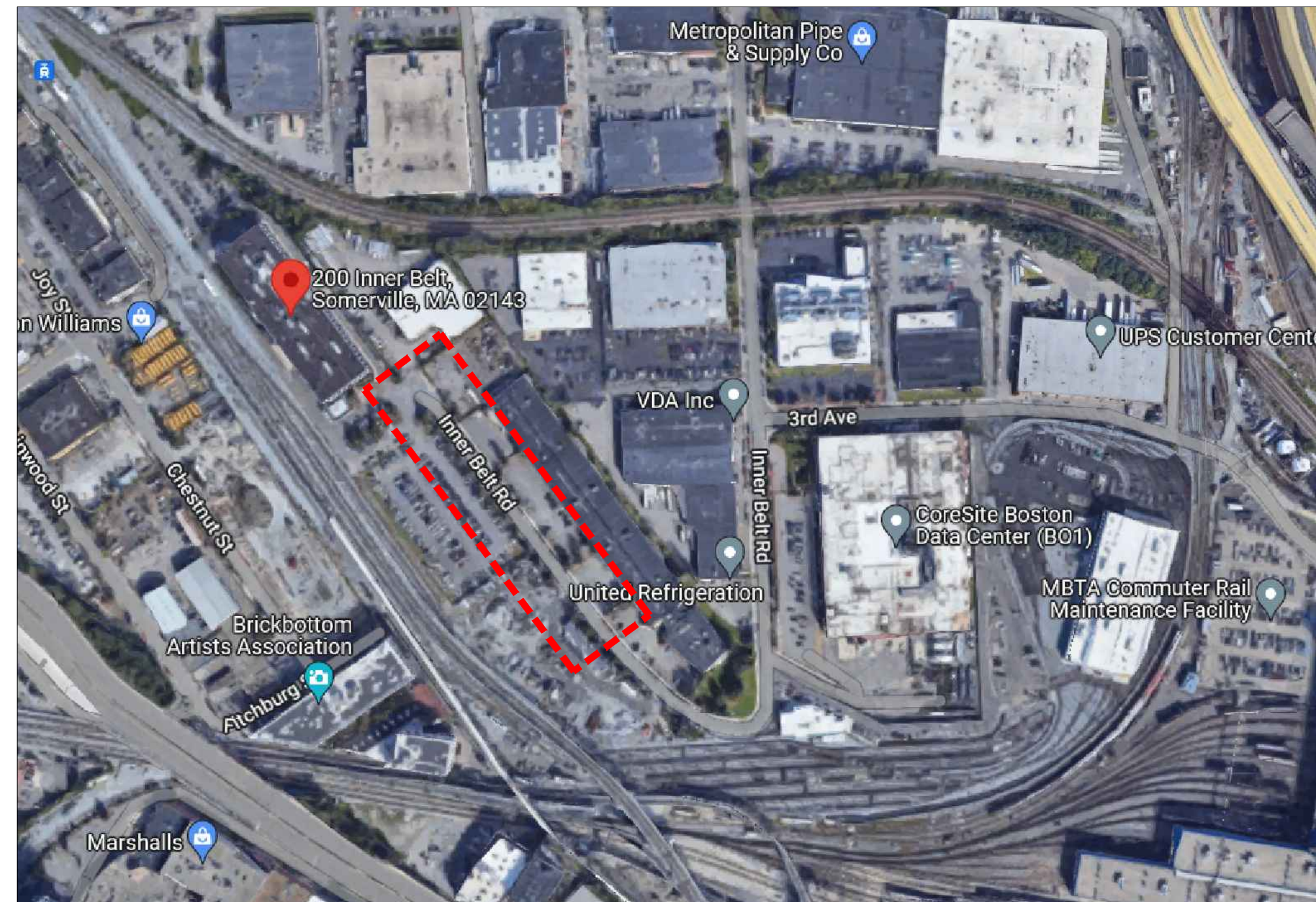




TOWARDEX[®]
Your network success story.

**PROPOSED CONDUIT INSTALLATION
AT
200 INNER BELT RD
SOMERVILLE, MA**

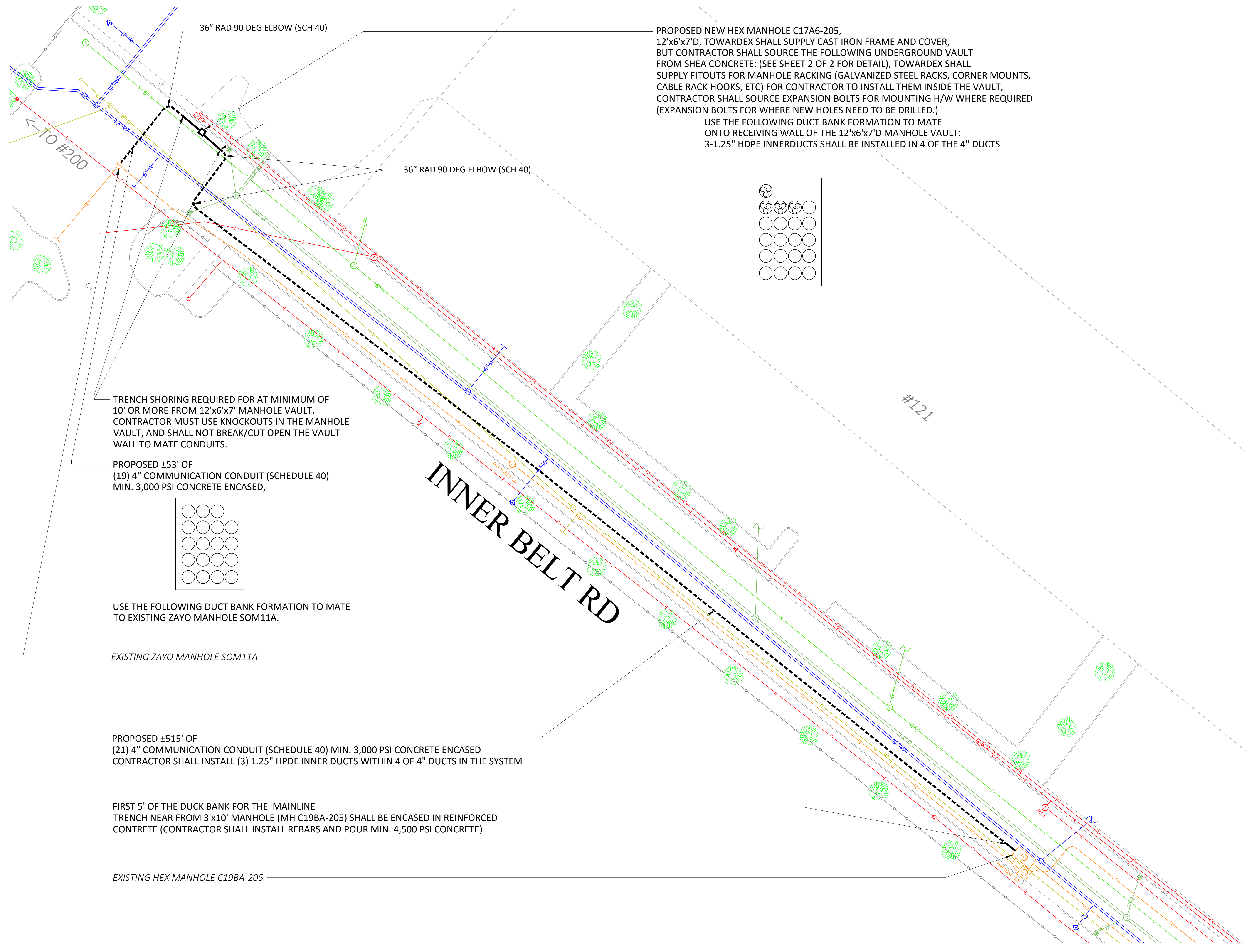


LOCUS
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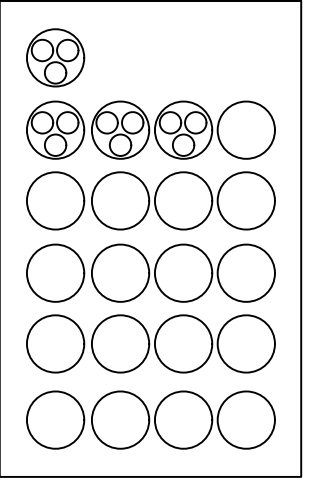
INDEX OF DRAWING

SHEET NO.	DESCRIPTION
--	COVER SHEET
01	PROPOSED CONDUIT INSTALLATION
02	GENERAL NOTES AND DETAILS

AXIS
ENGINEERING GROUP
201 Boston Post Rd West – Suite 100
Marlborough, MA 01752
(774) 556-2924 www.axisgroup.com

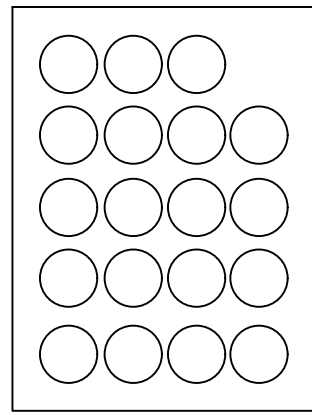


PROPOSED NEW HEX MANHOLE C17A6-205, 12'x6'x7'D, TOWARDEX SHALL SUPPLY CAST IRON FRAME AND COVER, BUT CONTRACTOR SHALL SOURCE THE FOLLOWING UNDERGROUND VAULT FROM SHEA CONCRETE: (SEE SHEET 2 OF 2 FOR DETAIL), TOWARDEX SHALL SUPPLY FITOUTS FOR MANHOLE RACKING (GALVANIZED STEEL RACKS, CORNER MOUNTS, CABLE RACK HOOKS, ETC) FOR CONTRACTOR TO INSTALL THEM INSIDE THE VAULT, CONTRACTOR SHALL SOURCE EXPANSION BOLTS FOR MOUNTING H/W WHERE REQUIRED (EXPANSION BOLTS FOR WHERE NEW HOLES NEED TO BE DRILLED.)
 USE THE FOLLOWING DUCT BANK FORMATION TO MATE ONTO RECEIVING WALL OF THE 12'x6'x7'D MANHOLE VAULT:
 3-1.25" HDPE INNERDUCTS SHALL BE INSTALLED IN 4 OF THE 4" DUCTS



TRENCH SHORING REQUIRED FOR AT MINIMUM OF 10' OR MORE FROM 12'x6'x7' MANHOLE VAULT. CONTRACTOR MUST USE KNOCKOUTS IN THE MANHOLE VAULT, AND SHALL NOT BREAK/CUT OPEN THE VAULT WALL TO MATE CONDUITS.

PROPOSED ±53' OF (19) 4" COMMUNICATION CONDUIT (SCHEDULE 40) MIN. 3,000 PSI CONCRETE ENCASED,



USE THE FOLLOWING DUCT BANK FORMATION TO MATE TO EXISTING ZAYO MANHOLE SOM111A.

EXISTING ZAYO MANHOLE SOM111A

PROPOSED ±515' OF (21) 4" COMMUNICATION CONDUIT (SCHEDULE 40) MIN. 3,000 PSI CONCRETE ENCASED CONTRACTOR SHALL INSTALL (3) 1.25" HDPE INNER DUCTS WITHIN 4 OF 4" DUCTS IN THE SYSTEM

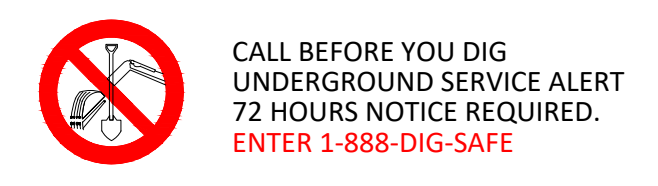
FIRST 5' OF THE DUCK BANK FOR THE MAINLINE TRENCH NEAR FROM 3'x10' MANHOLE (MH C19BA-205) SHALL BE ENCASED IN REINFORCED CONTECRE (CONTRACTOR SHALL INSTALL REBARS AND POUR MIN. 4,500 PSI CONCRETE)

EXISTING HEX MANHOLE C19BA-205

LEGEND

⊗	ELECTRIC POLE	⊗	STREET LIGHT
⊗	JOINT UTILITY POLE	⊗	ELECTRIC HH
⊗	LAMP POST	⊗	TEL HH
⊗	TRAFFIC LIGHT	⊗	CATV HH
⊗	SEWER MH	⊗	COMM PEDESTAL
⊗	DRAIN MH	⊗	IRRIGATION VALVE
⊗	TELEPHONE MH	⊗	WATER METER
⊗	ELECTRIC MH	⊗	GAS METER
⊗	CATV MH	⊗	SEWER GATE
⊗	WATER MH	⊗	GAS GATE
⊗	PAG	⊗	WATER GATE
⊗	BUSH/SHRUB	⊗	HYDRANT
⊗	R/W	⊗	MAIL BOX
⊗	CULVERT	⊗	STONE BOUND
⊗	GUARD RAIL	⊗	PARKING METER(S)
⊗	FENCE	⊗	STEEL POST
⊗	ELECTRIC VAULT	⊗	SIGN POLE
⊗	TRAFFIC HH	⊗	UG CABLE MARKER
⊗	PROPOSED HH	⊗	TRANSFORMER
⊗	PROPOSED CONDUIT	⊗	CATCH BASIN

NOTE:
 EXISTING UTILITIES SHOWN ARE APPROXIMATE AND NOT WARRANTED TO BE CORRECT. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL PUBLIC AND PRIVATE UTILITIES PRIOR TO BEGINNING ANY EXCAVATION.



PREPARED BY:
AXIS
 ENGINEERING GROUP

PREPARED FOR:
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REV #	DESCRIPTION	DATE
1	CHG PROP PATH	1/11/23
2	CHG PROP PATH	5/10/23

TITLE:
PROPOSED CONDUIT INSTALLATION
 200 INNER BELT RD
 SOMERVILLE, MA

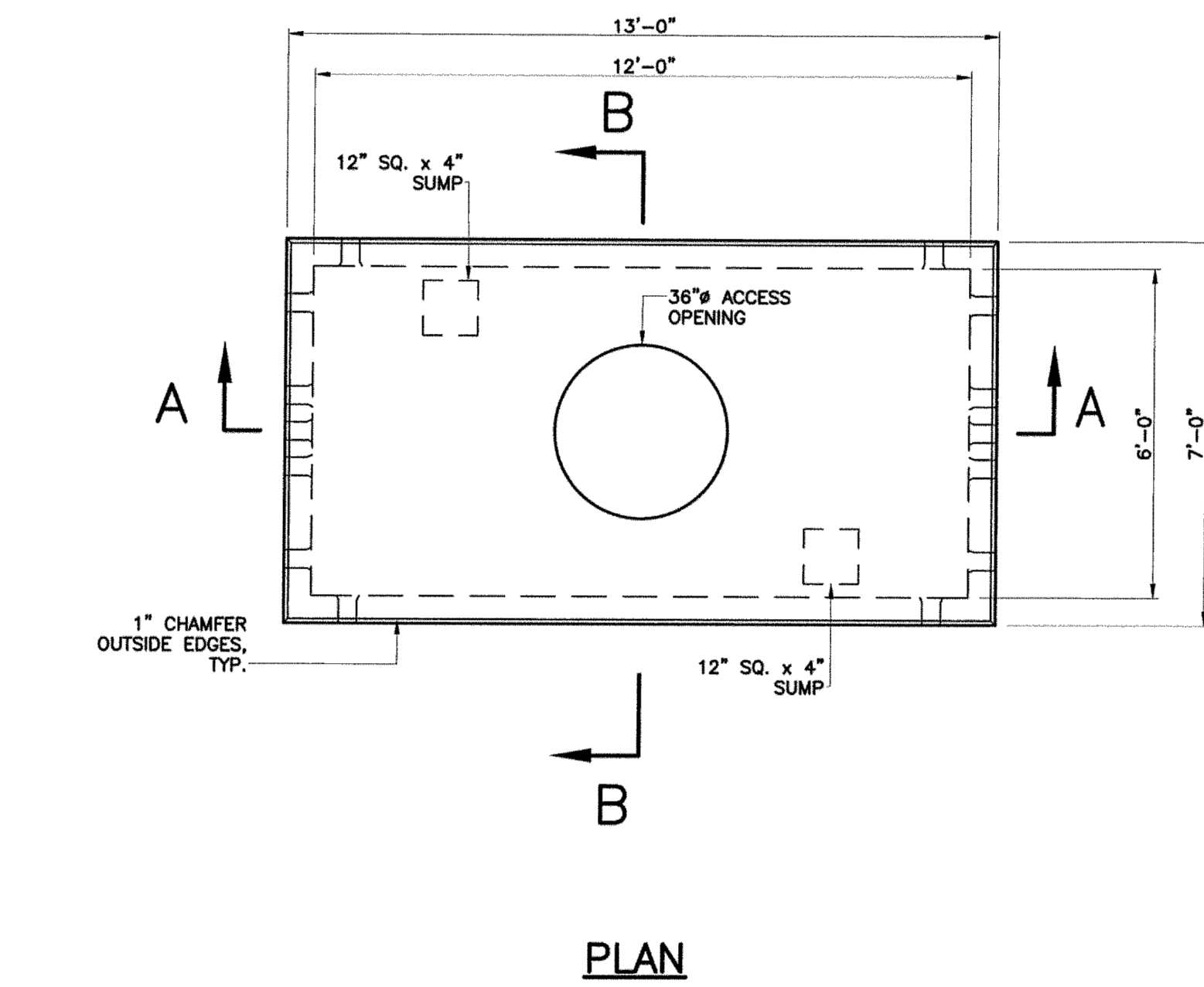
SURVEYED BY: AXIS ENGINEERING PRINT NO: 1 OF 2
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 DATE: 12/20/2022 AS-BUILT:

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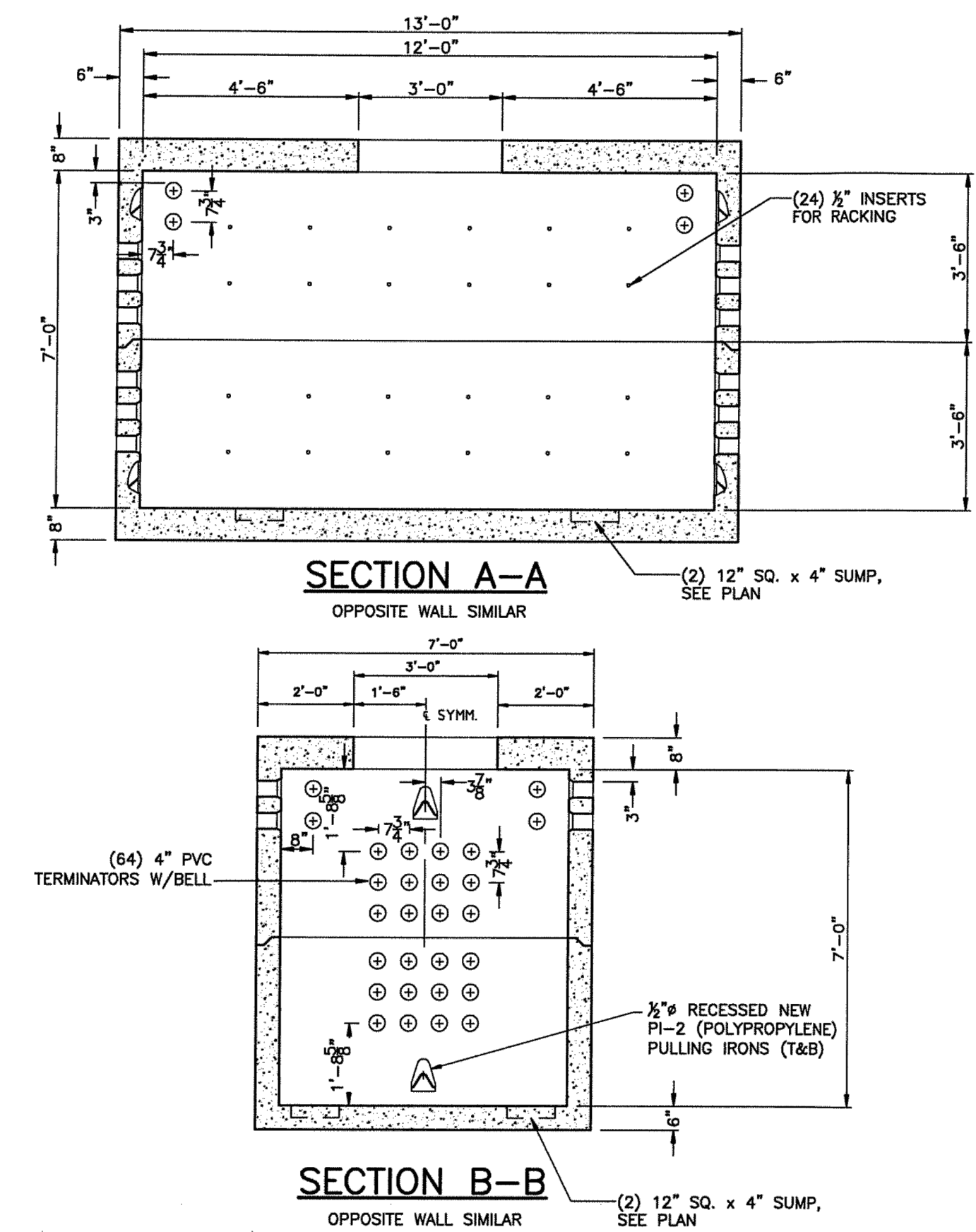
GENERAL NOTES

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
2. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
3. THE CONTRACTOR SHOULD MAINTAIN A SEPARATION OF 18 INCHES MIN. WHEN CROSSING EXISTING WATER FACILITIES.
4. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANY.
5. THE CONTRACTOR SHALL NOT DISTURB PUBLIC TREES AND SHRUBS.
6. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE OWNER.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING AND MAINTAINING TEMPORARY RESURFACING AND/OR PLATING FOR ALL EXCAVATIONS IN PAVED STREETS AND SIDEWALKS UNTIL PERMANENT RESURFACING IS COMPLETE.
8. JOINTS BETWEEN NEW BITUMINOUS CONCRETE ROADWAY PAVEMENT AND SAW CUT EXISTING PAVEMENT SHALL BE SEALED WITH BITUMEN AND BACK SANDED.
9. THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL EXISTING UTILITY LINES THAT BECOME EXPOSED DUE TO EXCAVATION REQUIRED TO INSTALL THE PROPOSED CONDUIT.
10. THE CONTRACTOR SHALL REPLACE ALL DISTURBED TRAFFIC SIGNAL LOOP DETECTORS TO GOOD WORKING CONDITION AS REQUIRED BY THE LATEST STANDARDS OF THE MUNICIPAL TRAFFIC DEPARTMENT.
11. ALL EXISTING STATE, COUNTY, CITY, AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATION ARE NOT GUARANTEED.
12. THE CONTRACTOR SHALL REPLACE ALL PAVEMENT MARKINGS IN THEIR ENTIRETY THAT HAVE BEEN DAMAGED BY TRENCH EXCAVATION OR OPERATIONS OF THE CONTRACTOR WITH SIMILAR COLOR AND SIZE THERMOPLASTIC MARKINGS.

* - ITEM SHOWN ON UTILITY RECORDS, BUT NOT FOUND IN FIELD.
 ~ - ITEM FOUND IN FIELD, BUT NOT IN UTILITY RECORDS.

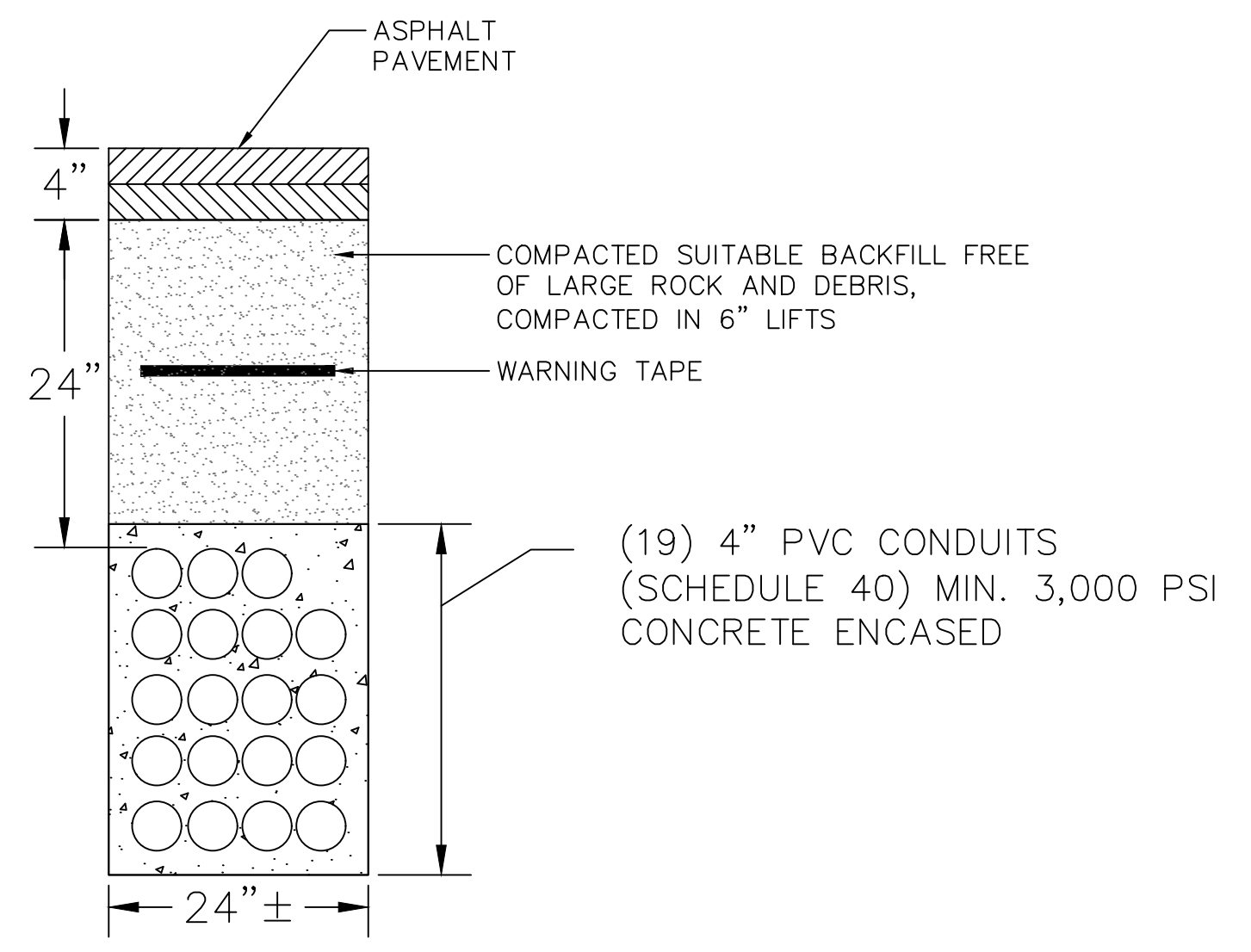


- NOTES:
1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
 2. DESIGN LOADING: AASHTO HS20-44, 0 TO 5 FEET COVER.
 3. STEEL REINFORCEMENT CONFORMS TO ASTM A615, GRADE 60.
 4. MINIMUM STEEL COVER 1".



SHEA CONCRETE PRODUCTS (MANHOLE 6'x12'x7')

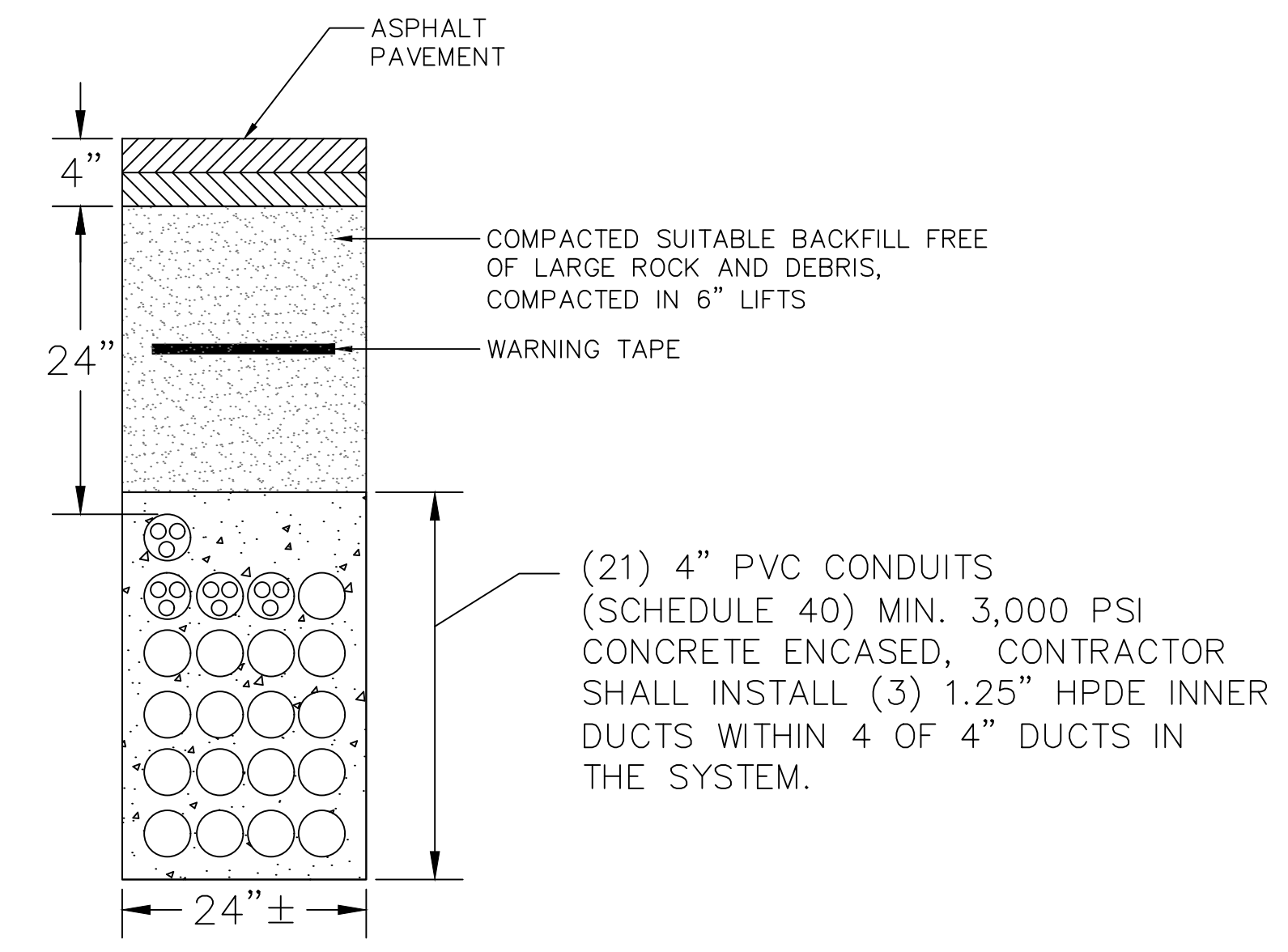
N.T.S.



ROADWAY PATCH AND DUCT BANK NORTH WALL INSTALLATION DETAIL

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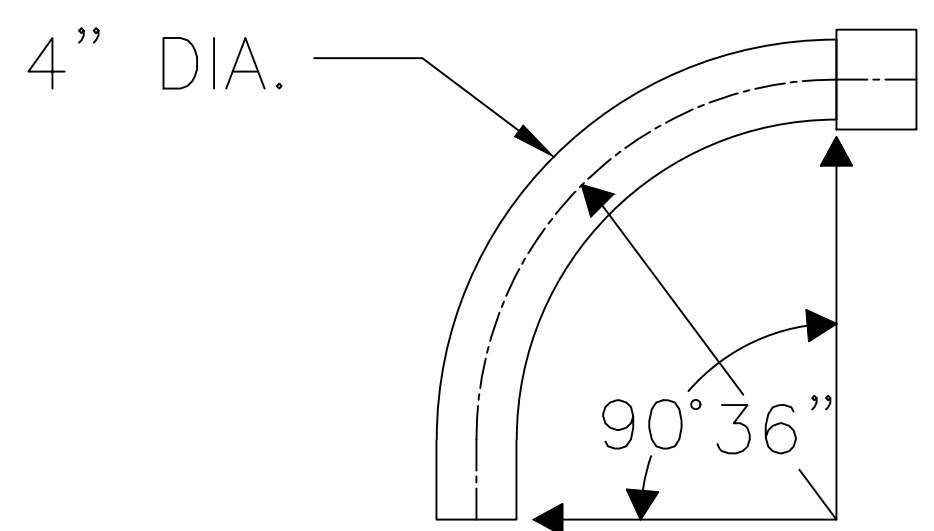
- TRENCH DETAIL NOTES:
1. 28" MAXIMUM FROM TOP OF CONDUIT TO SURFACE.
 2. 12" FROM TOP OF CONDUIT TO METALLIC WARNING TAPE PLACED ABOVE.
 3. REPAIR SIDEWALKS AND WALKWAYS WITH SAME MATERIALS AS EXISTING.
 4. CONDUIT SHALL BE ROPED AND APPROPRIATELY TAGGED UPON INSTALLATION.



ROADWAY PATCH AND DUCT BANK SOUTH WALL INSTALLATION DETAIL

N.T.S.

- TRENCH DETAIL NOTES:
1. 28" MAXIMUM FROM TOP OF CONDUIT TO SURFACE.
 2. 12" FROM TOP OF CONDUIT TO METALLIC WARNING TAPE PLACED ABOVE.
 3. REPAIR SIDEWALKS AND WALKWAYS WITH SAME MATERIALS AS EXISTING.
 4. CONDUIT SHALL BE ROPED AND APPROPRIATELY TAGGED UPON INSTALLATION.



SEGMENT 90° ELBOW

N.T.S.

LEGEND

⊗	ELECTRIC POLE	⊗	STREET LIGHT
⊕	JOINT UTILITY POLE	⊕	ELECTRIC HH
⊗	LAMP POST	⊗	TEL HH
⊕	TRAFFIC LIGHT	⊕	CATV HH
⊕	SEWER MH	⊕	COMM PEDESTAL
⊕	DRAIN MH	⊕	IRRIGATION VALVE
⊕	TELEPHONE MH	⊕	WATER METER
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⊕	WATER MH	⊕	GAS GATE
⊕	PAG	⊕	WATER GATE
⊕	BUSH/SHRUB	⊕	HYDRANT
R/W	RIGHT OF WAY	⊕	MAIL BOX
⊕	CULVERT	⊕	STONE BOUND
⊕	GUARD RAIL	⊕	PARKING METER(S)
⊕	FENCE	⊕	STEEL POST
⊕	ELECTRIC VAULT	⊕	SIGN POLE
⊕	TRAFFIC HH	⊕	UG CABLE MARKER
⊕	PROPOSED HH	⊕	TRANSFORMER
⊕	PROPOSED CONDUIT	⊕	CATCH BASIN

NOTE:
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CALL BEFORE YOU DIG
 UNDERGROUND SERVICE ALERT
 72 HOURS NOTICE REQUIRED.
 ENTER 1-888-DIG-SAFE

PREPARED BY: **AXIS ENGINEERING GROUP**

PREPARED FOR: **TOWARDEX**
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REV #	DESCRIPTION	DATE
1	CHG PROP PATH	1/11/23
2	CHG PROP PATH	5/10/23

TITLE: **GENERAL NOTES AND DETAILS**
 200 INNER BELT RD
 SOMERVILLE, MA

SURVEYED BY: AXIS ENGINEERING	PRINT NO: 2 OF 2
DRAWN BY: SL	SCALE: N.T.S.
DATE: 12/20/2022	AS-BUILT: