

TOWN OF WAREHAM, MASSACHUSETTS WATER POLLUTION CONTROL WANKINQUOAH AVENUE SEWER REPAIR CONTRACT NO. 2023-002 NOVEMBER 2023

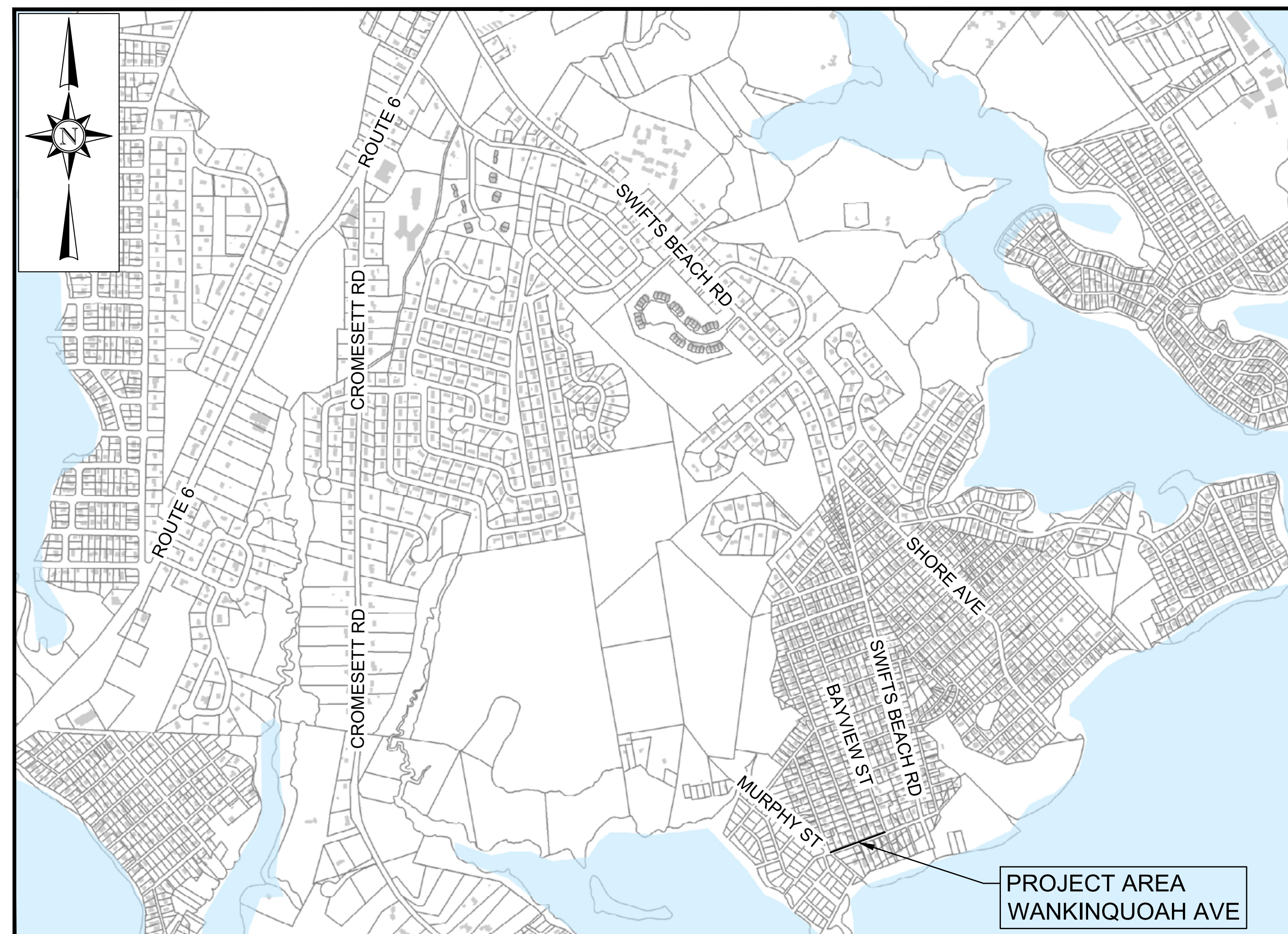


DEREK SULLIVAN

TOWN ADMINSTRATOR

SCOTT KRAIHANZEL

DIRECTOR OF WATER POLLUTION CONTROL



LOCATION MAP
NOT TO SCALE

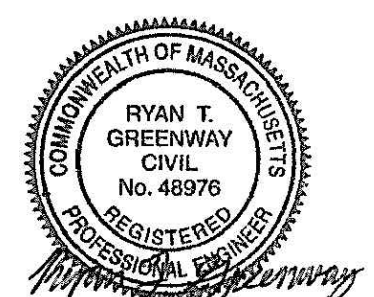
PREPARED BY:



ISSUE DATE: NOVEMBER 21, 2023

PLAN INDEX

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G-1	LEGEND AND GENERAL NOTES
G-2	LOCUS PLAN / CONCEPTUAL SEWER BYPASS PLAN
G-3	PAVEMENT RESTORATION PLAN
EX-1	EXISTING UTILITY PLAN
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CD-1 THRU CD-3	CIVIL DETAILS



REGISTERED PROFESSIONAL

11/21/2023

DATE

11/20/2023 4:00 PM J:\23_10914 - WAREHAM SWIFTS BEACH EMERGENCY REPAIRS\AUTOCAD\PLAN SET\NEW SEWER CONTRACT\LEGEND AND GENERAL NOTES.DWG

EXISTING FEATURES

Table mapping symbols to existing features such as Drain Line, Sewer Line, Water Line, Gas Line, and various manholes and poles.

PROPOSED WORK

Table mapping symbols to proposed work items including Sewer Line, Water Line, Hydrant, and various pipe materials and transitions.

ABBREVIATIONS

Table listing abbreviations for materials and structures like BIT (Bituminous), CONC (Concrete), and various pipe types like SWL (Solid White Line).

GENERAL

- GENERAL notes 1-15 covering construction standards, mapping, utilities, and site restoration.
GENERAL NOTES notes 1-9 covering erosion control, tree preservation, and excavation support.

GENERAL NOTES

- GENERAL NOTES 10-15 covering flow maintenance, excavation support, and dewatering.
GENERAL NOTES 16-18 covering flow maintenance, excavation support, and dewatering.

Table with columns: NUMBER, DATE, MADE BY, CHECKED BY, REVISIONS.

DRAWN BY: KJD
DESIGNED BY: RTG
CHECKED BY: CRC

REGISTERED PROFESSIONAL ENGINEER
RYAN T. GREENWAY
CIVIL No. 49876

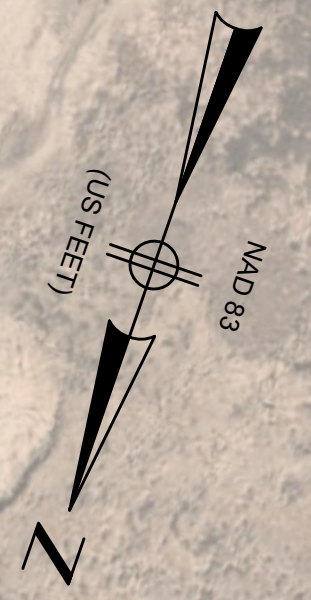
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SCALE: NONE

TOWN OF WAREHAM, MASSACHUSETTS
WANKINQUOAH AVENUE SEWER REPAIR
LEGEND AND GENERAL NOTES
BETA JOB NO. 10914
ISSUE DATE: NOVEMBER 21, 2023
SHEET NO. G-1

- NOTES**
1. THE CONTRACTOR'S SEQUENCE OF CONSTRUCTION AND BYPASS PLAN SHALL BE BASED UPON THE SCHEDULE SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER AS SPECIFIED. HOWEVER, AS A GUIDE FOR BIDDERS IN THE PREPARATION OF THEIR BID AND FOR THE CONTRACTOR IN THE PREPARATION OF HIS SCHEDULE, A RECOMMENDED BYPASS CONFIGURATION IS PROVIDED ON THIS PLAN.
 2. THE ORDER OF CONSTRUCTION SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER; SUCH APPROVAL OR DIRECTION, HOWEVER, SHALL IN NO WAY RELIEVE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM THE WORK IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONSTRUCTION PLANS AND SPECIFICATIONS HAVE BEEN DEVELOPED TO MINIMIZE THE CONSTRUCTION IMPACTS ON THE OPERATION OF THE TOWN'S WASTEWATER DISTRIBUTION SYSTEM. THE CONTRACTOR'S WORK SEQUENCE MUST BE SPECIFICALLY DETAILED IN THE CPM WHICH IS REQUIRED UNDER SECTION 01310.
 3. WHENEVER THE CONTRACTOR'S PROPOSED WORK WILL REQUIRE THE OWNER TO DEVIATE FROM THE NORMAL OPERATION OF THE WASTEWATER DISTRIBUTION SYSTEM, THE CONTRACTOR SHALL SO NOTIFY THE ENGINEER IN WRITING. SUCH NOTIFICATION SHALL BE SUBMITTED ONE WEEK PRIOR TO THE PLANNED CONSTRUCTION ACTIVITY.



AERIAL IMAGERY BY: NEARMAP

11/21/2023 10:27 AM J123.10914 - WAREHAM SWIFTS BEACH EMERGENCY REPAIRS/AUTOCAD/PLAN SET/NEW SENIOR CONTRACT/LOCUS.DWG

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:
KJD

DESIGNED BY:
RTG

CHECKED BY:
CRC

REGISTERED PROFESSIONAL

RYAN T. GREENWAY
CIVIL
No. 48976
REGISTERED PROFESSIONAL ENGINEER
STATE OF MASSACHUSETTS

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SCALE

1"=40'

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

TITLE

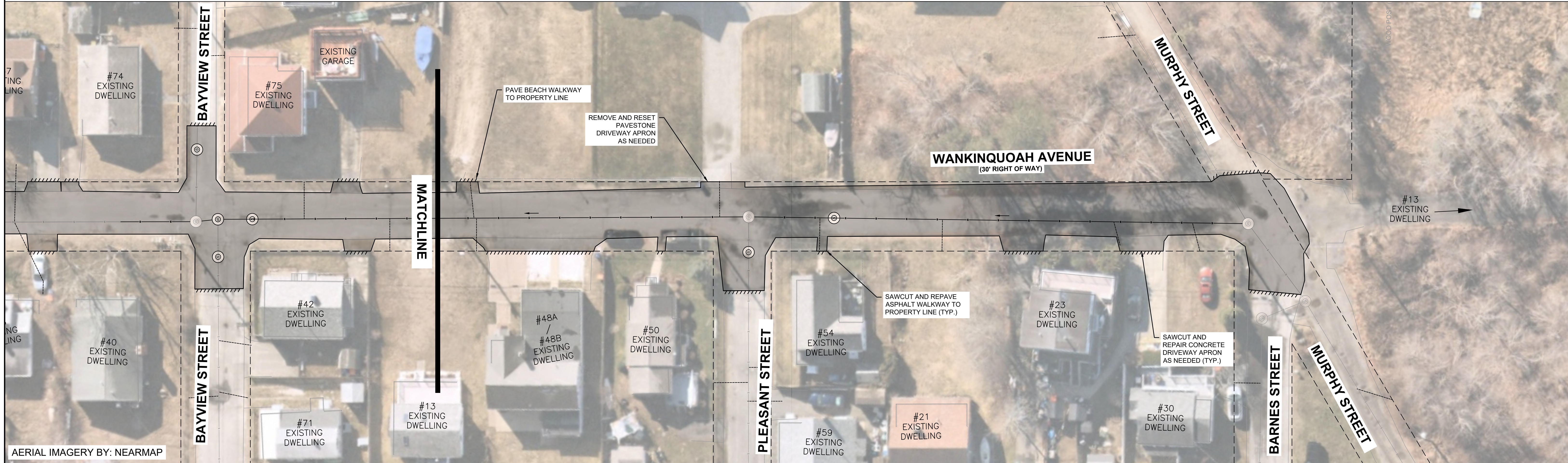
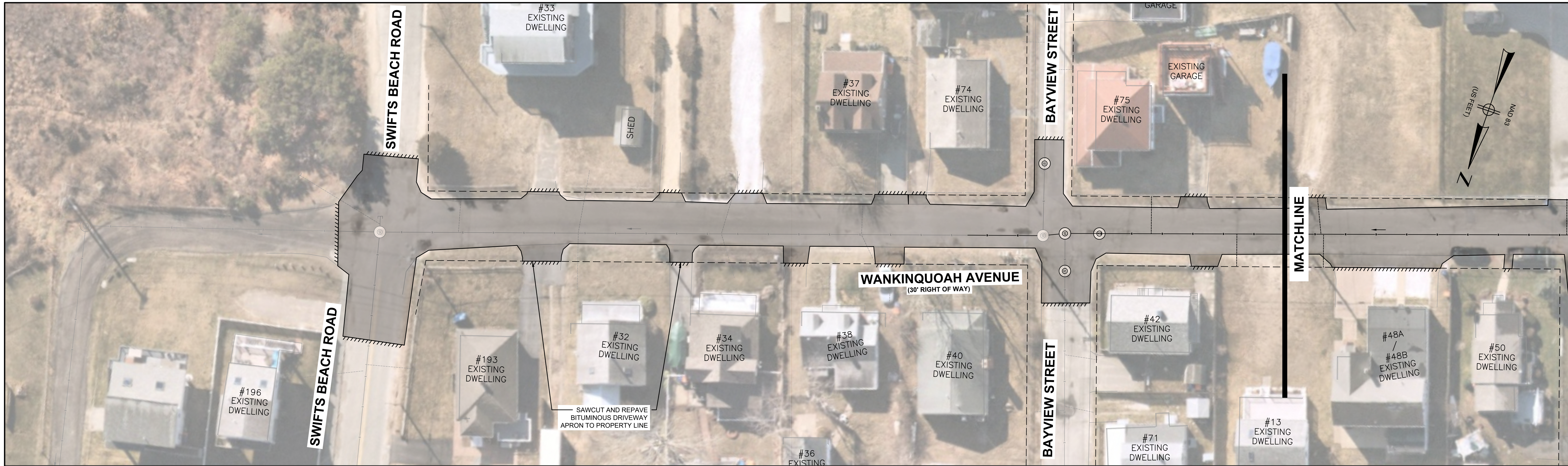
TOWN OF WAREHAM, MASSACHUSETTS
WANKINQUOAH AVENUE SEWER REPAIR

LOCUS PLAN / CONCEPTUAL
SEWER BYPASS PLAN

BETA JOB NO. 10914

ISSUE DATE NOVEMBER 21, 2023

SHEET NO. G-2



11/21/2023 10:41 AM - WAREHAM SWIFTS BEACH EMERGENCY REPAIRS/AUTOCAD/PLAN SET NEW SENIOR CONTRACT/LOCUS.DWG

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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KJD

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RTG

CHECKED BY:
CRC

REGISTERED PROFESSIONAL
RYAN T. GREENWAY
CIVIL
No. 48976
PROFESSIONAL ENGINEER



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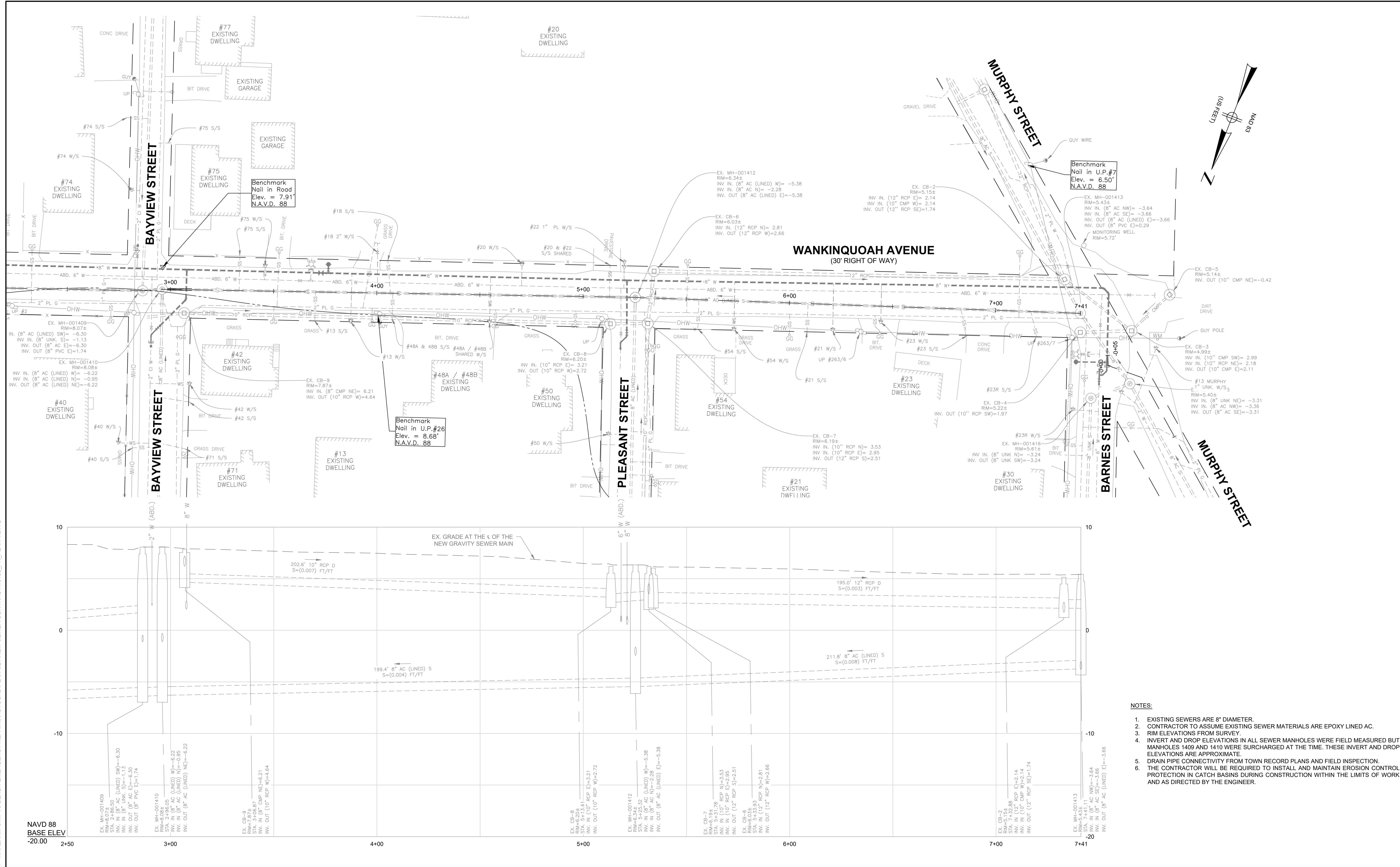
SCALE
1"=20'

TITLE
**TOWN OF WAREHAM, MASSACHUSETTS
WANKINQUOAH AVENUE SEWER REPAIR**
PAVEMENT RESTORATION PLAN

BETA JOB NO. 10914
ISSUE DATE NOVEMBER 21, 2023
SHEET NO. G-3

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11/21/2023 10:47 AM J123.10914 - WAREHAM SWIFTS BEACH EMERGENCY REPAIRS/AUTOCAD/PLAN SET/NEW SEWER CONTRACT/10188_PR_PLAN 1.DWG



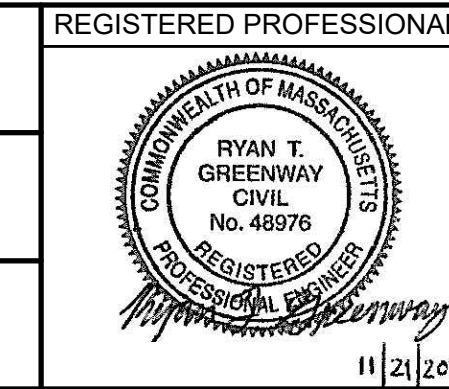
- NOTES:**
- EXISTING SEWERS ARE 8" DIAMETER.
 - CONTRACTOR TO ASSUME EXISTING SEWER MATERIALS ARE EPOXY LINED AC.
 - RIM ELEVATIONS FROM SURVEY.
 - INVERT AND DROP ELEVATIONS IN ALL SEWER MANHOLES WERE FIELD MEASURED BUT MANHOLES 1409 AND 1410 WERE SURCHARGED AT THE TIME. THESE INVERT AND DROP ELEVATIONS ARE APPROXIMATE.
 - DRAIN PIPE CONNECTIVITY FROM TOWN RECORD PLANS AND FIELD INSPECTION.
 - THE CONTRACTOR WILL BE REQUIRED TO INSTALL AND MAINTAIN EROSION CONTROL PROTECTION IN CATCH BASINS DURING CONSTRUCTION WITHIN THE LIMITS OF WORK AND AS DIRECTED BY THE ENGINEER.

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:
KJD

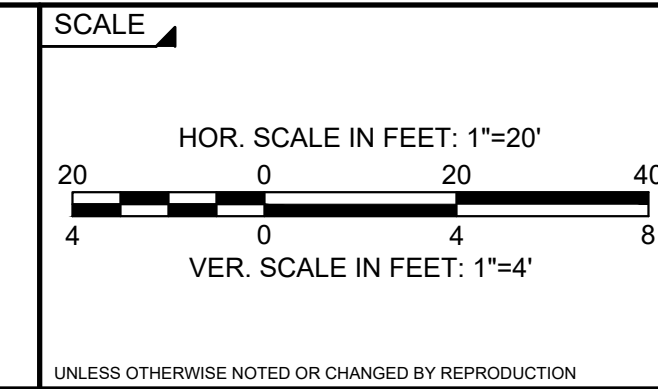
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RTG

CHECKED BY:
CRC



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TITLE

TOWN OF WAREHAM, MASSACHUSETTS
WANKINQUOAH AVENUE SEWER REPAIR

EXISTING UTILITY PLAN

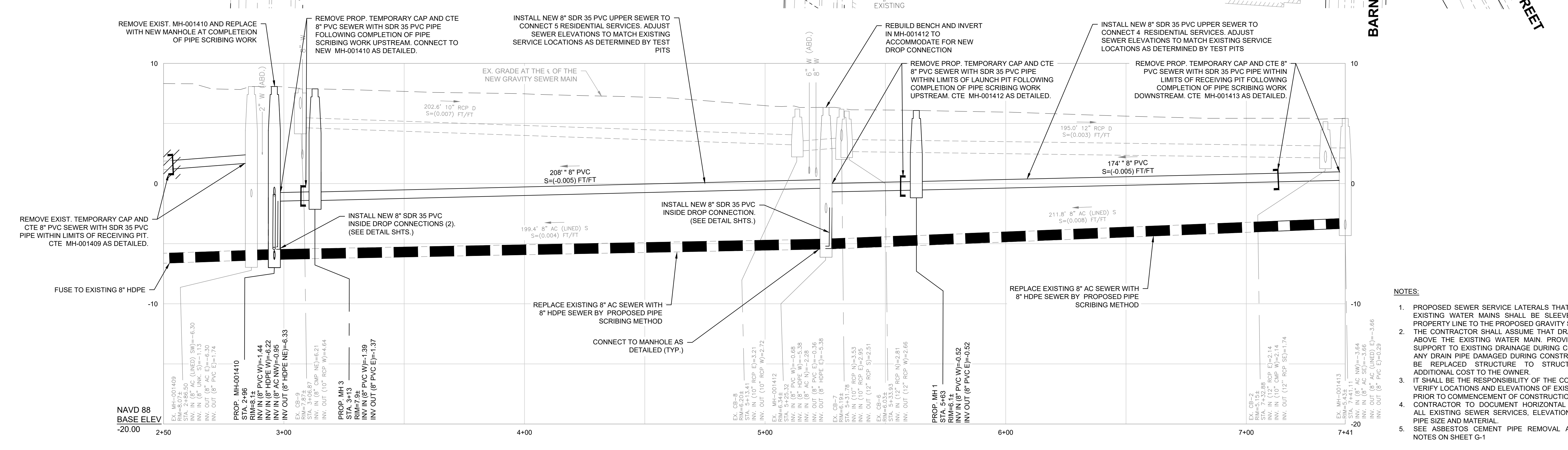
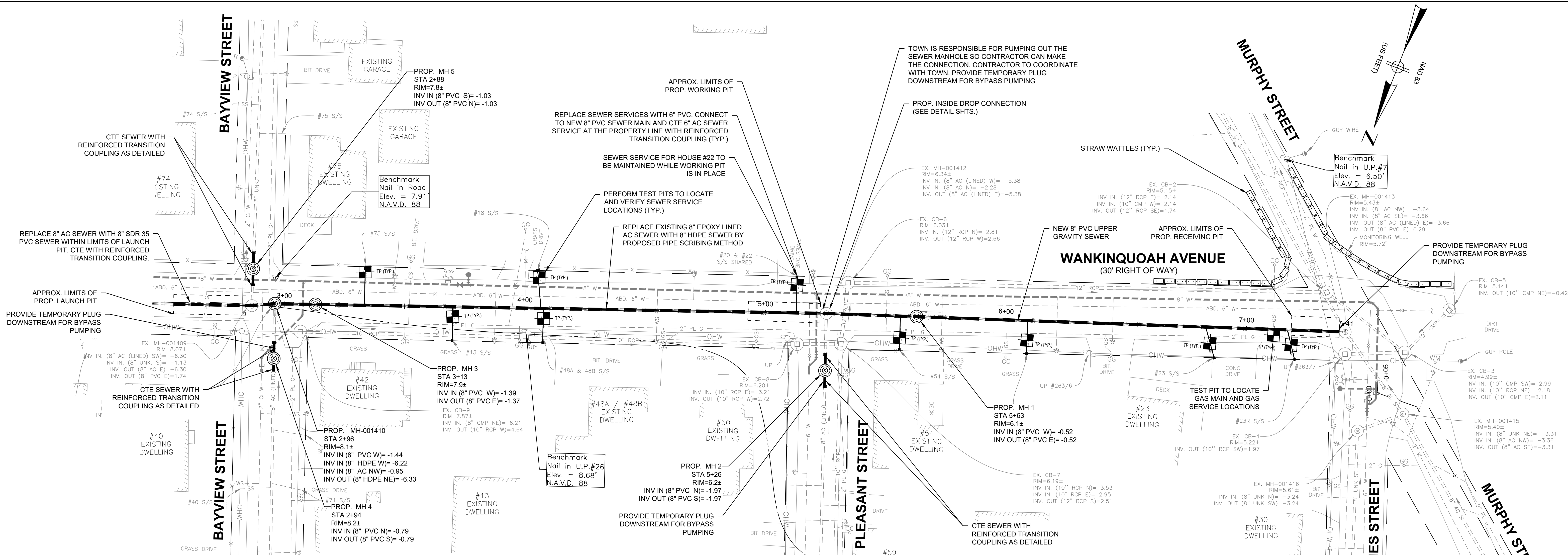
BETA JOB NO. 10914

ISSUE DATE: NOVEMBER 21, 2023

SHEET NO. EX-1

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11/21/2023 10:48 AM J103.10914 - WAREHAM SWIFTS BEACH EMERGENCY REPAIRS/AUTOCAD/PLAN SET/NEW SEWER CONTRACT/10188_PR_PLAN_1.DWG



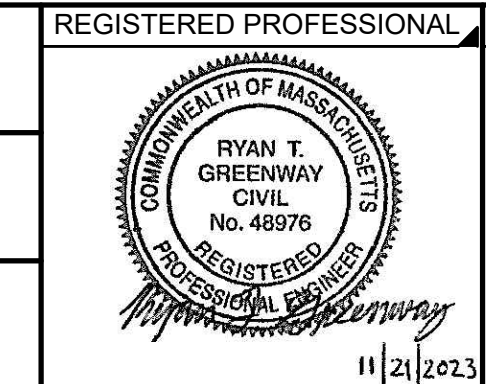
- NOTES:**
1. PROPOSED SEWER SERVICE LATERALS THAT CROSS OVER EXISTING WATER MAINS SHALL BE SLEEVED FROM THE PROPERTY LINE TO THE PROPOSED GRAVITY SEWER MAIN.
 2. THE CONTRACTOR SHALL ASSUME THAT DRAIN PIPES ARE ABOVE THE EXISTING WATER MAIN. PROVIDE ADEQUATE SUPPORT TO EXISTING DRAINAGE DURING CONSTRUCTION. ANY DRAIN PIPE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED STRUCTURE TO STRUCTURE AT NO ADDITIONAL COST TO THE OWNER.
 3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 4. CONTRACTOR TO DOCUMENT HORIZONTAL LOCATION OF ALL EXISTING SEWER SERVICES, ELEVATION OF SERVICE, PIPE SIZE AND MATERIAL.
 5. SEE ASBESTOS CEMENT PIPE REMOVAL AND DISPOSAL NOTES ON SHEET G-1

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

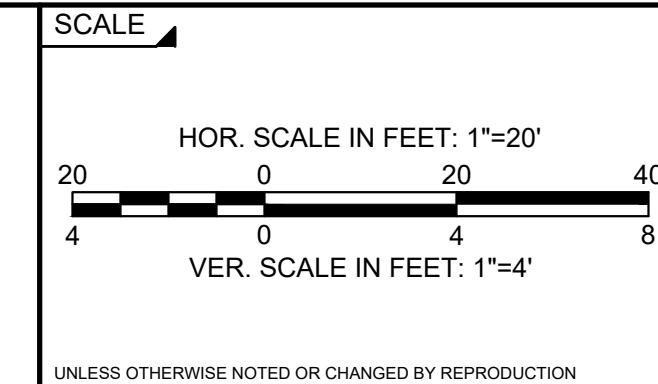
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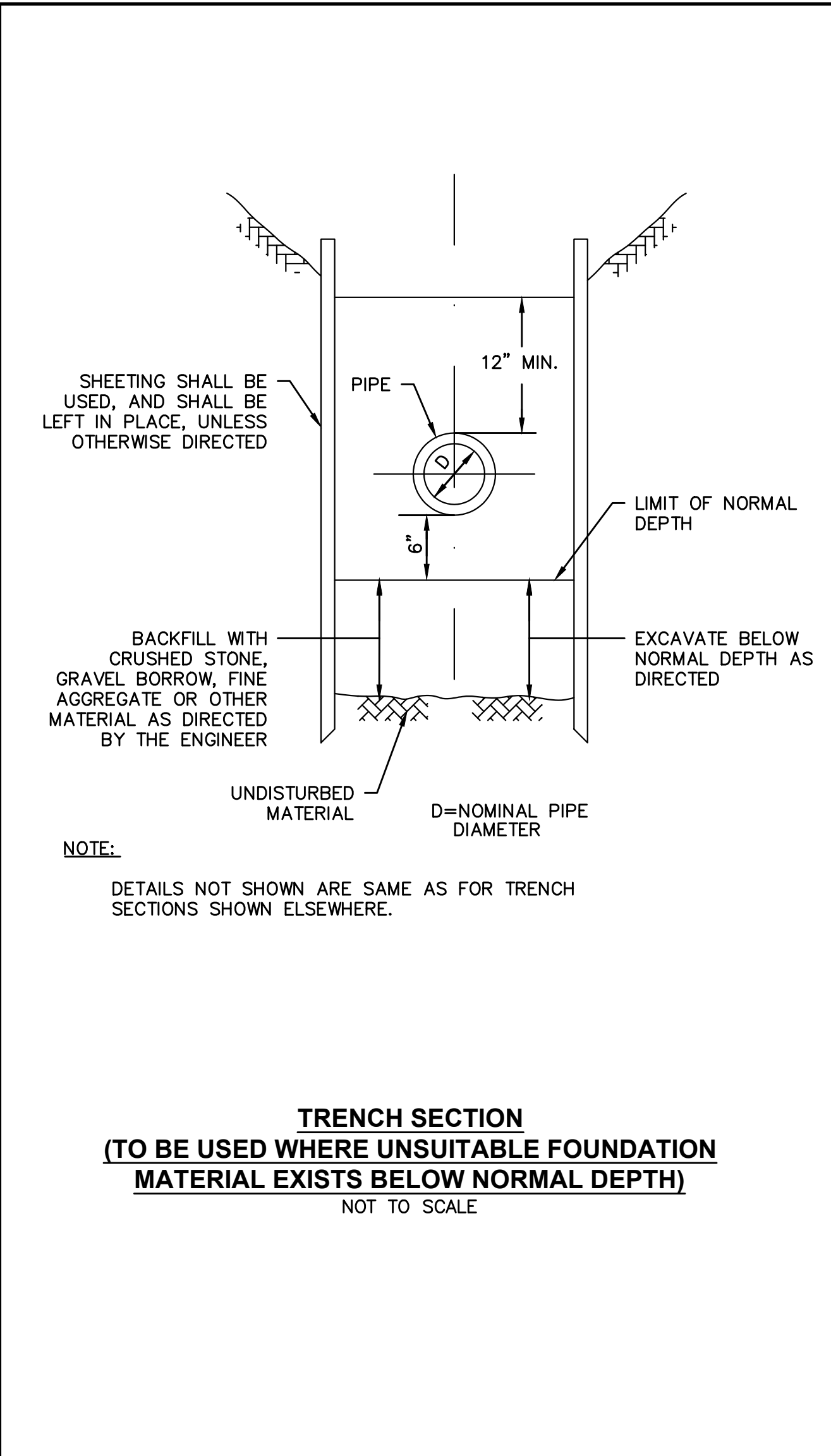
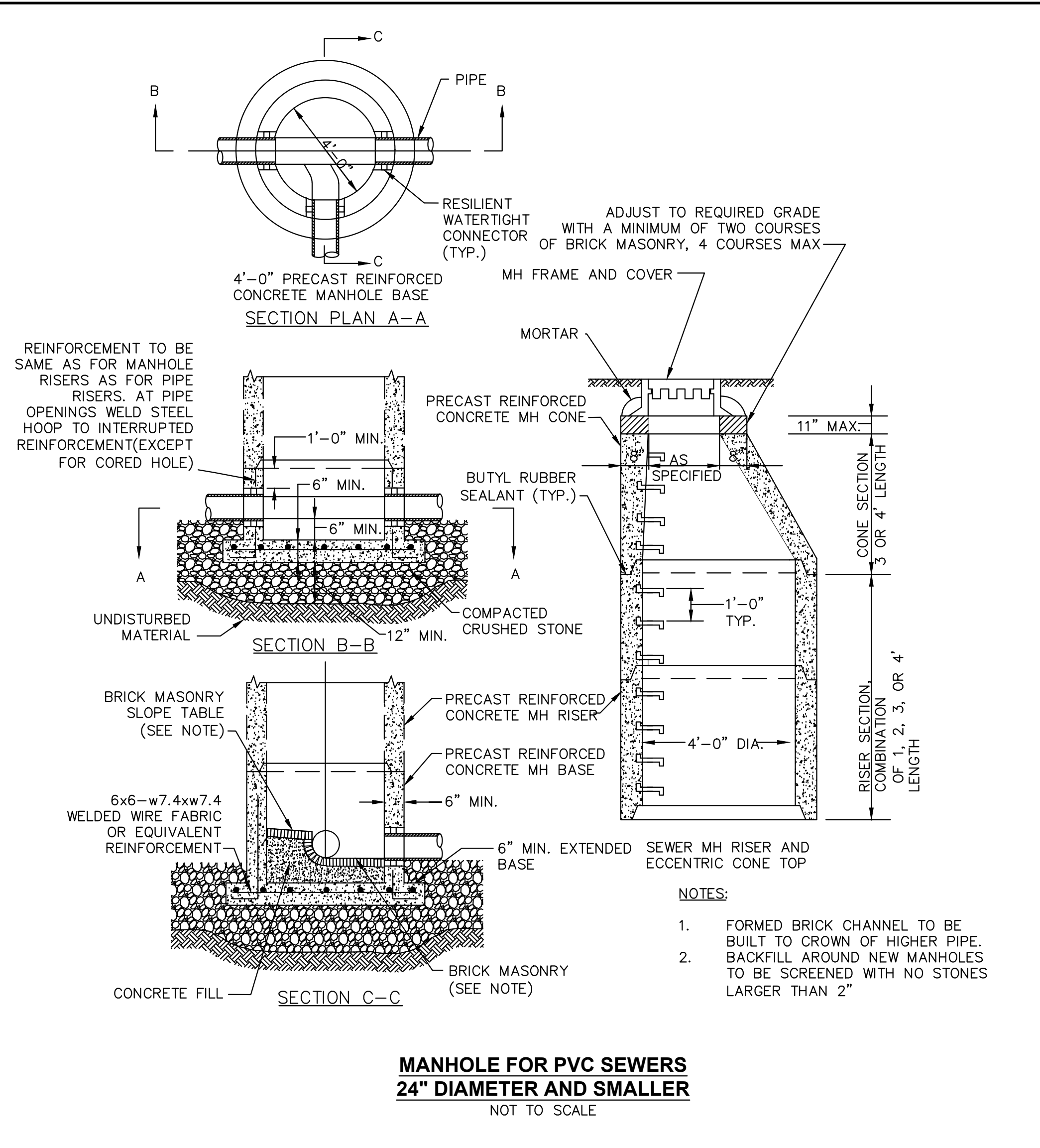


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TOWN OF WAREHAM, MASSACHUSETTS
WANKINQUOAH AVENUE SEWER REPAIR
PROPOSED SEWER PLAN

BETA JOB NO. 10914
ISSUE DATE: NOVEMBER 21, 2023
SHEET NO. C-1

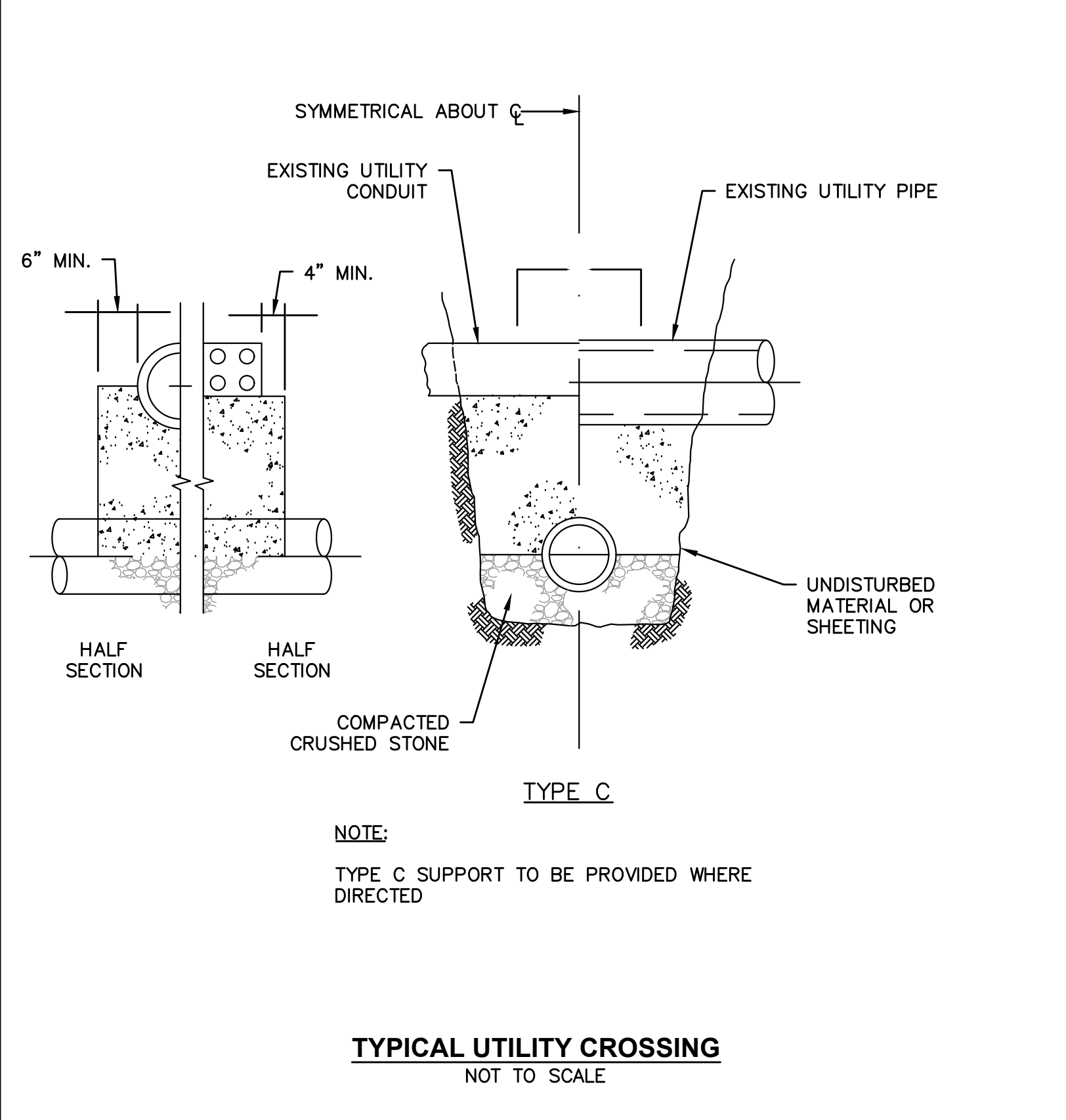
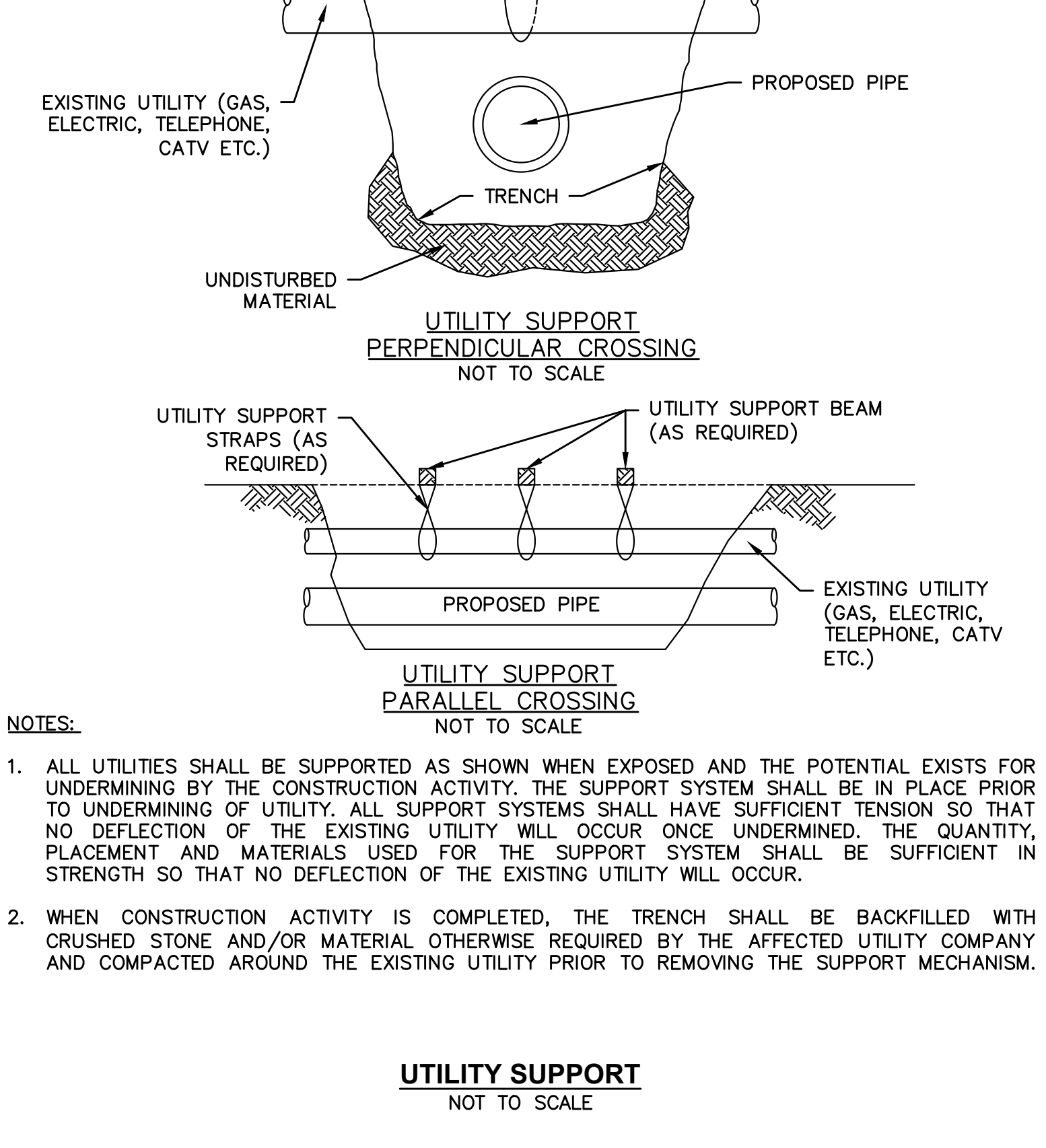
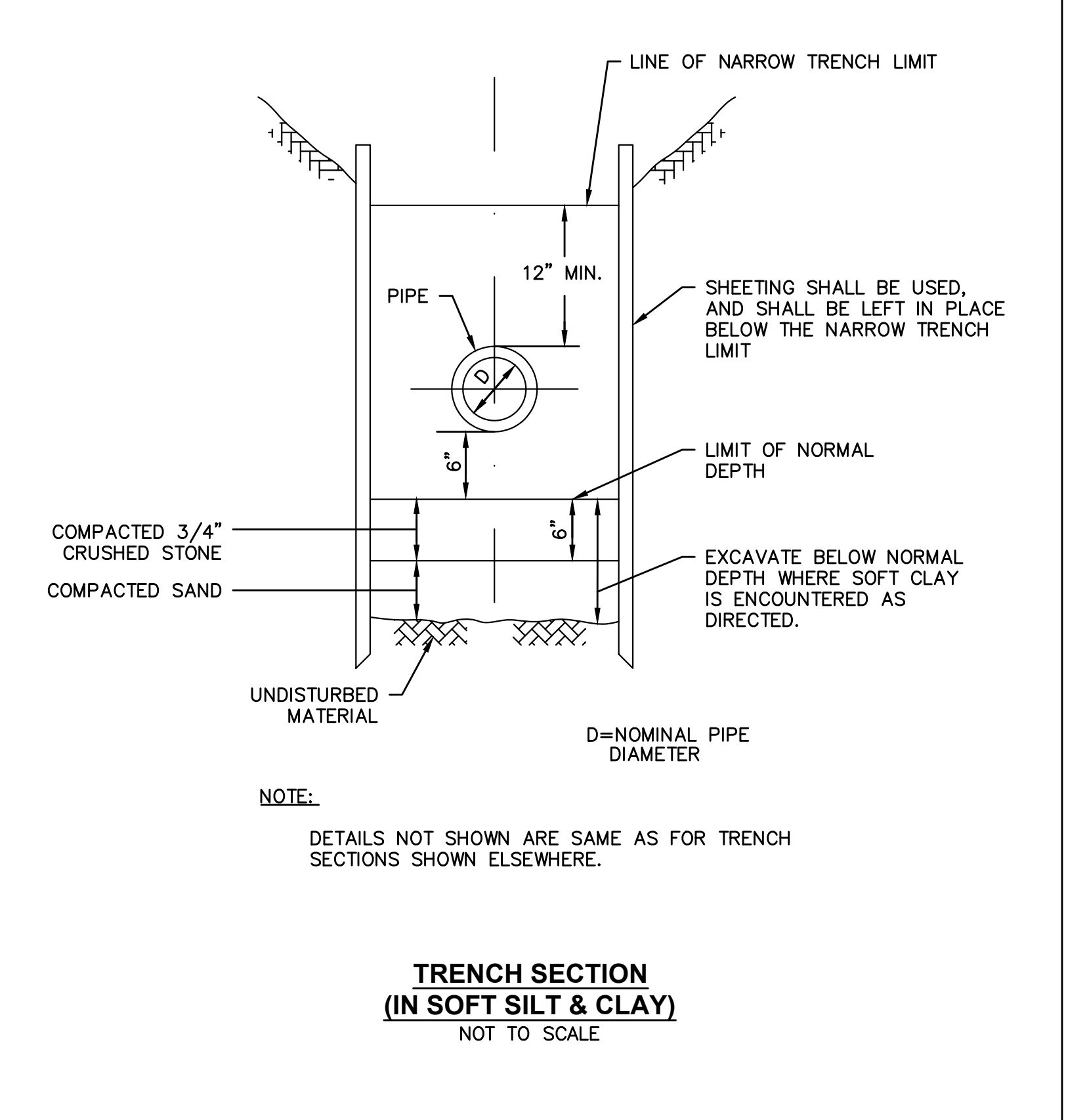
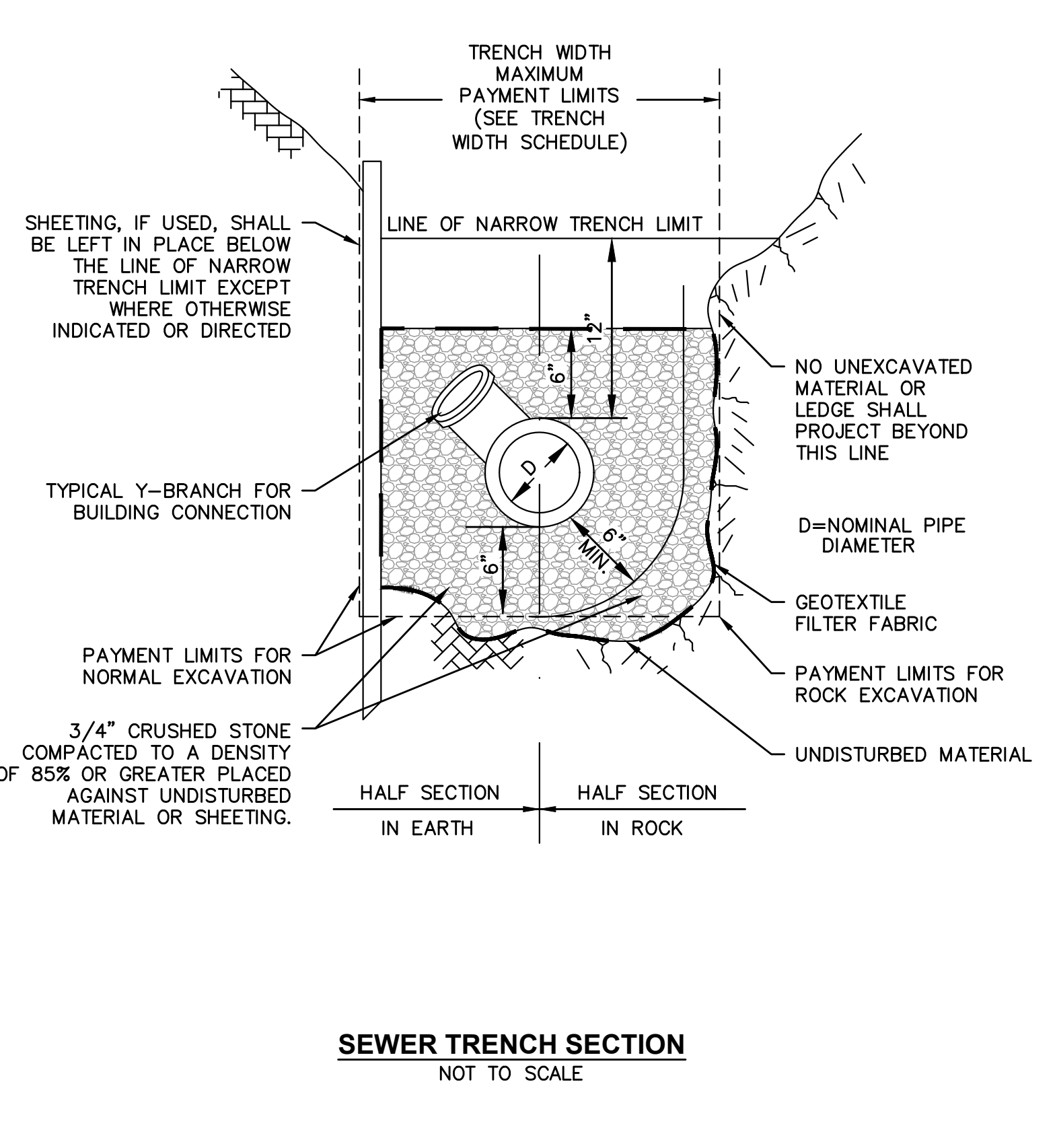
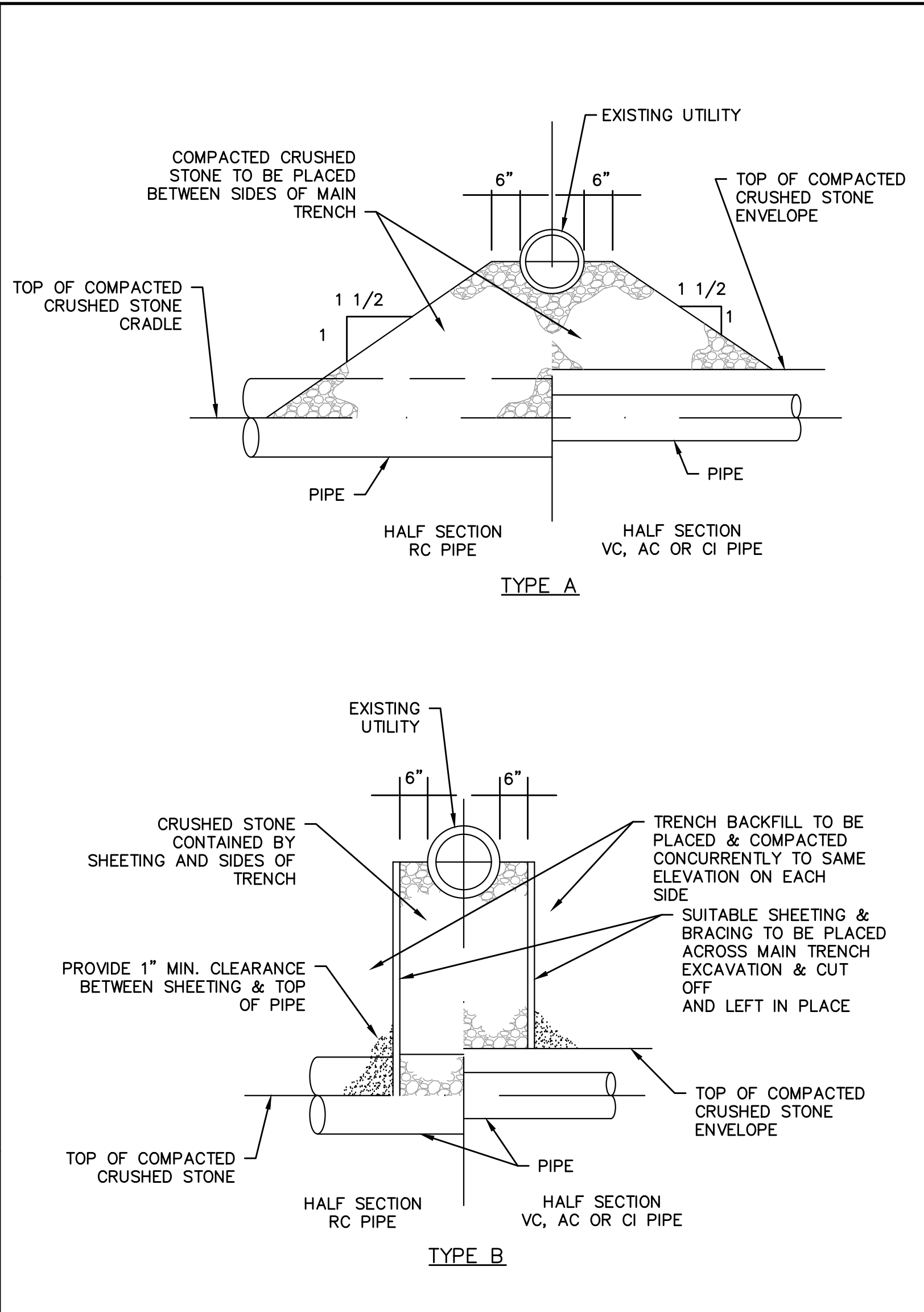
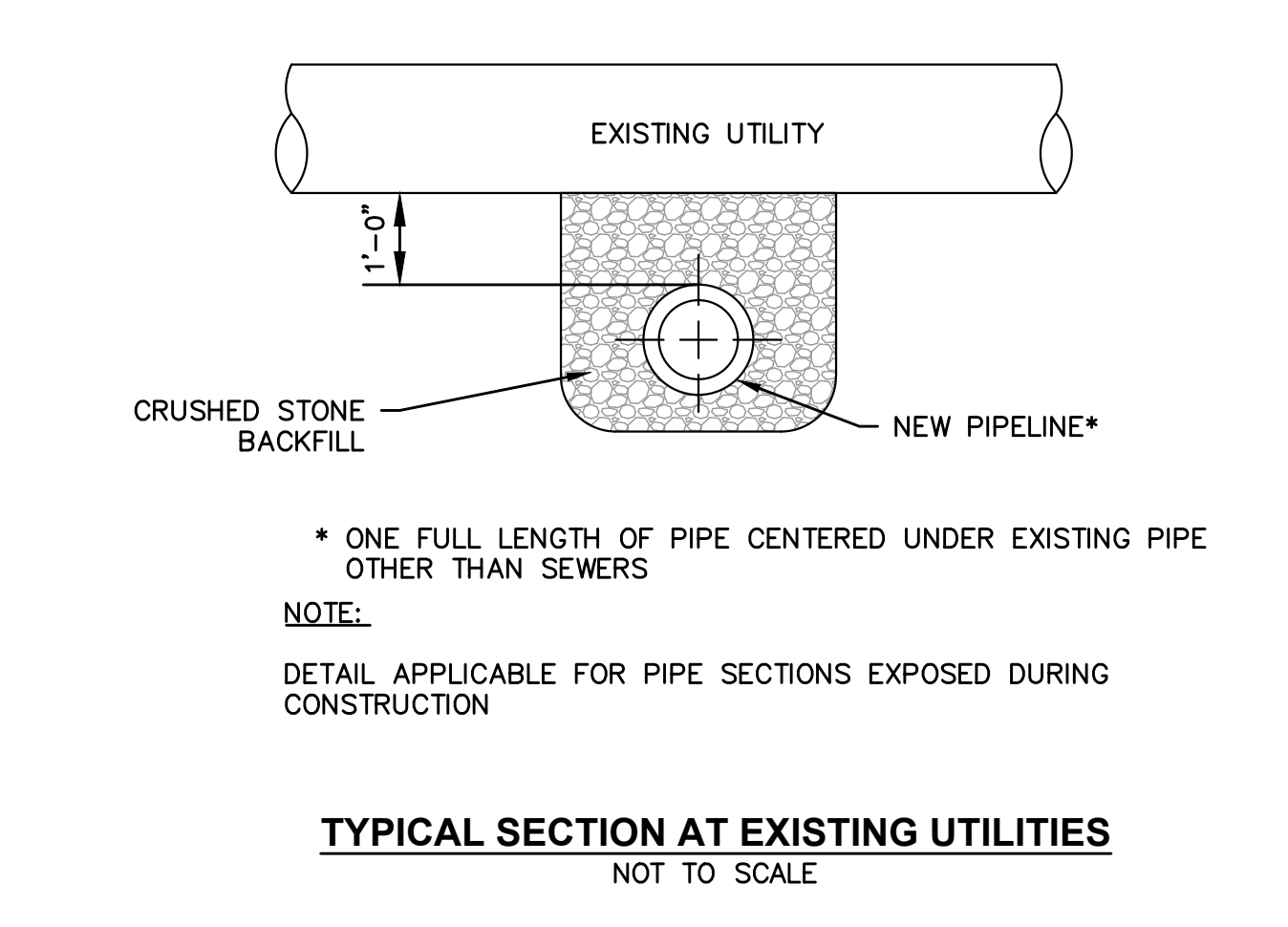


DIAMETER OF PIPE D IN INCHES	MAXIMUM PAYMENT LIMITS					
	TRENCH WIDTH IN FEET		TEMPORARY TRENCH PAVEMENT WIDTH IN FEET		PERMANENT TRENCH PAVEMENT WIDTH IN FEET*	
	TRENCH DEPTH	TRENCH DEPTH	TRENCH DEPTH	TRENCH DEPTH	TRENCH DEPTH	TRENCH DEPTH
12 AND SMALLER	< OR = 10'	> 10' TO 20'	< OR = 10'	> 10' TO 20'	< OR = 10'	> 10' TO 20'
	5.00	6.00	6.00	7.00	8.00	9.00

NOTES:

- PERMANENT TRENCH PAVEMENT INCLUDES 1' CUT BACK OF TEMPORARY PAVEMENT ALONG EACH SIDE OF THE TRENCH
- TRENCH DEPTH MEASURED FROM THE EXISTING GROUND SURFACE TO 6" BELOW THE BOTTOM OF THE CONSTRUCTED PIPE.
- QUANTITIES FOR PAYMENT SHALL BE IN ACCORDANCE WITH THE ABOVE LIMITS OR THE ACTUAL WIDTHS, WHICHEVER IS LESS.

**TRENCH WIDTH SCHEDULE
NOT TO SCALE**



11/21/2023 10:53 AM J103.10914 - WAREHAM SWIFTS BEACH EMERGENCY REPAIRS/AUTOCAD/PLAN SET/NEW SEWER CONTRACT/DETAILS.DWG

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RTG

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CRC

REGISTERED PROFESSIONAL

PREPARED BY

RYAN T. GREENWAY
CIVIL
No. 48976
REGISTERED PROFESSIONAL ENGINEER

BETA

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SCALE

NONE

TITLE

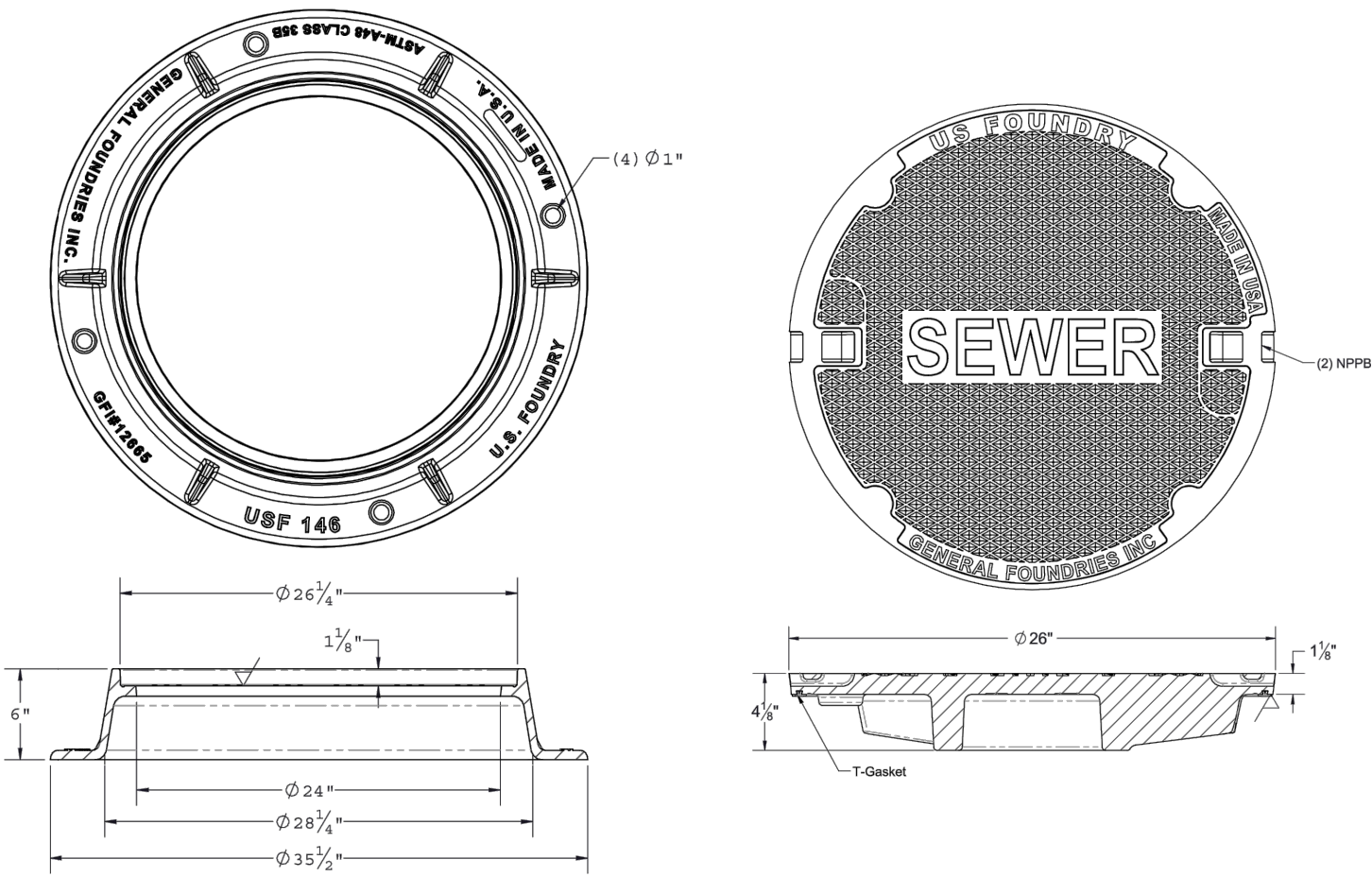
TOWN OF WAREHAM, MASSACHUSETTS
WANKINQUOAH AVENUE SEWER REPAIR

BETA JOB NO. 10914

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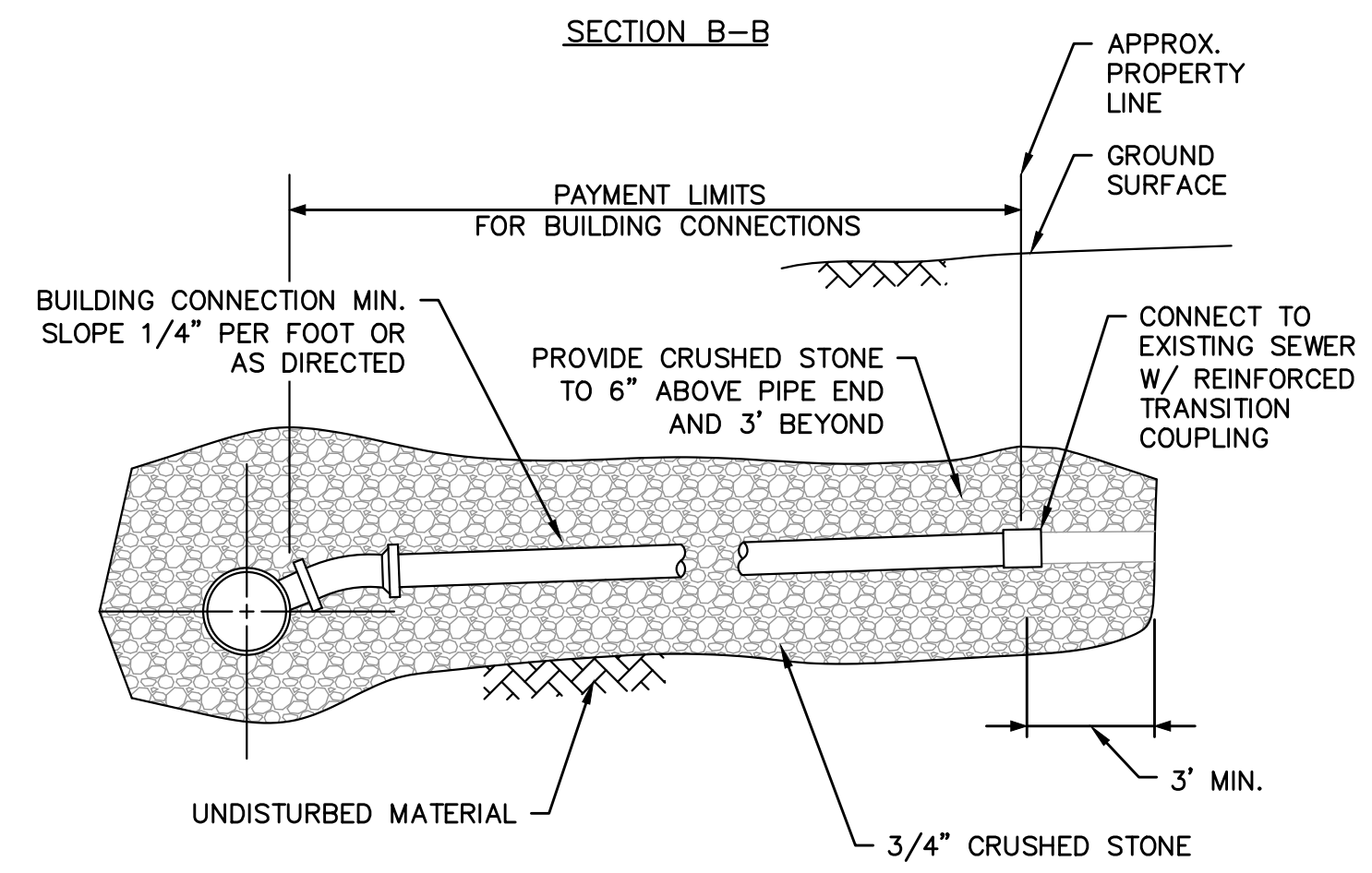
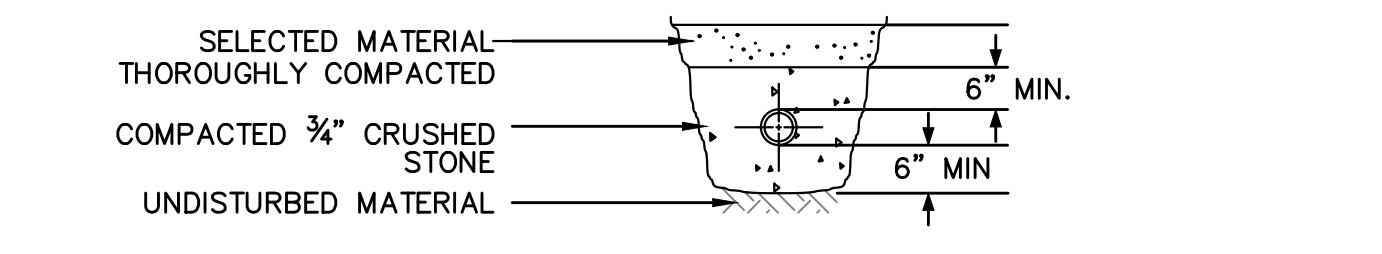
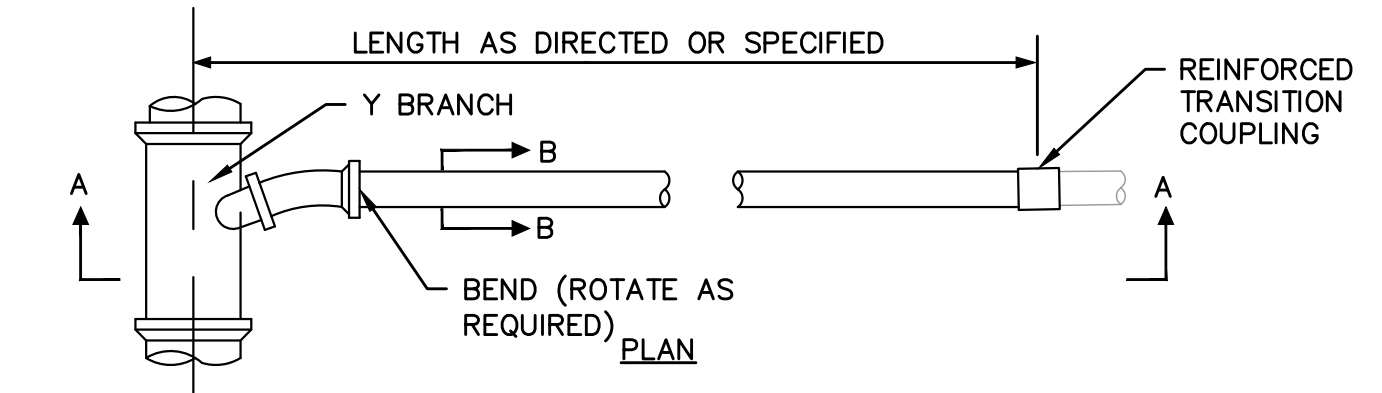
SHEET NO. CD-1

CIVIL DETAILS 1



- NOTES:**
1. FRAME AND COVER SET FOR SEWER MANHOLES SHALL BE MODEL NOS. 8021904 / 8013697 AS MANUFACTURED BY GENERAL FOUNDRIES INC OR APPROVED EQUAL.
 2. COVER CASTING SHALL CONFORM TO THE MUNICIPAL STANDARD (AS SHOWN) UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
 3. COVER LETTERING DETAIL APPLIES TO ALL COVER SIZES AND WATERTIGHT MANHOLE COVERS IN ACCORDANCE WITH NOTES IN TYPICAL MANHOLE DETAIL.
 4. FOR SHALLOW STRUCTURES 6\"/>

26-INCH SEWER MANHOLE FRAME AND COVER
NOT TO SCALE

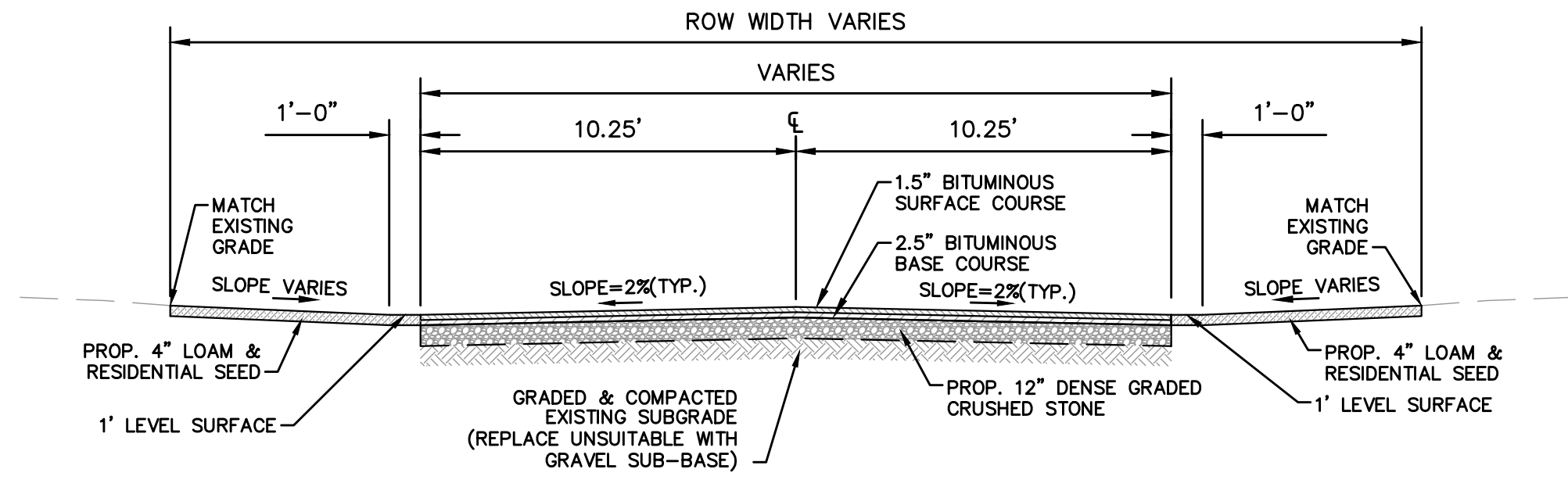


GRAVITY SEWER SERVICE
NOT TO SCALE

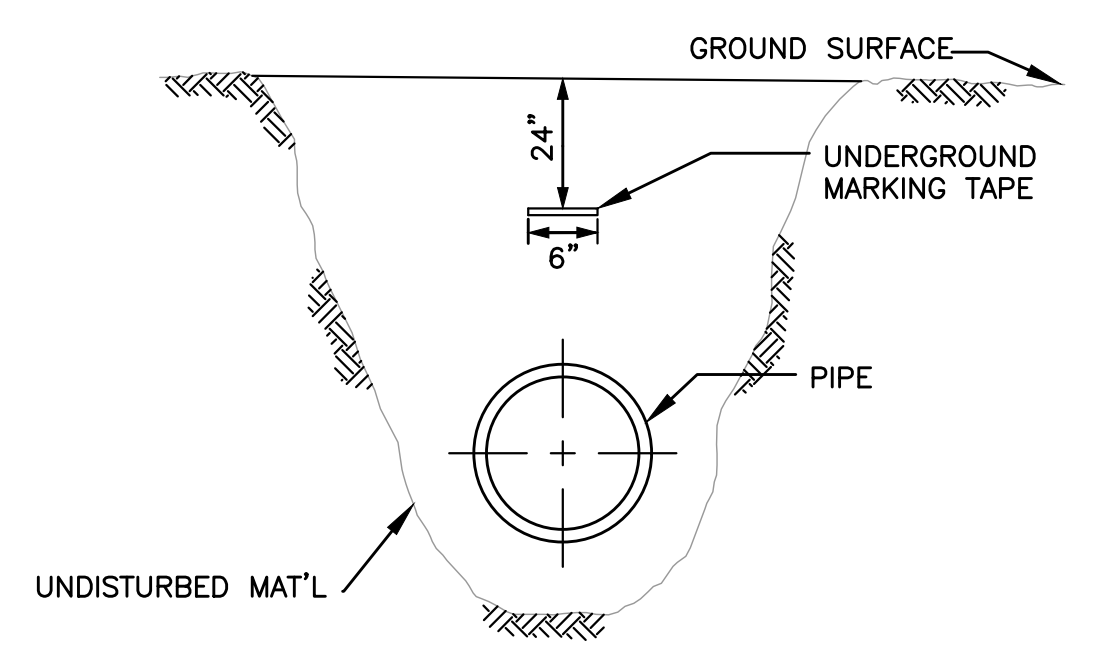
PAVEMENT NOTES

- FULL DEPTH PAVEMENT**
 SURFACE COURSE: 1.5\"/>

HMA DRIVEWAYS
 SURFACE COURSE: 1.5\"/>

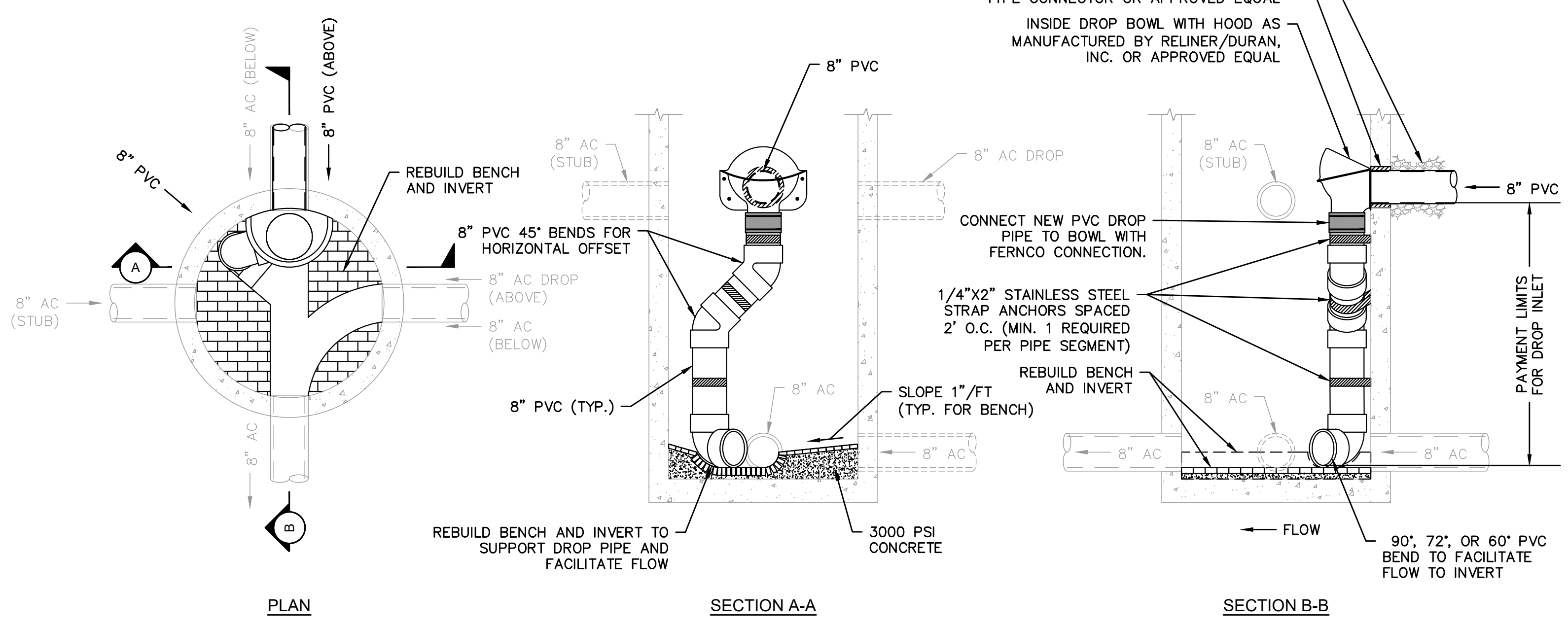


ROADWAY TYPICAL SECTION FULL DEPTH RECONSTRUCTION
NOT TO SCALE

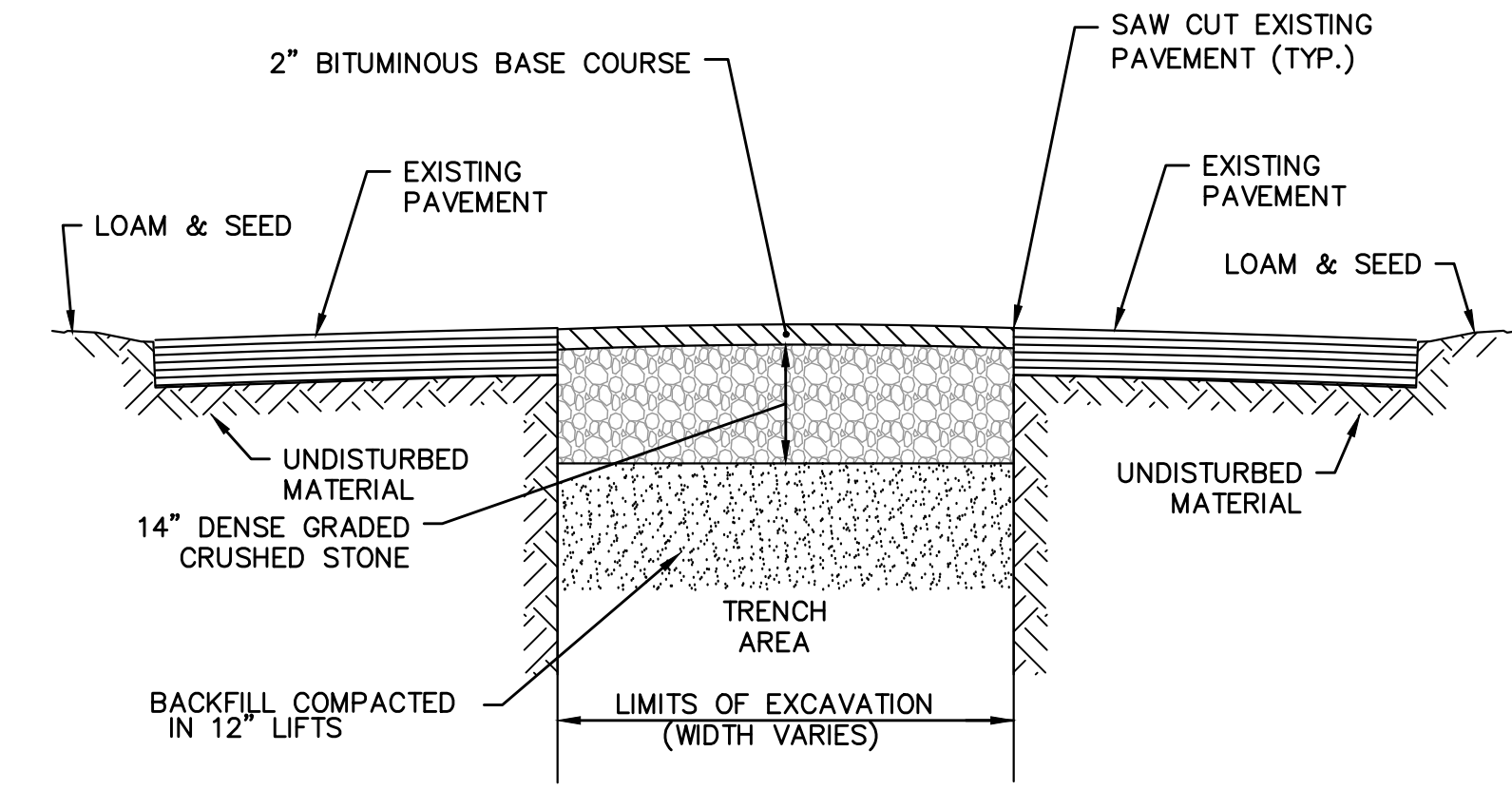


- NOTES:**
1. MARKING TAPE TO BE INSTALLED OVER ALL PIPELINES AND CONDUITS INSTALLED UNDER THIS CONTRACT.
 2. MARKING TAPE FOR NON-FERROUS PIPE OR CONDUITS TO BE DETECTABLE, MAGNETIC TYPE.
 3. MARKING TAPE FOR FERROUS PIPE OF CONDUITS TO BE NON-DETECTABLE, NON-MAGNETIC TYPE.
 4. MARKING TAPE IS TO BE 6-INCHES WIDE AND INSTALLED DIRECTLY ABOVE THE PIPE OR CONDUIT APPROXIMATELY 24-INCHES BELOW THE PROPOSED FINISHED GRADE.

UNDERGROUND UTILITY MARKING TAPE DETAIL
NOT TO SCALE

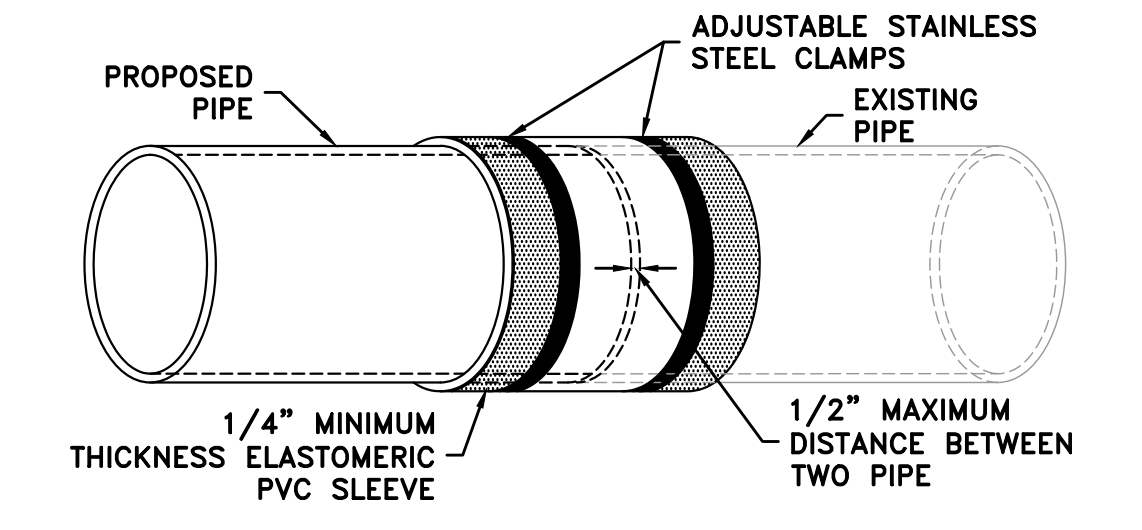


SEWER MANHOLE INSIDE DROP CONNECTION (MH 1410 & 1412)
NOT TO SCALE



- NOTES:**
1. CONTRACTOR TO VARY PAVEMENT THICKNESS TO MAINTAIN A MINIMUM. CROSS SECTIONAL SLOPE EQUALING 0.02 FT/FT OR %.
 2. DETAIL IS ALSO TO BE USED FOR PAVING LAUNCHING AND RECEIVING PITS.

TEMPORARY BITUMINOUS CONCRETE TRENCH WIDTH PAVEMENT
NOT TO SCALE



- NOTES:**
1. THE PROPOSED PIPE MAY HAVE AN OUTSIDE DIAMETER (O.D.) THAT IS DIFFERENT THAN THE O.D. OF THE EXISTING PIPE. THE CONTRACTOR SHALL VERIFY THE O.D. PRIOR TO ORDERING THE COUPLING.
 2. COUPLING SHALL BE SHIELDED REPAIR COUPLING - FERCO STRONGBACK RC SERIES WITH STAINLESS STEEL MOLDED BUSHING AND HARDWARE, SIZED TO SUIT OR EQUAL

REINFORCED TRANSITION COUPLING CONNECTION
NOT TO SCALE

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REGISTERED PROFESSIONAL
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 No. 49876
 PROFESSIONAL ENGINEER

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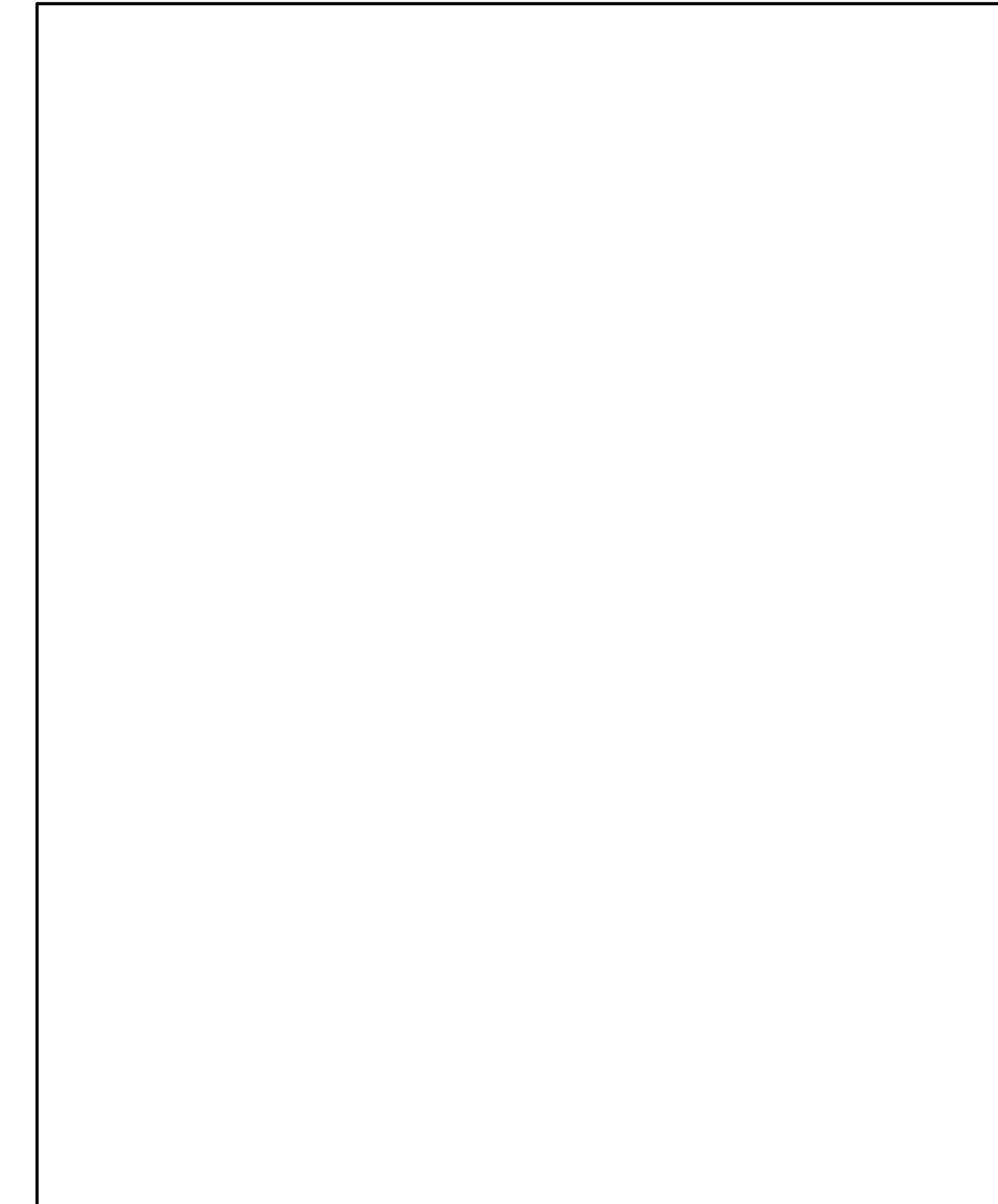
SCALE
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TITLE
**TOWN OF WAREHAM, MASSACHUSETTS
 WANKINQUOAH AVENUE SEWER REPAIR**

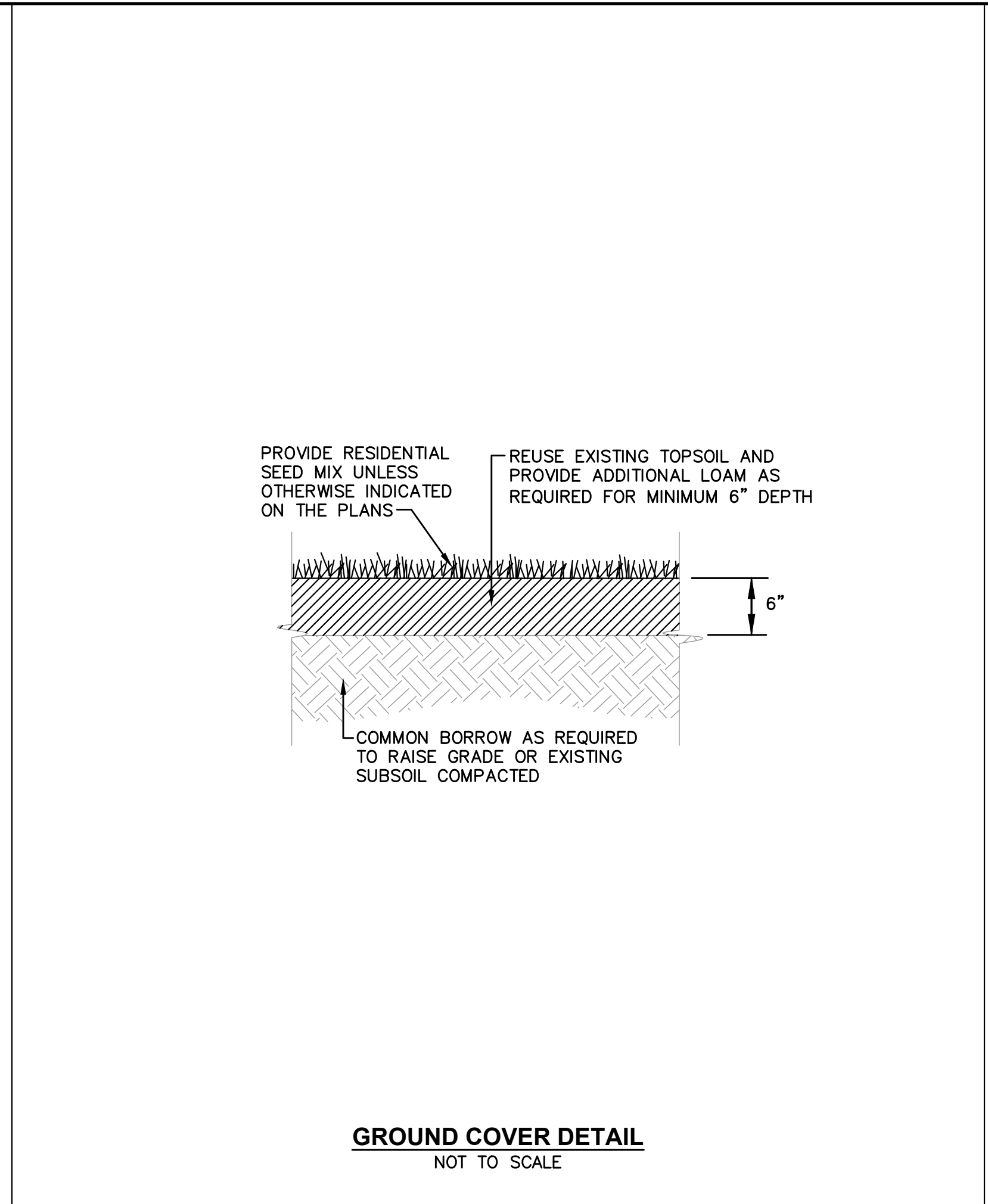
CIVIL DETAILS 2

BETA JOB NO. 10914
 ISSUE DATE: NOVEMBER 21, 2023
 SHEET NO. CD-2

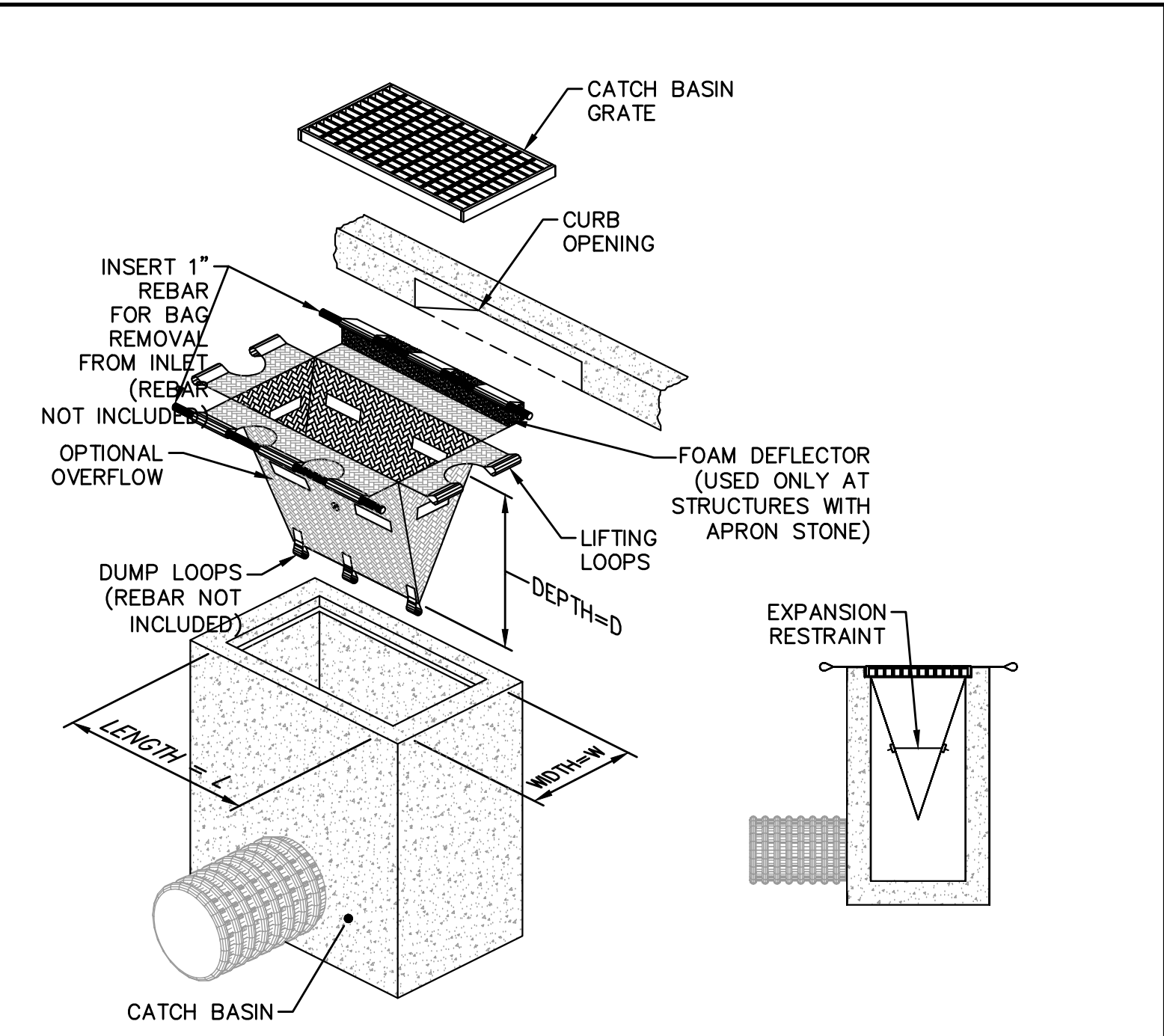
11/21/2023 10:53 AM J103.10014 - WAREHAM SWIFTS BEACH EMERGENCY REPAIRS/AUTOCAD/PLAN SET/NEW SEWER CONTRACT/DETAILS.DWG



GROUND COVER DETAIL
NOT TO SCALE



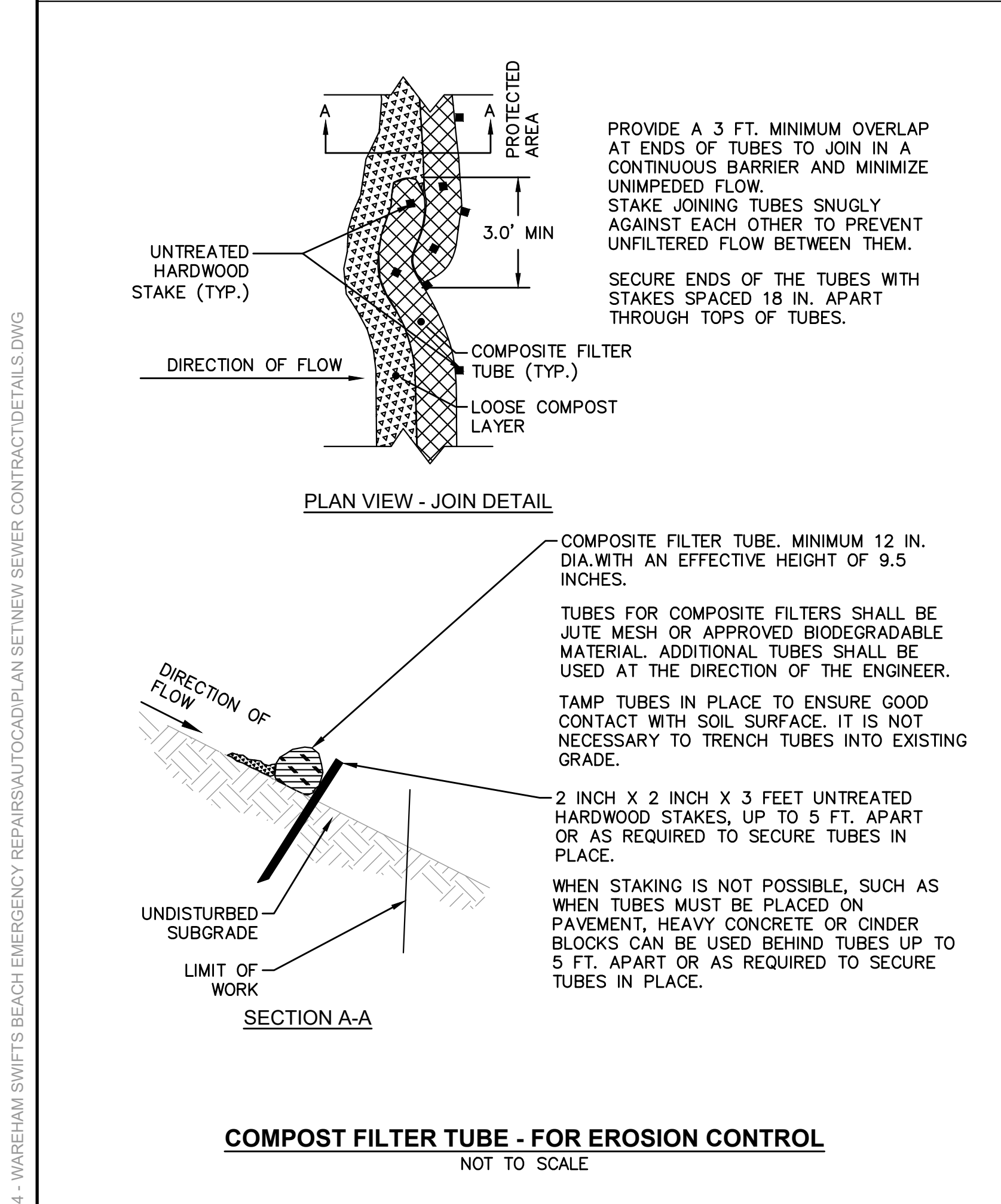
INLET SEDIMENT CONTROL DEVICE (SILT SACK)
(WITH OPTIONAL CURB DEFLECTOR)
NOT TO SCALE



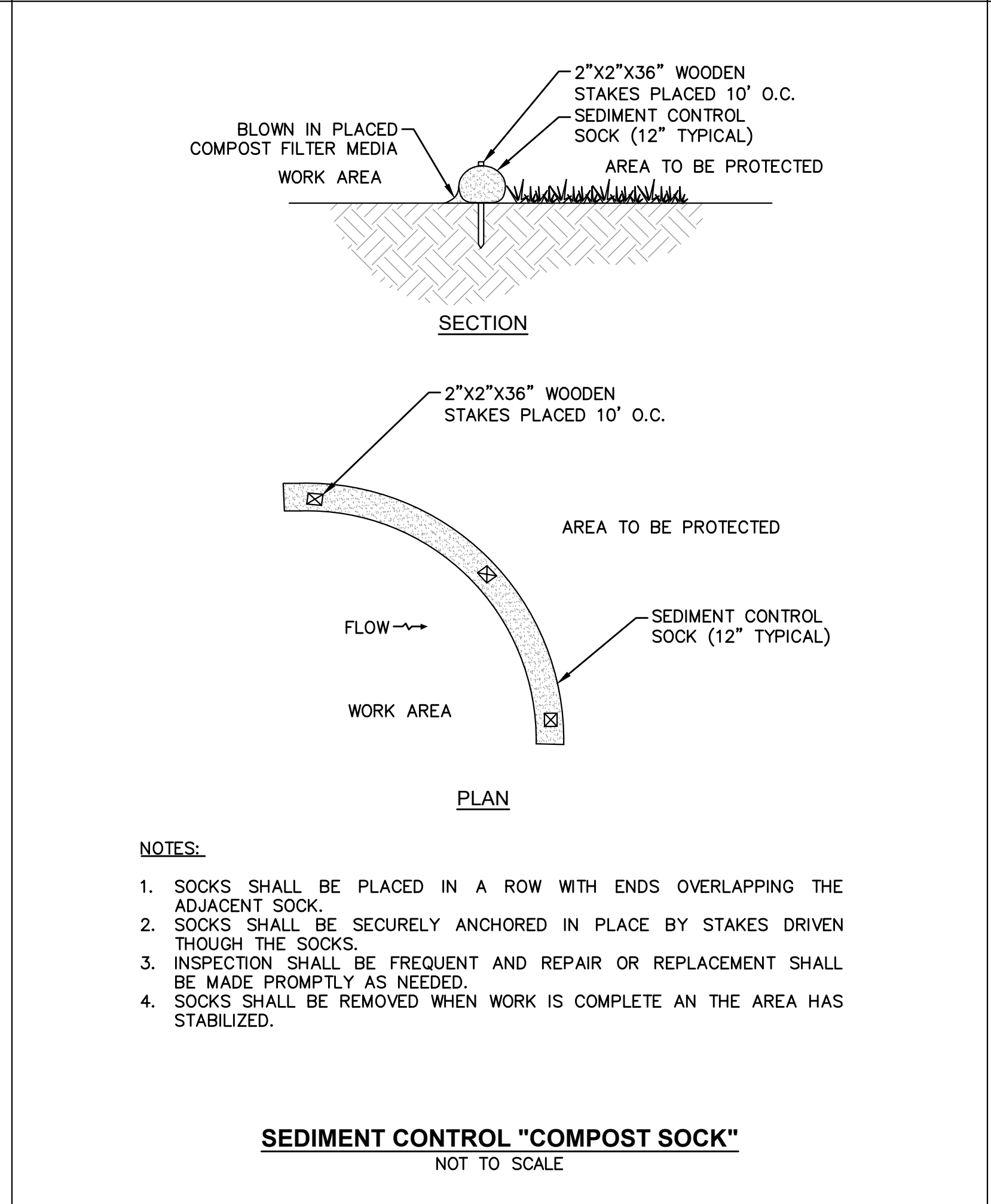
SEDIMENT CONTROL TRAP WITH DEWATERING BAG
NOT TO SCALE

NOTES:

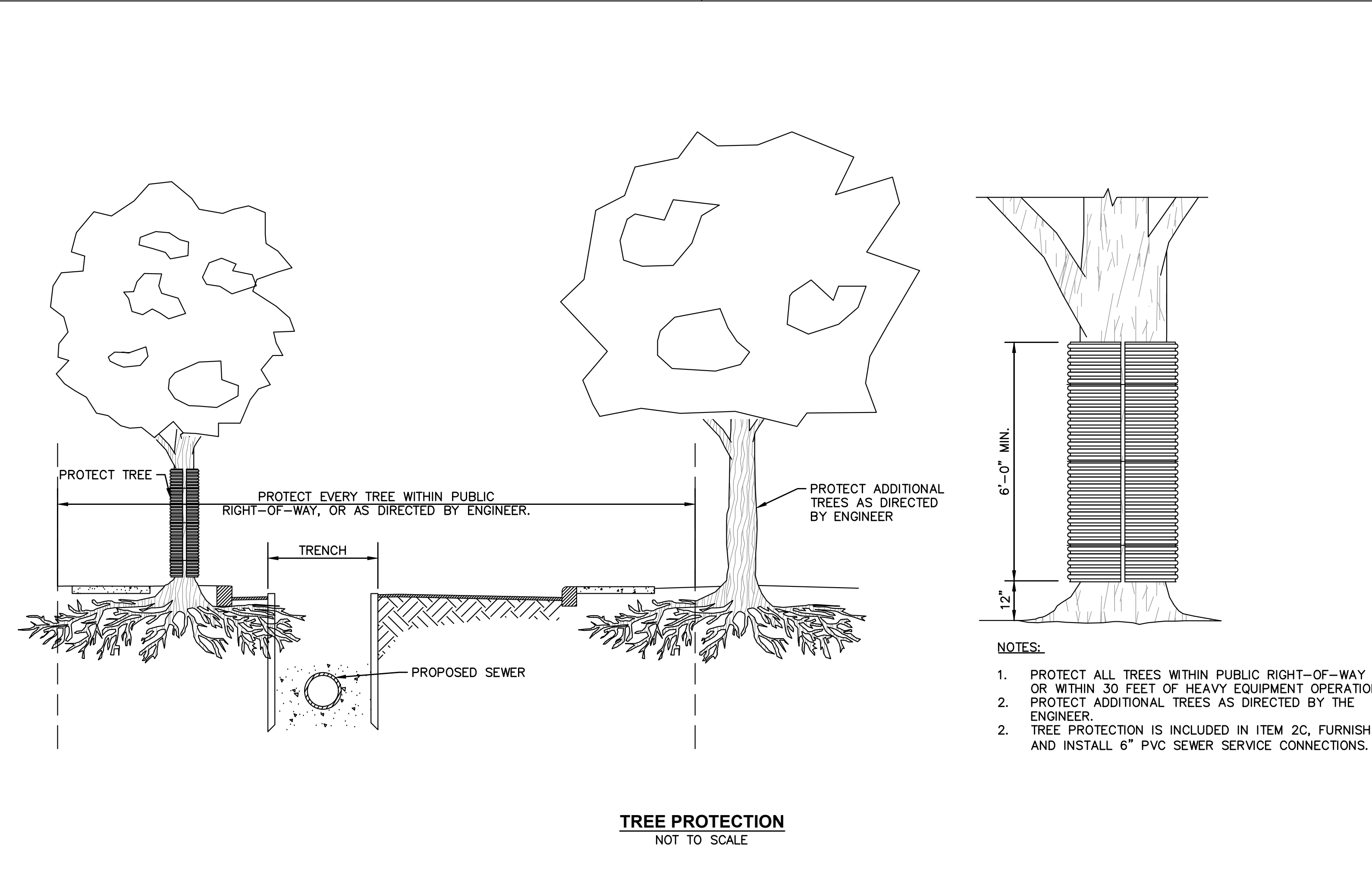
- ALL DEWATERING DISCHARGES SHALL BE THROUGH DEWATERING BAG, CONTRACTOR SHALL MAINTAIN AND CLEAN AS REQUIRED.
- CONTRACTOR SHALL SUBMIT DEWATERING PLANS TO THE ENGINEER/OWNER FOR APPROVAL.
- SIZING OF DEWATERING BAG SHALL BE BASED ON BUT NOT LIMITED TO THE FOLLOWING:
 - 3a. PUMP FLOW RATE
 - 3b. QUALITY AND TYPE OF SEDIMENT
 - 3c. VOLUME OF MATERIALS NEEDING CONTAINMENT



COMPOST FILTER TUBE - FOR EROSION CONTROL
NOT TO SCALE



SEDIMENT CONTROL "COMPOST SOCK"
NOT TO SCALE



TREE PROTECTION
NOT TO SCALE

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:
KJD

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RTG

CHECKED BY:
CRC

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RYAN T. GREENWAY
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PROFESSIONAL ENGINEER

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SUBCONSULTANT

SCALE
NONE

TITLE
TOWN OF WAREHAM, MASSACHUSETTS
WANKINQUOAH AVENUE SEWER REPAIR

CIVIL DETAILS 3

BETA JOB NO. 10914

ISSUE DATE NOVEMBER 21, 2023

SHEET NO. CD-3

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