

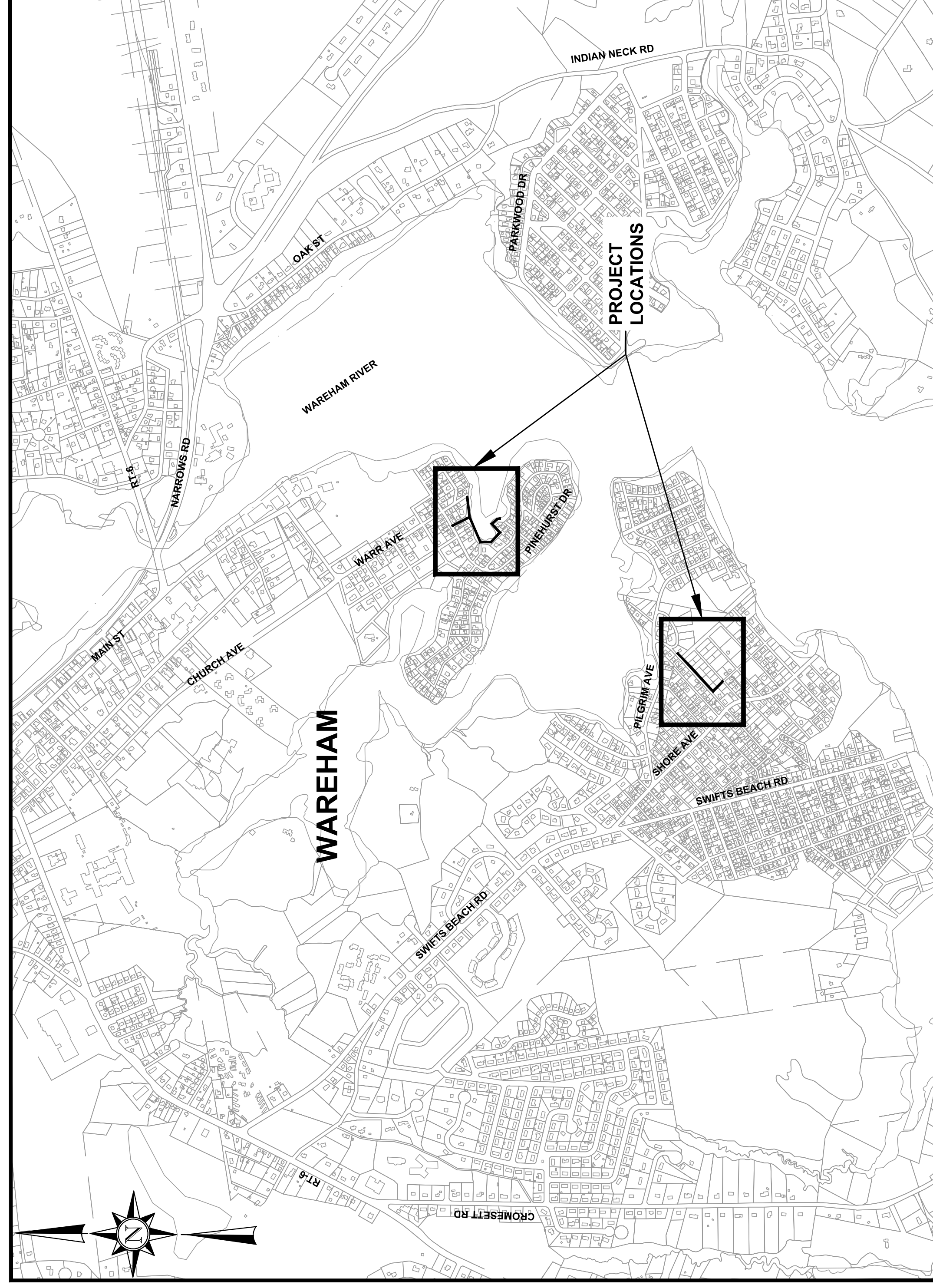
TOWN OF WAREHAM, MASSACHUSETTS WAREHAM POLLUTION CONTROL SEA STREET AND SMITH AVENUE SEWER SYSTEM REHABILITATION CONTRACT NO. 2020-001

AUGUST 2020



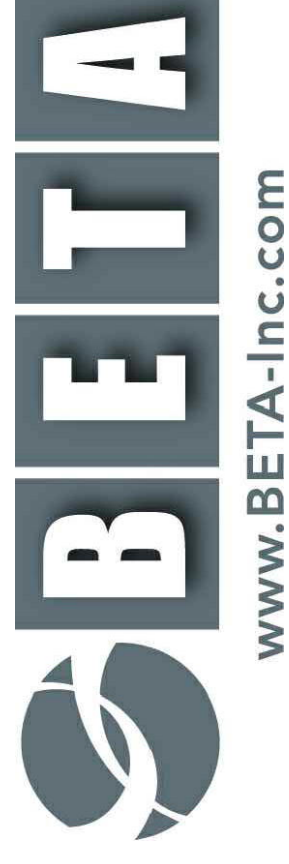
WAREHAM POLLUTION CONTROL

GUY CAMPINHA, DIRECTOR OF WATER POLLUTION CONTROL



LOCATION MAP
 NOT TO SCALE

PREPARED BY:



ISSUE DATE: AUGUST 2020

PLAN INDEX

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
G-1	LEGEND AND GENERAL NOTES
C-1	SEA STREET SHORELINE SEWER REHABILITATION
C-2	SMITH AVENUE MARSH SEWER REHABILITATION
CD-1	CONSTRUCTION DETAILS
TMP-1	TRAFFIC MANAGEMENT DETAILS



REGISTERED PROFESSIONAL
 DATE

GENERAL NOTES

GENERAL

1. THESE GENERAL NOTES ARE NOT INTENDED TO REPLACE THE SPECIFICATIONS FOR THIS CONTRACT. SEE SPECIFICATIONS FOR OTHER REQUIREMENTS IN ADDITION TO THE GENERAL NOTES.
2. FOR ALL CONSTRUCTION, THE PUBLIC RIGHT-OF-WAY SHALL BE THE LIMIT OF DISTURBANCE. ALL SURFACES DAMAGED OUTSIDE THE PUBLIC RIGHT-OF-WAY SHALL BE REPLACE IN KIND, AT THE CONTRACTORS EXPENSE.
3. THE CONTRACTOR SHALL CONFINE ALL ACTIVITIES FOR CONSTRUCTION PURPOSES WITHIN THE INDICATED LIMITS OF WORK AS SHOWN IN THE CONTRACT DRAWINGS. ALL SURFACES DAMAGED OUTSIDE THESE LIMITS BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT CONTRACTOR'S EXPENSE.

MAPPING

4. BASE MAPPING BASED ON GEOGRAPHIC INFORMATION SYSTEMS (GIS) DATA, DATA DIGITIZED FROM AERIAL, AND DATA COLLECTED VIA GPS.
5. VERTICAL DATUM IS NAVD88. HORIZONTAL DATUM IS MASSACHUSETTS STATE PLANE COORDINATE SYSTEM REFERENCED TO NAD83/CORS.
6. THE LOCATION, SIZE, AND MATERIAL OF EXISTING PIPES, DUCTS, CONDUITS AND OTHER UNDERGROUND STRUCTURES AND/OR UTILITIES SHOWN ON THESE PLANS ARE FROM THE BEST AVAILABLE SOURCES AND ARE NOT WARRANTED TO BE EXACT, NOR IS IT WARRANTED THAT ALL UNDERGROUND PIPES, UTILITIES OR STRUCTURES ARE SHOWN. EXACT LOCATION TO BE DETERMINED BY CONTRACTOR IN FIELD.
7. EXISTING UTILITIES HAVE BEEN PLOTTED FROM THE BEST AVAILABLE DATA AND ARE APPROXIMATE ONLY. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING UTILITIES AND NOTIFY ALL UTILITY COMPANIES (PUBLIC AND PRIVATE). IN ADDITION, "DIG SAFE" MUST BE CONTACTED AT 1(888)DIG-SAFE. CONTRACTOR TO CONTACT TOWN OF WAREHAM FOR THE LOCATION OF TOWN OF WAREHAM OWNED UTILITIES INCLUDING SEWER, WATER, DRAIN AND OTHER TOWN OWNED UTILITIES.
8. "AS-BUILT" DRAWINGS MAY BE EXAMINED AT THE TOWN OF WAREHAM ENGINEERING OFFICE. THE OWNER DOES NOT GUARANTEE THE CORRECTNESS OF THE CONTENTS OF THESE PLANS. THE CONTRACTOR IS CAUTIONED AGAINST RELYING SOLELY ON THE "AS-BUILTS" WITHOUT VERIFYING THE SAME BY FIELD INVESTIGATIONS.
9. PROPERTY LINES AND CITY/TOWN LINES ARE SHOWN FOR INFORMATION ONLY.

EXISTING UTILITIES

10. EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION SHALL BE PROTECTED AND SUPPORTED AT ALL TIMES BY THE CONTRACTOR. ALL EXISTING UTILITIES TO BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS TO INTERFERE AS LITTLE AS POSSIBLE WITH EXISTING UTILITIES. PAYMENT FOR PROVIDING SAID PROTECTION AND SUPPORTS SHALL BE CONSIDERED A PART OF AND PAID FOR UNDER THE APPROPRIATE PIPE OR STRUCTURE ITEMS UNLESS OTHERWISE INDICATED AND/OR DIRECTED BY THE OWNER. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION BY REASON OF DELAY AND/OR INCONVENIENCE IN ADAPTING HIS OPERATIONS ACCORDINGLY.

11. CONTRACTOR IS RESPONSIBLE FOR REPAIR OF DAMAGED UTILITIES CAUSED BY THE CONTRACTORS OPERATIONS AT NO ADDITIONAL COST TO THE OWNER.

REMOVAL AND DISPOSAL

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) ALL MATERIALS INDICATED ON THE PLANS INCLUDING BUT NOT LIMITED TO: EXISTING UNDERGROUND UTILITIES, EXISTING UNDERGROUND STRUCTURES, EXISTING CONCRETE, PIPE, AND BRICK THAT WAS IN CONTACT WITH SEWAGE SHALL BE CLEANED IN ACCORDANCE WITH MA DEP REQUIREMENTS AND DISPOSED OF ACCORDINGLY. ONCE CLEANED, DEMOLITION MATERIALS SHALL NOT BE CONSIDERED SPECIAL WASTE. NO TEMPORARY STORAGE WILL BE ALLOWED IN TOWN.

SITE RESTORATION

13. EXCEPT WHERE NOTED BY PROPOSED CONTOUR LINES, ALL FINAL CONTOUR LINE ELEVATIONS SHALL BE THE SAME AS EXISTING CONTOUR LINE ELEVATIONS.
14. JOINTS BETWEEN NEW BITUMINOUS CONCRETE ROADWAY PAVEMENT AND SAWCUT EXISTING PAVEMENT SHALL BE SEALED WITH BITUMEN AND BACKSANDBED.
15. ALL CURBING DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE RESET, RESTORED OR REPLACED IN KIND. IF DAMAGED, INCLUDING CEMENT CONCRETE REGARDLESS OF ITS PROXIMITY TO THE DRAIN OR SEWER, AS DIRECTED BY THE OWNER/ENGINEER. PAYMENT SHALL BE CONSIDERED PART OF AND PAID FOR UNDER THE APPROPRIATE PIPE ITEMS AS APPLICABLE UNLESS OTHERWISE INDICATED ON PLANS.
16. ALL SIDEWALK AND WHEELCHAIR RAMP AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IN CONFORMANCE TO THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS AND THE ARCHITECTURAL ACCESS BOARD (AAB) REQUIREMENTS AT THE CONTRACTORS EXPENSE.
17. THE CONTRACTOR SHALL REMOVE AND RESET ALL SIGNS DISTURBED DURING CONSTRUCTION, IN CONFORMANCE WITH THE MASSACHUSETTS STANDARD SPECIFICATIONS AND CONSTRUCTION STANDARDS.
18. ALL GRASSED OR WOODED AREAS DISTURBED BY THE CONSTRUCTION OPERATIONS SHALL BE LOAMED AND SEEDED IN ACCORDANCE WITH THE SPECIFICATIONS. FINAL RESTORATION SHALL BE EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO CONSTRUCTION AS DETERMINED SOLELY BY THE OWNER/ENGINEER. PAYMENT SHALL BE CONSIDERED PART OF AND PAID FOR UNDER THE APPROPRIATE PIPE ITEMS AS APPLICABLE UNLESS OTHERWISE INDICATED.

MAINTENANCE OF EXISTING FLOWS

19. FLOW IN ALL SANITARY SEWERS, COMBINED SEWERS AND DRAINS SHALL BE MAINTAINED AT ALL TIMES. CONTRACTOR SHALL PROVIDE BYPASS EQUIPMENT AS NECESSARY TO COMPLETE WORK. SEE SPECIFICATIONS.
20. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY EQUIPMENT, PIPING, FITTINGS AND APPURTENANCES NECESSARY TO COMPLETE THIS CONTRACT.
21. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL TEMPORARY BYPASS-LINES UNTIL THE MODIFICATIONS AND CONSTRUCTION ARE COMPLETE.

EXISTING FEATURES

- — — GRAVITY SEWER
- — — (S) SEWER MANHOLE
- — — PROPERTY LINE

PROPOSED WORK

- SEWER MANHOLE REHABILITATION (EPOXY LINE)
- — — SEWER LINE REHABILITATION (CURED-IN-PLACE-LINER)

SEA STREET AND SMITH AVENUE
SEWER REHABILITATION
CONTRACT NO. 2020-001

LEGEND AND GENERAL NOTES

NONE

SCALE

SUBCONSULTANT

REGISTERED PROFESSIONAL PREPARED BY

BETA
www.BETA-Inc.com

ROBERT A. DRAKE
CIVIL ENGINEER
No. 4110-B
8-17-20

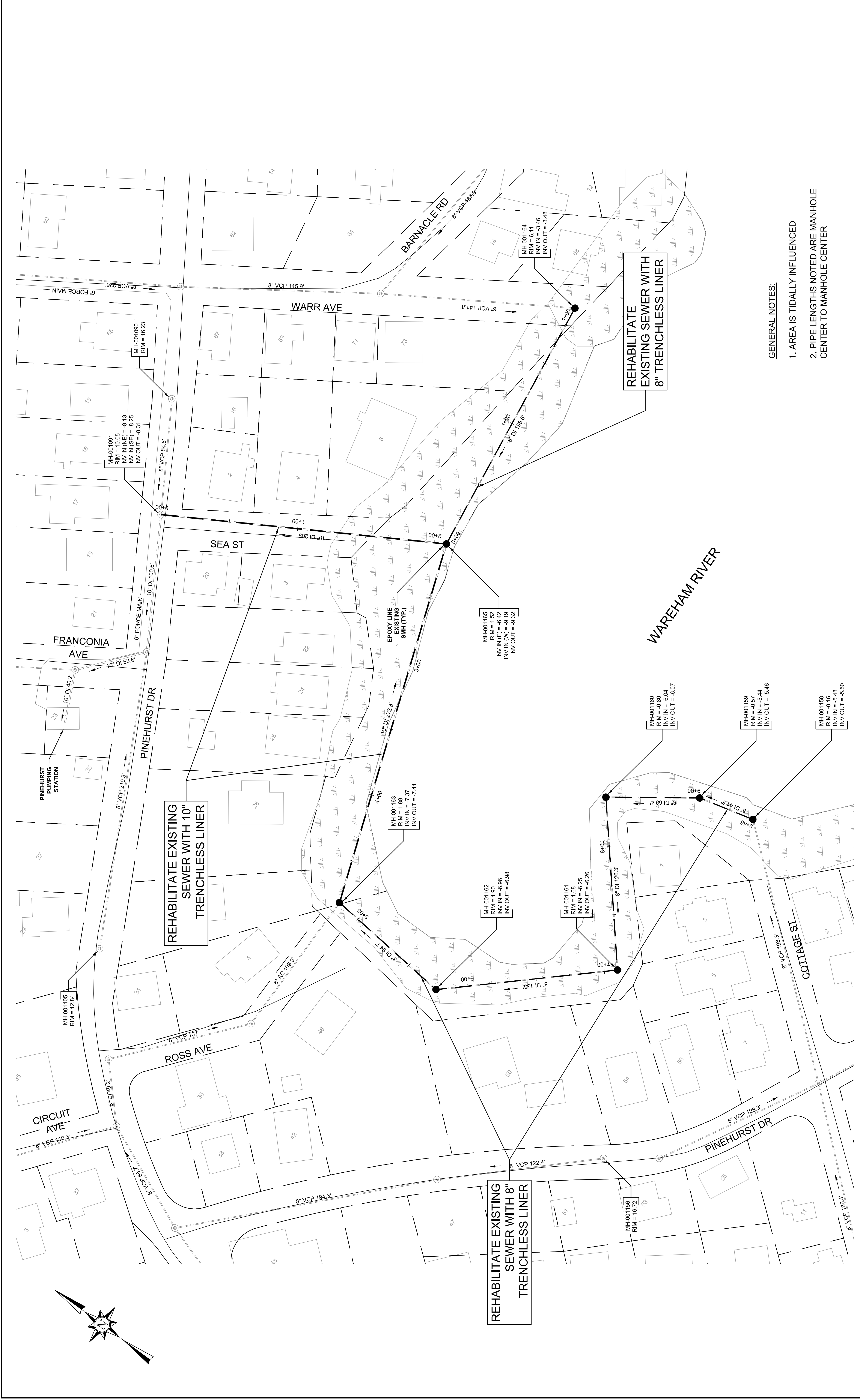
DRAWN BY:	PAN			
DESIGNED BY:	RTG			
CHECKED BY:	RD			
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

TITLE

ISSUE DATE
AUGUST 2020

SHEET NO.
G-1

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

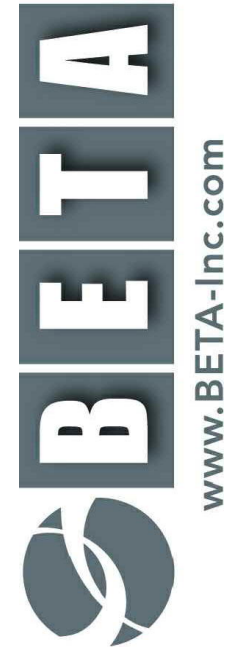



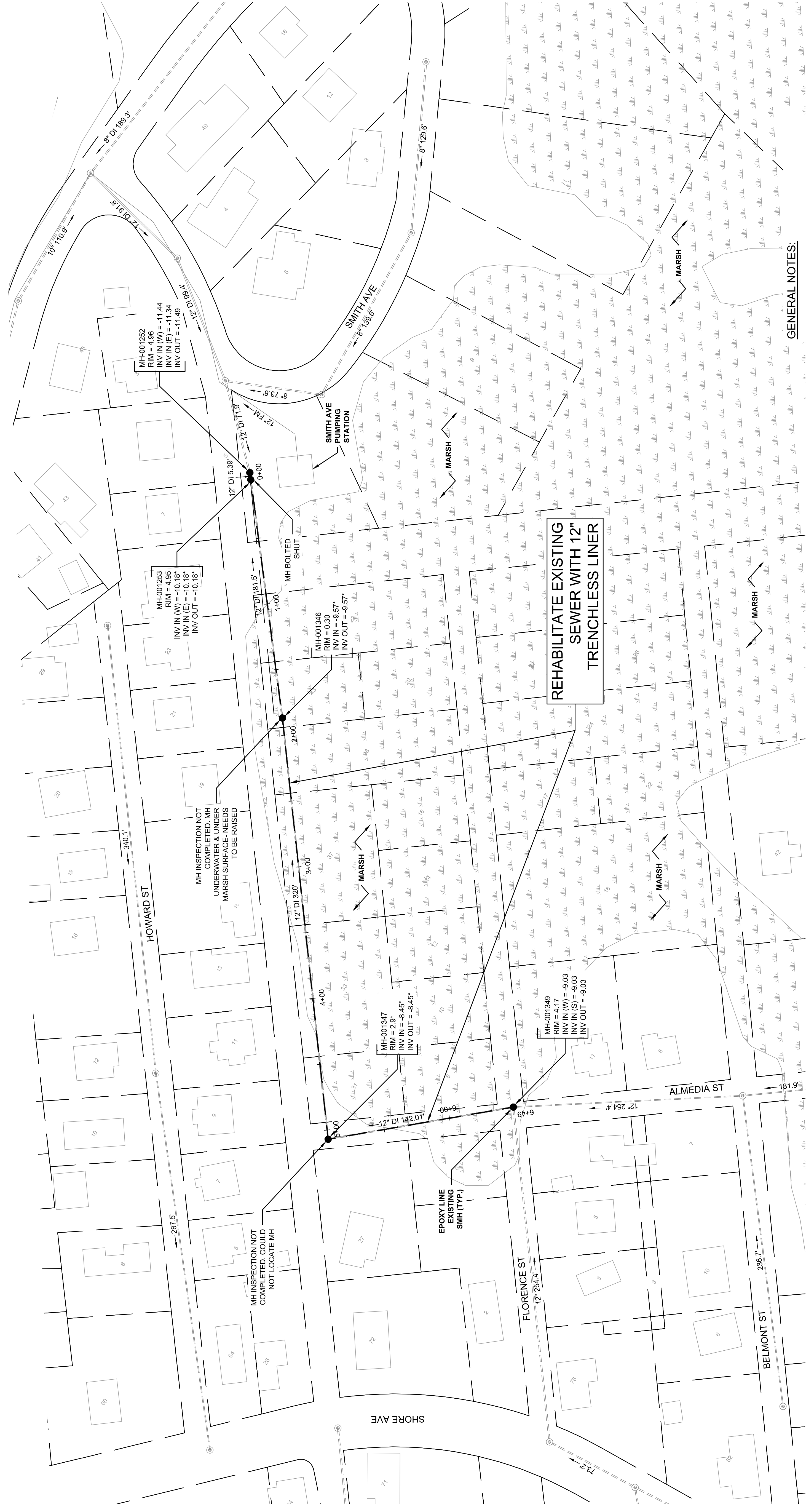
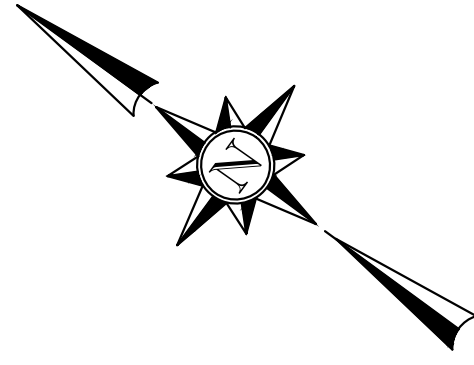
GENERAL NOTES:
 1. AREA IS TIDALLY INFLUENCED
 2. PIPE LENGTHS NOTED ARE MANHOLE CENTER TO MANHOLE CENTER

REHABILITATE EXISTING SEWER WITH 8" TRENCHLESS LINER

REHABILITATE EXISTING SEWER WITH 10" TRENCHLESS LINER

REHABILITATE EXISTING SEWER WITH 8" TRENCHLESS LINER

SEA STREET AND SMITH AVENUE SEWER REHABILITATION CONTRACT NO. 2020-001		ISSUE DATE AUGUST 2020	SHEET NO. C-1										
SEA STREET SHORELINE SEWER REHABILITATION		TITLE											
SCALE		SCALE IN FEET: 1"=30'											
SUBCONSULTANT		UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION											
REGISTERED PROFESSIONAL PREPARED BY		 www.BETA-Inc.com											
DRAWN BY: PAN		 8-17-20											
DESIGNED BY: RTG		<table border="1"> <tr> <th>NUMBER</th> <th>DATE</th> <th>MADE BY</th> <th>CHECKED BY</th> <th>REVISIONS</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>		NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS					
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS									
CHECKED BY: RD													



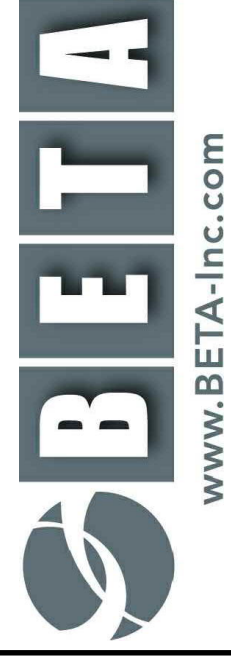
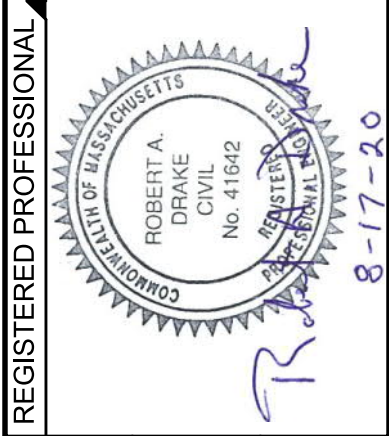
REHABILITATE EXISTING
SEWER WITH 12"
TRENCHLESS LINER

GENERAL NOTES:

1. AREA IS TIDALLY INFLUENCED
 2. PIPE LENGTHS NOTED ARE MANHOLE CENTER TO MANHOLE CENTER
- * ADJUSTED ELEVATIONS BASED OFF OF RECORD INFORMATION. NUMBERS ARE APPROXIMATE

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

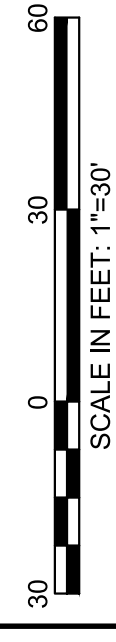
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SUBCONSULTANT

SCALE



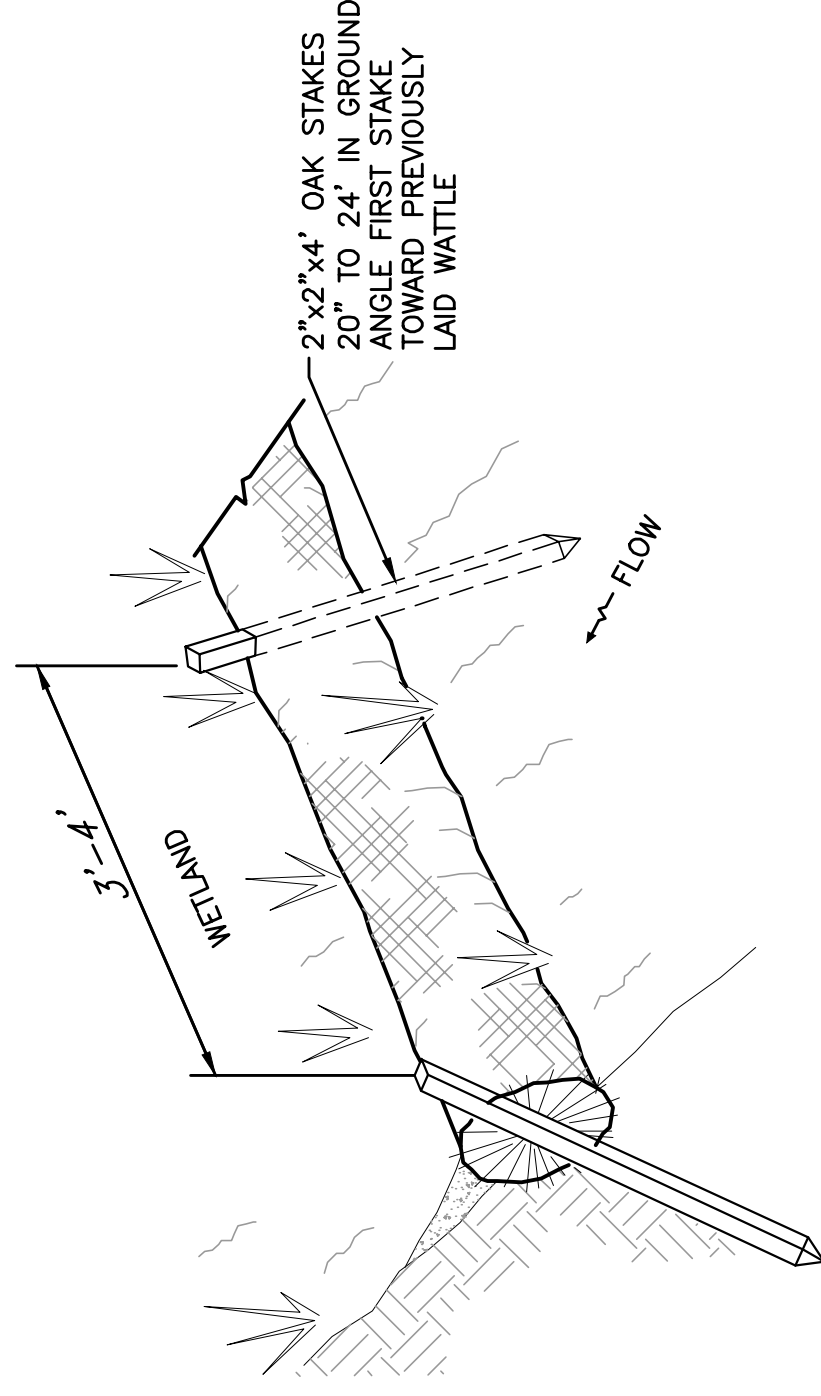
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SEA STREET AND SMITH AVENUE
SEWER REHABILITATION
CONTRACT NO. 2020-001

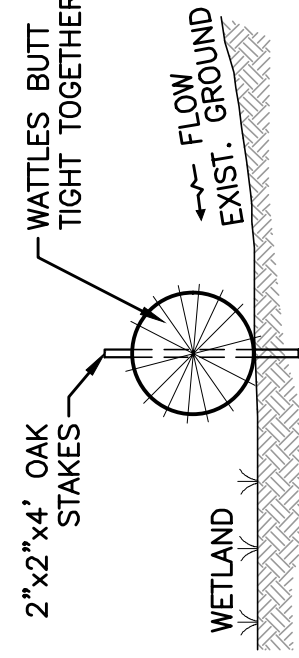
SMITH AVENUE MARSH
SEWER REHABILITATION

ISSUE DATE
AUGUST 2020

SHEET NO.
C-2



ANCHORING DETAIL



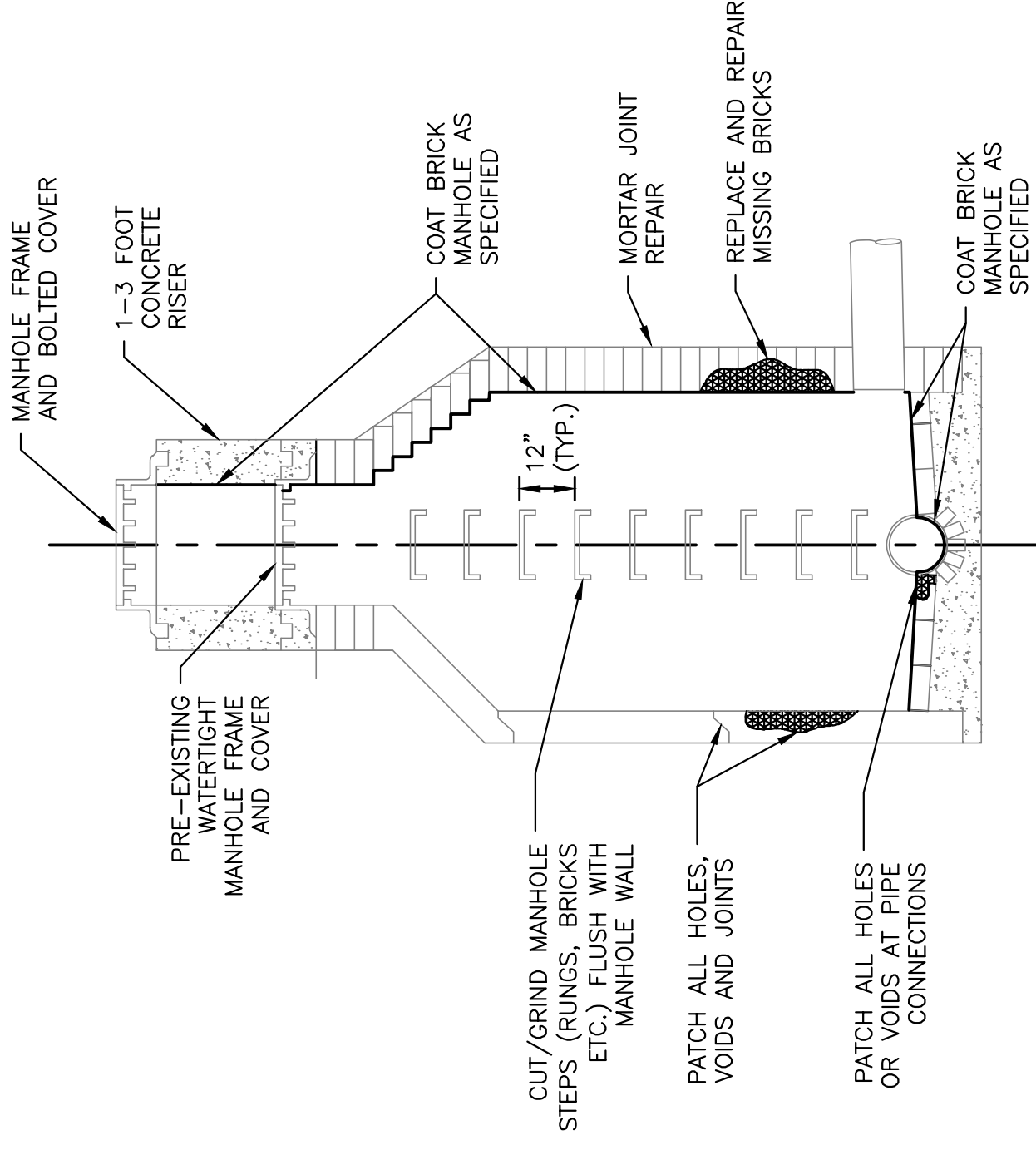
EMBEDDING DETAIL

NOTES:

1. STRAW WATTLES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT WATTLES.
2. STRAW WATTLES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR REBARS DRIVEN THROUGH THE WATTLES. THE FIRST STAKE IN EACH WATTLE SHALL BE ANGLED TOWARDS PREVIOUSLY LAID WATTLE TO FORCE WATTLES TOGETHER.
3. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY IF WATTLES ARE FOUND TO BE DAMAGED.
4. WATTLES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

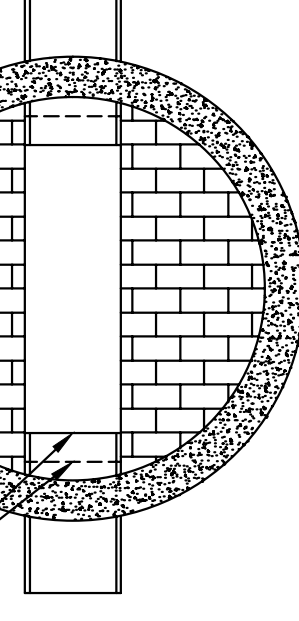
TYPICAL STRAW WATTLE FOR EROSION CONTROL

NOT TO SCALE



**SEWER REHABILITATION DETAIL
SEA STREET**

NOT TO SCALE

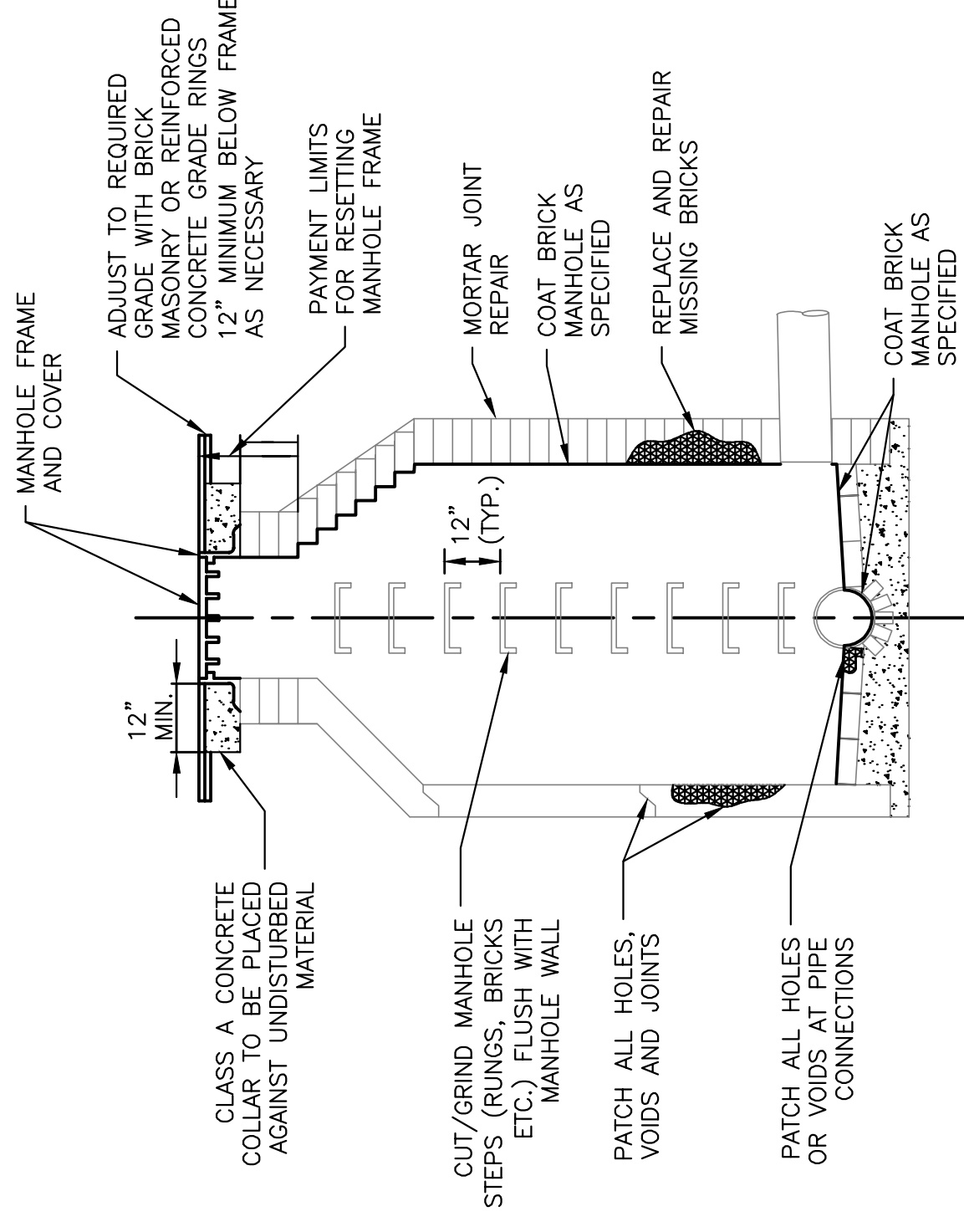


NOTES:

1. PREPARATION FOR MANHOLE REHABILITATION TO BE AS SPECIFIED.
2. PRIOR TO APPLICATION OF MORTAR AND MANHOLE, STOP ALL ACTIVE LEAKS INTO MANHOLE.
3. PAYMENT FOR MANHOLE REHABILITATION SHALL BE THE MEASURED VERTICAL FOOTAGE OF LINER INSTALLED, FROM MANHOLE INVERT TO TOP OF LINER.

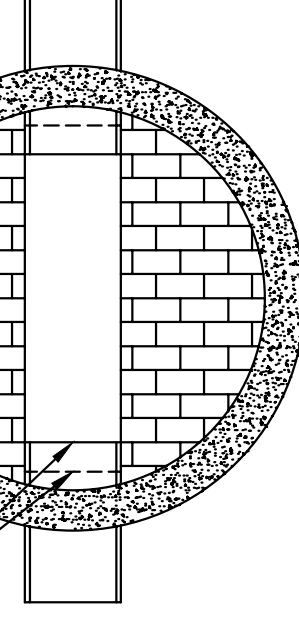
**SEWER REHABILITATION DETAIL
SMITH AVENUE**

NOT TO SCALE



**SEWER REHABILITATION DETAIL
SMITH AVENUE**

NOT TO SCALE

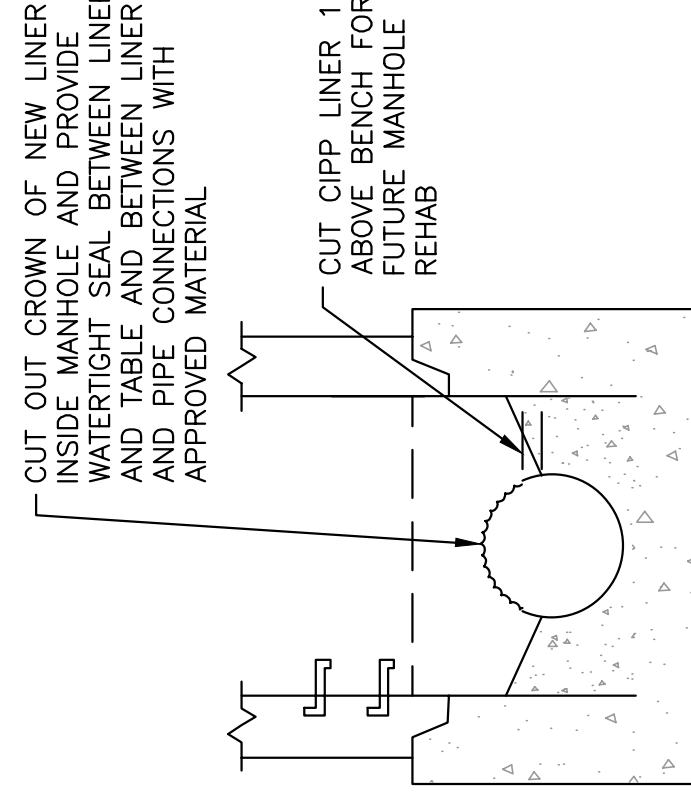


NOTES:

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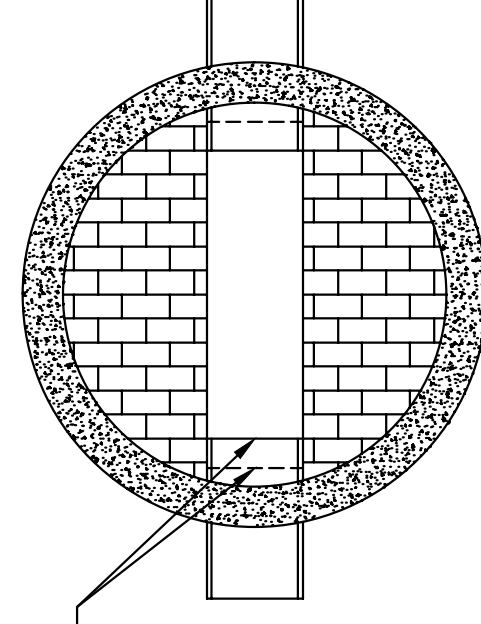
**SEWER REHABILITATION DETAIL
SMITH AVENUE**

NOT TO SCALE



**MANHOLE CIPP LINER DETAIL
FOR PASS THROUGH INSTALLATION**

NOT TO SCALE



**CUT CIPP LINER/EXISTING PIPE
TO 2" FROM MH WALL TO ALLOW
FOR BENCH AND INVERT REPAIR**

SEWER CIPP LINER IN MANHOLE DETAIL

NOT TO SCALE

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

REGISTERED PROFESSIONAL PREPARED BY

8-17-20

AS SHOWN

SCALE

SUBCONSULTANT

TITLE

SEA STREET AND SMITH AVENUE
SEWER REHABILITATION
CONTRACT NO. 2020-001

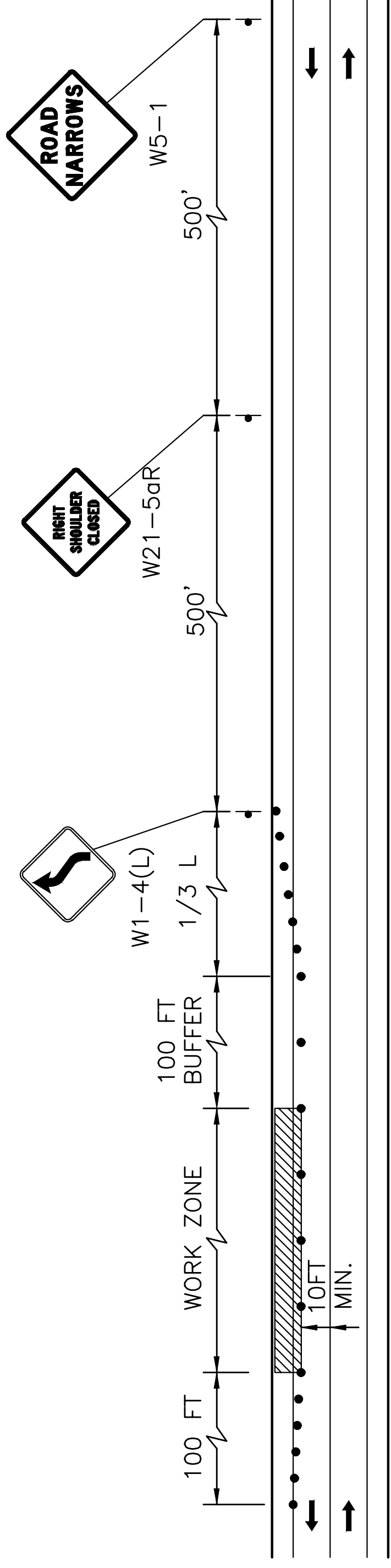
CONSTRUCTION DETAILS

ISSUE DATE

AUGUST 2020

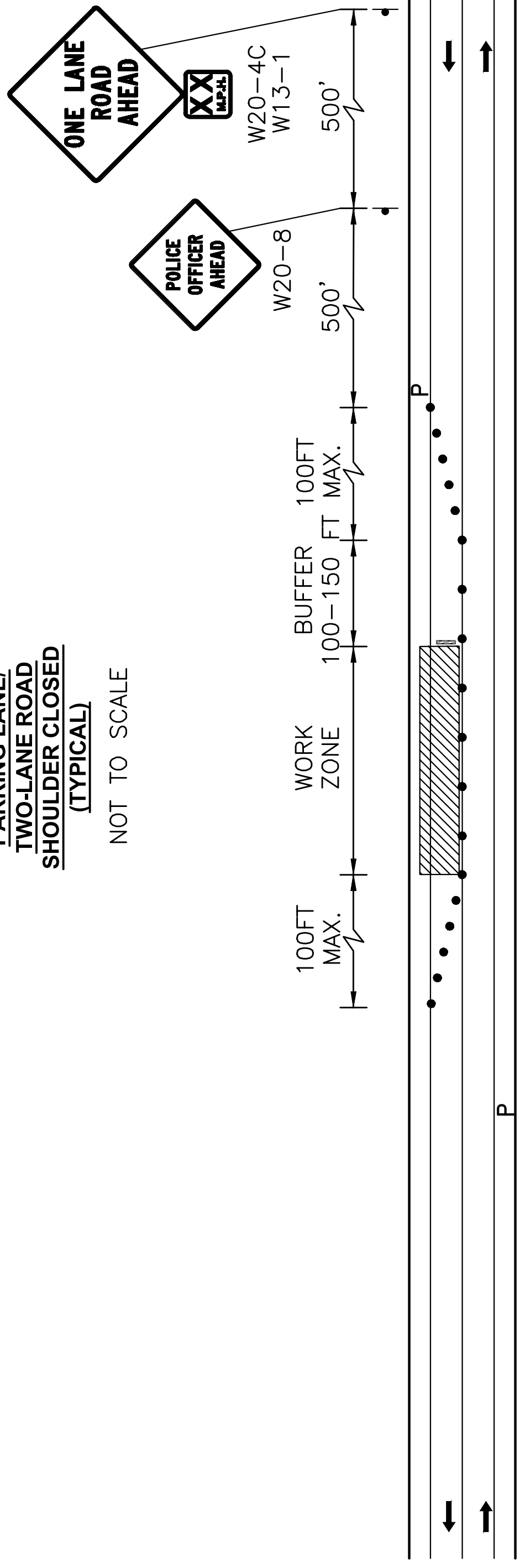
SHEET NO.

CD-1



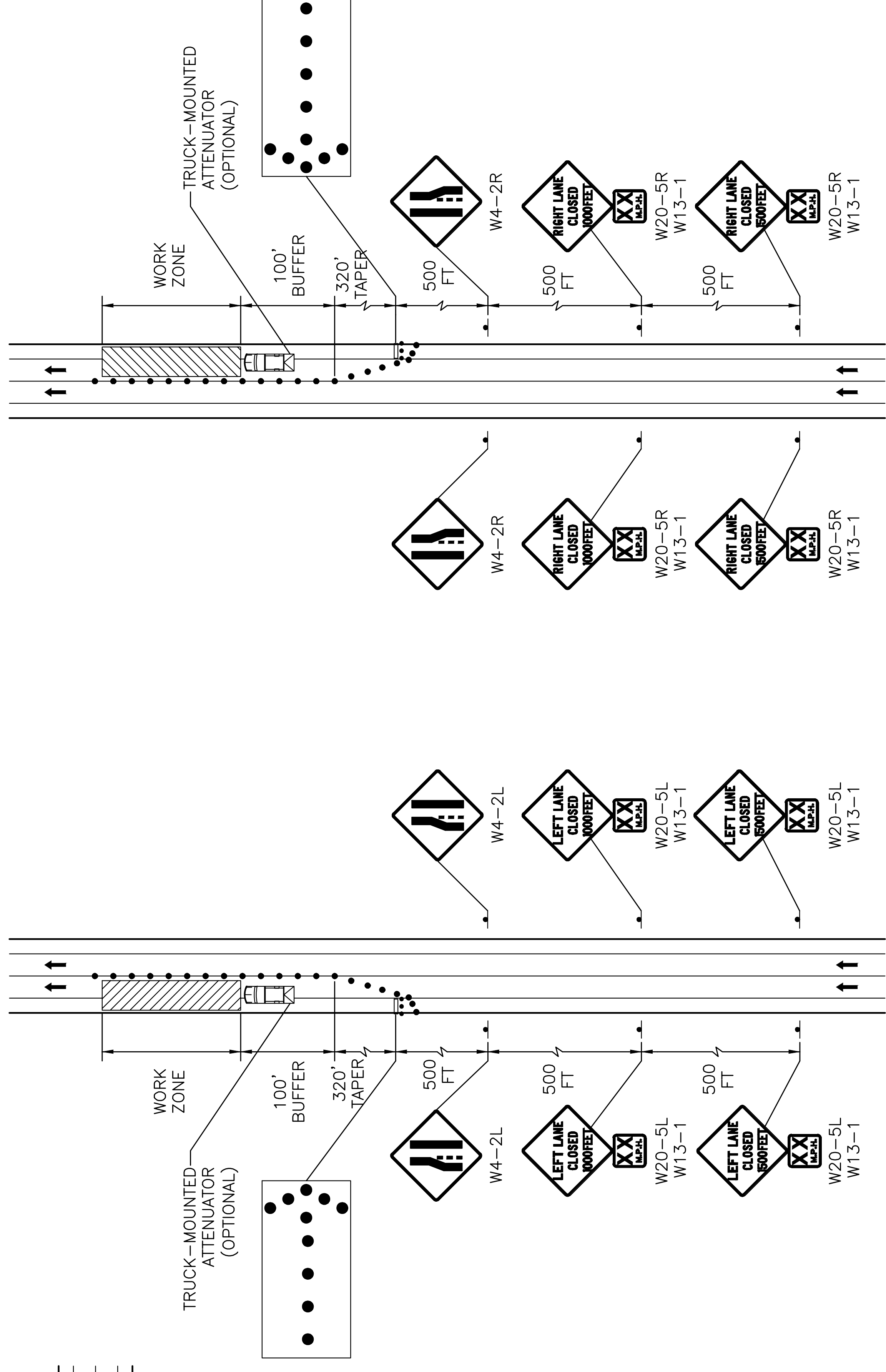
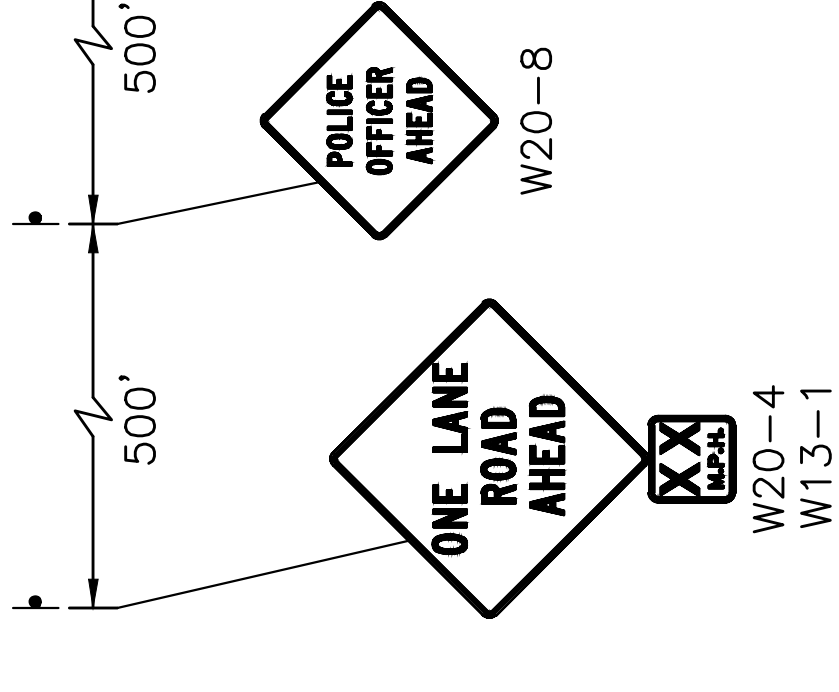
**PARKING LANE/
TWO-LANE ROAD
SHOULDER CLOSED
(TYPICAL)**

NOT TO SCALE



**TWO-LANE ROAD
ONE LANE ALTERNATING TRAFFIC
WITH POLICE DETAIL
(TYPICAL)**

NOT TO SCALE



LEFT LANE CLOSURE (TYPICAL)

NOT TO SCALE

RIGHT LANE CLOSURE (TYPICAL)

NOT TO SCALE

**SHOULDER CLOSED
PARKING LANE**

NOT TO SCALE

NUMBER DATE MADE BY CHECKED BY REVISIONS	DRAWN BY: PAN DESIGNED BY: RTG CHECKED BY: RD	REGISTERED PROFESSIONAL PREPARED BY: 8-17-20	www.BETA-Inc.com	SUBCONSULTANT	AS SHOWN	TITLE
					SEA STREET AND SMITH AVENUE SEWER REHABILITATION CONTRACT NO. 2020-001	TRAFFIC MANAGEMENT DETAILS
ISSUE DATE: AUGUST 2020 SHEET NO.: TMP-1				UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION		