR CLEANING CONSTRUCTION SITE AND ADJOINING ROADS. THE USE OF BROOM SWEEPER IS NOT PERMITTED.

CATCH BASIN/MANHOLE PROTECTION:

- PROTECT STORM SEWER CATCH BASINS WITH APPROVED INLET FILTERS.

Know what's Below. CALL before you dig.	
PREPARED BY: 	CITY OF ANN ARBOR 
<b>FIELD OPERATIONS - CITY OF ANN ARBOR</b> <b>EIGHTH STREET SANITARY SEWER</b> <b>MANHOLE REPLACEMENT</b> GENERAL NOTES AND LEGEND	
SCALE NONE	DRAWING No. 2075128404 - G-02
SHEET No. 2 OF 5	



MIN.(1)-MAX.(3) BRICK OR 2" PRECAST CONC. ADJUSTMENT RING COURSES FOR ADJUSTING CASTING TO FINISH GRADE

6" CONC. M.H. BLOCK WITH MORTAR JOINTS & FILLED VOIDS. OUTSIDE FACE SHALL RECEIVE 1/2" MORTAR COAT AND STRUCK SMOOTH.

CONCRETE BLOCK MANHOLE MAY BE USED FOR STORM SEWER ONLY

IF PIPE IS NOT LAID THROUGH MANHOLE, CONSTRUCT FULL DIA. CHANNEL WITH CL. "A" CONCRETE. IF PIPE IS LAID THRU MANHOLE CL. "B" CONCRETE MAY BE USED.

MORTAR FILLET(TYP.)

MINIMUM 4" 21AA STONE BEDDING AND BACKFILL UNDER MANHOLE BASE AND TO FIRST PIPE JOINT

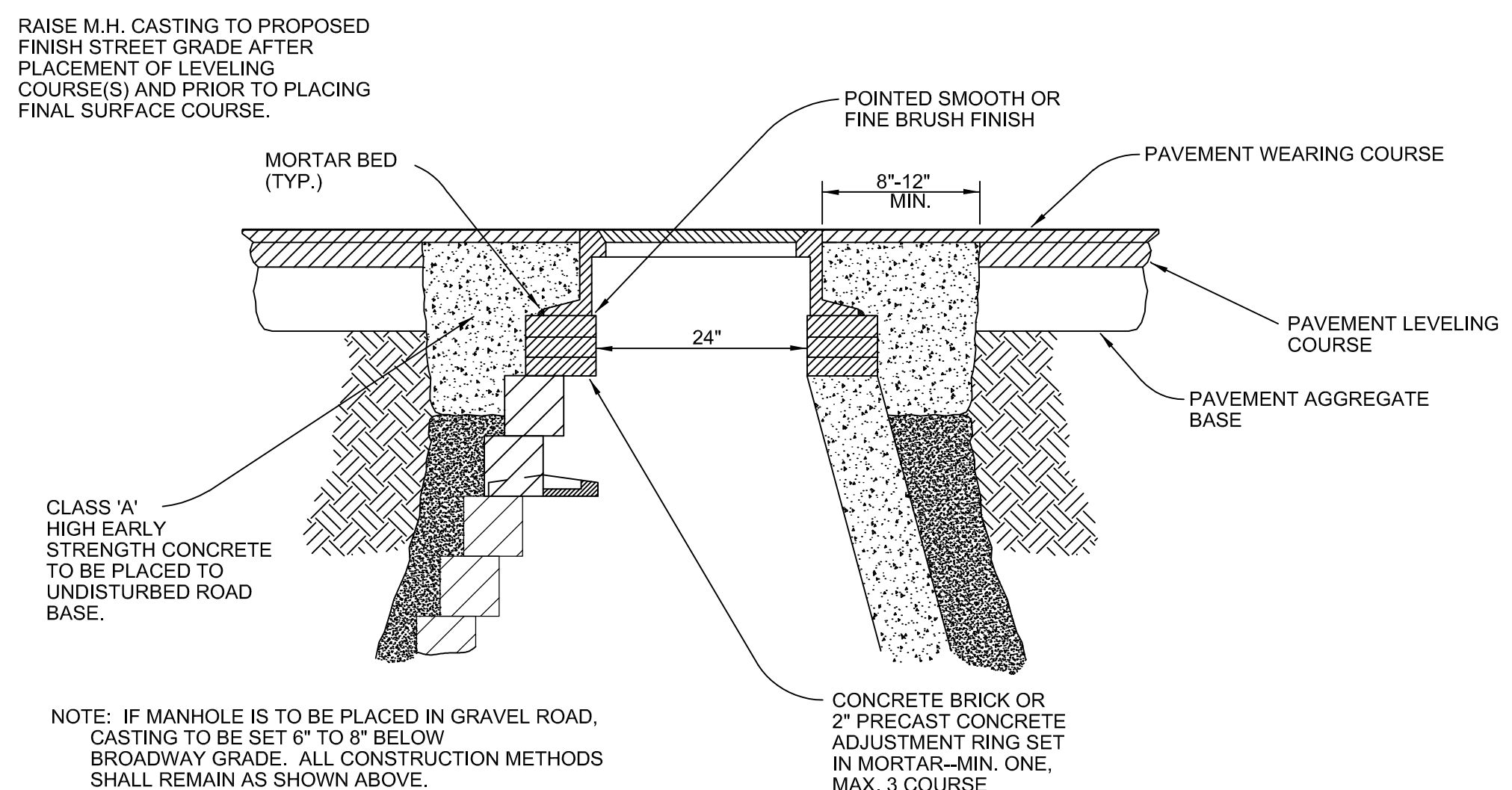
NOTE: ALL SANITARY MANHOLES SHALL BE PRECAST CONC.

NOTE: ALL MANHOLES MUST HAVE ECCENTRIC CONES- BOTH STORM AND SANITARY

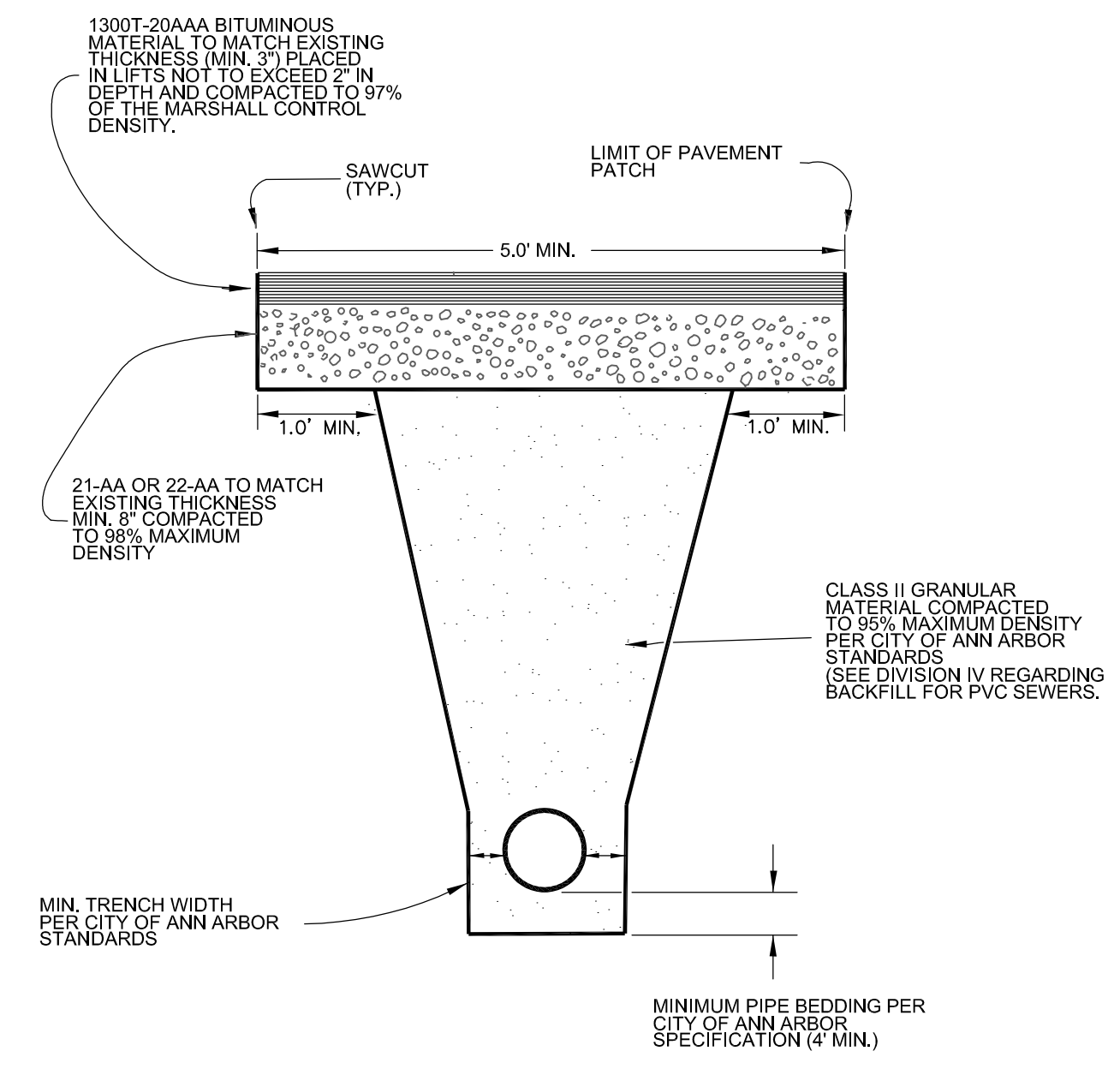
NOTE: ALL SANITARY SEWER OPENINGS SHALL BE PRECAST WITH RUBBER BOOT CONNECTIONS.

NOTE: CONCRETE BLOCK MANHOLE MAY BE USED FOR STORM SEWER ONLY, AND SHALL BE ECCENTRIC

**STANDARD MANHOLE (TYPE 1) SD-S-1**  
NOT TO SCALE



**MANHOLE CASTING ADJUSTMENT SD-GU-6**  
NOT TO SCALE

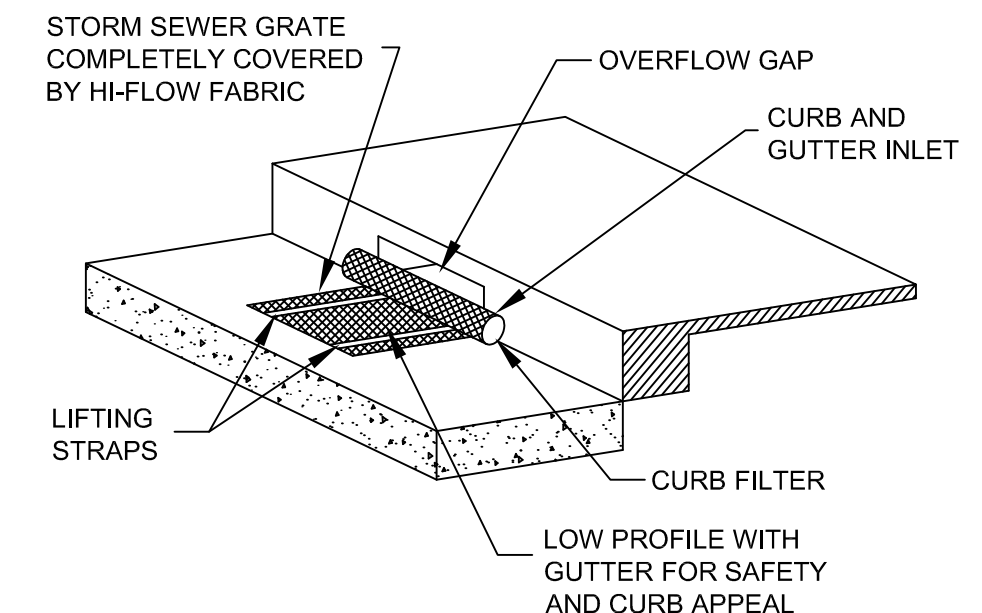


NOTE: DENSITY TESTING PER CITY OF ANN ARBOR SPECIFICATION

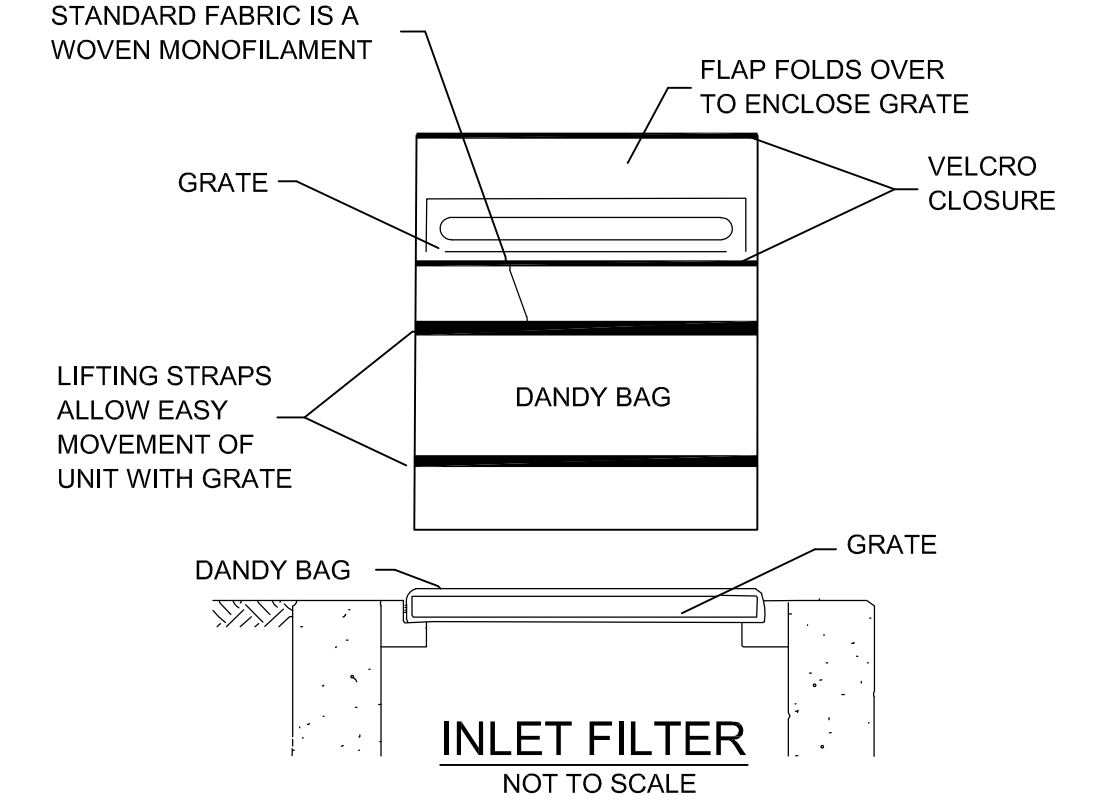
NOTE: TRENCH DETAILS SHOW TYPE OF BACKFILL AND SURFACE RESTORATION ONLY.

NOTE: ALL TRENCHING TO CONFORM TO ALL APPLICABLE M.I.O.S.H.A. STANDARDS

**TRENCH DETAIL - (TYPE I) SD-TD-1**  
NOT TO SCALE



NOTE: TO INSURE PROPER OPERATION REMOVE SILT, SEDIMENT, AND DEBRIS FROM THE SURFACE AND THE VICINITY OF THE UNIT WITH A SQUARE POINT SHOVEL OR STIFF BRISTLE BROOM AWAY FROM ENVIRONMENTALLY SENSITIVE AREAS AND WATERWAYS IN MANNER SATISFACTORY TO THE ENGINEER/INSPECTOR. REMOVE FINE MATERIAL FROM INSIDE DANDY BAG AS NEEDED. DISPOSE OF DANDY BAG NO LONGER IN USE AT AN APPROPRIATE RECYCLING OR SOLID WASTE FACILITY. TO INSPECT INLET, REMOVE DANDY BAG WITH GRATE INSIDE, INSPECT CATCH BASIN AND REPLACE DANDY BAG BACK INTO GRATE FRAME.

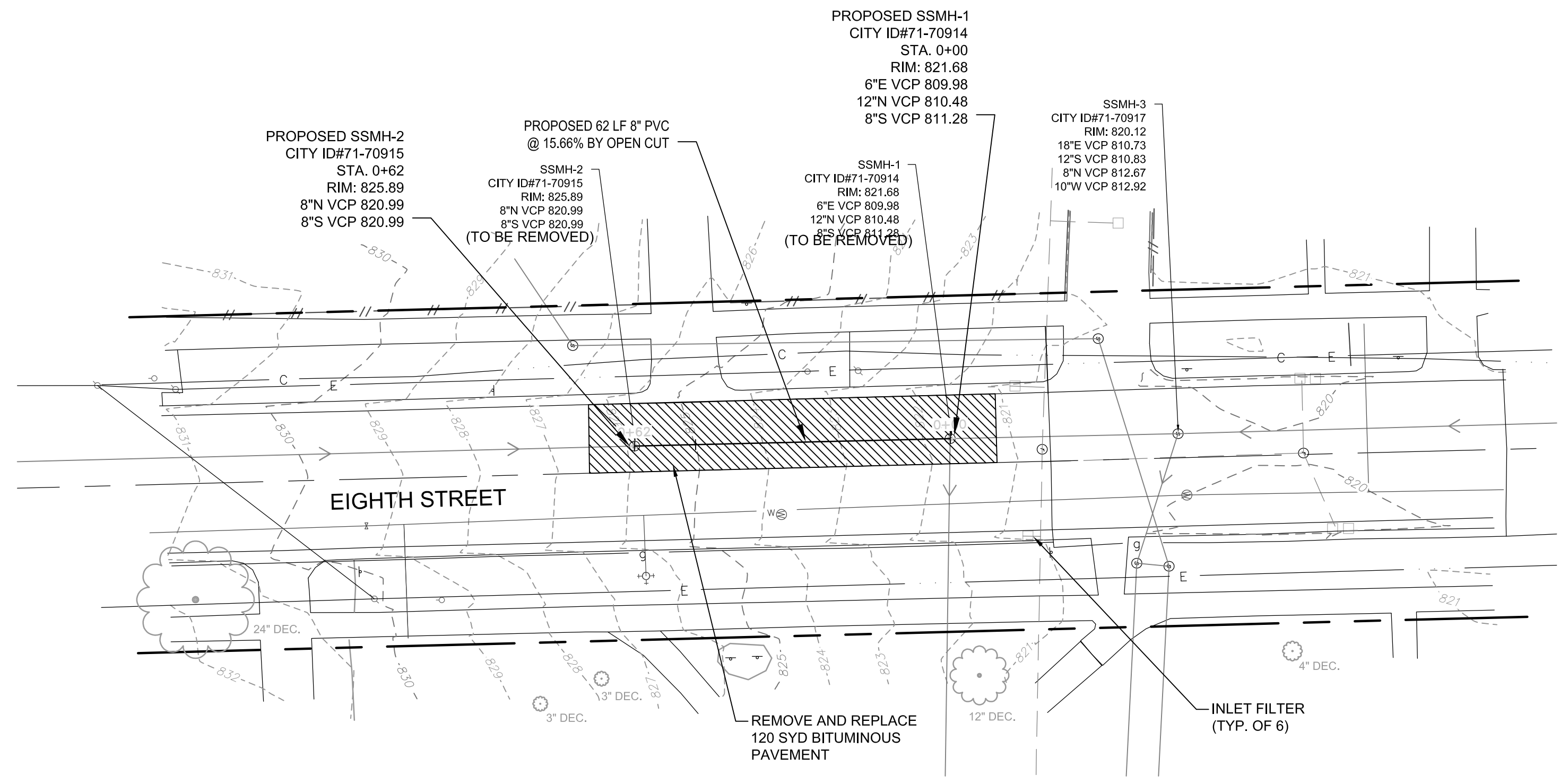


**INLET FILTER**  
NOT TO SCALE

PREPARED BY:	
2 BID SET	04/09/14
1 PRELIMINARY PLAN	03/13/14
REV.	DATE
FIELD OPERATIONS - CITY OF ANN ARBOR EIGHTH STREET SANITARY SEWER MANHOLE REPLACEMENT STANDARD DETAILS SHEET	
SCALE: NONE	DRAWING NO.: 2075128404 - G-03
SHEET NO.: 3 OF 5	

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**SANITARY SEWER PLAN**  
SCALE: 1"=20'

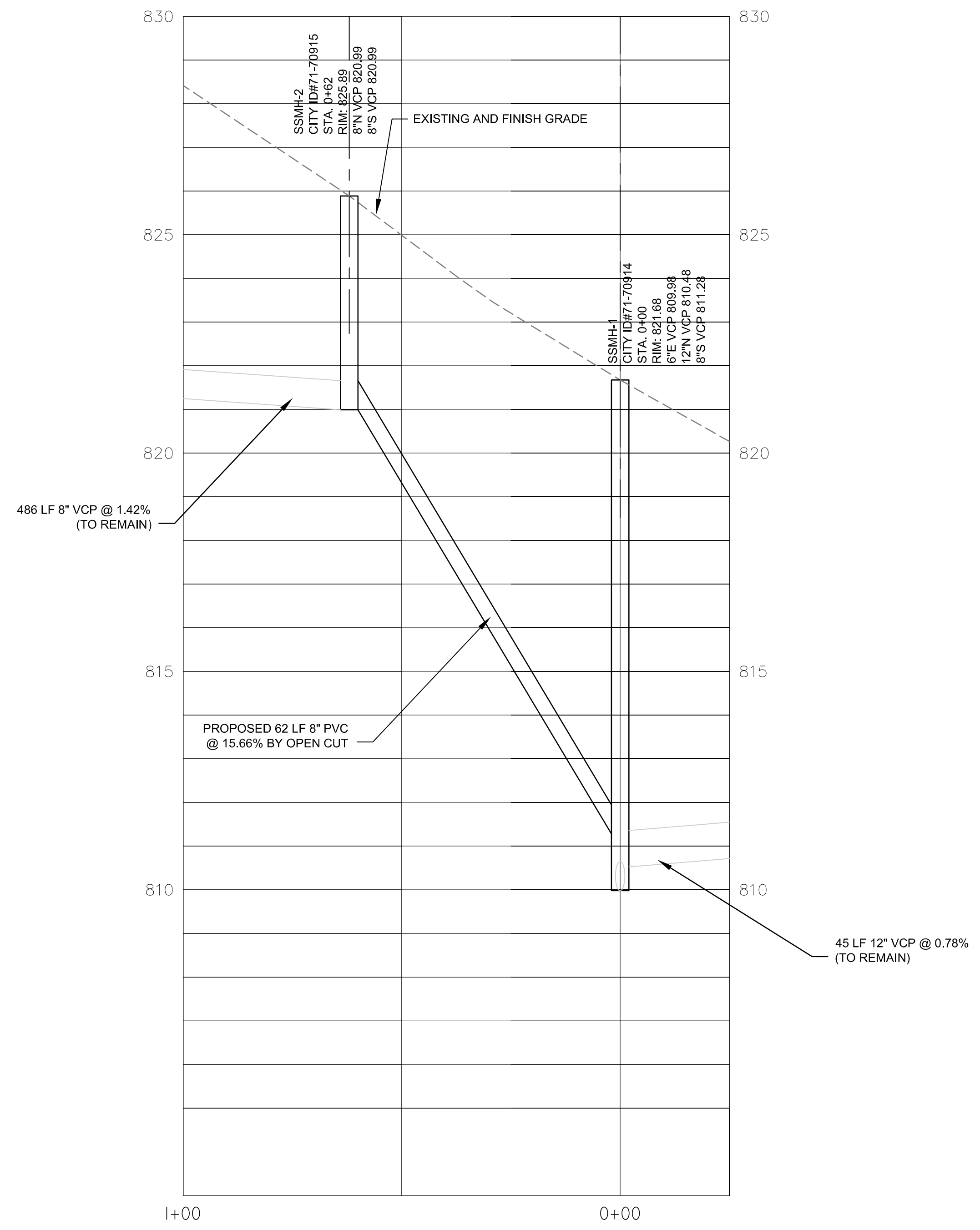
SANITARY SEWER STRUCTURE SCHEDULE						
STRUCTURE	STATION	RIM	DEPTH	DIA	TYPE	INVERT
SSMH-1 CITY ID#71-70914	0+00	821.68	11.70	4'	SD-S-1	6"E 809.98 12"N 810.48 8"S 811.28
SSMH-2 CITY ID#71-70915	0+62	825.89	4.99	4'	SD-S-1	8"N 820.99 8"S 820.99

**CONSTRUCTION NOTES:**

- CONTRACTOR SHALL VERIFY ALL EXISTING PIPE INVERT ELEVATIONS PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY SHEETING AND SHORING TO PREVENT DAMAGE TO EXISTING UTILITY POLES AND UNDERGROUND UTILITIES.
- SANITARY SEWER STRUCTURES SHALL BE PRECAST CONCRETE.
- CALL MISS DIG AT 1-800-482-7171 AT LEAST 3 WORKING DAYS PRIOR TO ANY EXCAVATION TO CONFIRM THE LOCATION OF EXISTING BURIED UTILITIES. THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

**EIGHTH STREET SANITARY SEWER BYPASS PLAN:**

- INSTALL PLUGS UPSTREAM FROM SSMH-1 (CITY ID#71-70914) AND SSMH-2 (CITY ID#71-70915).
- THE 12" SEWER NORTH OF SSMH-1 SHALL BE ALLOWED TO BACKFLOW INTO SSMH-3 (CITY ID#71-70917) AND DISCHARGE THROUGH THE 18" SEWER FLOWING EAST.
- THE 8" SEWER SOUTH OF SSMH-2 (CITY ID#71-70915) SHALL BE PLUGGED AT THE SANITARY MANHOLE 219 FEET SOUTH OF SSMH-2 (CITY ID#71-70915). CONTRACTOR SHALL MAKE ALL NECESSARY PROVISIONS TO ACCOMMODATE THE INDIVIDUAL SANITARY LEADS THAT ENTER DOWNSTREAM FROM THE PLUG LOCATION.
- ALL BYPASS PUMPS SHALL DISCHARGE INTO SSMH-3 (CITY ID#71-70917).



**SANITARY SEWER PROFILE**  
SCALE: 1"=20' HORIZ.  
1"=2' VERT.



REV.	DESCRIPTION	DATE	DRAWN	CHECKED
2	BID SET	04/09/14	BWA	CJE
1	PRELIMINARY PLAN	03/13/14	BWA	CJE

PREPARED BY:  
**Stantec**

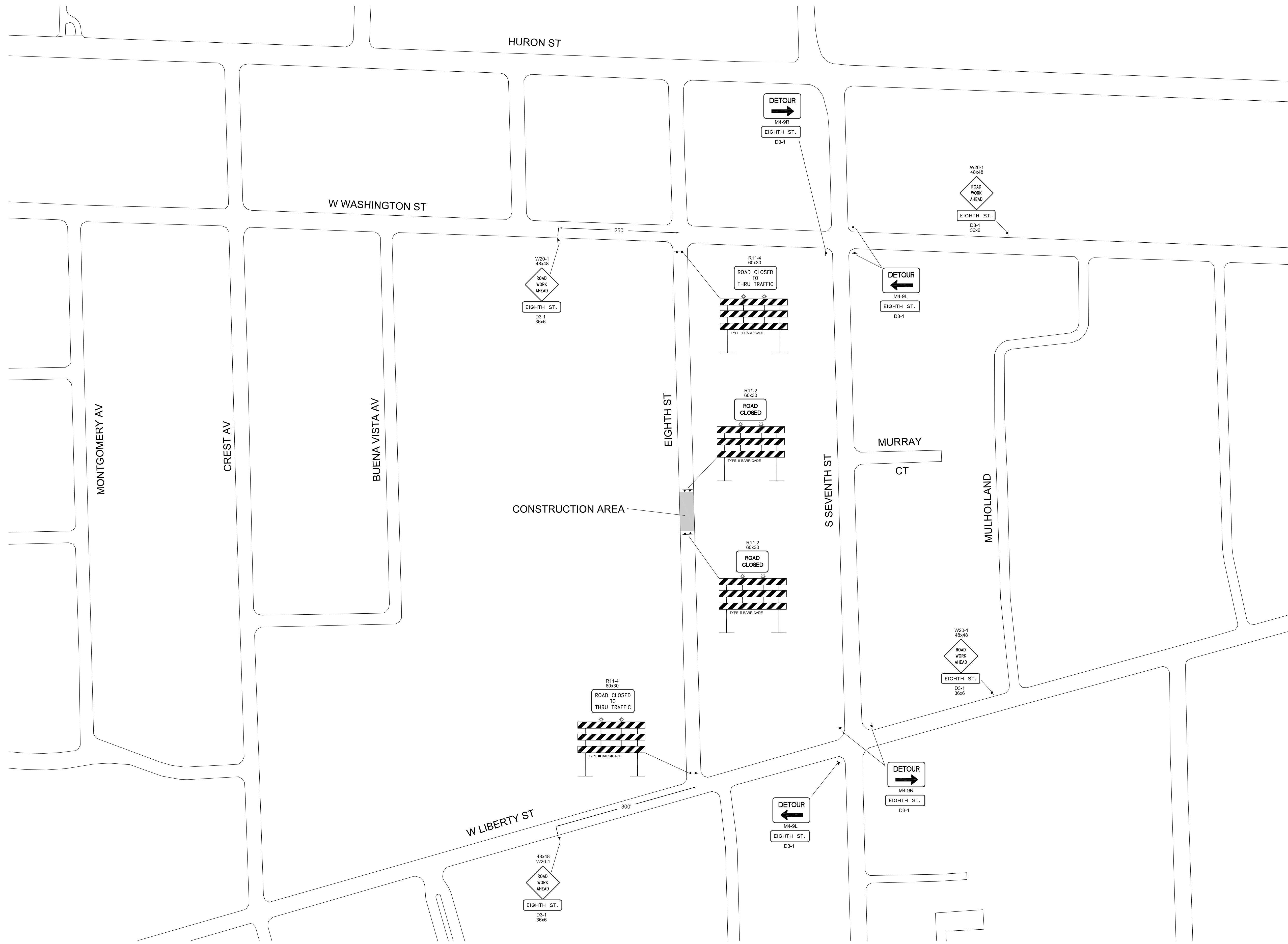


**FIELD OPERATIONS - CITY OF ANN ARBOR**  
**EIGHTH STREET SANITARY SEWER**  
**MANHOLE REPLACEMENT**  
SANITARY SEWER PLAN AND PROFILE

SCALE: PLAN: 1"=20' PROFILE: 1"=2'  
DRAWING No. **2075128404 - C-01**

V:\2075\active\2075128404\civil\drawing\128404-01.dwg Dwg Created: 2-Dec-13 - \_o2 standard.stb - Plot Date: 9-Apr-14

V:\2075\active\2075128404\civil\drawing\128404C-02.dwg Dwg Created: 13-Feb-14 - \_d2\_standard.stb - Plot Date: 9-Apr-14



TRAFFIC CONTROL PLAN  
SCALE: 1"=100'



<p>FIELD OPERATIONS - CITY OF ANN ARBOR</p> <p><b>EIGHTH STREET SANITARY SEWER MANHOLE REPLACEMENT</b></p> <p>TRAFFIC CONTROL PLAN</p>		<p>SCALE PLAN: 1"=100'</p>	<p>SHEET No. 5 OF 5</p>										
<p>PREPARED BY:</p>	<p>REV. DESCRIPTION</p> <table border="1"> <tr> <td>2</td> <td>BID SET</td> <td>04/09/14</td> <td>BWA</td> <td>C/E</td> </tr> <tr> <td>1</td> <td>PRELIMINARY PLAN</td> <td>03/13/14</td> <td>BWA</td> <td>C/E</td> </tr> </table>	2	BID SET	04/09/14	BWA	C/E	1	PRELIMINARY PLAN	03/13/14	BWA	C/E	<p>DRAWING No. 2075128404 - C-02</p>	<p>5 OF 5</p>
2	BID SET	04/09/14	BWA	C/E									
1	PRELIMINARY PLAN	03/13/14	BWA	C/E									

