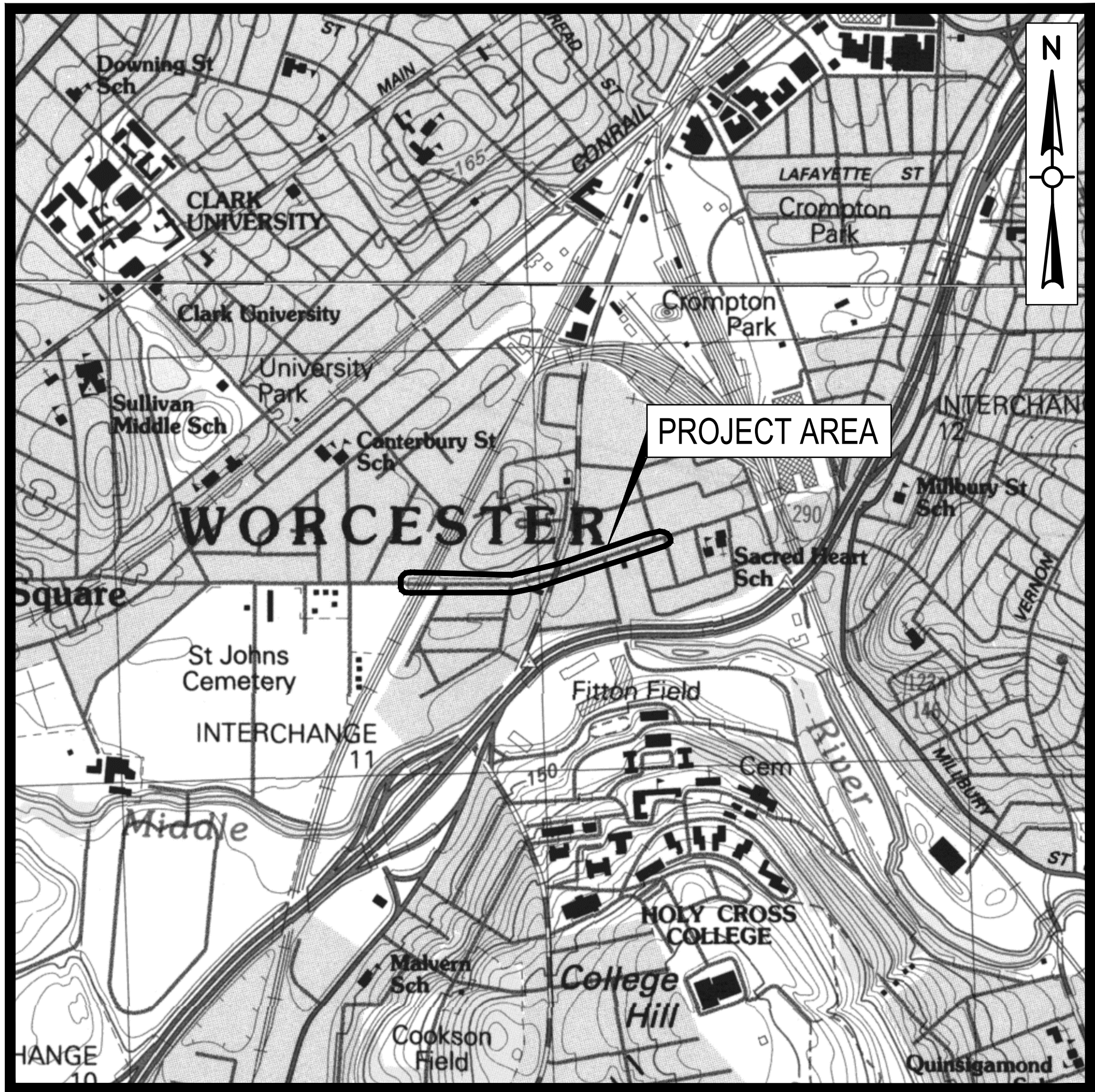


CITY OF WORCESTER, MASSACHUSETTS  
CAMBRIDGE STREET SEWER INTERCEPTOR REHABILITATION PROJECT  
DEPARTMENT OF PUBLIC WORKS AND PARKS



LOCUS MAP

DRAWING INDEX	
SHEET	TITLE
G000	COVER AND DRAWING INDEX
G001	ABBREVIATIONS, NOTES AND LEGEND
C100	BASE BID PLANS AND TABLES
C101	BID ALTERNATE NO. 1 AND BID ALTERNATE NO. 2 PLANS AND TABLES
C500	CONSTRUCTION DETAILS I
C501	CONSTRUCTION DETAILS II
C502	WORCESTER STANDARD CONSTRUCTION DETAILS
C503	CONSTRUCTION ZONE SAFETY PLAN

Weston & Sampson  
Weston & Sampson Engineers, Inc.  
427 Main Street, Suite 400  
Worcester, MA 01608  
978.532.1900 800.SAMPSON  
www.westonandsampson.com



08/04/2022

CONTRACT NO. S23-1  
BID NO. 7869-W3



ERIC D. BATISTA, ACTING CITY MANAGER  
JAY J. FINK, PE, COMMISSIONER OF PUBLIC WORKS AND PARKS

Issued Date:

AUGUST 2022



Know what's below.  
Call before you dig.

Issued For:

RELEASED FOR CONSTRUCTION



LEGEND		
DESCRIPTION	EXISTING	PROPOSED REHABILITATIONS
SANITARY/COMBINED SEWER		
SANITARY/COMBINED SEWER MANHOLE	SS01234	SS01234
SURFACE DRAIN MANHOLE	DS01234	DS01234
BUILDING		
RAILROAD		

CONSTRUCTION NOTES:

- THE CONTRACTOR SHALL CALL DIG SAFE AT 811 OR 1-888-344-7233 AT LEAST 72 HOURS, SATURDAYS, SUNDAYS, AND HOLIDAYS EXCLUDED, PRIOR TO EXCAVATING AT ANY LOCATION. A COPY OF THE DIG SAFE PROJECT REFERENCE NUMBER(S) SHALL BE GIVEN TO THE OWNER PRIOR TO EXCAVATION.
- LOCATIONS OF EXISTING PIPES, CONDUITS, UTILITIES, FOUNDATIONS AND OTHER UNDERGROUND OBJECTS ARE NOT WARRANTED TO BE CORRECT AND THE CONTRACTOR SHALL HAVE NO CLAIM ON THAT ACCOUNT SHOULD THEY BE OTHER THAN SHOWN.
- STONE WALLS, FENCES, MAIL BOXES, SIGNS, CURBS, LIGHT POLES, ETC. SHALL BE REMOVED AND REPLACED AS NECESSARY TO PERFORM THE WORK. UNLESS OTHERWISE INDICATED, ALL SUCH WORK SHALL BE INCIDENTAL TO CONSTRUCTION OF THE PROJECT.
- ALL PAVEMENT DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED IN ACCORDANCE WITH THE SPECIFICATIONS AND AS SHOWN ON THE DRAWINGS.
- ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND PAYMENT LIMITS SHALL BE RESTORED AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL NOT STORE ANY APPARATUS, MATERIALS, SUPPLIES, OR EQUIPMENT ON DRAINAGE STRUCTURES OR WITHIN 100 FEET OF WETLANDS.
- IN PAVED AREAS, THE TOP OF THE MANHOLE COVER SHALL BE SET FLUSH WITH THE PAVED SURFACE. IN OTHER AREAS, THE TOP OF THE COVER SHALL EXTEND 6 INCHES ABOVE FINISHED GRADE, OR AS SHOWN ON THE DRAWINGS, OR AS REQUIRED BY THE ENGINEER.
- THE CONTRACTOR SHALL GIVE THE ENGINEER AT LEAST 10 DAYS' NOTICE PRIOR TO PERFORMING ANY WORK IN WETLANDS.
- EXISTING UTILITY INFORMATION WAS TAKEN FROM CITY RECORD DRAWINGS. THE CONTRACTOR SHALL VISIT THE PREMISES TO FAMILIARIZE HIMSELF THOROUGHLY WITH ALL THE DETAILS OF THE WORK AND OF WORKING CONDITIONS, TO VERIFY ALL DIMENSIONS IN THE FIELD, AND TO ADVISE THE ENGINEER IN WRITING OF ANY DISCREPANCY BEFORE PERFORMING ANY WORK. THE CONTRACTOR SHALL CONSULT OFFICIAL RECORDS OF EXISTING UTILITIES, BOTH SURFACE AND SUBSURFACE, AND THEIR CONNECTIONS, AND SHALL FULLY INFORM HIMSELF OF ALL EXISTING CONDITIONS AND LIMITATIONS AS THEY APPLY TO THE WORK.
- A SUBSURFACE UTILITY SURVEY WAS PERFORMED FROM #379 TO #553 CAMBRIDGE STREET AND IS AVAILABLE UPON REQUEST.
- THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATION OF SEWER SERVICES AS NECESSARY TO PERFORM THE WORK.
- THE CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC TO ALL STREETS THROUGHOUT THE DURATION OF THE PROJECT. SEE SHEET C503 FOR CONSTRUCTION ZONE SAFETY PLAN.
- THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF MASSACHUSETTS GENERAL LAW CHAPTER 82A, TRENCH EXCAVATION AND SAFETY REQUIREMENTS, TO PREVENT THE GENERAL PUBLIC FROM UNAUTHORIZED ACCESS TO UNATTENDED TRENCHES.
- PLANS ONLY ILLUSTRATE APPROXIMATE LOCATIONS OF MANHOLES AND PIPE SEGMENTS. REFER TO THE TABLES ON EACH SHEET FOR THE APPROXIMATE LENGTH OF EACH PIPE SEGMENT AND THE APPROXIMATE STATION NUMBER OF REHABILITATIONS. SEE TELEVISION INSPECTION LOGS, WHICH SHALL BE FURNISHED UPON REQUEST, FOR MORE INFORMATION. THE LOCATIONS OF MANHOLES AND PIPE SEGMENTS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
- NO PAYMENT WILL BE MADE FOR PIPE CLEANING. CONTRACTOR SHALL REFER TO TELEVISION INSPECTION LOGS TO DETERMINE EXTENT OF CLEANING.
- EXCAVATION SHALL BE COMPLETED IN ACCORDANCE WITH ALL APPLICABLE MASSACHUSETTS DOT STANDARDS AND SPECIFICATIONS.
- IN SITUATIONS WHERE WORK IS LOCATED OFF A PUBLIC STREET, THE 'STREET / LOCATION' FIELD OF THE TABLE INDICATES THE CLOSEST STREET.
- MANHOLES AND LINE SEGMENTS WITH WORK TO BE PERFORMED ON ARE INDICATED ON PLANS ACCORDING TO LEGEND. WHERE THERE IS A DISCREPANCY BETWEEN THE PLANS AND THE WORK TABLES, THE WORK TABLES SHALL CONTROL.
- WATER SERVICE CONNECTIONS AND GAS SERVICE CONNECTIONS HAVE NOT BEEN INCLUDED ON THE PLAN VIEWS. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATION OF WATER SERVICE CONNECTIONS, GAS SERVICE CONNECTIONS AND OTHER UTILITIES AS NECESSARY TO PERFORM THE WORK.
- NO CONSTRUCTION WORK SHALL BE ALLOWED ON SATURDAYS, SUNDAYS, OR HOLIDAYS WITHOUT WRITTEN AUTHORIZATION FROM THE OWNER AND APPROVAL FROM THE ENGINEER.
- ALL STREET EXCAVATIONS SHALL BE COMPLETELY CLOSED AT THE END OF EACH WORKING DAY BY BACKFILLING OR COVERING WITH STEEL PLATES.
- CONTRACTOR SHALL DEVELOP AND IMPLEMENT A COVID-19 HEALTH AND SAFETY PLAN IN ACCORDANCE WITH THE COMMONWEALTH OF MASSACHUSETTS COVID-19 GUIDELINES AND PROCEDURES FOR ALL CONSTRUCTION SITES AND WORKERS AT ALL PUBLIC WORK. THE GUIDELINES ARE INCLUDED IN APPENDIX C OF THE SPECIFICATIONS.
- SEE GEOTECHNICAL ENGINEERING REPORT IN APPENDIX D OF THE SPECIFICATIONS FOR AVAILABLE GEOTECHNICAL INFORMATION.
- SEE ENVIRONMENTAL SUMMARY MEMORANDUM IN APPENDIX E OF THE SPECIFICATIONS FOR AVAILABLE ENVIRONMENTAL INFORMATION.

ABBREVIATIONS

AC	ASBESTOS CEMENT
APPROX.	APPROXIMATE
AVE	AVENUE
BLDG.	BUILDING
CAS	CAST IRON
CL	CENTERLINE
CONC	CONCRETE (NON-REINFORCED)
CDF	CONTROLLED DENSITY FILL
CT	COURT
DI	DUCTILE IRON
DIA.	DIAMETER
DP	DIAMETER OF PIPE
DPW&P	DEPARTMENT OF PUBLIC WORKS AND PARKS
EA	EACH
IN	INCH
L	LENGTH
LF	LINEAR FEET
LN	LANE
MH	MANHOLE
MIN.	MINIMUM
NA	NOT APPLICABLE
NO.	NUMBER
NTS	NOT TO SCALE
PKWY	PARKWAY
PS	PUMP STATION
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REQ'D	REQUIRED
ST	STREET
STA	STATION
SVC	SERVICE CONNECTION
TEMP	TEMPORARY
TYP	TYPICAL
VF	VERTICAL FEET
VC	VITRIFIED CLAY
W	WIDTH

PROPOSED BYPASS LOCATIONS

NTS.



SUCTION  
(SEE C100)



DISCHARGE  
(SEE C100)

BYPASS NOTES:

- CONTRACTOR SHALL MAINTAIN EXISTING FLOWS IN THE SYSTEM TO PREVENT SURCHARGING, AS APPROVED OR REQUIRED BY THE ENGINEER.
- BYPASS PIPING SHALL BE BURIED IN FIELD, ROAD, AND AT ALL DRIVEWAY CROSSINGS.
- CONTRACTOR SHALL COORDINATE WITH ADJACENT CONSTRUCTION OCCURRING AT CAMP PARK.
- FOLLOWING INITIAL BYPASS SETUP, CONTRACTOR SHALL MAINTAIN EXISTING FENCES AND INSTALL TEMPORARY FENCES AS NEEDED TO PROTECT PUMPS AND ENSURE PUBLIC SAFETY. RECREATIONAL COURTS AND FIELDS ARE TO REMAIN OPEN THROUGHOUT THE DURATION OF PROJECT.
- CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION SURVEY OF ALL AREAS THAT MAY BE DISTURBED BY CONSTRUCTION USING PHOTOGRAPHY AND/OR VIDEO PRIOR TO THE COMMENCEMENT OF WORK. ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION FOLLOWING COMPLETION OF WORK IN ACCORDANCE WITH THE SPECIFICATIONS.

Project: CITY OF WORCESTER,  
MASSACHUSETTS  
DEPARTMENT OF PUBLIC WORKS  
AND PARKS

CAMBRIDGE STREET SEWER  
INTERCEPTOR REHABILITATION  
PROJECT

Weston & Sampson

Weston & Sampson Engineers, Inc.  
427 Main Street, Suite 400  
Worcester, MA 01608  
978.532.1900 800.SAMPSON  
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Reviewed By: FEO  
Approved By: FEO

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W&S File No.:

Drawing Title:

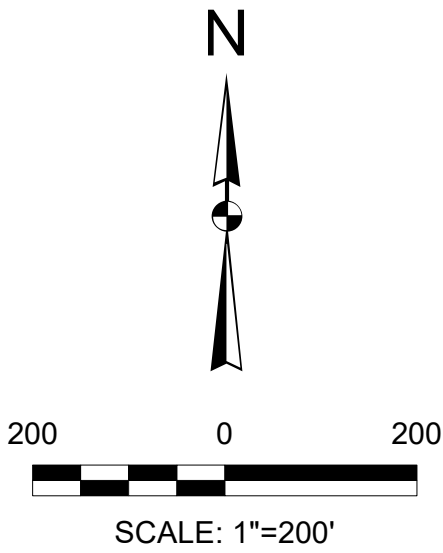
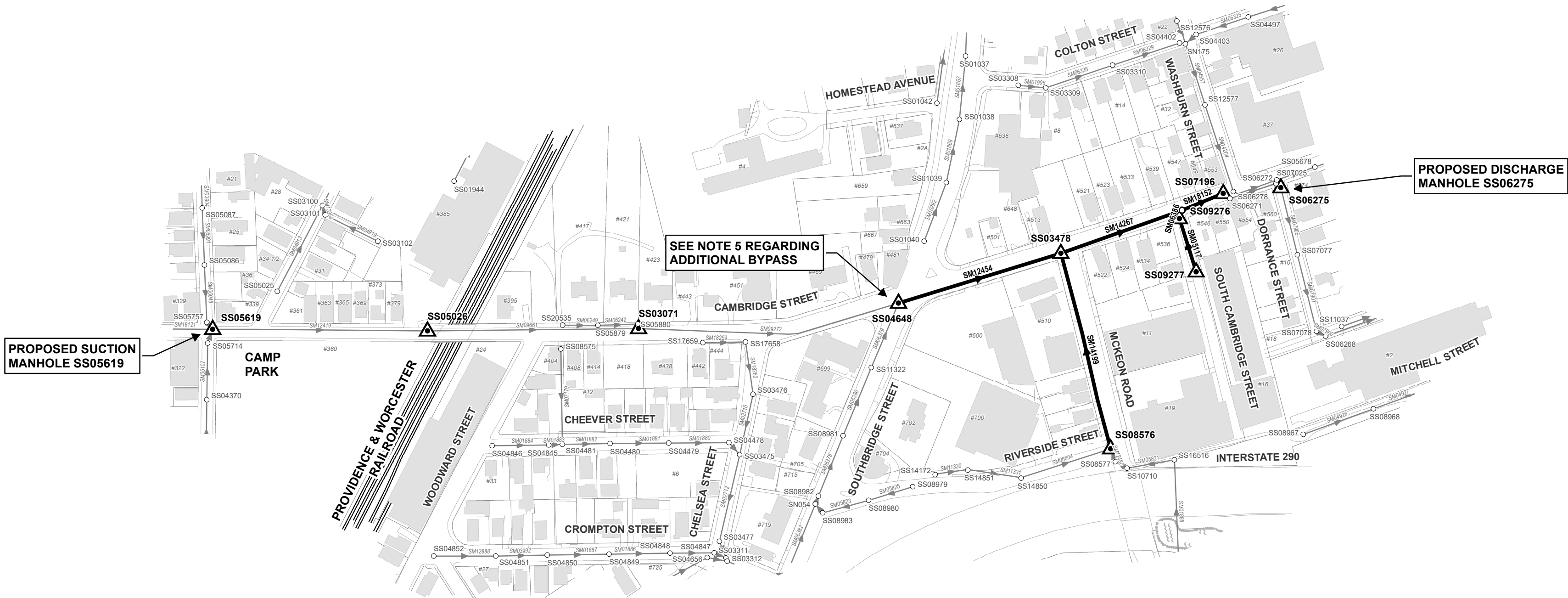
ABBREVIATIONS,  
NOTES, AND LEGEND

Sheet Number:

G001



- NOTES:**
- CONTRACTOR SHALL CONFIRM AND VERIFY ALL SERVICE LOCATIONS DURING INITIAL TELEVISION INSPECTION WITH DYE TESTING. CONTRACTOR SHOULD NOTE THAT SERVICE CONNECTION DIAMETERS VARY IN SIZE.
  - MANHOLE SS03478 HAS 2 UTILITY CROSSINGS LOCATED INSIDE THE MANHOLE.
  - ASSET ID SM06386: SN205 TIES INTO ASSET ID SM14267 ON CAMBRIDGE STREET AS A SERVICE CONNECTION. CIPP INSTALLATION SHALL BE PERFORMED WHILE ASSET ID SM14267 IS UNDER BYPASS.
  - ASSET ID SM06379 (18-INCH X 27-INCH) FROM SOUTHBRIDGE STREET TIES INTO ASSET ID SM09272 AT STA 5+88 AS A SERVICE CONNECTION. ADDITIONAL BYPASS WILL BE REQUIRED TO REHABILITATE SECTIONS DOWNSTREAM OF SOUTHBRIDGE STREET.
  - ASSET ID SM14199 (12-INCH) FROM MCKEON ROAD TIES INTO ASSET ID SM12454 AS A SERVICE CONNECTION AT STA 3+88. CIPP INSTALLATION SHALL BE PERFORMED WHILE ASSET ID SM12454 IS UNDER BYPASS.
  - SERVICE CONNECTIONS AT STA 0+40, 1+67, AND 3+76 IN ASSET ID SM12454 ARE 12-INCH DIAMETER.
  - CONTRACTOR SHALL COORDINATE WITH ADJACENT CONSTRUCTION OCCURRING AT CAMP PARK.



INSTALL MANHOLE FRAME AND COVER			GEOPOLYMER LINING OF MANHOLES				
MH	STREET / LOCATION	MATERIAL	MH	STREET / LOCATION	APPROXIMATE MH DEPTH (VF)	MATERIAL	MH TYPE
SS03071	CAMBRIDGE STREET	BRICK	SS03071	CAMBRIDGE STREET	26	BRICK	SANITARY
SS04648	CAMBRIDGE STREET	BRICK	SS04648	CAMBRIDGE STREET	22	BRICK	SANITARY
SS03478	CAMBRIDGE STREET	BRICK	SS03478 <sup>(2)</sup>	CAMBRIDGE STREET	17.5	BRICK	SANITARY
SS05026	CAMBRIDGE STREET	BRICK	SS05026	CAMBRIDGE STREET	24	BRICK	SANITARY
SS07196	CAMBRIDGE STREET	BRICK	SS07196	CAMBRIDGE STREET	15	BRICK	SANITARY
SS05619	CAMBRIDGE STREET	LINED	SS5619	CAMBRIDGE STREET	20.5	LINED	SANITARY
SS06275	DORRANCE STREET	PRECAST	SS06275	DORRANCE STREET	15	PRECAST	SANITARY
SS08576	MCKEON ROAD	BRICK	SS08576	MCKEON ROAD	9.5	BRICK	SANITARY
SS09276	SOUTH CAMBRIDGE STREET	BRICK	SS09276	SOUTH CAMBRIDGE STREET	10	BRICK	SANITARY
SS09277	SOUTH CAMBRIDGE STREET	BRICK	SS09277	SOUTH CAMBRIDGE STREET	10	BRICK	SANITARY
TOTAL (EA) = 10			APPROX. TOTAL (VF) = 171.5				

STRUCTURAL CURED-IN-PLACE PIPE							
ASSET ID	MH	TO MH	STREET / LOCATION	PIPE DIA (IN)	MATERIAL	APPROXIMATE MH TO MH LENGTH (LF)	REINSTATE SERVICE APPROXIMATE STATION <sup>(1)</sup>
SM14199 <sup>(5)</sup>	SS08576	SS03478	MCKEON ROAD	12	VCP	470	0+20, 0+24, 0+61, 0+67, 1+00, 1+04, 1+28, 1+43, 1+45, 1+60, 1+85, 2+19, 2+21, 2+27, 2+69, 3+37, 3+56, 4+11
SM05117	SS09277	SS09276	SOUTH CAMBRIDGE STREET	12	VCP	124	0+10
SM06386 <sup>(3)</sup>	SS09276	SN205	SOUTH CAMBRIDGE STREET	12	VCP	25	-
APPROX. TOTAL (LF) =						619	

GEOPOLYMER LINING OF SEWERS							
ASSET ID	MH	TO MH	STREET / LOCATION	PIPE DIA (IN)	MATERIAL	APPROXIMATE MH TO MH LENGTH (LF)	REINSTATE SERVICE APPROXIMATE STATION <sup>(1)</sup>
SM12454	SS04648	SS03478 <sup>(2)</sup>	CAMBRIDGE STREET	48 x 72 WITH 24 x 18 INVERT	BRICK	393	0+40 <sup>(8)</sup> , 0+45, 0+69, 0+97, 1+10, 1+36, 1+67 <sup>(8)</sup> , 1+72, 2+14, 2+14, 2+15, 2+47, 2+76, 2+93, 3+40, 3+70, 3+76 <sup>(8)</sup> , 3+81, 3+88 <sup>(9)</sup>
SM14267	SS03478 <sup>(2)</sup>	SS07196	CAMBRIDGE STREET	60 x 84 WITH 24 x 18 INVERT	BRICK	378	0+38, 1+16, 1+29, 1+62, 1+72, 1+91, 2+01, 2+03, 2+17, 2+37, 2+40, 2+56, 2+64, 2+75, 2+81, 3+09, 3+14, 3+32, 3+50, 3+59, 3+78
APPROX. TOTAL (LF) =						771	

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Reviewed By: FEO

Approved By: FEO

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W&S File No.:

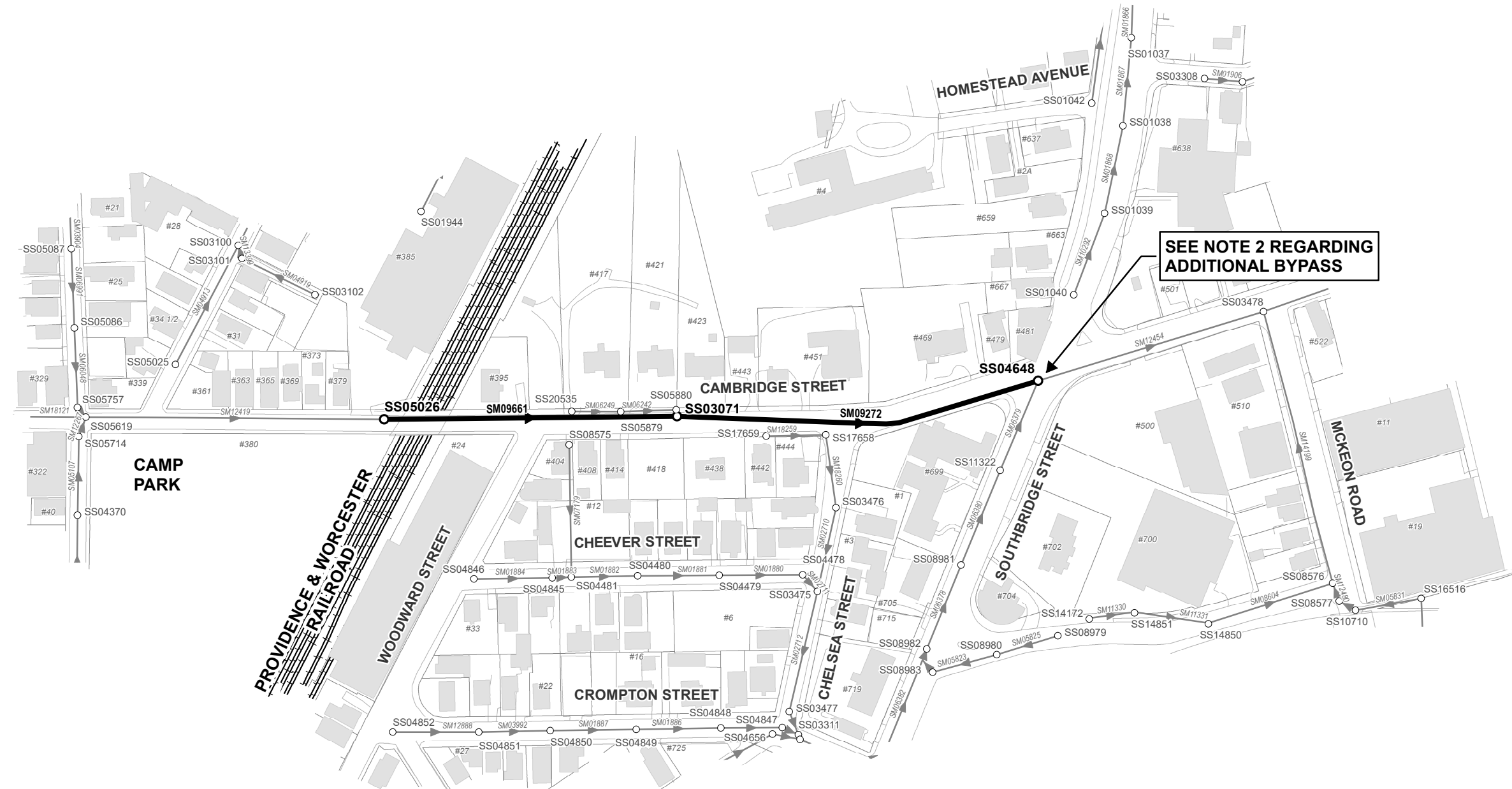
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PLANS AND TABLES

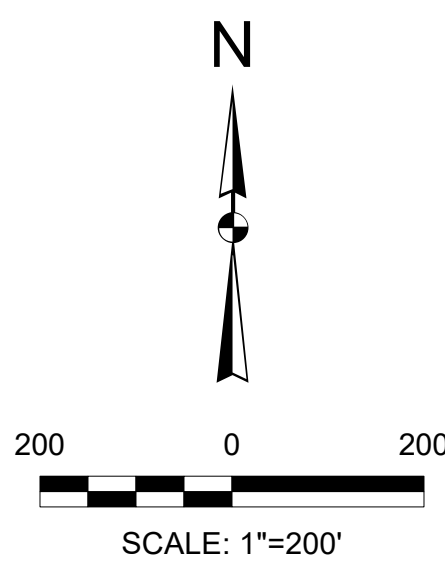
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BID ALTERNATE NO. 1

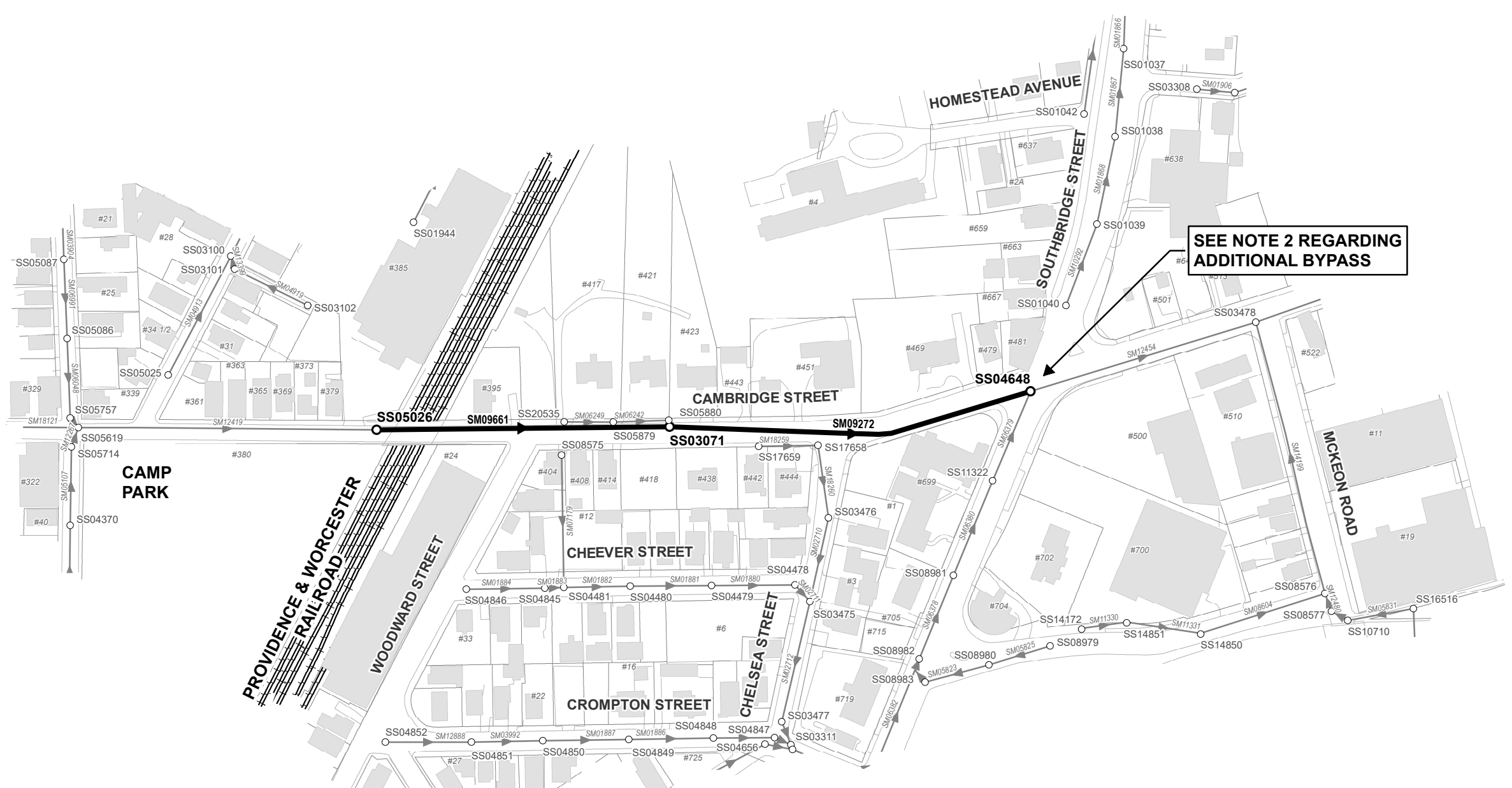


GEOPOLYMER LINING OF SEWERS

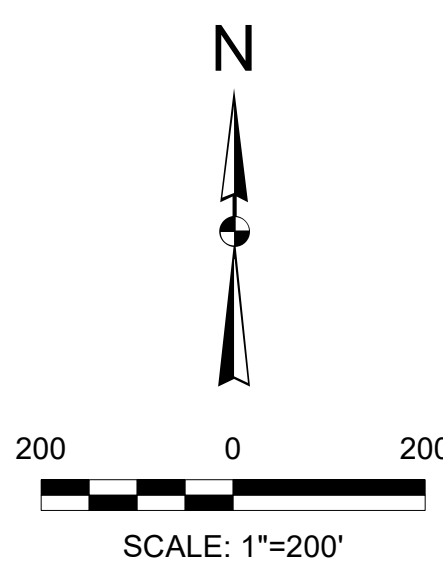
ASSET ID	MH	TO MH	STREET / LOCATION	PIPE DIA (IN)	MATERIAL	APPROXIMATE MH TO MH LENGTH (LF)	REINSTATE SERVICE APPROXIMATE STATION <sup>(1)</sup>
SM09661	SS05026	SS03071	CAMBRIDGE STREET	48 x 72	BRICK	475	0+29, 0+29, 0+88, 1+30, 1+39, 1+80, 2+50, 2+98, 3+83, 3+83
SM09272	SS03071	SS04648	CAMBRIDGE STREET	48 x 72	BRICK	594	0+06, 0+08, 0+18, 0+49, 0+51, 0+74, 0+94, 2+12, 3+26, 3+64, 3+68, 3+69, 4+31, 4+36, 5+23, 5+62, 5+72, 5+88 <sup>(2)</sup>
APPROX. TOTAL (LF) =						1,069	

NOTES:

- CONTRACTOR SHALL CONFIRM AND VERIFY ALL SERVICE LOCATIONS DURING INITIAL TELEVISION INSPECTION WITH DYE TESTING. CONTRACTOR SHOULD NOTE THAT SERVICE CONNECTION DIAMETERS VARY IN SIZE.
- ASSET ID SM06379 (18-INCH X 27-INCH) FROM SOUTHBRIDGE STREET TIES INTO ASSET ID SM09272 AT STA 5+88 AS A SERVICE CONNECTION. ADDITIONAL BYPASS WILL BE REQUIRED WHEN LINING SM09272 TO DIVERT FLOWS FROM SOUTHBRIDGE STREET.
- CONTRACTOR SHALL COORDINATE WITH ADJACENT CONSTRUCTION OCCURRING AT CAMP PARK.



BID ALTERNATE NO. 2



STRUCTURAL CURED-IN-PLACE PIPE

ASSET ID	MH	TO MH	STREET / LOCATION	PIPE DIA (IN)	MATERIAL	APPROXIMATE MH TO MH LENGTH (LF)	REINSTATE SERVICE APPROXIMATE STATION <sup>(1)</sup>
SM09661	SS05026	SS03071	CAMBRIDGE STREET	48 x 72	BRICK	475	0+29, 0+29, 0+88, 1+30, 1+39, 1+80, 2+50, 2+98, 3+83, 3+83
SM09272	SS03071	SS04648	CAMBRIDGE STREET	48 x 72	BRICK	594	0+06, 0+08, 0+18, 0+49, 0+51, 0+74, 0+94, 2+12, 3+26, 3+64, 3+68, 3+69, 4+31, 4+36, 5+23, 5+62, 5+72, 5+88 <sup>(2)</sup>
APPROX. TOTAL (LF) =						1,069	

NOTES:

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- ASSET ID SM06379 (18-INCH X 27-INCH) FROM SOUTHBRIDGE STREET TIES INTO ASSET ID SM09272 AT STA 5+88 AS A SERVICE CONNECTION. ADDITIONAL BYPASS WILL BE REQUIRED WHEN LINING SM09272 TO DIVERT FLOWS FROM SOUTHBRIDGE STREET.
- CONTRACTOR SHALL COORDINATE WITH ADJACENT CONSTRUCTION OCCURRING AT CAMP PARK.



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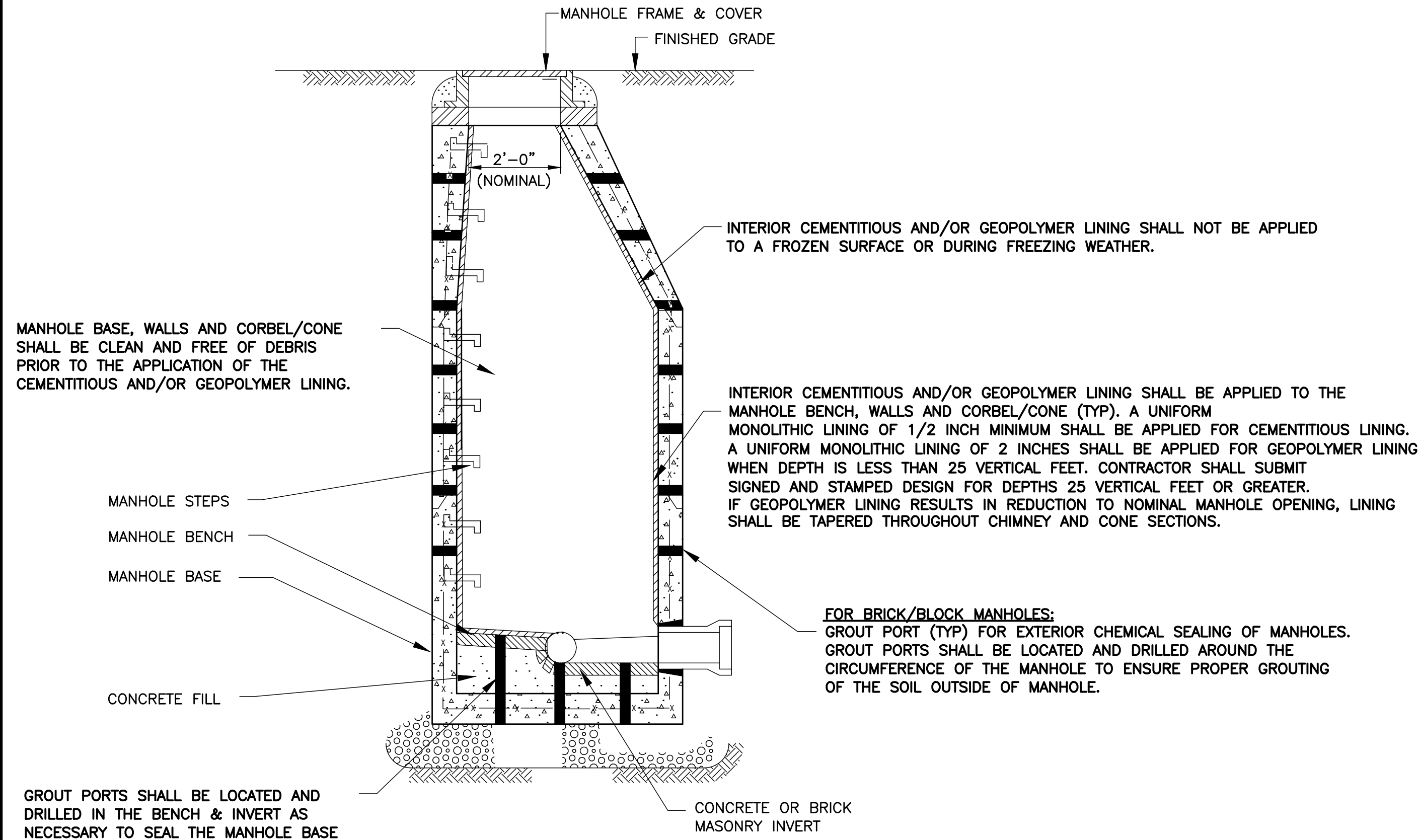
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&  
BID ALTERNATE NO. 2  
PLANS AND TABLES

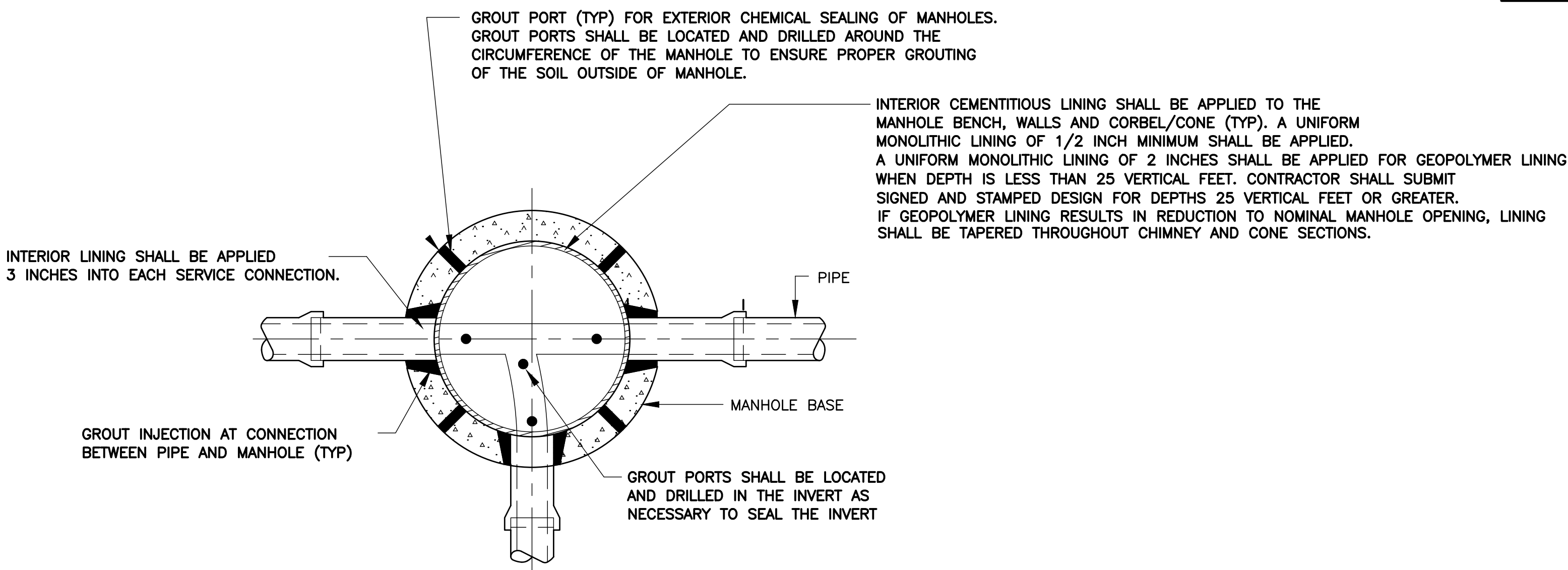
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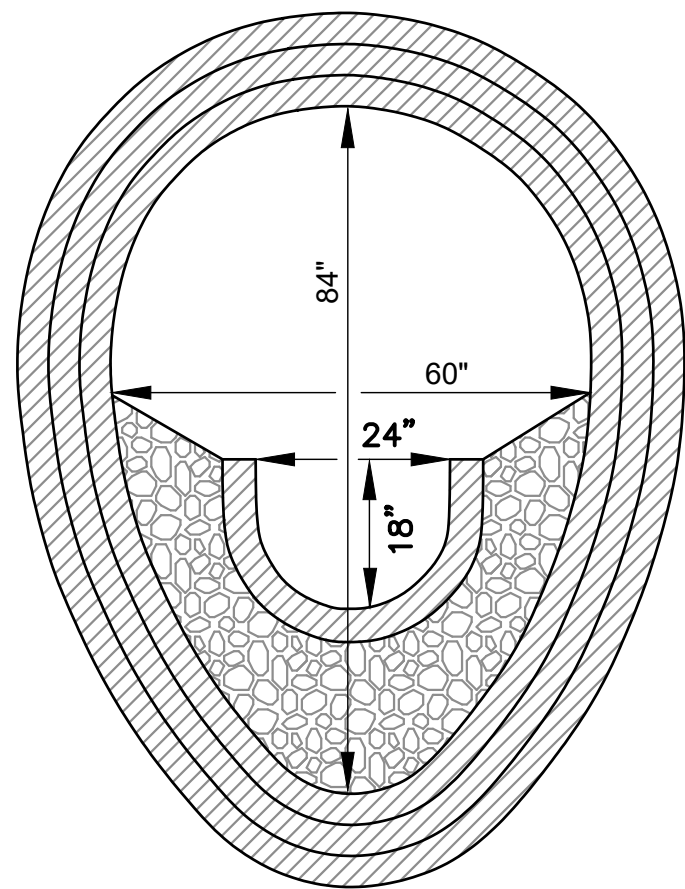




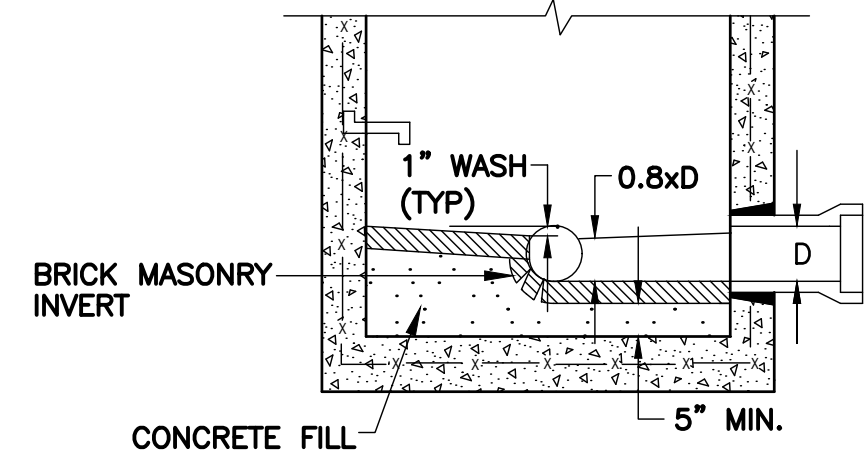
MANHOLE REHABILITATION DETAIL  
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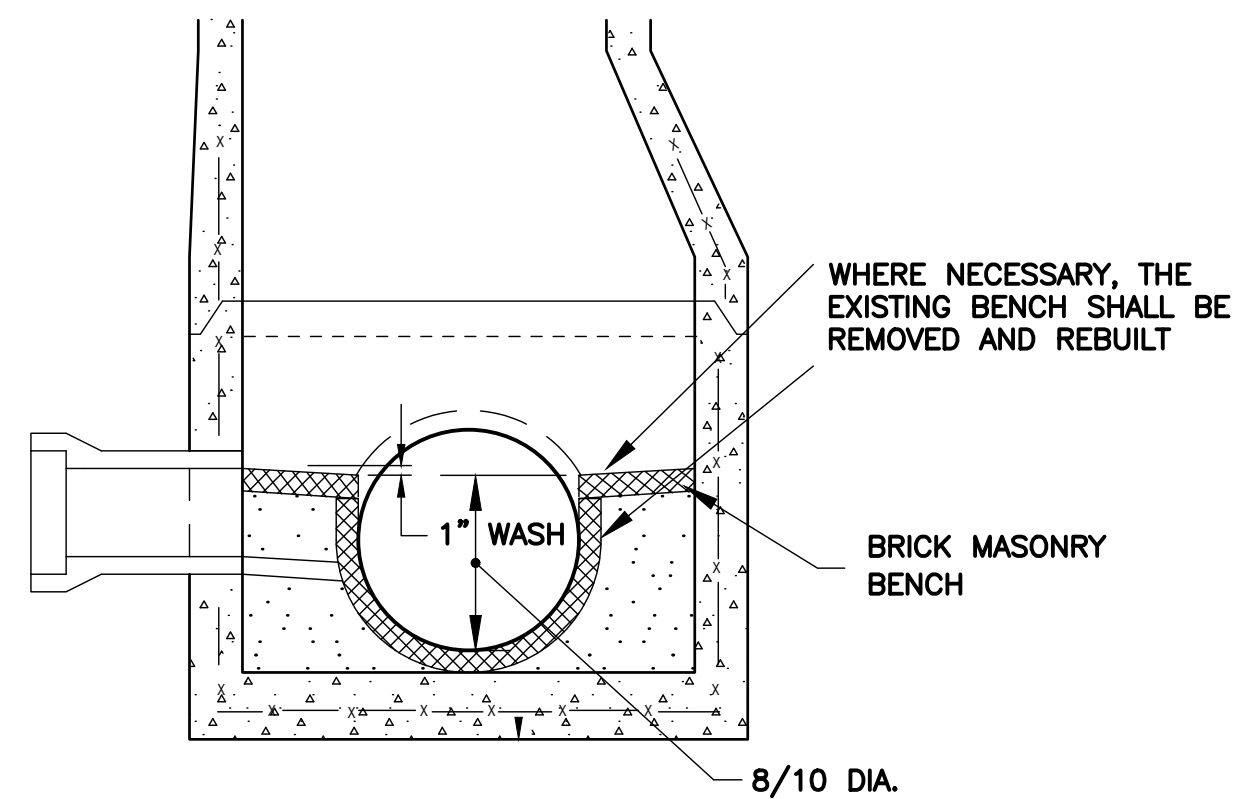
MANHOLE REHABILITATION PLAN  
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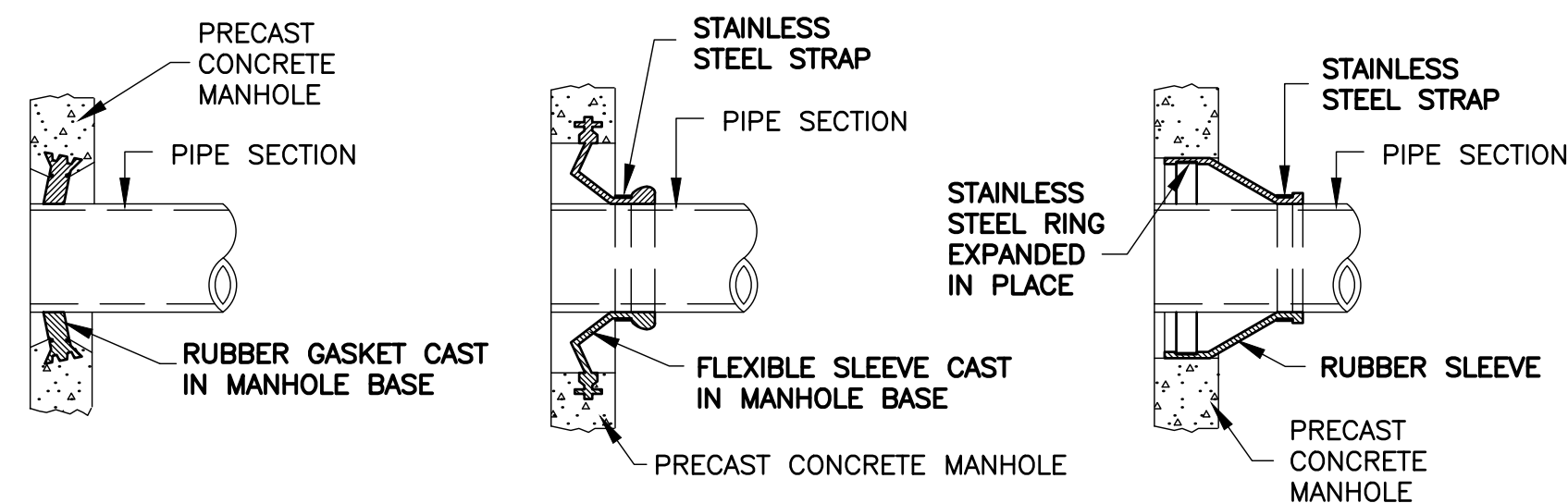
60" x 84" SEWER  
WITH 18" x 24" TROUGH DETAIL



SEWER MANHOLE  
BENCH AND INVERT DETAIL  
N.T.S.



SEWER MANHOLE BENCH DETAIL  
N.T.S.



MANHOLE SEAL DETAILS  
N.T.S.

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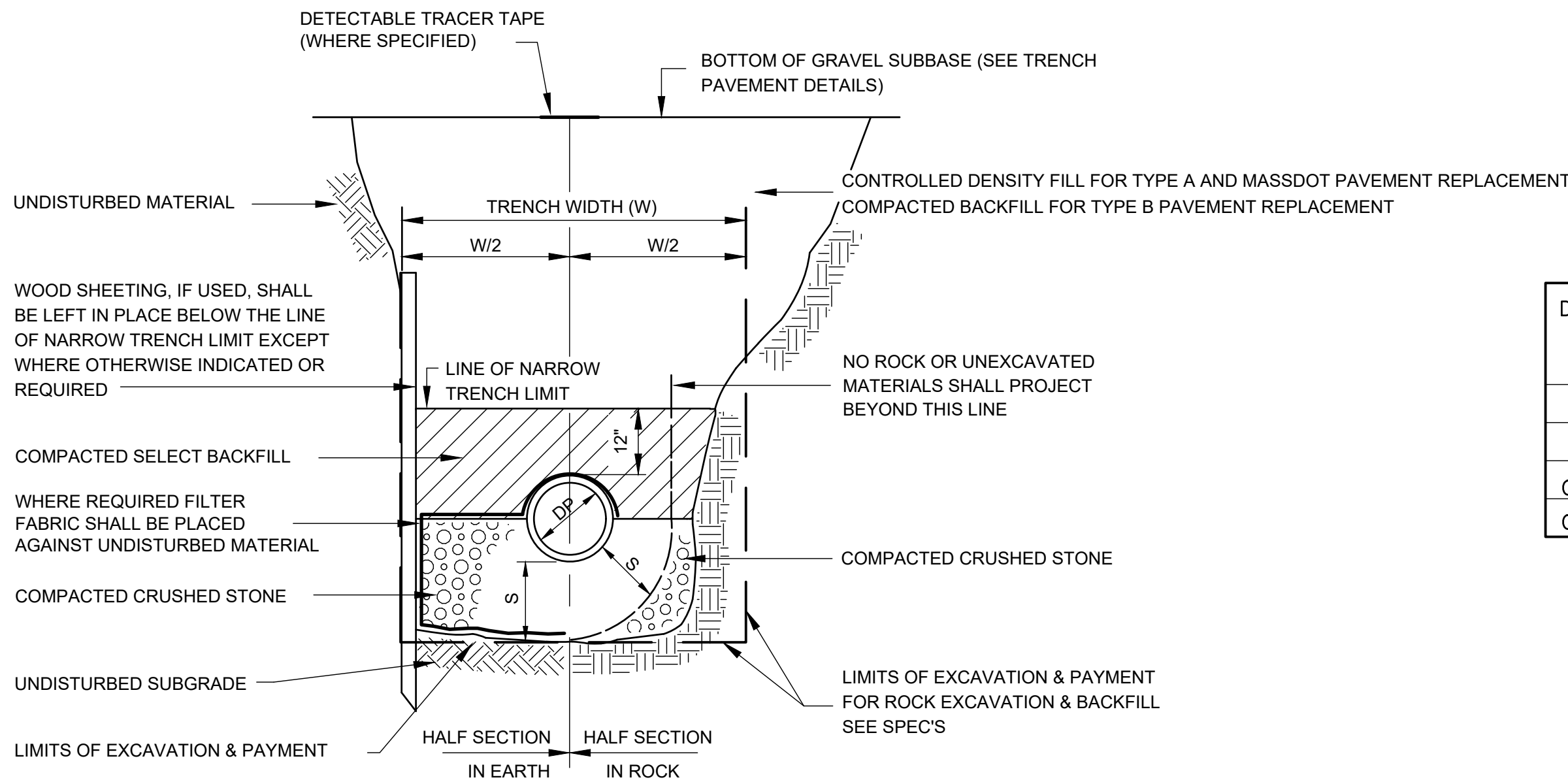
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CONSTRUCTION  
DETAILS I

Sheet Number:

C500



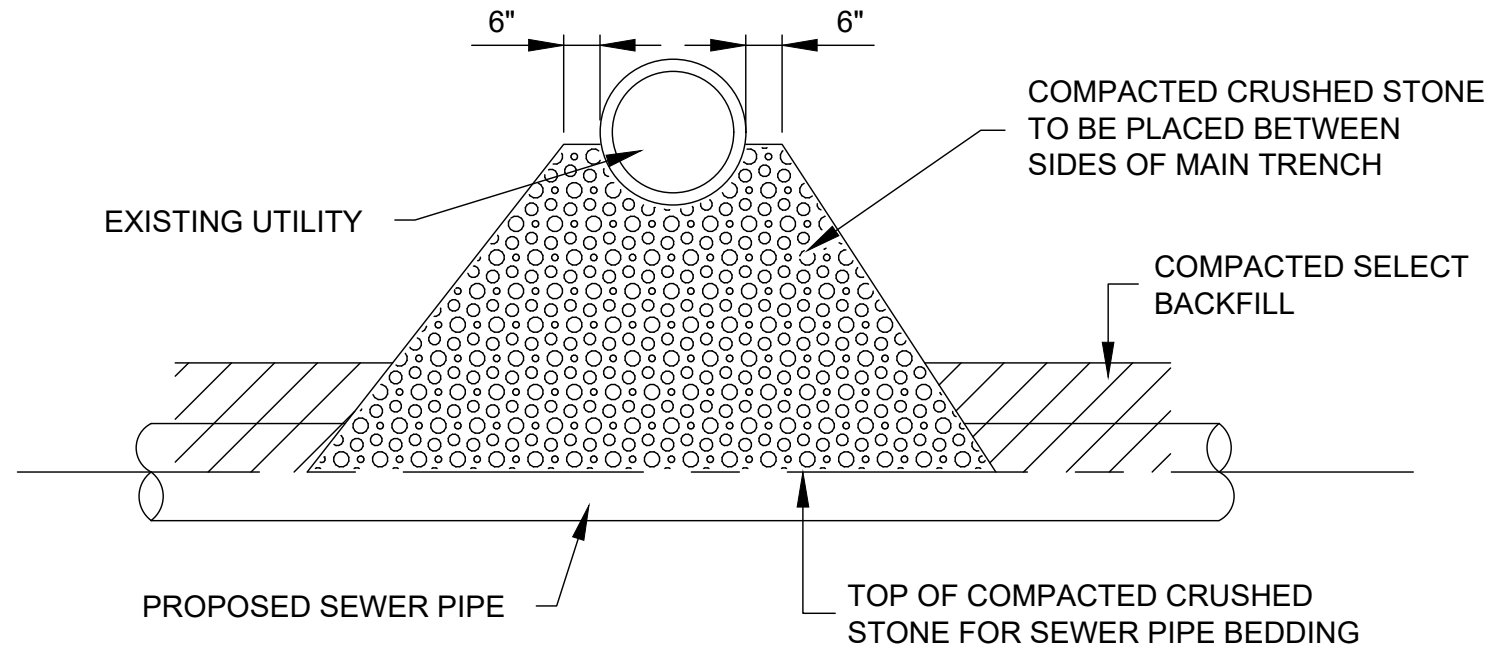


**TRENCH DETAIL**  
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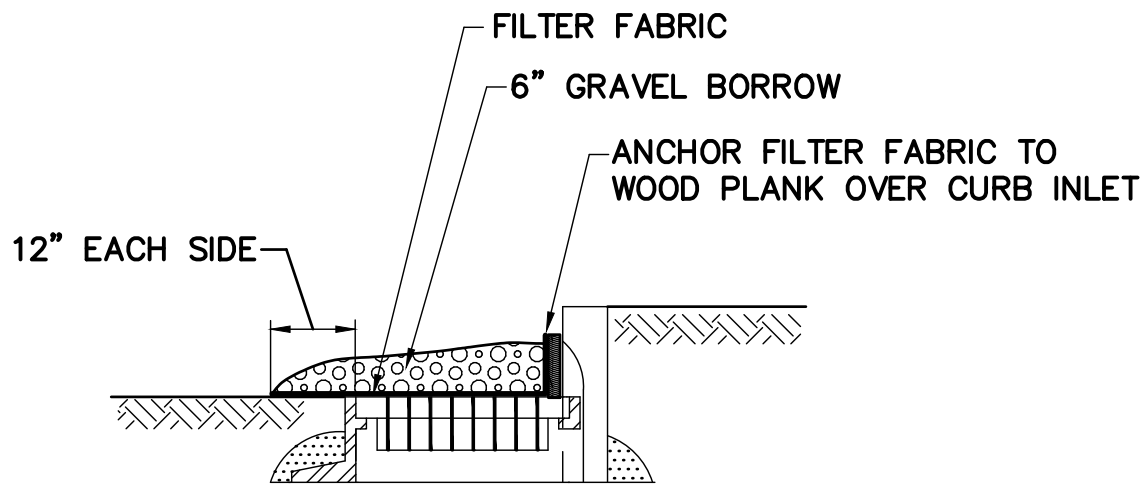
NOTE:  
FOR W, DP, & S, SEE TABLE A

DEPTH TO INVERT	DIAMETER OF PIPE (DP)	MAXIMUM TRENCH WIDTH BELOW LINE OF NARROW TRENCH LIMIT (SHEETED OR UNSHEETED) (W)	MINIMUM CLEARANCE (S)
0-12'	TO 18"	5'	6"
0-12'	21"-24"	5'	7-1/2"
OVER 12'	TO 18"	7'	6"
OVER 12'	21"-24"	7'	7-1/2"

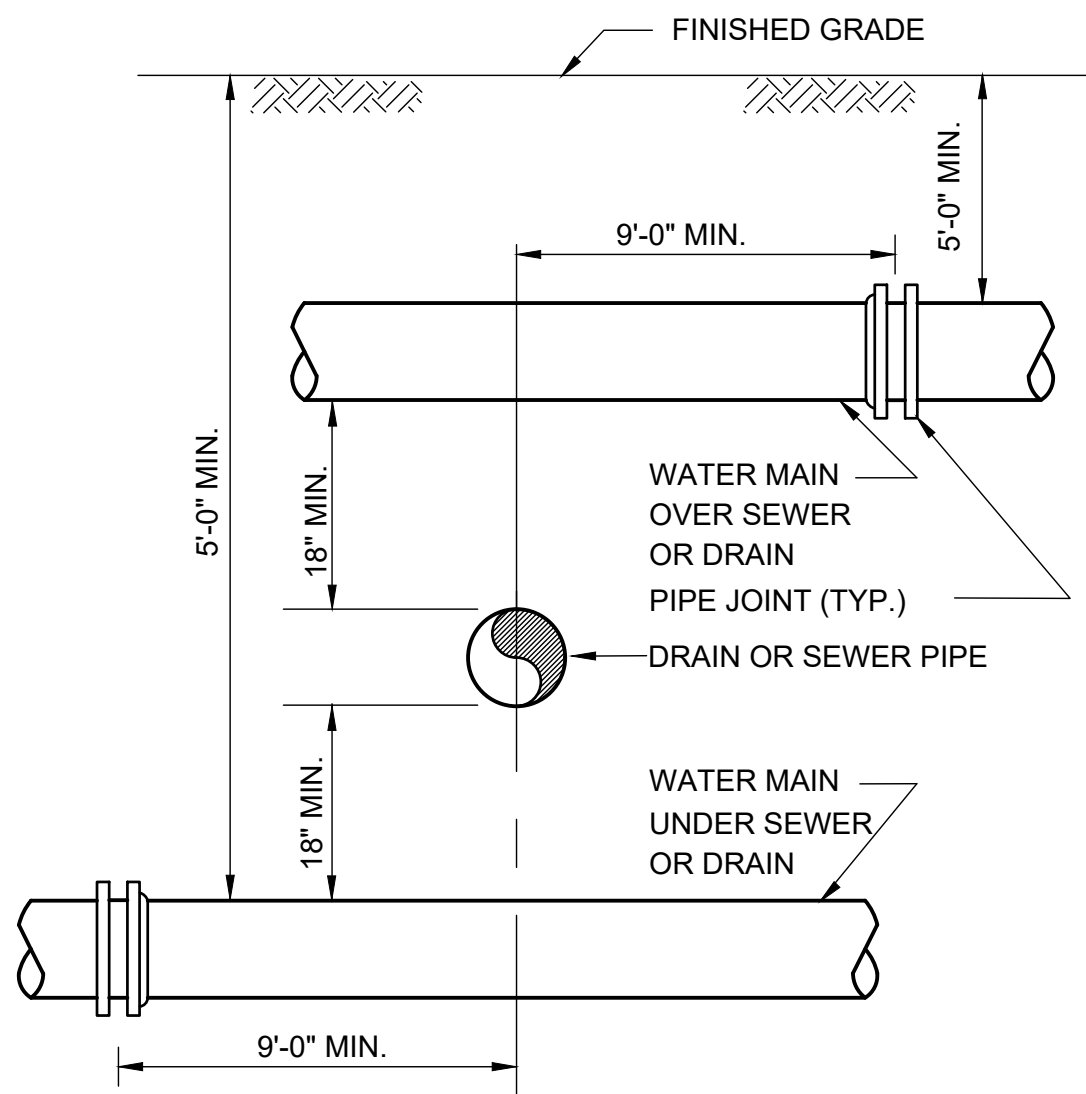
**TABLE A**



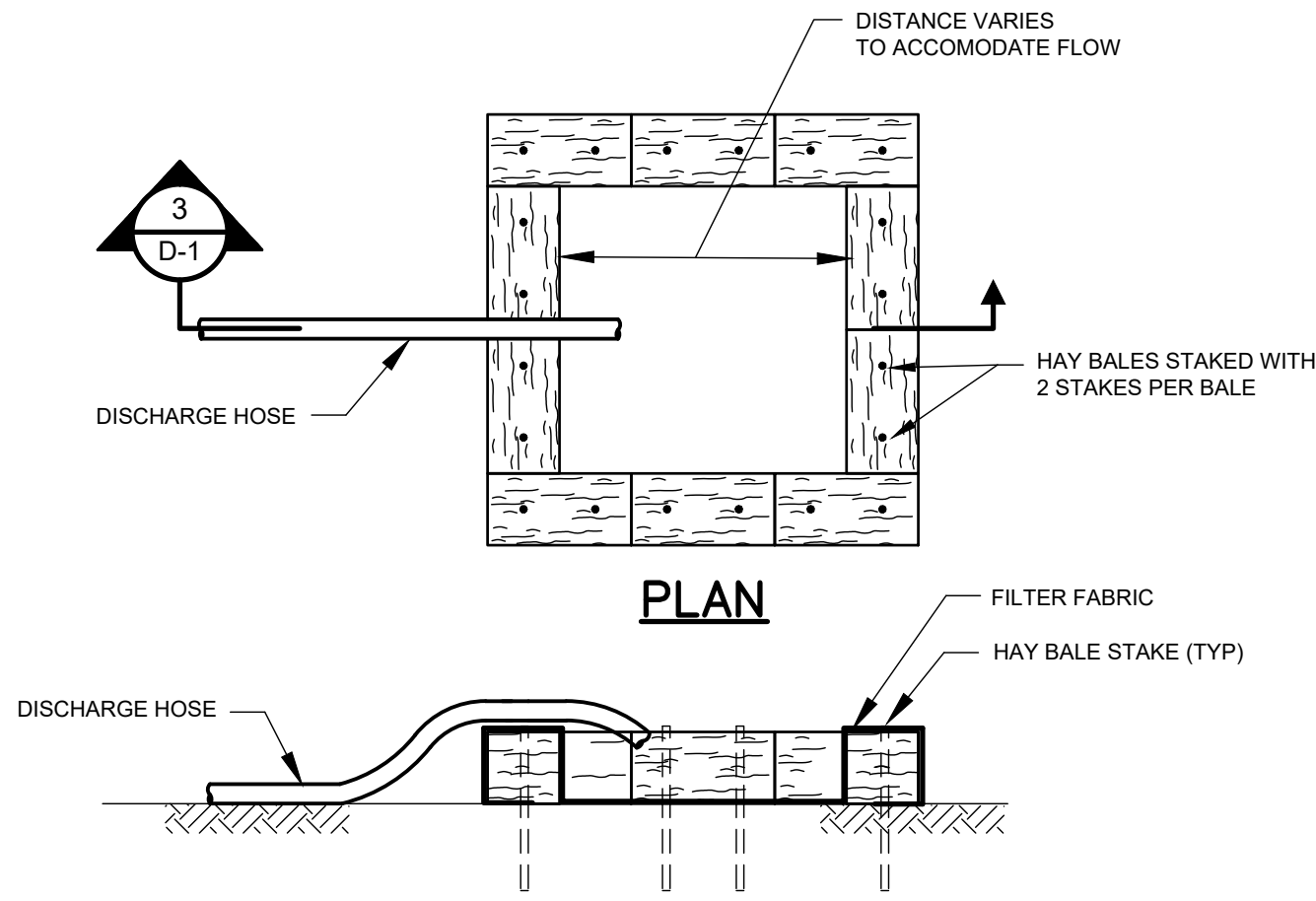
**UTILITY CROSSING DETAIL**  
N.T.S.



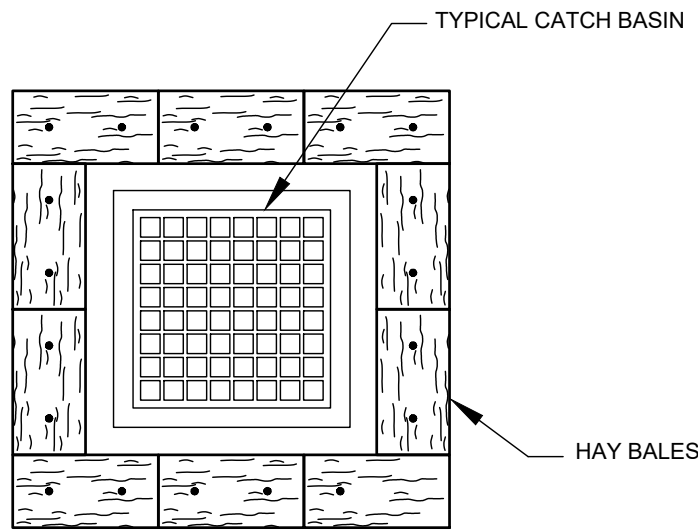
**CATCH BASIN INLET PROTECTION DETAIL**  
N.T.S.



**SEWER OR DRAIN CROSSING DETAIL**  
N.T.S.



**DEWATERING DISCHARGE DISPOSAL DETAIL**  
N.T.S.



**CATCH BASIN PROTECTION DETAIL**  
N.T.S.

Revisions:		
No.	Date	Description

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Reviewed By: FEO  
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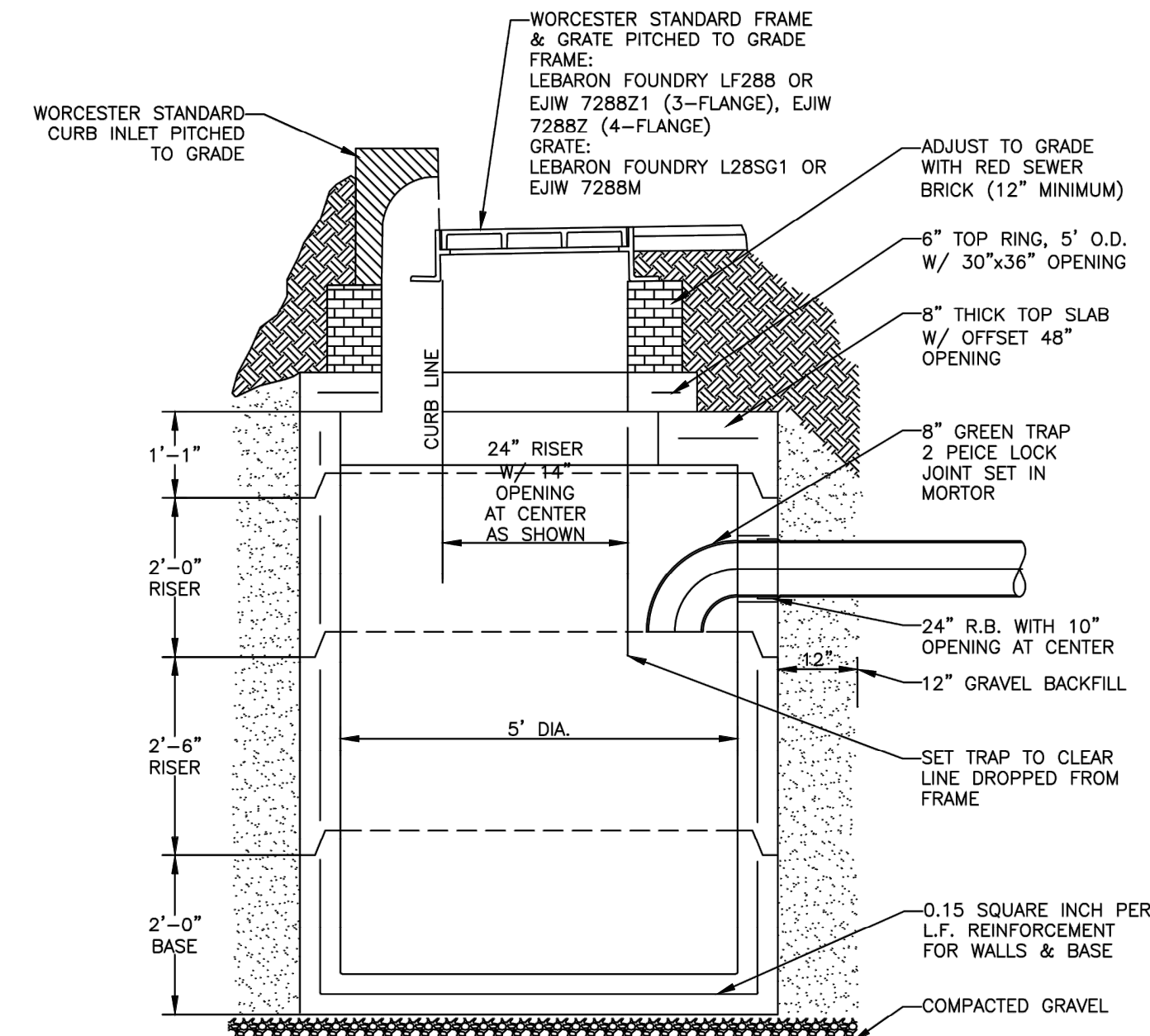
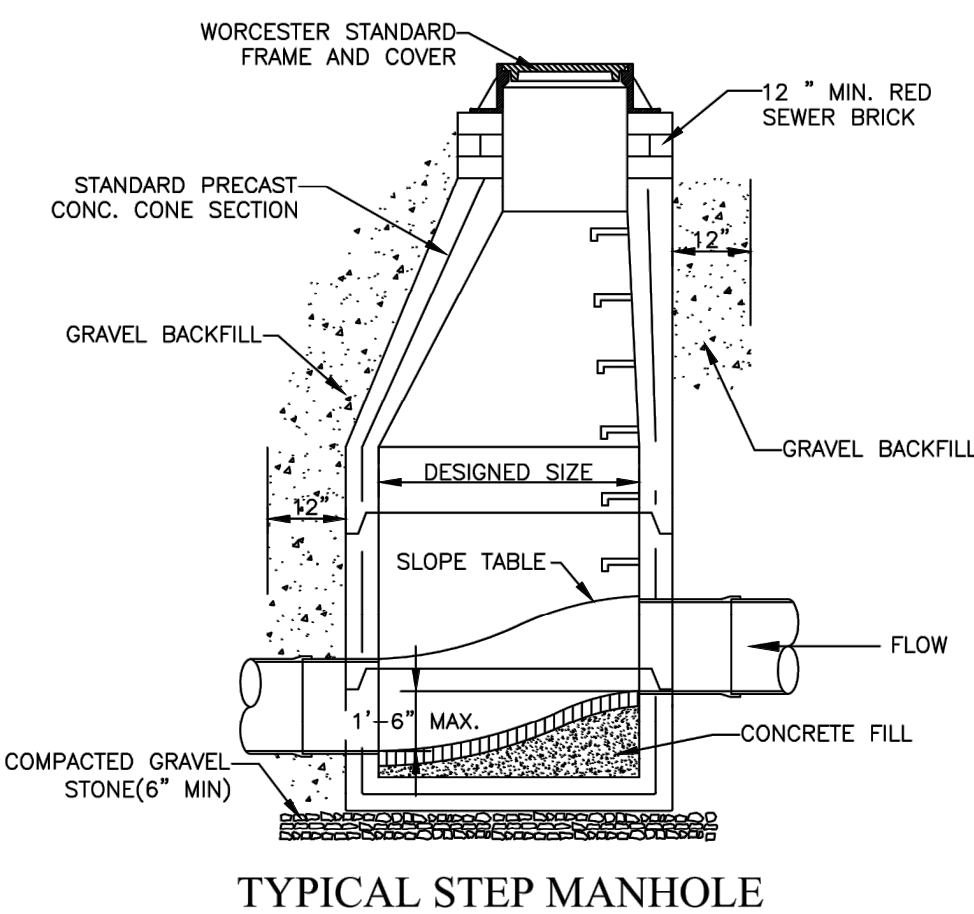
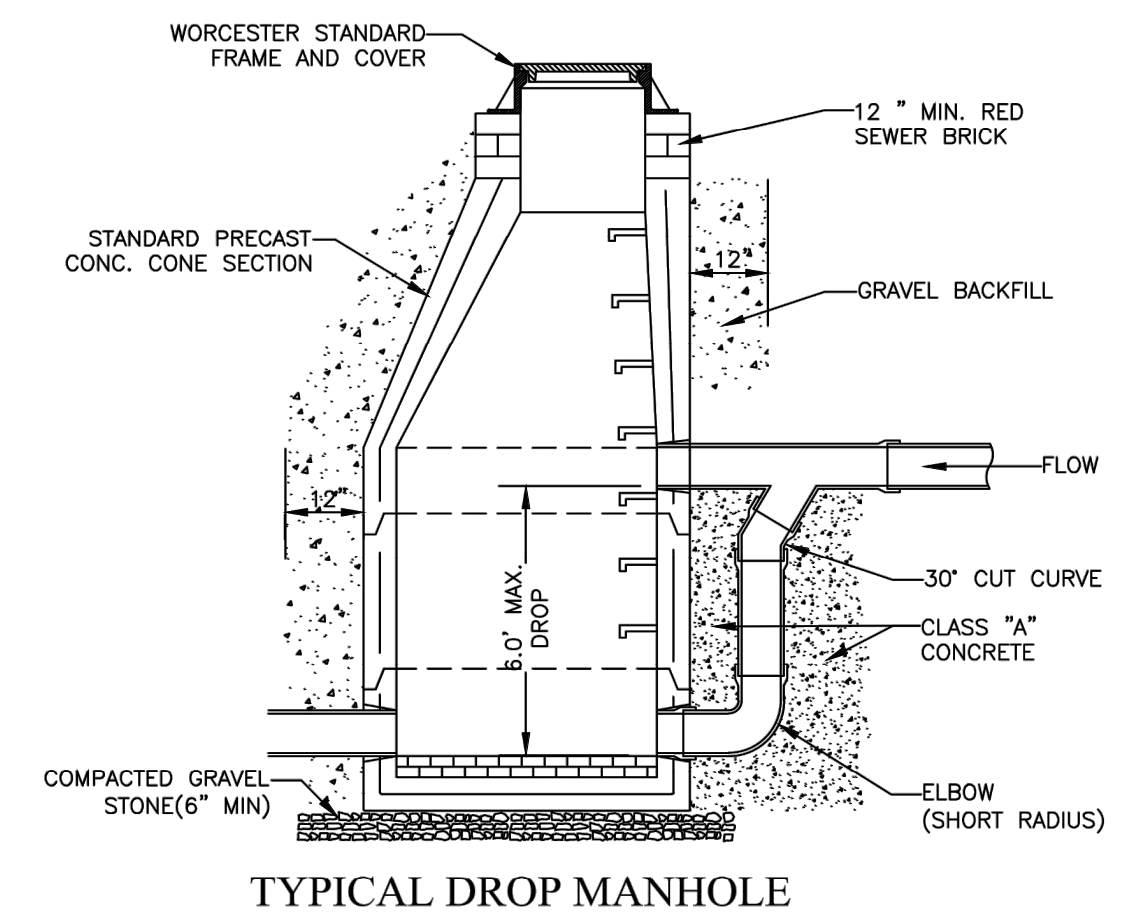
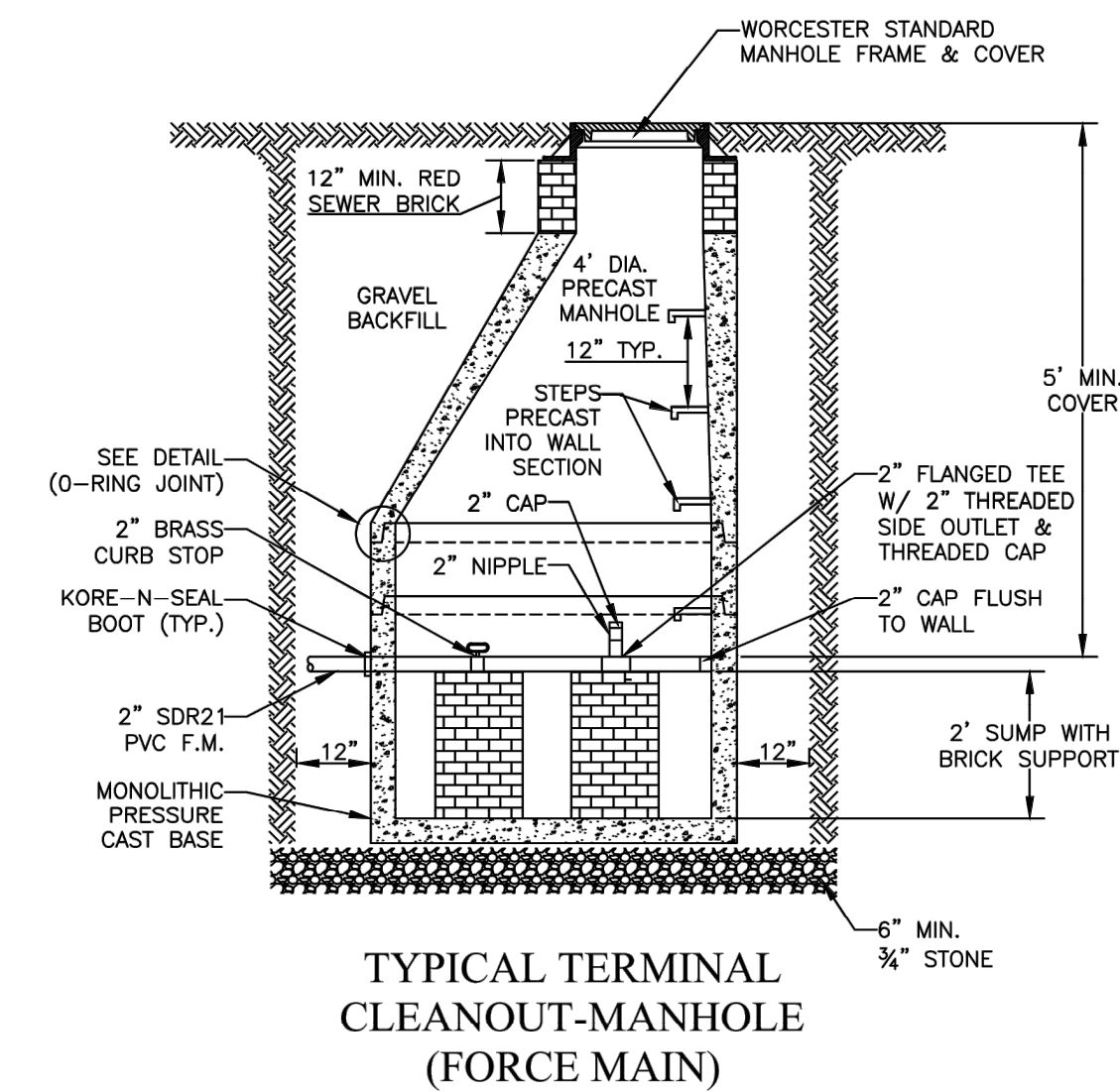
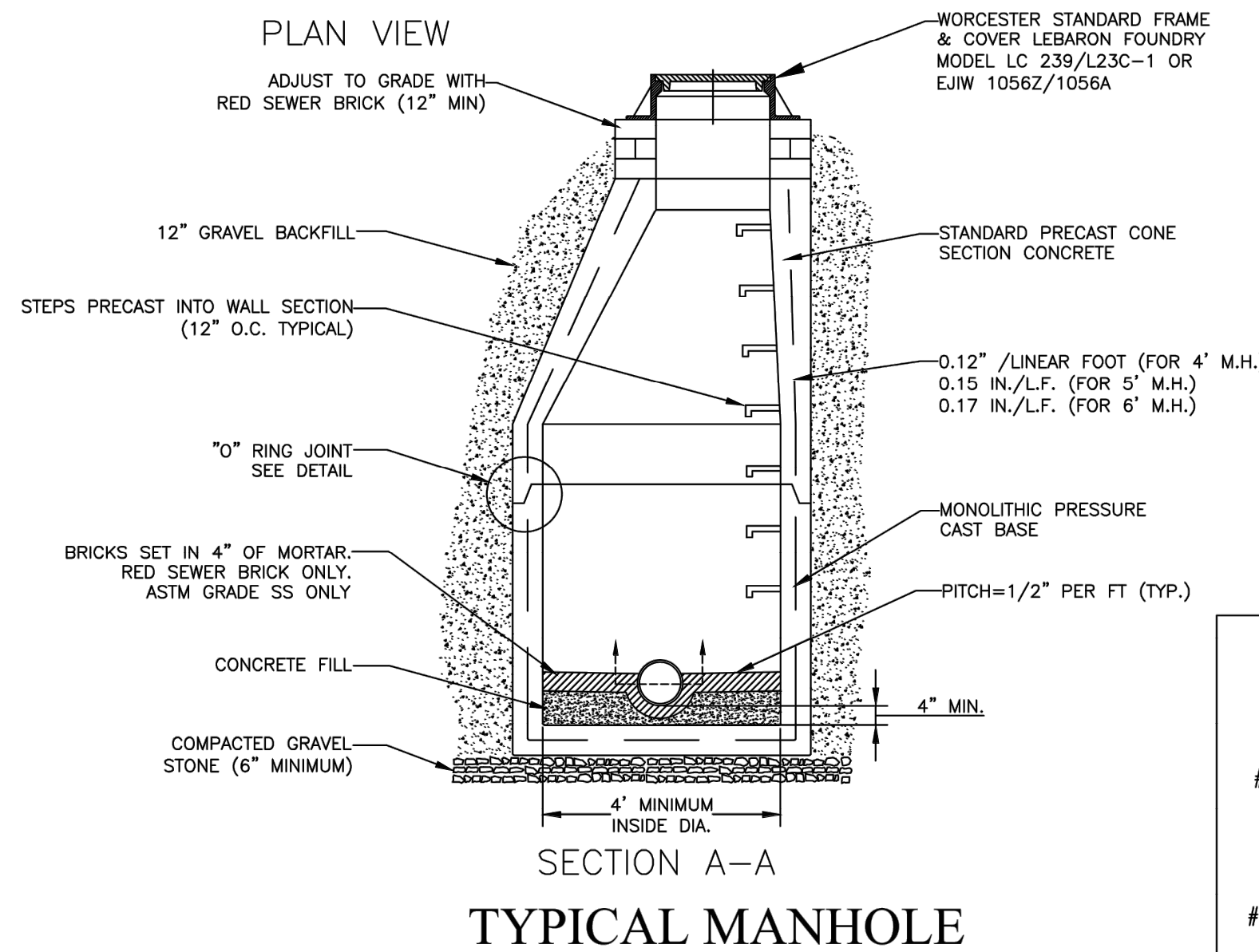
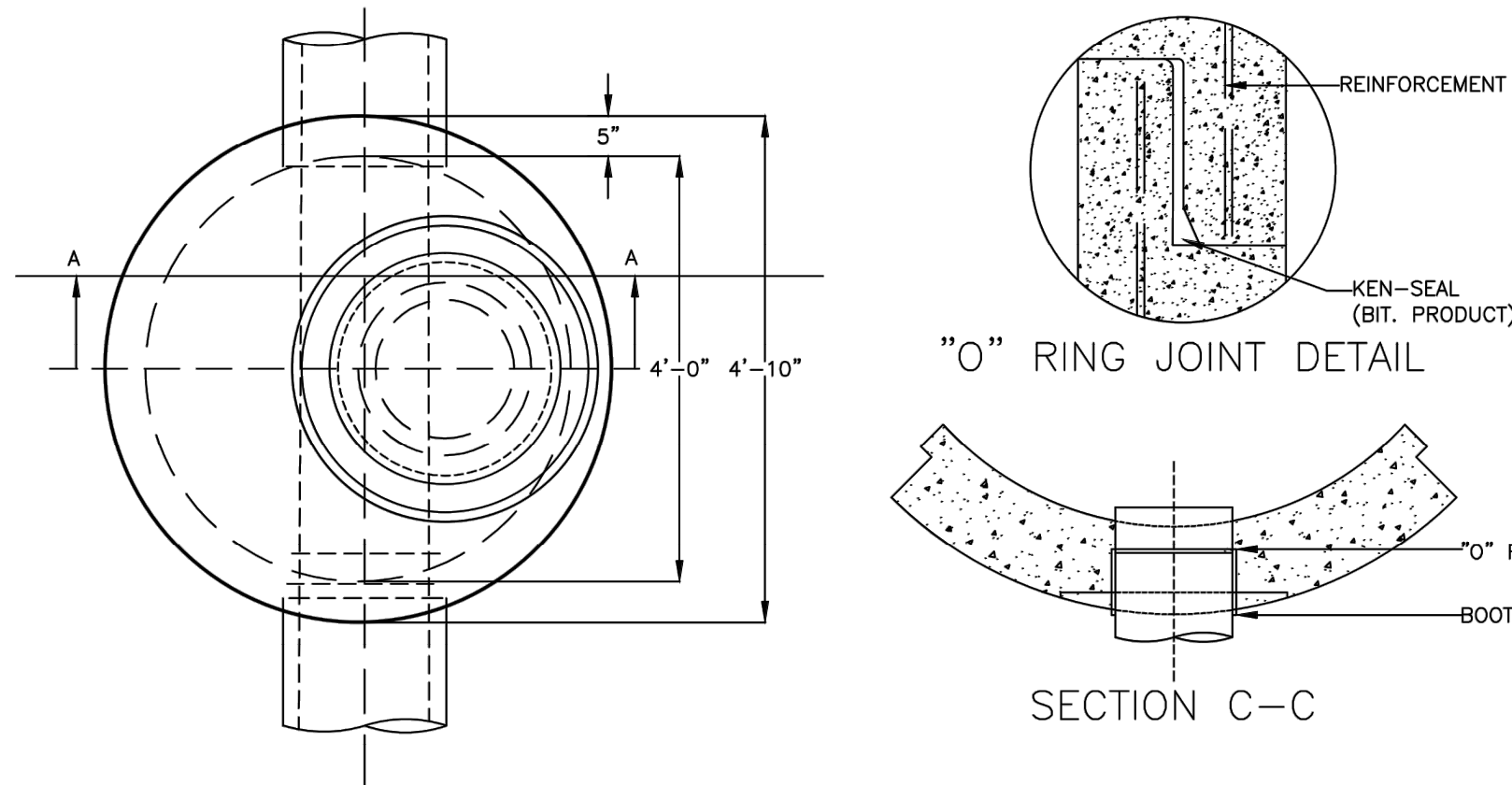
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**CONSTRUCTION  
DETAILS II**

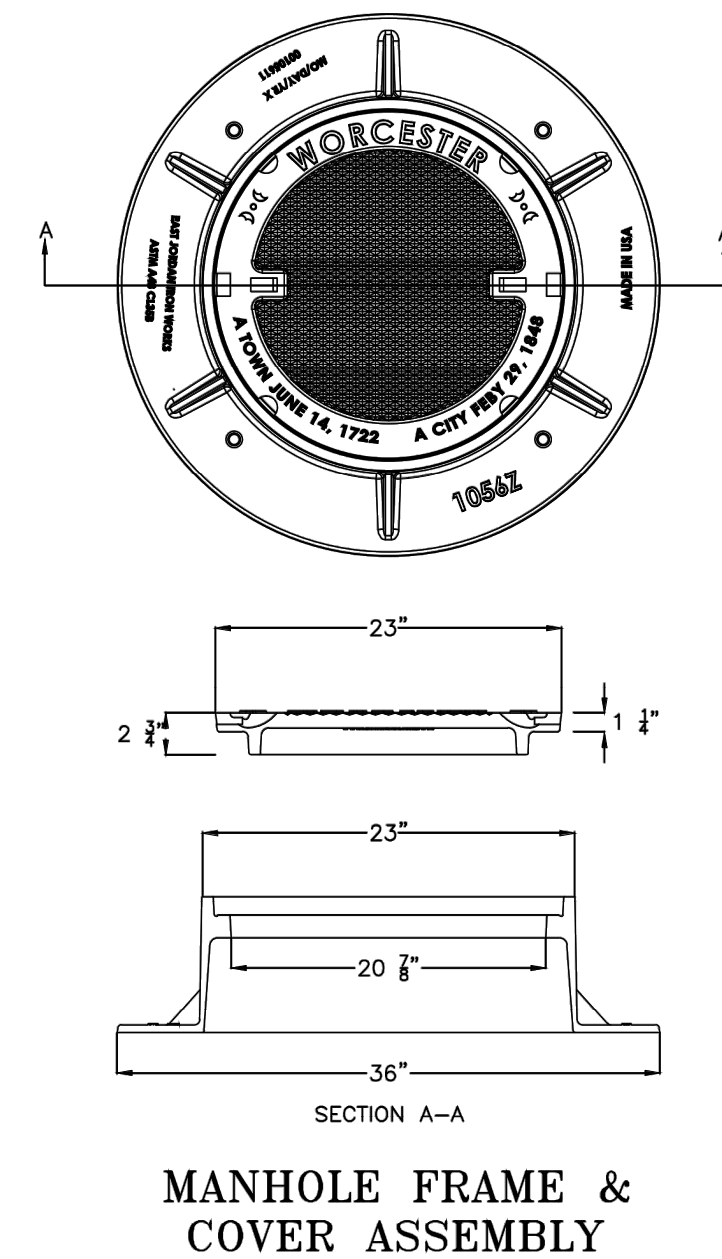
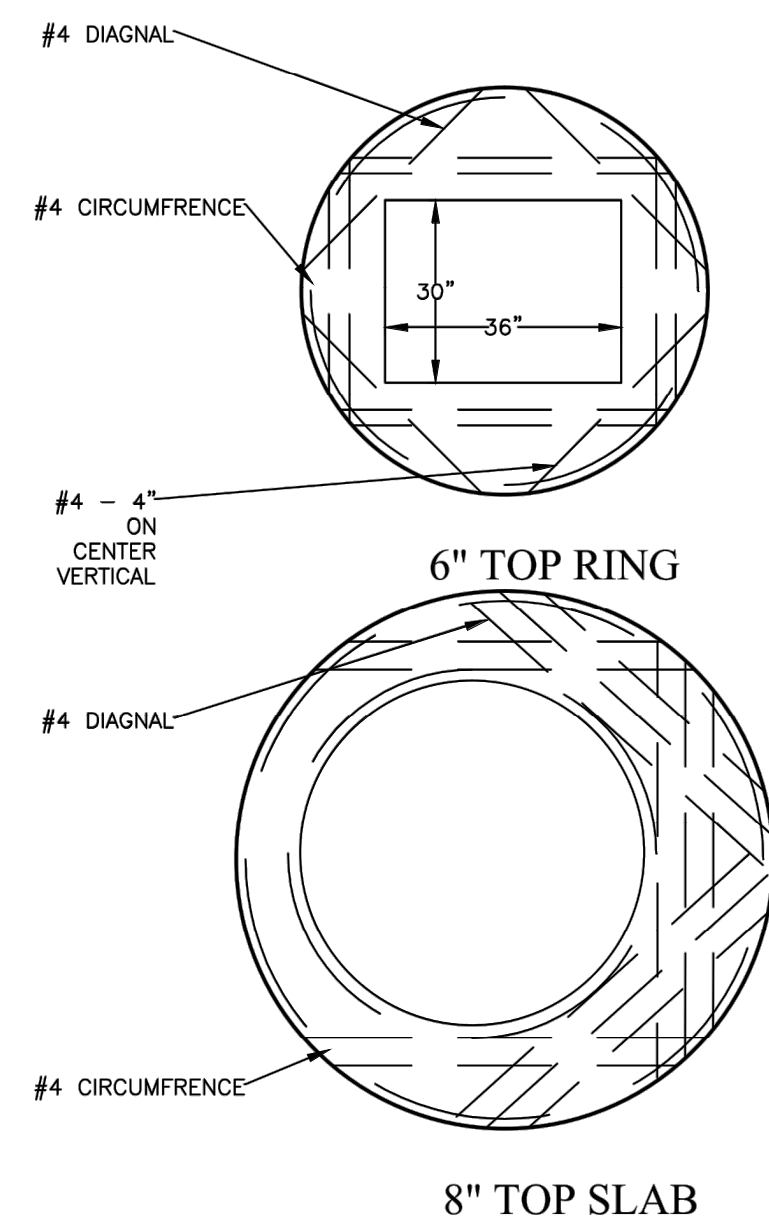
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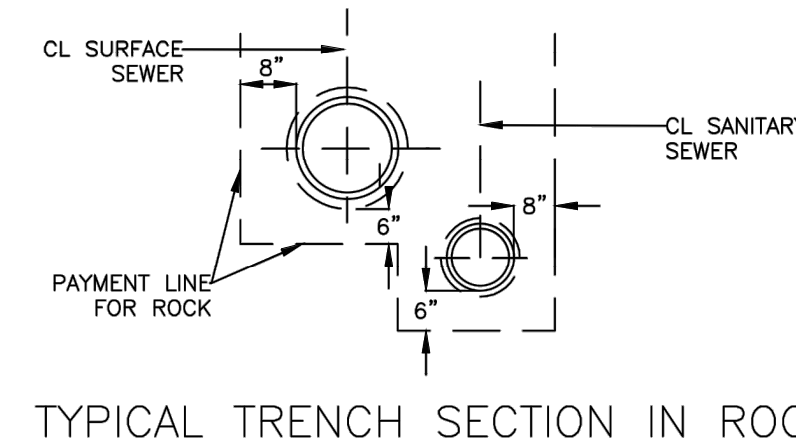




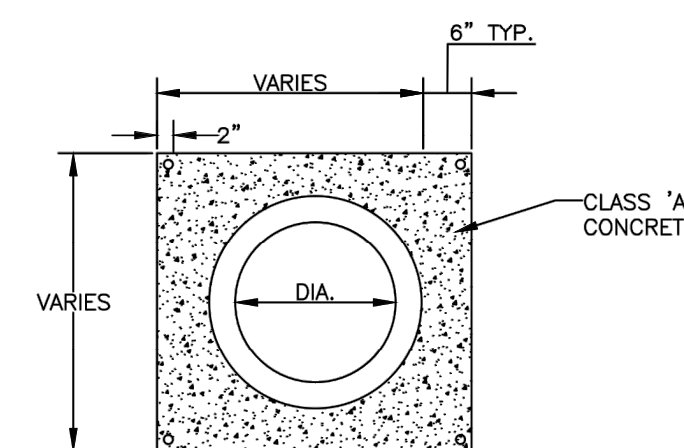
TYPICAL PRECAST CATCH BASIN



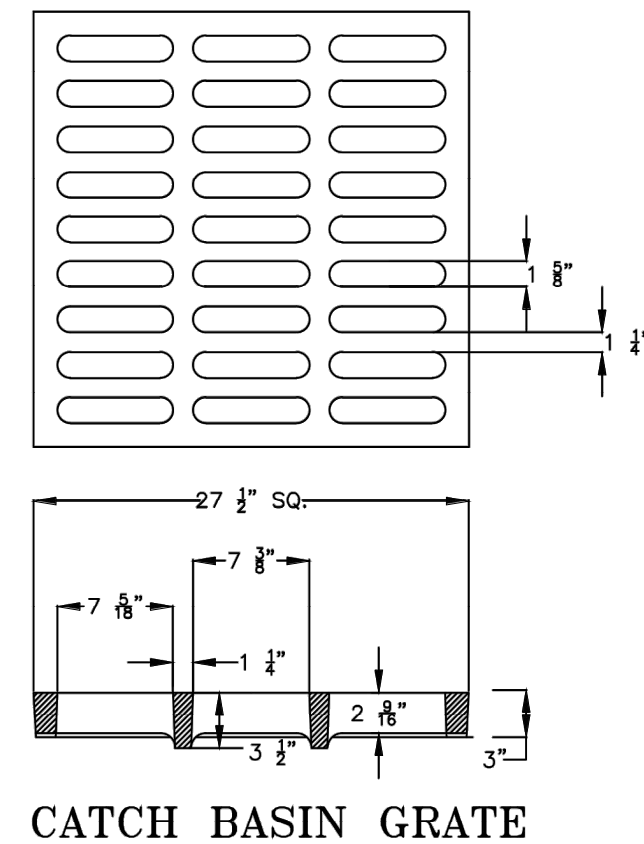
MANHOLE FRAME & COVER ASSEMBLY



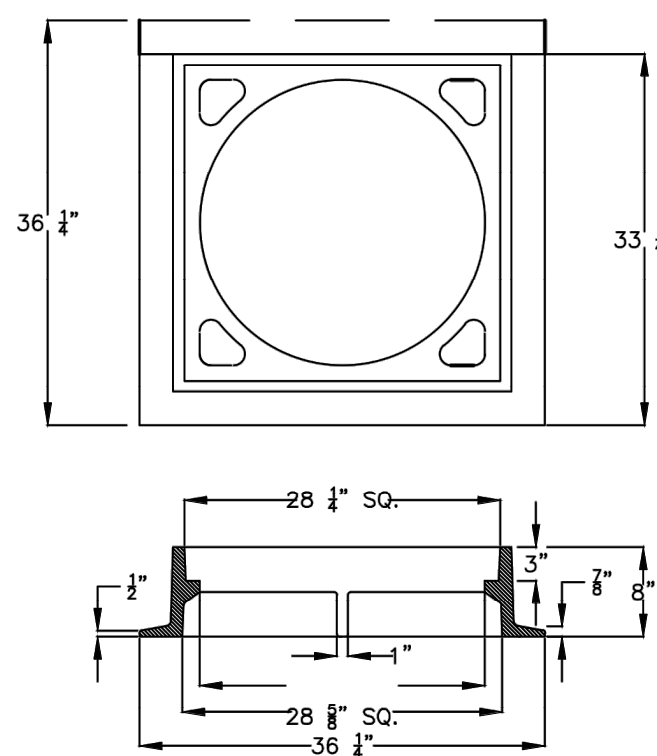
TYPICAL TRENCH SECTION IN ROCK



CONCRETE ENCASEMENT DETAIL



CATCH BASIN GRATE



CATCH BASIN FRAME

- GENERAL NOTES:
1. THE CITY OF WORCESTER IS NOT RESPONSIBLE FOR JOB SAFETY OR SUPERVISION. THE CONTRACTOR IS TO PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, FOLLOWING ALL THE OSHA REQUIREMENTS, TO ENSURE PUBLIC AND CONTRACTOR SAFETY.
  2. THE LOCATION OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. SANITARY SEWER AND ALL OTHER UTILITY SERVICE CONNECTIONS POINTS SHALL BE CONFIRMED INDEPENDENTLY BY THE CONTRACTOR IN THE FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO THE CITY OF WORCESTER DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND INSTALLATIONS SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
  3. ALL UTILITIES AND SERVICES INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, FIBER OPTICS, ETC WITHIN THE LIMITS OF DISTURBANCE SHALL BE VERTICALLY AND HORIZONTALLY LOCATED. THE CONTRACTOR SHALL USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE EXISTING UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION AT NO COST TO THE CITY.
  4. DEFINE AND LOCATE VERTICALLY AND HORIZONTALLY ALL ACTIVE UTILITY AND/OR SERVICE SYSTEMS THAT ARE TO BE REMOVED. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN ALL ACTIVE SYSTEMS THAT ARE NOT BEING REMOVED/RELOCATED DURING CONSTRUCTION ACTIVITY.
  5. ALL DEMOLITION ACTIVITIES ARE TO BE PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND CONTRACT DOCUMENTS AS WELL AS FEDERAL, STATE AND CITY REGULATIONS. ANY DISCREPANCIES OR DEVIATIONS SHALL BE IDENTIFIED BY THE CONTRACTOR TO THE CITY OF WORCESTER IN WRITING FOR RESOLUTION PRIOR TO INITIATION OF SITE ACTIVITY.
  6. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH ALL FEDERAL, STATE AND CITY REGULATIONS.
  7. THE CONTRACTOR SHALL COMPLY WITH THE LATEST OSHA STANDARDS AND REGULATIONS, OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES.
  8. EXPLOSIVES SHALL NOT BE USED WITHOUT WRITTEN CONSENT OF ALL APPLICABLE GOVERNING AUTHORITIES. ALL THE REQUIRED PERMITS AND EXPLOSIVE CONTROL MEASURES THAT ARE REQUIRED BY THE FEDERAL, STATE, AND LOCAL GOVERNMENTS SHALL BE IN PLACE PRIOR TO STARTING AND EXPLOSIVE PROGRAM. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ALL INSPECTION AND SEISMIC VIBRATION TESTING THAT IS REQUIRED TO MONITOR THE EFFECTS ON ALL LOCAL STRUCTURES.
  9. ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE SURVEYOR'S BENCHMARK AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO GROUND BREAK.
  10. THE CONTRACTOR SHALL BE FAMILIAR AND RESPONSIBLE FOR ANY/ALL CERTIFICATIONS, INSPECTIONS, ETC. REQUIRED BY ALL GOVERNING JURISDICTIONAL AGENCIES DURING AND AFTER CONSTRUCTION FOR SIGN-OFF, INCLUDING BUT NOT LIMITED TO PROCUREMENT OF SERVICES, SCHEDULING OF FIELD OBSERVATIONS AND COORDINATION WITH REPRESENTATIVES OF THE APPROPRIATE PARTIES.
  11. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE REQUIREMENTS AND STANDARDS OF THE LOCAL GOVERNING AUTHORITY.
  12. THESE PLANS ARE BASED ON INFORMATION PROVIDED TO THE CITY OF WORCESTER DEPARTMENT OF PUBLIC WORKS AND PARKS ENGINEERING DIVISION AT THE TIME OF PLAN PREPARATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND NOTIFY THE CITY OF WORCESTER DEPARTMENT OF PUBLIC WORKS AND PARKS ENGINEERING DIVISION IN WRITING IF ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLANS, OR IF THE PROPOSED WORK WOULD BE INHIBITED BY ANY OTHER SITE FEATURES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
  13. DEBRIS SHALL NOT BE BURIED ON-SITE AND ALL UNSUITABLE EXCAVATED MATERIAL AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL CITY, COUNTY, STATE AND FEDERAL LAWS AND APPLICABLE CODES.
  14. CONTRACTOR IS RESPONSIBLE FOR ALL SHORING REQUIRED DURING EXCAVATION (TO BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS) AND ANY ADDITIONAL PROVISIONS TO ASSURE STABILITY OF STRUCTURES, AS FIELD CONDITIONS DICTATE.
  15. IF THE CONTRACTOR DEVIATES FROM THE PLANS AND SPECIFICATIONS, INCLUDING THE NOTES CONTAINED THEREON, WITHOUT FIRST OBTAINING WRITTEN AUTHORIZATION FOR SUCH DEVIATIONS FROM THE CITY OF WORCESTER DEPARTMENT OF PUBLIC WORKS AND PARKS, ENGINEERING DIVISION, IT SHALL BE RESPONSIBLE FOR THE PAYMENT OF ALL COSTS TO CORRECT ANY WORK DONE, ALL FINES OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE CITY OF WORCESTER HARMLESS FROM ALL SUCH COSTS TO CORRECT ANY SUCH WORK AND FROM ALL SUCH FINES AND PENALTIES, COMPENSATION AND PUNITIVE DAMAGES AND COSTS OF ANY NATURE RESULTING THEREFROM.

NOTES:

1. CONTRACTOR SHALL REFER TO THE CITY OF WORCESTER STANDARD SPECIFICATIONS & DETAILS FOR TYPICAL TEMPORARY/PERMANENT PATCH DETAIL FOR ROADWAY

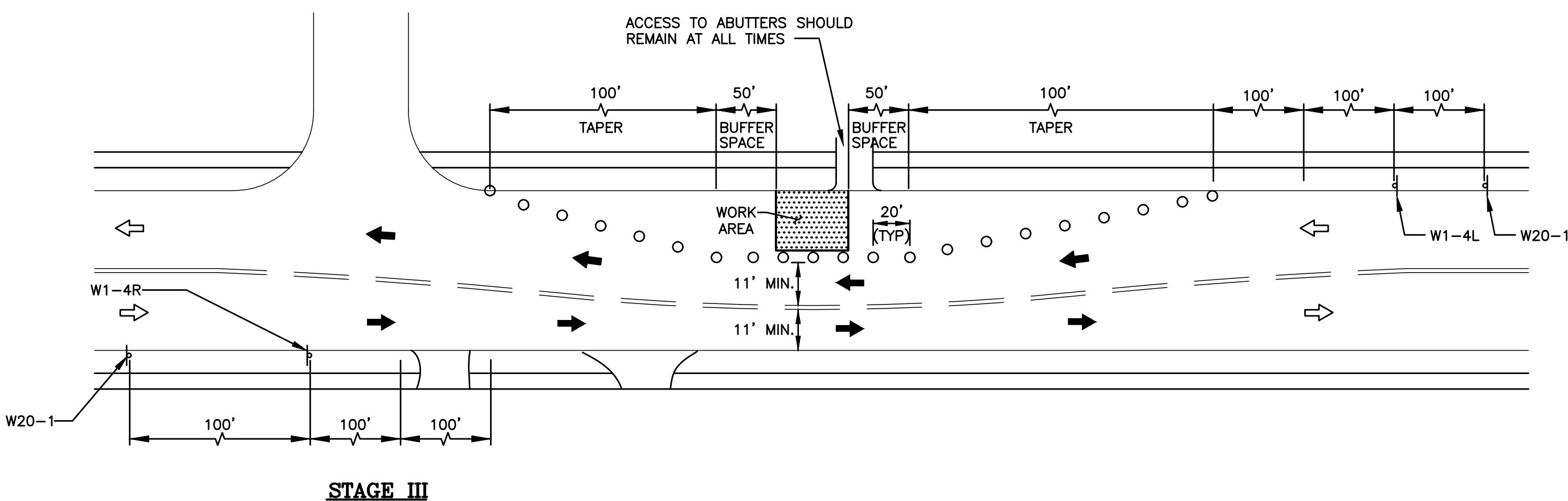
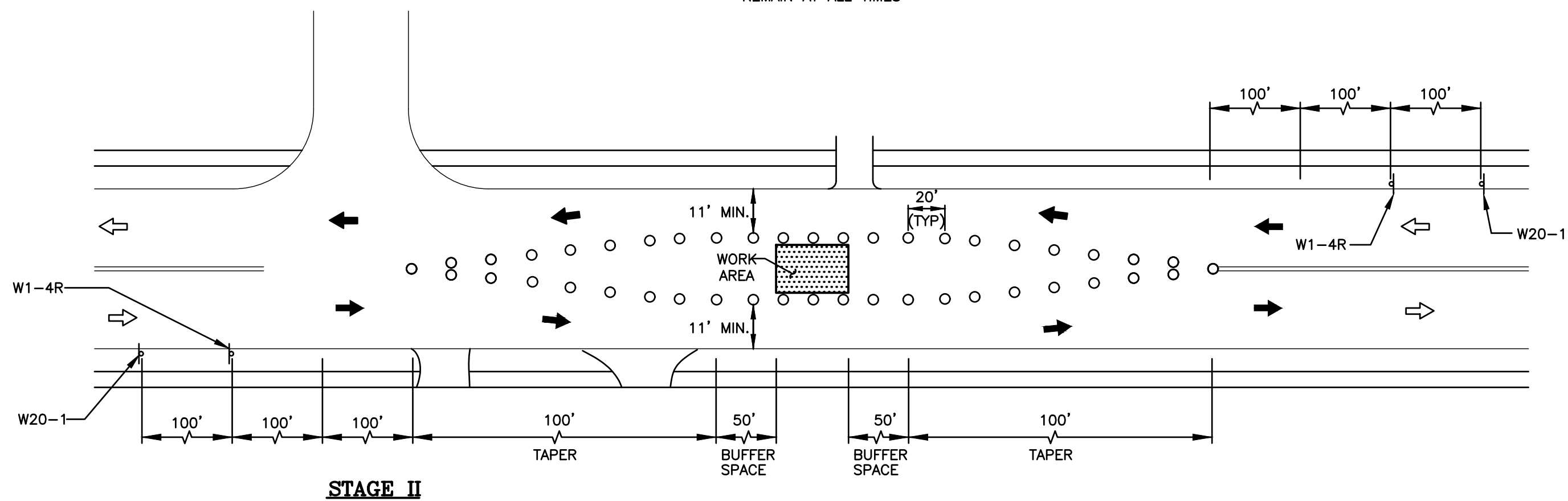
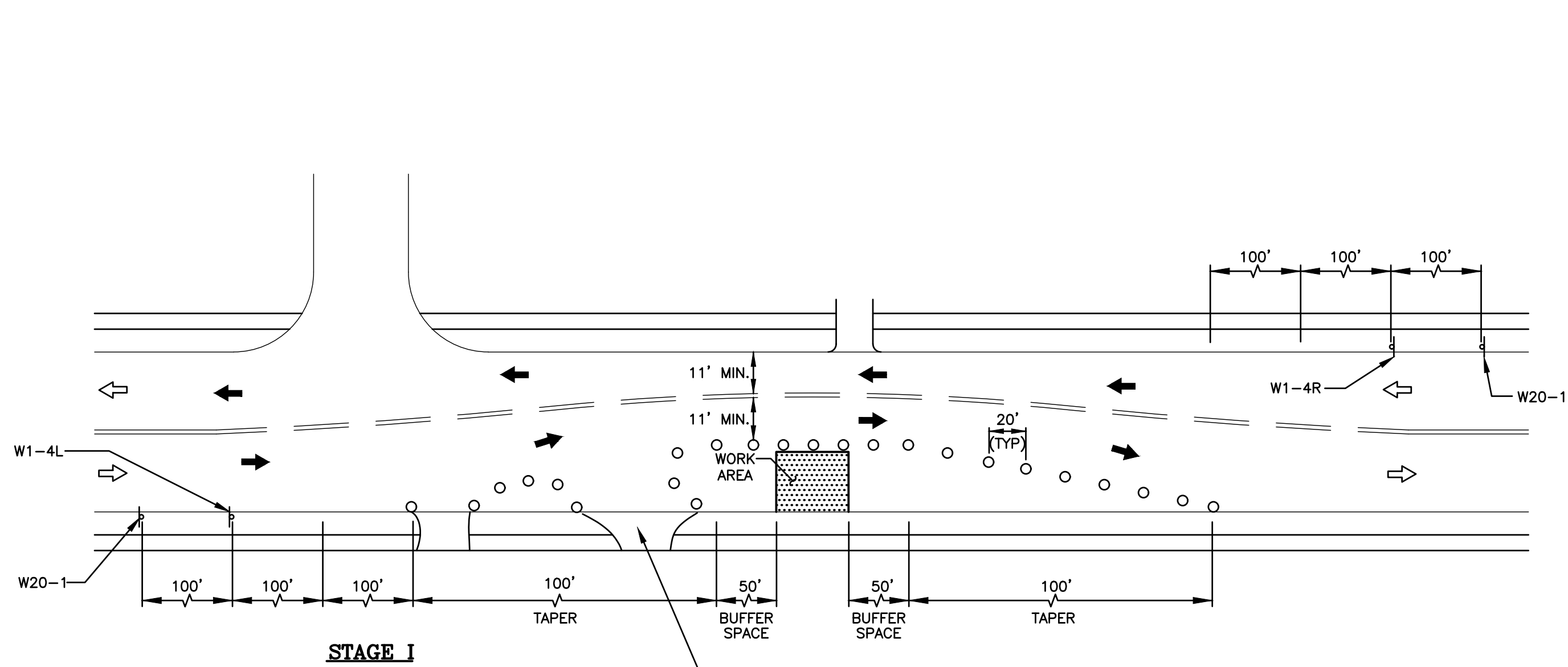
Revisions:		
No.	Date	Description

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No.	Date	Description

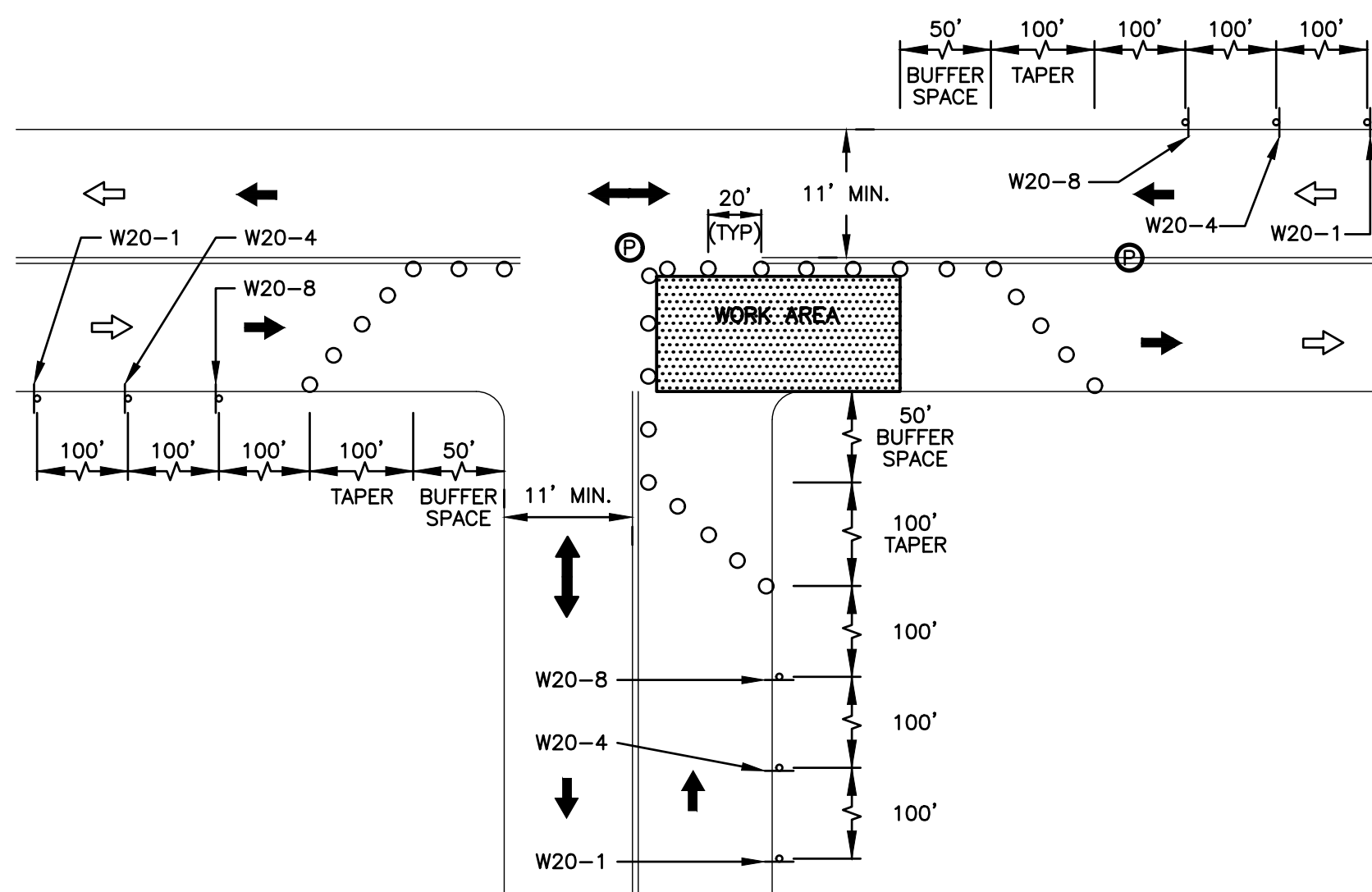
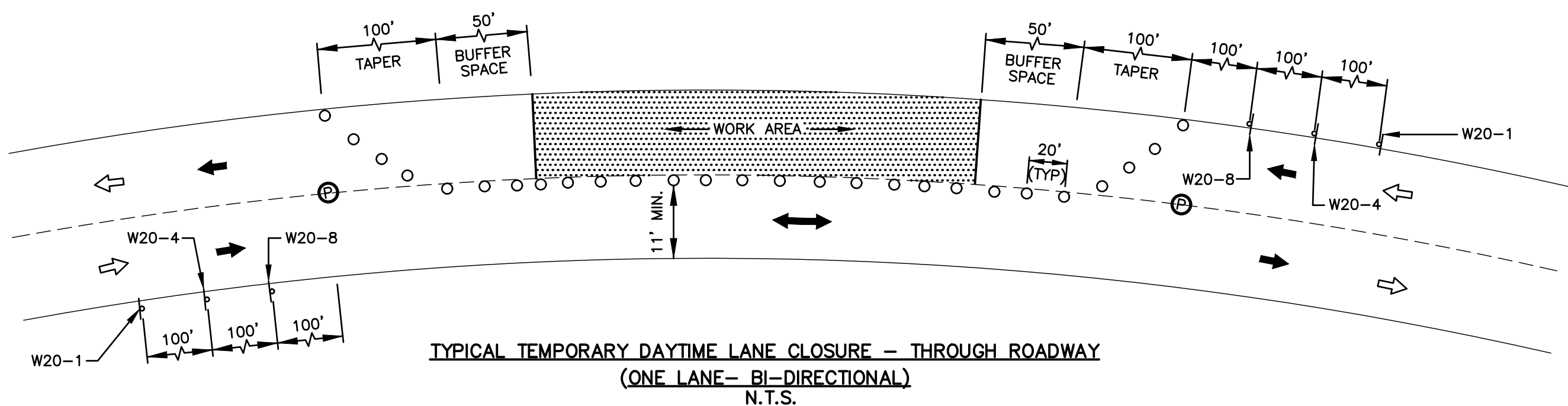
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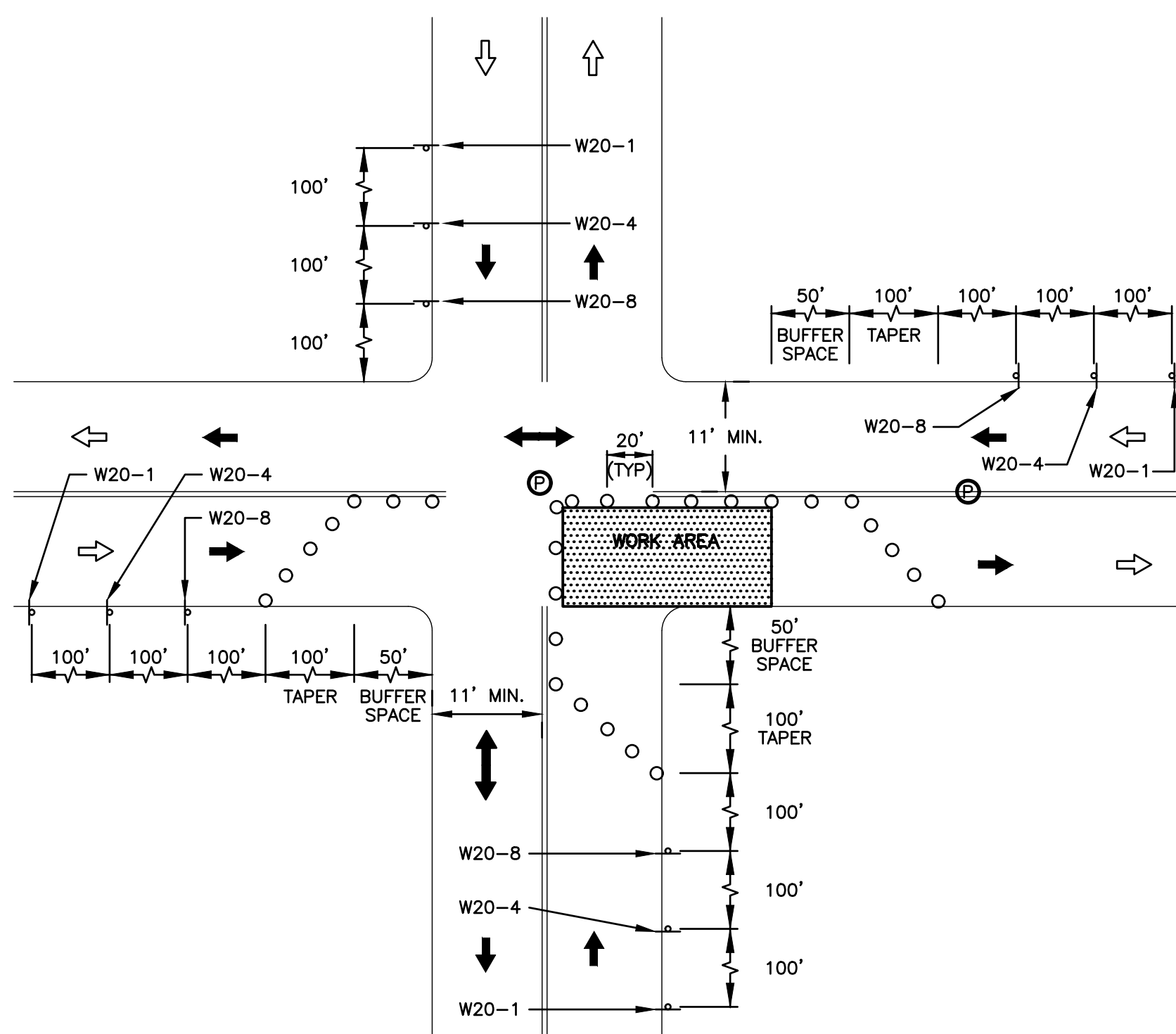




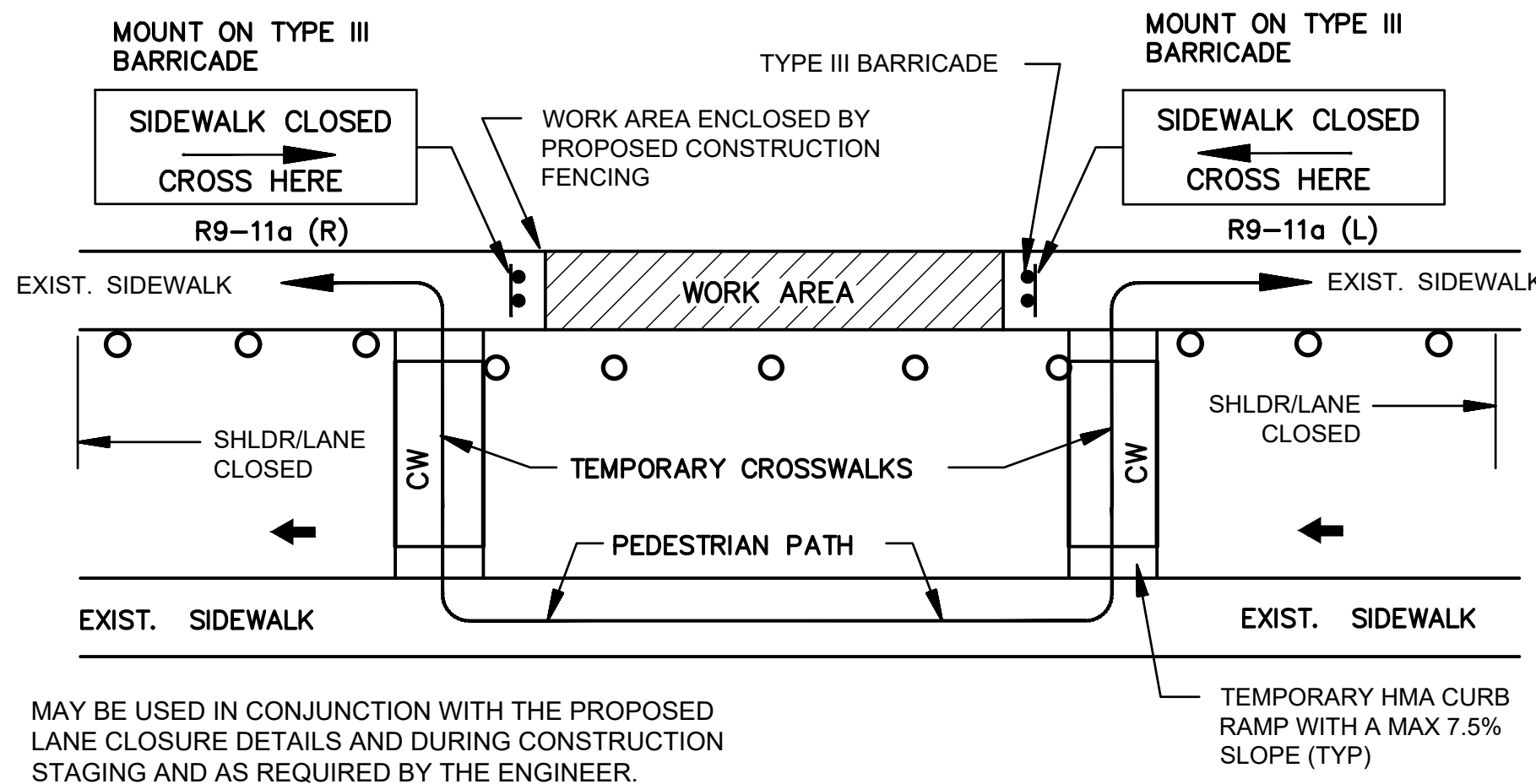
TRAFFIC OPERATION STAGES  
N.T.S.



"T" INTERSECTION LANE CLOSURE  
N.T.S.



CLOSURE AT SIDE OF INTERSECTION  
N.T.S.



PEDESTRIAN BYPASS  
N.T.S.

TEMPORARY TRAFFIC SIGN SUMMARY		
MUTCD CODE	SIZE OF SIGN	
	WIDTH	HEIGHT
W1-4L	30"	30"
W1-4R	30"	30"
W20-1	36"	36"
W20-4	36"	36"
W20-8	36"	36"

#### NOTE:

- FOR THE LATEST SPECIFICATION ON TEXT DIMENSIONS AND COLOR, CONTRACTOR SHALL REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CURRENT EDITION).

#### LEGEND:

- REFLECTORIZED DRUM
- TRAFFIC FLOW DURING CONSTRUCTION
- NORMAL TRAFFIC FLOW
- POLICE DETAIL OFFICER
- CONSTRUCTION SIGN
- WORK AREA

#### GENERAL NOTES:

- PLACEMENT OF ALL CONSTRUCTION SIGNS, DRUMS, BARRICADES, TRAFFIC DEVICES AND THE SHAPE, SIZE & COLOR OF ALL TEMPORARY TRAFFIC SIGNS SHALL CONFORM WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ADVANCE WARNING SIGN PLACEMENT AND TAPER LENGTH TO BE ADJUSTED ACCORDING TO STREET CONDITIONS AND DRIVEWAY OPENINGS.
- ALL DRUMS SHALL BE APPROXIMATELY PLACED AND MOVED AS NECESSARY TO MAINTAIN ADEQUATE ABUTTER ACCESS AT ALL TIMES.
- THE CONTRACTOR SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT AND SIMILAR OPERATIONS.
- NONESSENTIAL TRAFFIC CONTROL DEVICES SHALL BE COVERED OR REMOVED DURING NON-WORKING HOURS.
- PEDESTRIANS SHALL BE PROVIDED WITH ACCESS AND SAFE PASSAGE THROUGH THE TEMPORARY TRAFFIC CONTROL ZONE AT ALL TIMES.
- W20-8 SHALL BE TAKEN DOWN OR COVERED AFTER EACH WORKING DAY OR WHEN OTHERWISE NOT APPLICABLE, OR WHEN POLICE OFFICERS ARE NOT PRESENT TO DIRECT TRAFFIC.
- ADVISORY SPEED PLATES (W13-1 - SEE CURRENT EDITION OF MUTCD) SHALL BE USED IF APPLICABLE AND AS REQUIRED BY THE ENGINEER.
- NO DIFFERENCE IN ROADWAY LANE ELEVATION WILL BE ALLOWED AT THE END OF THE WORK DAY.
- SAMPLE TRAFFIC PLANS INCLUDED ON THIS PLAN SHEET ARE BASED ON AN URBAN (LOW SPEED) ROAD TYPE FROM THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- DASHED LINES SHOW LANE DESIGNATIONS TO BE USED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL SUBMIT ANY REVISIONS TO THE CONSTRUCTION ZONE SAFETY PLAN TO THE ENGINEER FOR APPROVAL.
- THIS CONSTRUCTION ZONE SAFETY PLAN SHALL NOT RELIEVE THE CONTRACTOR OF HIS SOLE RESPONSIBILITY FOR CONSTRUCTION SITE SAFETY.
- THE CONTRACTOR SHALL SUBMIT DETAILED TRAFFIC MANAGEMENT AND DETOUR PLANS TO THE ENGINEER FOR APPROVAL.
- THE CONTRACTOR SHALL INCLUDE PROVISIONS TO FURNISH AND INSTALL AS MANY AS TWO (2) PORTABLE TEMPORARY TRAFFIC SIGNALS AS REQUIRED BY THE CITY TO FACILITATE ONE LANE OF ALTERNATING TRAFFIC IN LIEU OF POLICE DETAIL. CONTRACTOR SHALL PROVIDE ALL REQUIRED COMPONENTS NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM. THE CONTRACTOR SHALL DEMONSTRATE THAT TEMPORARY TRAFFIC SIGNALS OPERATE PROPERLY PRIOR TO CLOSING THE ROAD TO ONE LANE OF TRAFFIC.
- THE CONTRACTOR SHALL PROVIDE UP TO 600 UNIT DAYS OF MESSAGE SIGN OPERATION, WITH POSSIBLY UP TO THREE (3) SIGN UNITS OPERATING FOR 200 DAYS SIMULTANEOUSLY, AS REQUIRED BY THE ENGINEER.

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Revisions:

No.	Date	Description

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Sheet Number:

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