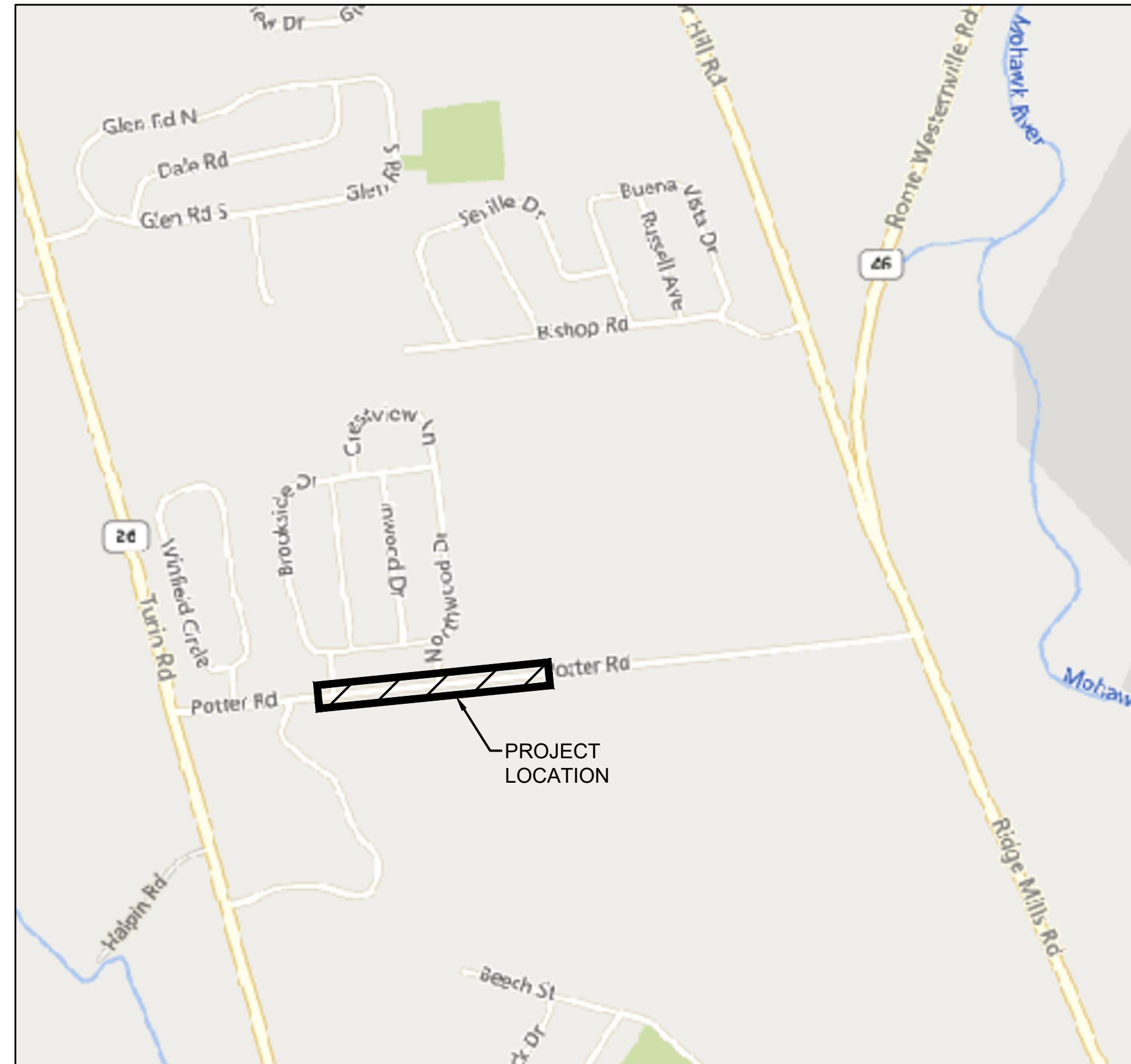


CONTRACT DRAWINGS

INDEX TO DRAWINGS

- COVER SHEET
- C-001 GENERAL NOTES
- C-101 OVERALL SITE PLAN
- C-102 ENLARGED UTILITY PLAN
- C-103 ENLARGED UTILITY PLAN
- C-201 SANITARY SEWER PROFILES
- C-202 WATER MAIN PROFILES
- C-501 MISCELLANEOUS DETAILS
- C-502 MISCELLANEOUS DETAILS



LOCATION PLAN
NOT TO SCALE



CITY OF ROME SANITARY SEWER AND WATER MAIN EXTENSION

POTTER ROAD
CITY OF ROME
ONEIDA COUNTY

ISSUED FOR BID
AUGUST 9, 2024



MBL ENGINEERING, PLLC
16510 BALCH PLACE
MANNSVILLE, NY 13661



SITE NOTES:

1. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL NOTIFY DIG SAFELY NEW YORK (1.800.962.7962 OR 811) PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, INCLUDING ANY EXCAVATION AND TEST BORINGS ACCORDING TO CODE RULE 753. THE CONTRACTOR SHALL CONTACT DIG SAFELY NEW YORK AND THE OWNER PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES AND SHALL PROVIDE AT LEAST 72 HOURS NOTIFICATION.
2. THE CONTRACTOR SHALL COORDINATE ALL WORK AFFECTING UTILITIES WITH THE RESPECTIVE UTILITY OWNER INCLUDING THE CITY OF ROME FOR THE SANITARY AND WATER CONNECTIONS. ALL DETAILS OF CONSTRUCTION AND/OR RELOCATION OF AFFECTED UTILITIES SHALL BE APPROVED BY THE UTILITY OWNER, THE OWNER AND OTHER APPROVING AGENCIES.
3. ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE EROSION & SEDIMENT CONTROL PLAN, AND STORMWATER POLLUTION PREVENTION PLAN.

SURVEY NOTES

1. TOPOGRAPHIC & PLANIMETRIC INFORMATION SHOWN HEREIN PLOTTED FROM FIELD SURVEY PERFORMED BY SEGUIN LAND SURVEYING, P.L.L.C., DATED JUNE 27, 2024.
2. SUBJECT TO ANY AND ALL EASEMENTS OF RECORD AND/OR AS FOUND IN THE FIELD.
3. VERTICAL DATUM BASED ON NAVD1988. HORIZONTAL DATUM BASED ON NAD83, NEW YORK STATE PLANE COORDINATES, CENTRAL ZONE.

NEW YORK STATE D.O.T. SPECIFICATIONS:

1. CONTRACTOR SHALL FOLLOW REQUIREMENTS OF 608-01 STANDARD SHEETS
2. EXCEPT AS MODIFIED HEREIN, SECTIONS 200 THROUGH 700 OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS, CONSTRUCTION AND MATERIALS ISSUED BY THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION, OFFICE OF ENGINEERING, INCLUDING ALL REVISIONS AND ADDENDA ISSUED BY NYS DOT PRIOR TO THE DATE THE NOTICE TO BIDDERS IS ADVERTISED, HEREINAFTER REFERRED TO AS THE NYS DOT STANDARD SPECIFICATIONS, SHALL GOVERN THE WORK TO BE DONE WHERE REFERRED TO ON THE PLANS AND IN THE SPECIFICATIONS. IF A CONFLICT EXISTS BETWEEN THE NYS DOT STANDARD SPECIFICATIONS AND THESE CONTRACT DOCUMENTS, THE CONTRACT DOCUMENTS SHALL GOVERN.
3. ANY REFERENCE TO NYS DOT STANDARD SPECIFICATIONS IS LIMITED IN SCOPE TO TECHNICAL ENGINEERING AND CONSTRUCTION WORK; MATERIALS, DETAILS, PROCEDURES, ETC. ALL REFERENCES TO THE STATE OR THE NYS DOT OR ADMINISTRATIVE OFFICERS OR EMPLOYEES THEREOF ARE NULL AND VOID WITH RESPECT TO LEGAL OR CONTRACTUAL RESPONSIBILITIES.
4. FOR CLARIFICATION, WHERE THE STATE OF NEW YORK OR THE NYS DOT OR ADMINISTRATIVE OFFICERS OR EMPLOYEES THEREOF ARE NAMED IN THE STANDARD SPECIFICATIONS, SUCH REFERENCES SHALL BE TAKEN TO MEAN EITHER THE ENGINEER OR OWNER AS DEFINED BY THE CONTRACT, EACH WITH SEPARATE AND DISTINCT RESPONSIBILITIES DESCRIBED OR REASONABLY IMPLIED BY THE CONTRACT.
5. THE CONTRACTOR IS ADVISED THAT THE METHOD OF MEASUREMENT AND BASIS OF PAYMENT FOR INDIVIDUAL NYS DOT ITEM NUMBERS DOES NOT NECESSARILY REFLECT THE OWNER'S METHOD OF MEASUREMENTS AND/OR BASIS OF PAYMENT.

GENERAL UTILITY:

1. THE APPROXIMATE LOCATION OF ALL KNOWN EXISTING UNDERGROUND UTILITIES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE TRUE LOCATION AND DEPTH PRIOR TO COMMENCING WORK. BEFORE ANY PIPE IS INSTALLED, THE CONTRACTOR SHALL UNCOVER ALL EXISTING UTILITIES AT PROPOSED PIPE CROSSINGS TO ENABLE THE OWNER'S REPRESENTATIVE TO VERIFY NO CONFLICTS OF UTILITY LOCATIONS SHALL OCCUR. IN THE EVENT A CONFLICT OR POTENTIAL CONFLICT IS IDENTIFIED, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY.
2. THE CONTRACTOR SHALL VERIFY LOCATION, SIZE AND JOINT TYPE OF EXISTING PIPES AT CONNECTION LOCATIONS PRIOR TO CONSTRUCTION, TO ENABLE AN APPROVED COMPATIBLE CONNECTION.

DRAINAGE:

1. STORM SEWER PIPE SHALL BE SMOOTH INTERIOR CORRUGATED POLYETHYLENE DRAINAGE PIPE WITH MANNINGS "N" OF 0.012 OR LESS (ADS N-12 OR APPROVED EQUAL).
2. ALL STRUCTURES AND APPURTENANCES SHALL BE DESIGNED FOR H2O LOADINGS.
3. FRAMES AND GRATES SHALL BE AS NOTED ON RESPECTIVE DETAILS.
4. ALL EXISTING DRAINAGE FACILITIES TO REMAIN SHALL BE MAINTAINED FREE OF DEBRIS AND FOREIGN MATTER AND OPERATIONAL THROUGHOUT THE DURATION OF THE CONTRACT.
5. ALL PROPOSED CATCH BASINS AND MANHOLE RIMS TO BE ADJUSTED TO FINISHED GRADE ELEVATION, AS REQUIRED.

SANITARY SEWER:

1. CONTRACTOR SHALL NOT DIRECT SURFACE OR SUBSURFACE WATER TO THE SANITARY SEWER SYSTEM WITHOUT WRITTEN PERMISSION AND IN COMPLIANCE WITH THE REQUIREMENTS OF THE CITY OF ROME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH DISPOSAL OF WATER.
2. ALL STRUCTURES AND APPURTENANCES SHALL BE DESIGNED FOR H2O LOADINGS EXCEPT WITHIN YARDS.
3. ALL SANITARY SEWER PIPE SHALL BE SDR-35.
4. LETTERING ON MANHOLE COVERS TO READ "SANITARY SEWER". MANHOLE RIMS ARE TO BE ADJUSTED TO MEET FINISHED GRADE ELEVATION.

WATERMAIN:

1. WATER SERVICE SHALL BE AS NOTED IN SCHEDULE.

PIPE SCHEDULE	
WATER	DI CL 52
SANITARY	SDR-35
STORM	SICPP ADS N-12 WT

GRADING:

1. ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN UNTIL THEY ARE ADEQUATELY STABILIZED. NO TREES CAN BE CLEARED DURING THE INDIANA BAT SEASON 6" CALIBER OR LARGER
2. AREAS SCHEDULED FOR EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIAL.
3. ALL EMBANKMENTS SHALL BE COMPACTED AS SPECIFIED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS.
4. ALL EMBANKMENT MATERIALS SHALL BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 8 INCHES IN THICKNESS.
5. FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO EMBANKMENT SLOPES OF STRUCTURAL FILLS.
6. ALL DISTURBED AREAS WILL BE RESTORED IN ACCORDANCE WITH THE SOIL RESTORATION REQUIREMENTS IN TABLE 5.3 OF THE STORMWATER DESIGN MANUAL.

STABILIZATION WITH MULCH:

1. PROTECTIVE MATERIALS:
 - A. UNROTTED SMALL-GRAIN STRAW OR SALT HAY SHALL BE SPREAD UNIFORMLY AT 90 TO 115 POUNDS PER 1,000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL, LIQUID MULCH BINDERS OR NETTING TIEDOWN.
 - B. SYNTHETIC OR ORGANIC SOIL STABILIZERS MAY BE USED, UNDER SUITABLE CONDITIONS AND IN SUFFICIENT QUANTITIES.
 - C. WOOD-FIBER OR PAPER-FIBER MULCH AT THE RATE OF 1,500 POUNDS PER ACRE MAY BE APPLIED BY A HYDROSEEDER OR HYDROMULCHER.
 - D. MULCH NETTING, SUCH AS PAPER JUTE, EXCELSIOR, COTTON OR PLASTIC MAY BE USED.
 - E. EXCELSIOR MATTING SHALL BE USED ON SLOPES OF 1:4 OR STEEPER.
2. MULCH ANCHORING:
 - A. PEG AND TWINE - DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE AND AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
 - B. MULCH NETTINGS - STAPLE PAPER, COTTON OR PLASTIC NETTINGS OVER HAY OR STRAW MULCH. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED. NETTING IS USUALLY AVAILABLE IN ROLLS 4 FEET WIDE AND UP TO 300 FEET LONG.

NO.	ISSUED FOR BID	DRAWING RELEASE
0	8/9/24	DATE

GENERAL NOTES



INFRASTRUCTURE EXPANSION
POTTER ROAD
CITY OF ROME
ONEIDA COUNTY

PROJECT #
22-067

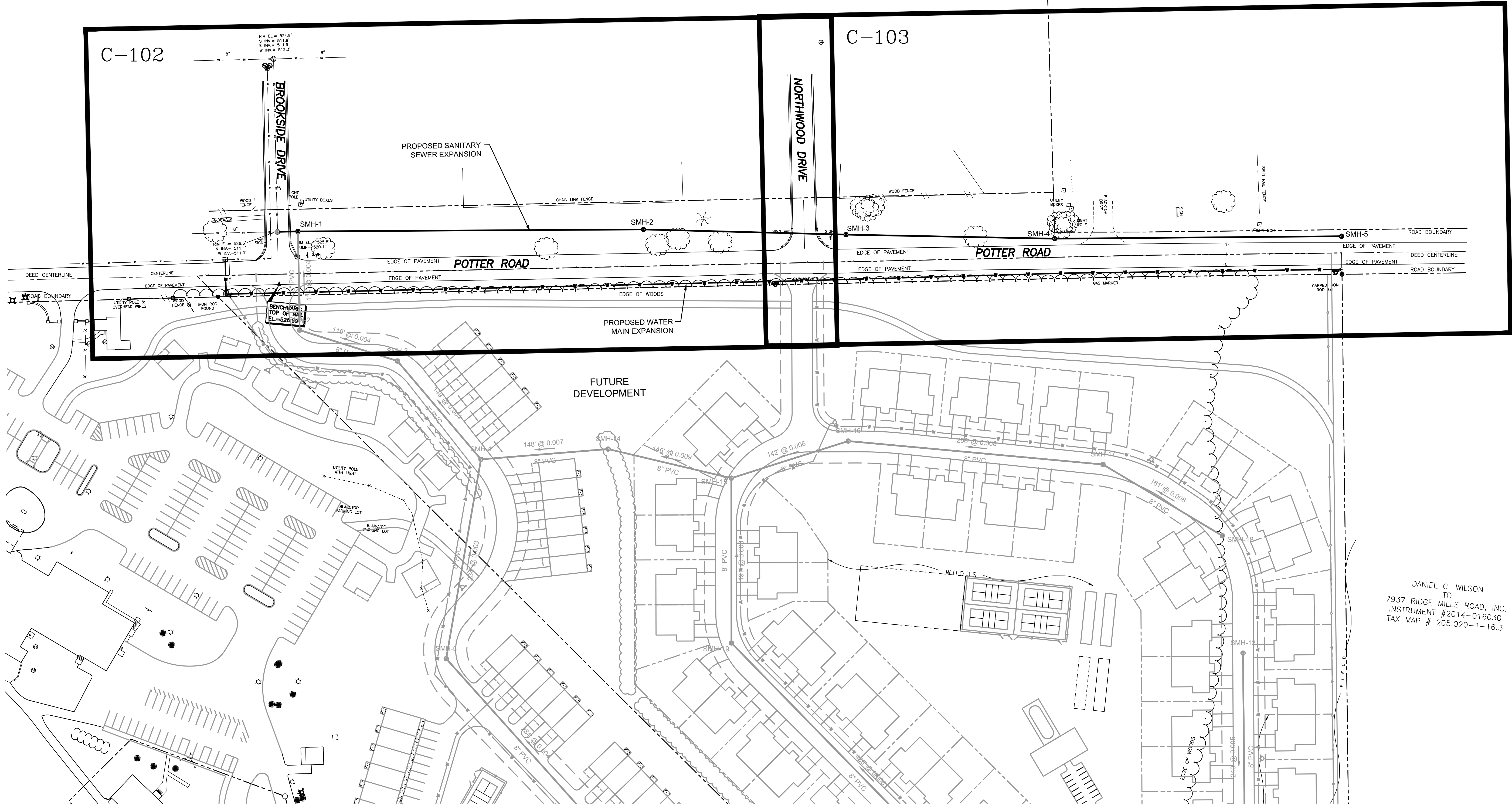
DATE:
JULY 2024

SHEET #
C-001



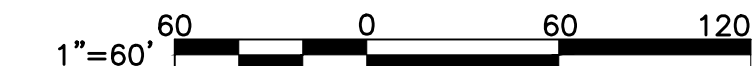
THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT.



PLAN
SCALE: 1"=60'

DANIEL C. WILSON
TO
7937 RIDGE MILLS ROAD, INC.
INSTRUMENT #2014-016030
TAX MAP # 205.020-1-16.3



THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT.



NO.	ISSUED FOR BID	DRAWING RELEASE
0	8/9/24	DATE

OVERALL
SITE PLAN

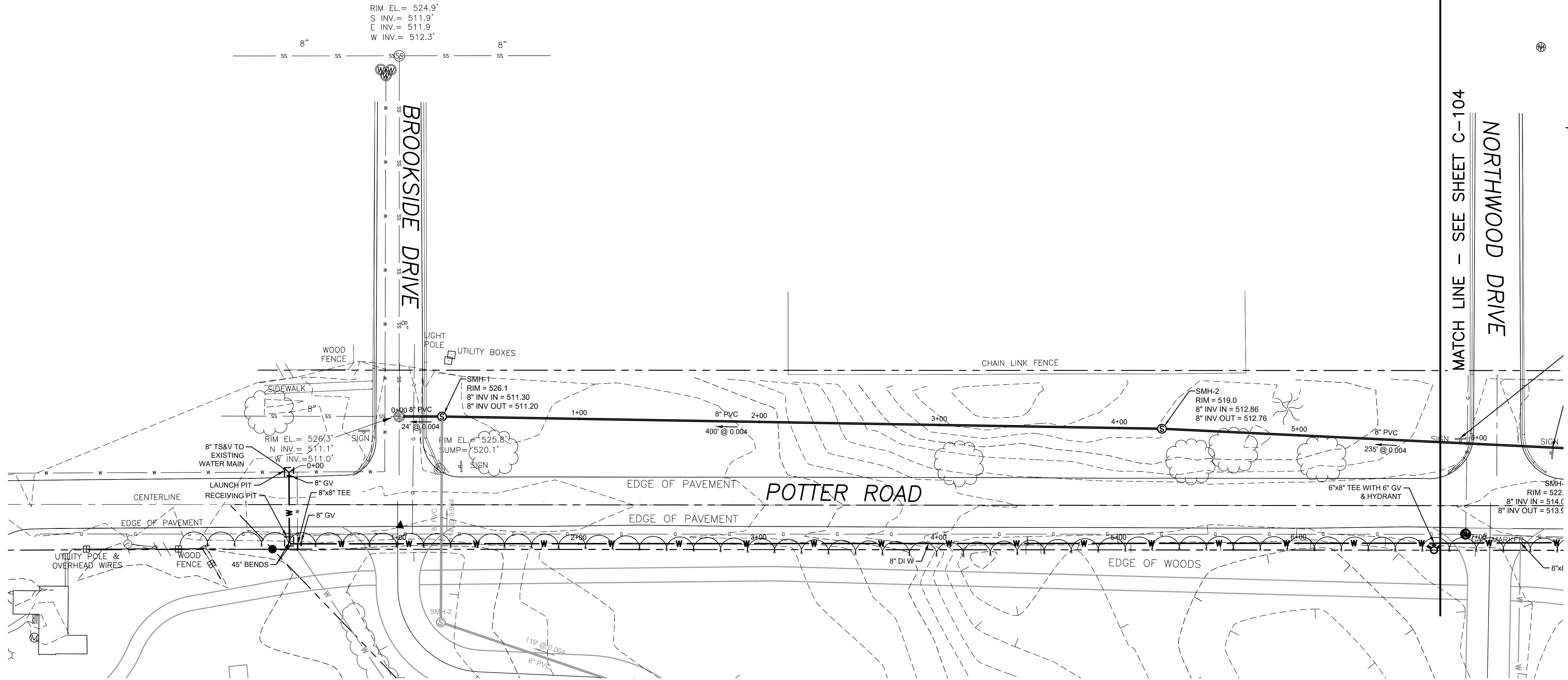


INFRASTRUCTURE EXPANSION
POTTER ROAD
CITY OF ROME
ONEIDA COUNTY

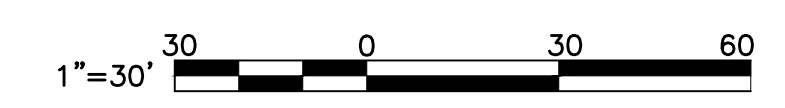
PROJECT #
22-067

DATE:
JULY 2024

SHEET #
C-101

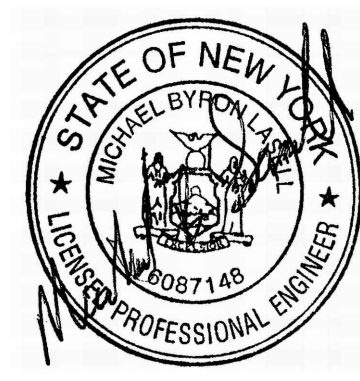


PLAN
SCALE: 1"=30'



THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT.



NO.	ISSUED FOR BID	DRAWING RELEASE
0	8/9/24	DATE

ENLARGED
UTILITY PLAN



INFRASTRUCTURE EXPANSION
POTTER ROAD
CITY OF ROME
ONEIDA COUNTY

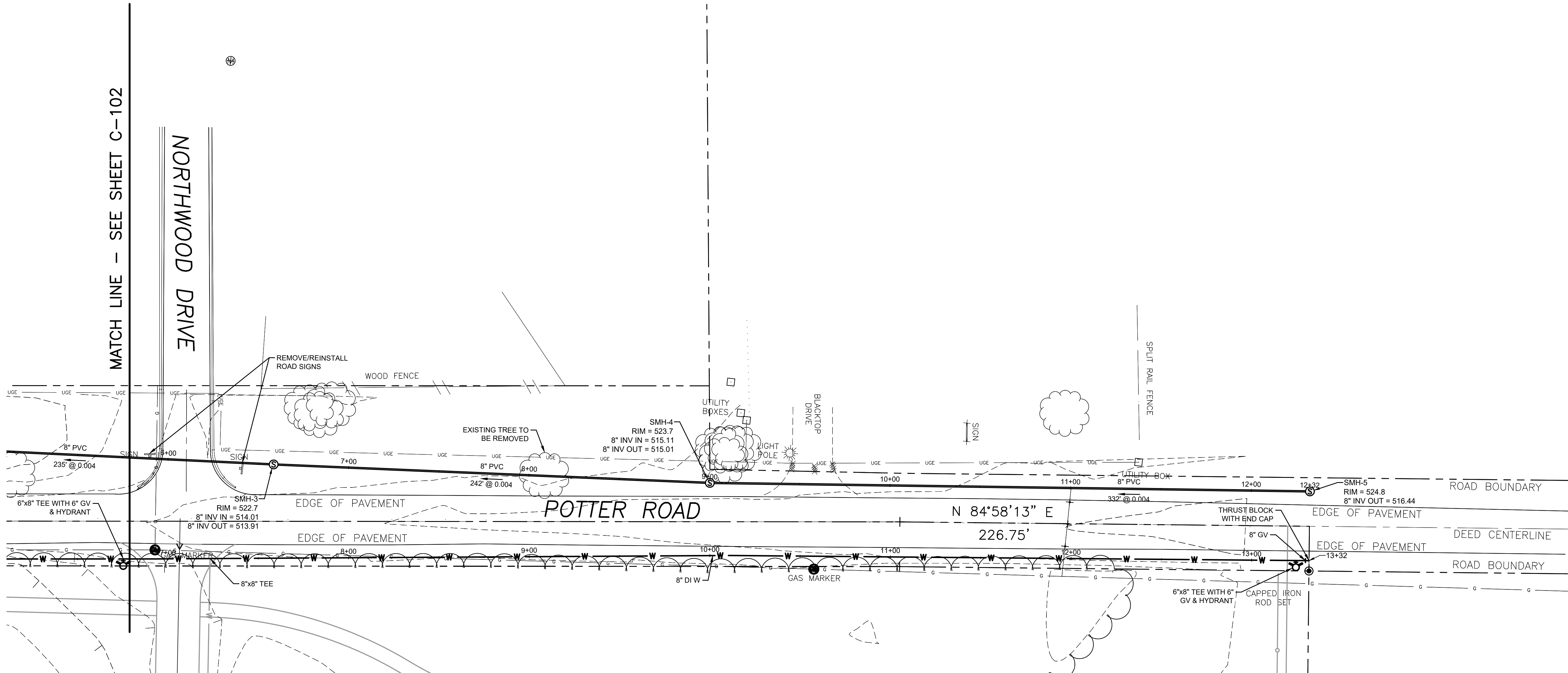
PROJECT #
22-067

DATE:
JULY 2024

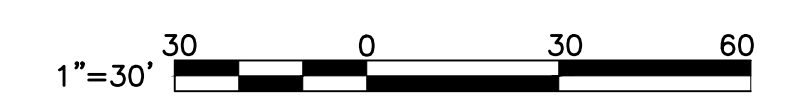
SHEET #
C-102

MATCH LINE - SEE SHEET C-102

NORTHWOOD DRIVE

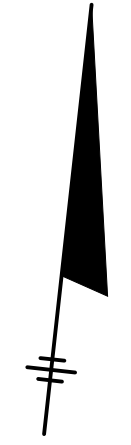


PLAN
SCALE: 1"=30'



THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT.



NO.	ISSUED FOR	DATE	DRAWING RELEASE
0	8/9/24		

ENLARGED
UTILITY PLAN

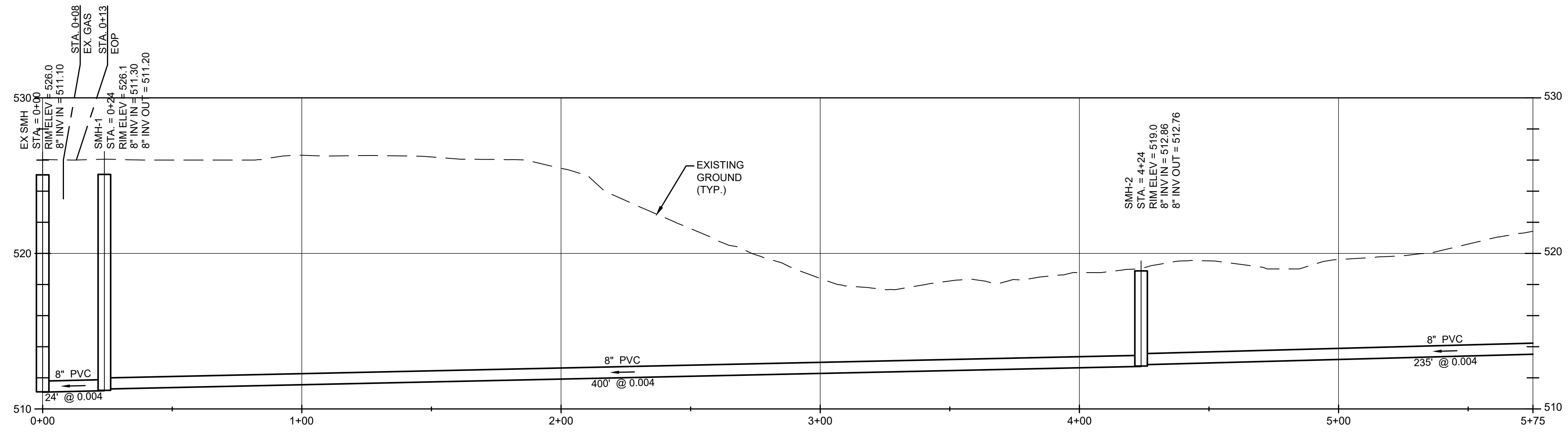


INFRASTRUCTURE EXPANSION
POTTER ROAD
CITY OF ROME
ONEIDA COUNTY

PROJECT #
22-067

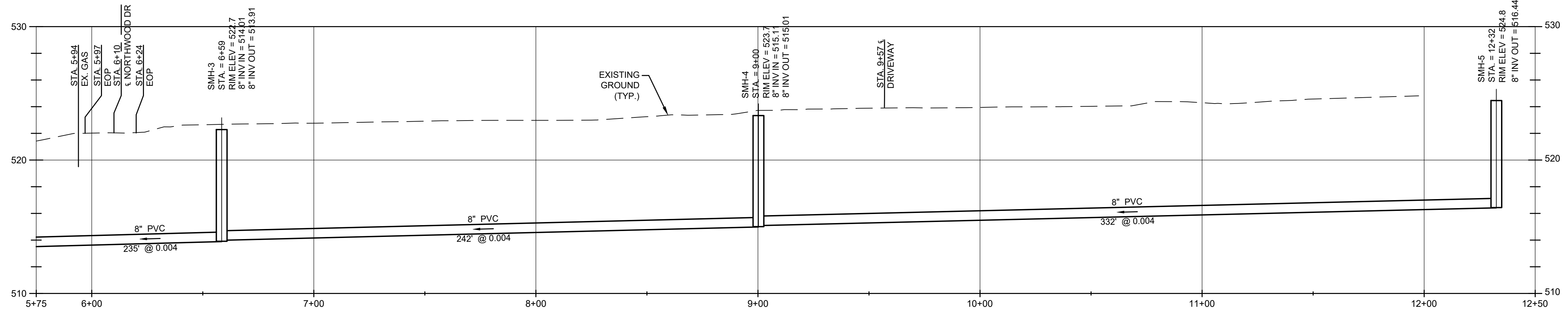
DATE:
JULY 2024

SHEET #
C-103



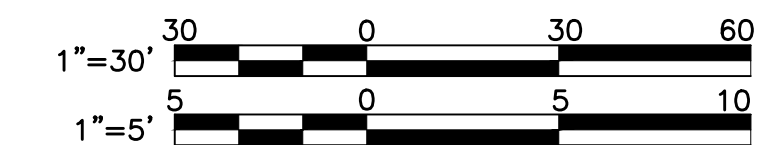
SANITARY SEWER PROFILE

SCALE: HORIZ. 1"=30'
VERT. 1"=5'



SANITARY SEWER PROFILE

SCALE: HORIZ. 1"=30'
VERT. 1"=5'



THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT.



SANITARY SEWER
PROFILES



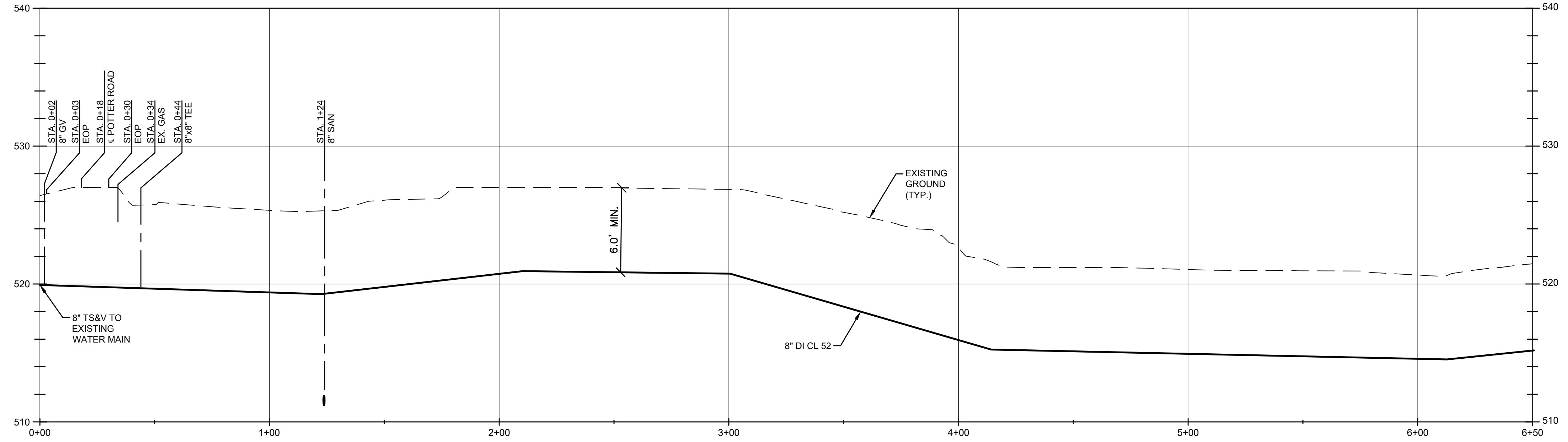
INFRASTRUCTURE EXPANSION
POTTER ROAD
CITY OF ROME
ONEIDA COUNTY

PROJECT #
22-067

DATE:
JULY 2024

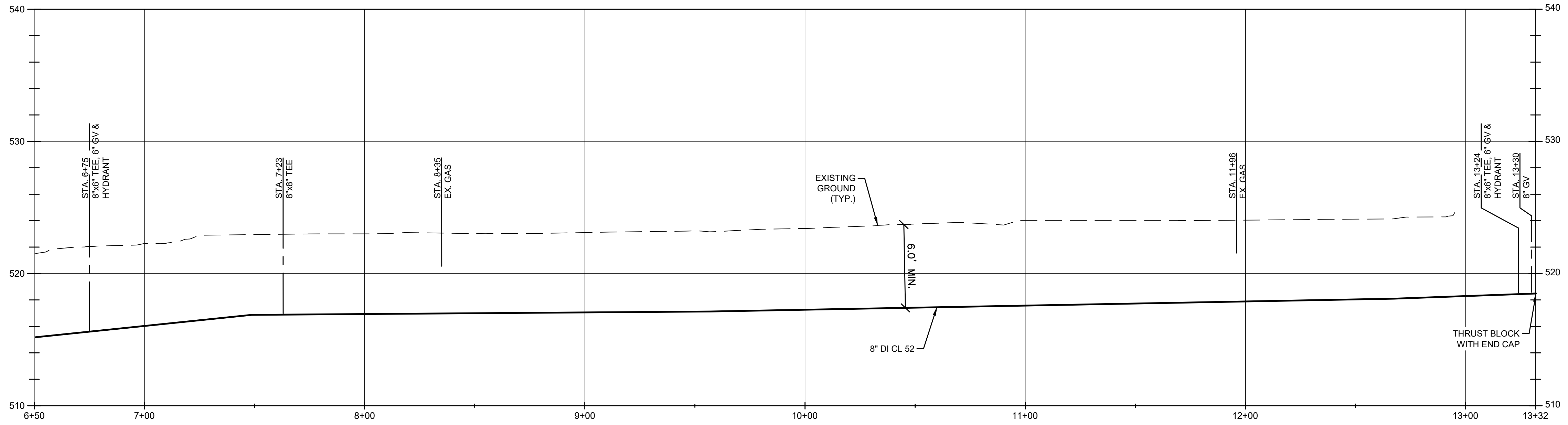
SHEET #
C-201

NO.	0	ISSUED FOR BID	DRAWING RELEASE
DATE	8/9/24		



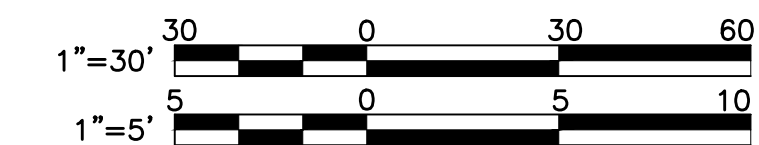
WATER MAIN PROFILE

SCALE: HORIZ. 1"=30'
VERT. 1"=5'



WATER MAIN PROFILE

SCALE: HORIZ. 1"=30'
VERT. 1"=5'



THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT.



WATER MAIN
PROFILES



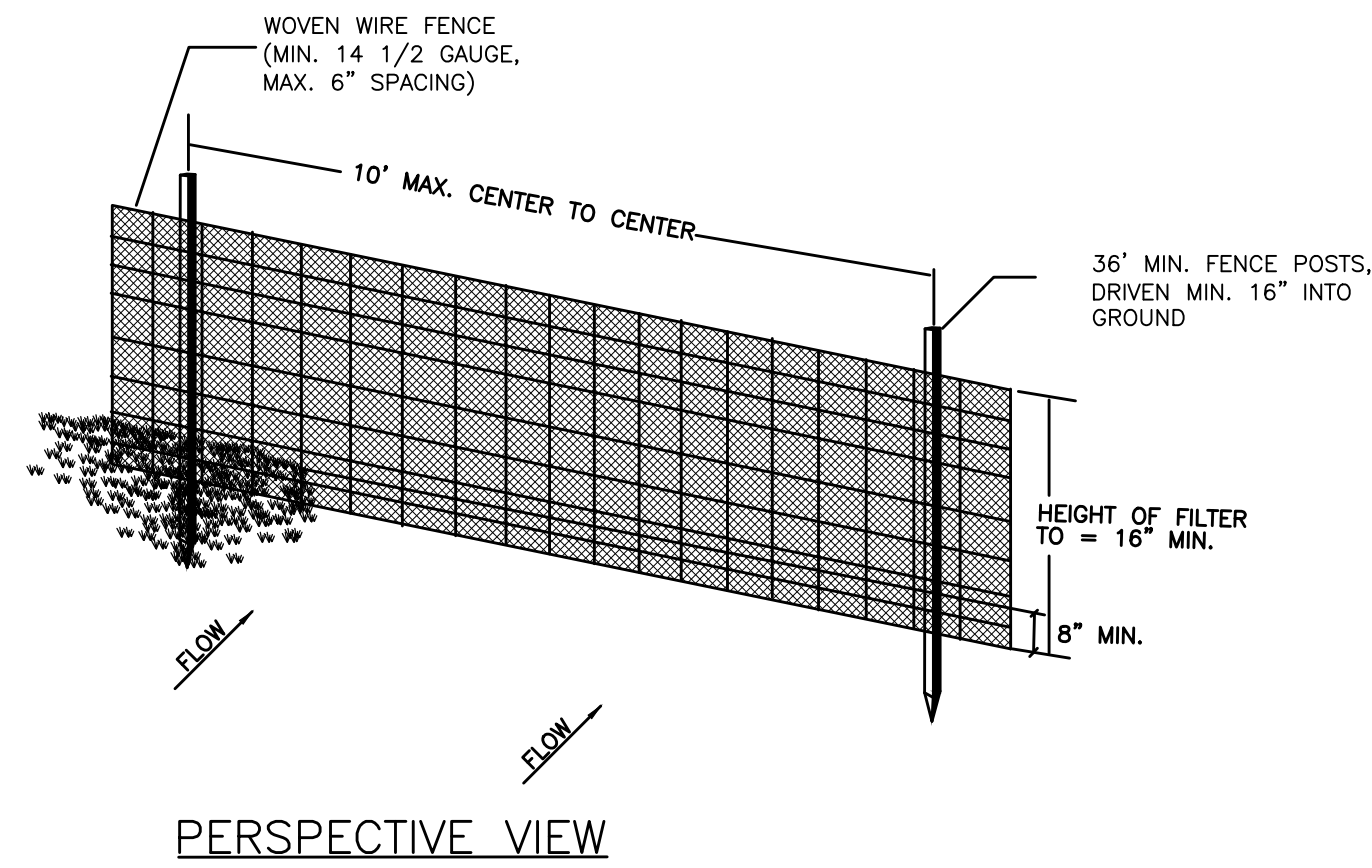
INFRASTRUCTURE EXPANSION
POTTER ROAD
CITY OF ROME
ONEIDA COUNTY

PROJECT #
22-067

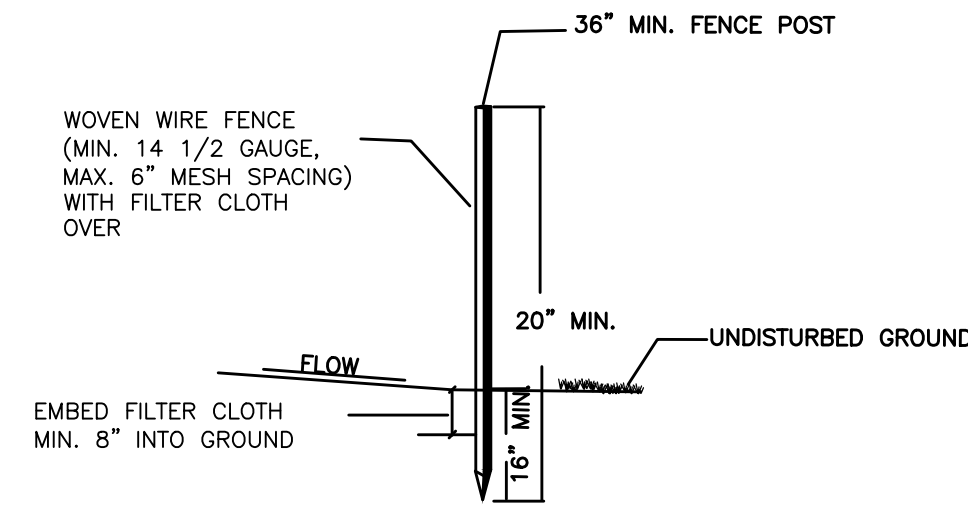
DATE:
JULY 2024

SHEET #
C-202

NO.	0	ISSUED FOR BID	DRAWING RELEASE
DATE	8/9/24		



PERSPECTIVE VIEW



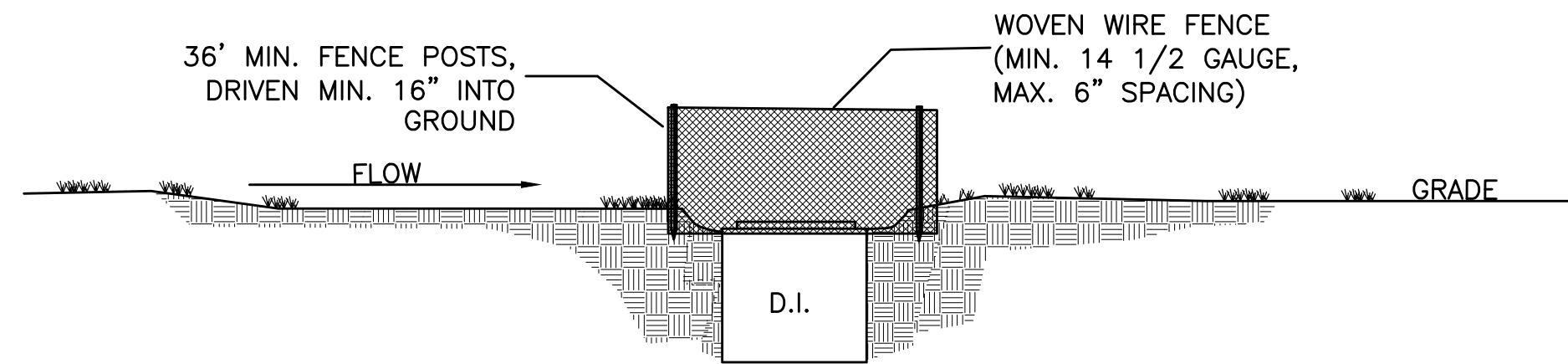
SECTION

CONSTRUCTION NOTES FOR FABRICATED SLIT FENCE:

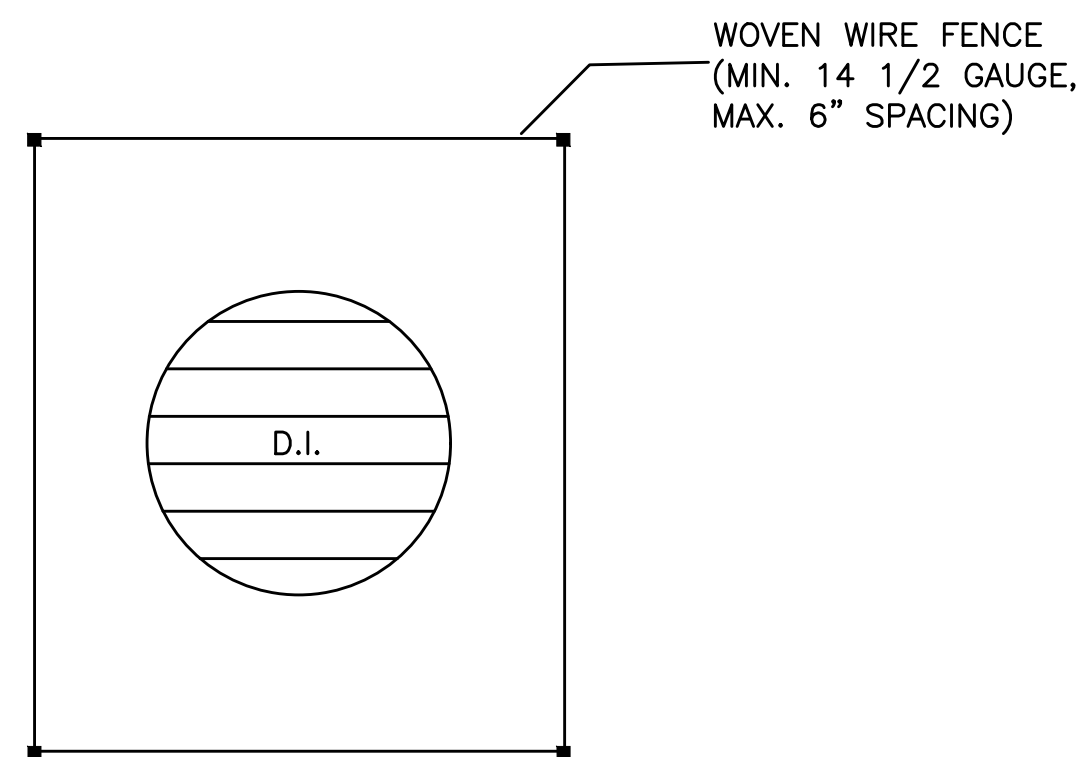
- WOVEN WIRE FENCE TO BE FASTENED SECURLY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
- FILTER COLTH TO BE FASTENED SECURLY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

POSTS: STEEL EITHER "I" OR "U" TYPE OR 2" HARDWOOD
 FENCE: WOVEN WIRE, 14 1/2 GAUGE 6" MAX. MESH OPENINGS.
 FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL
 PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

A SILT FENCE DETAIL
 NOT TO SCALE

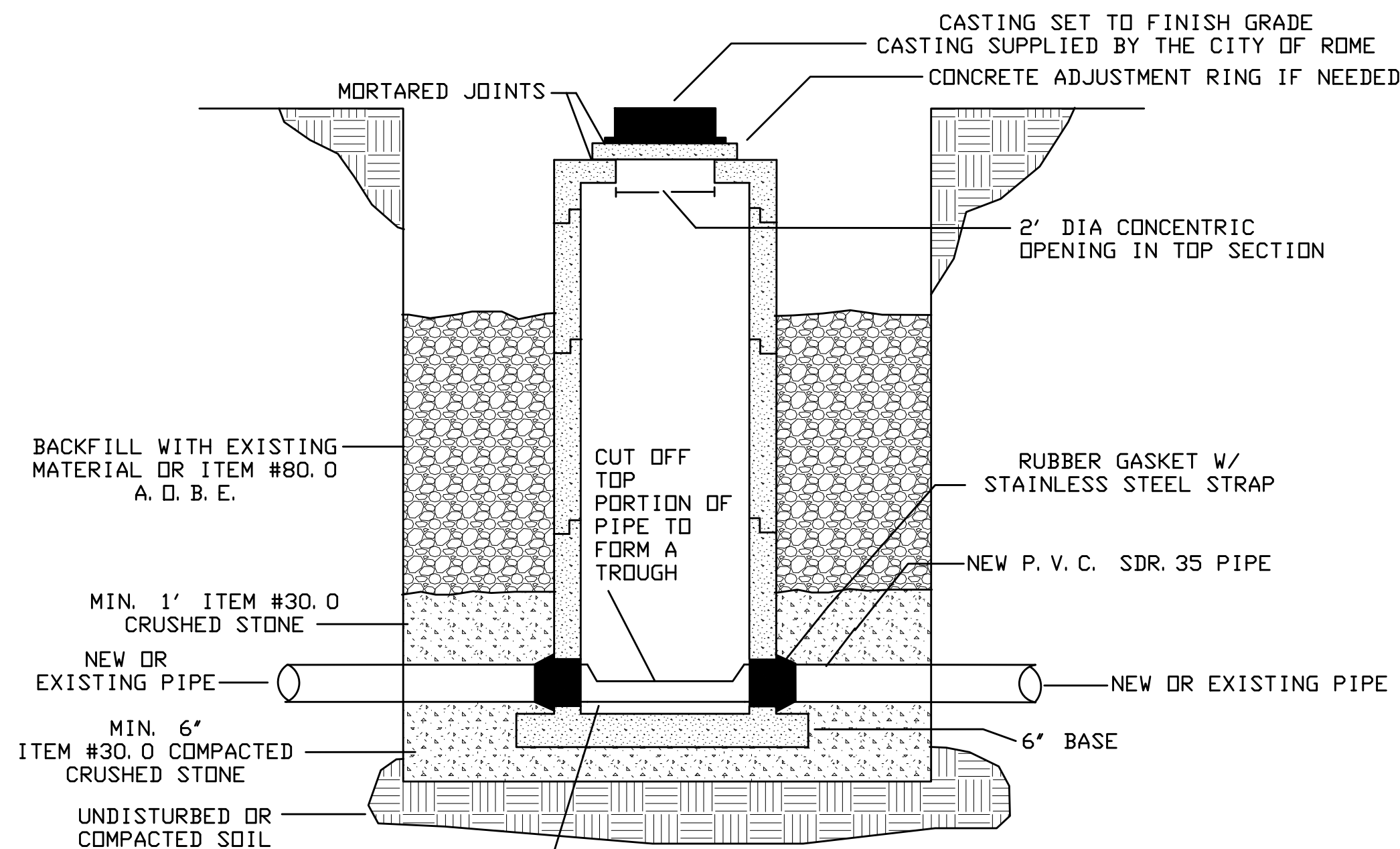


NOT TO SCALE



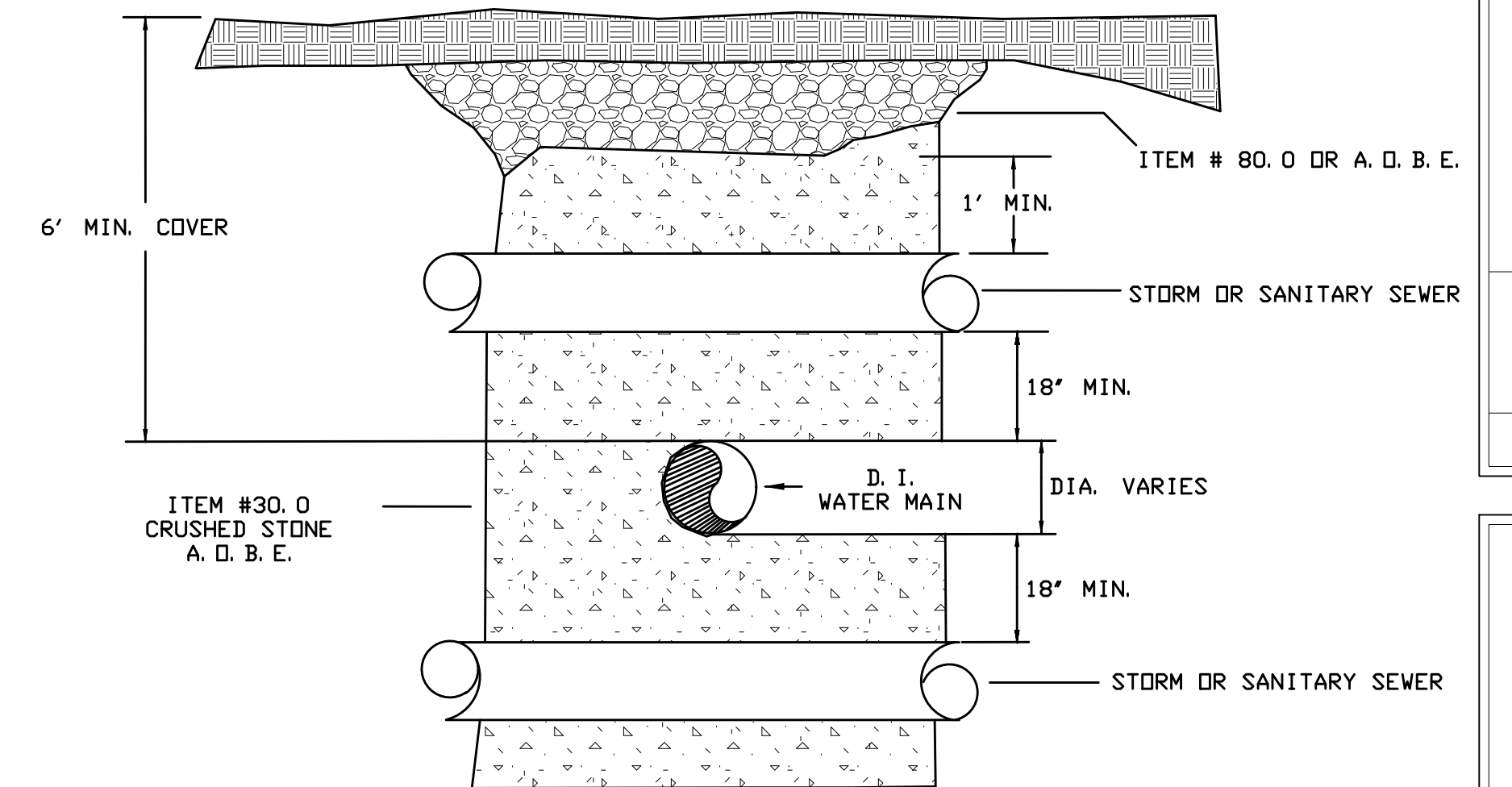
PLAN

B D.I. PROTECTION DETAIL
 NOT TO SCALE

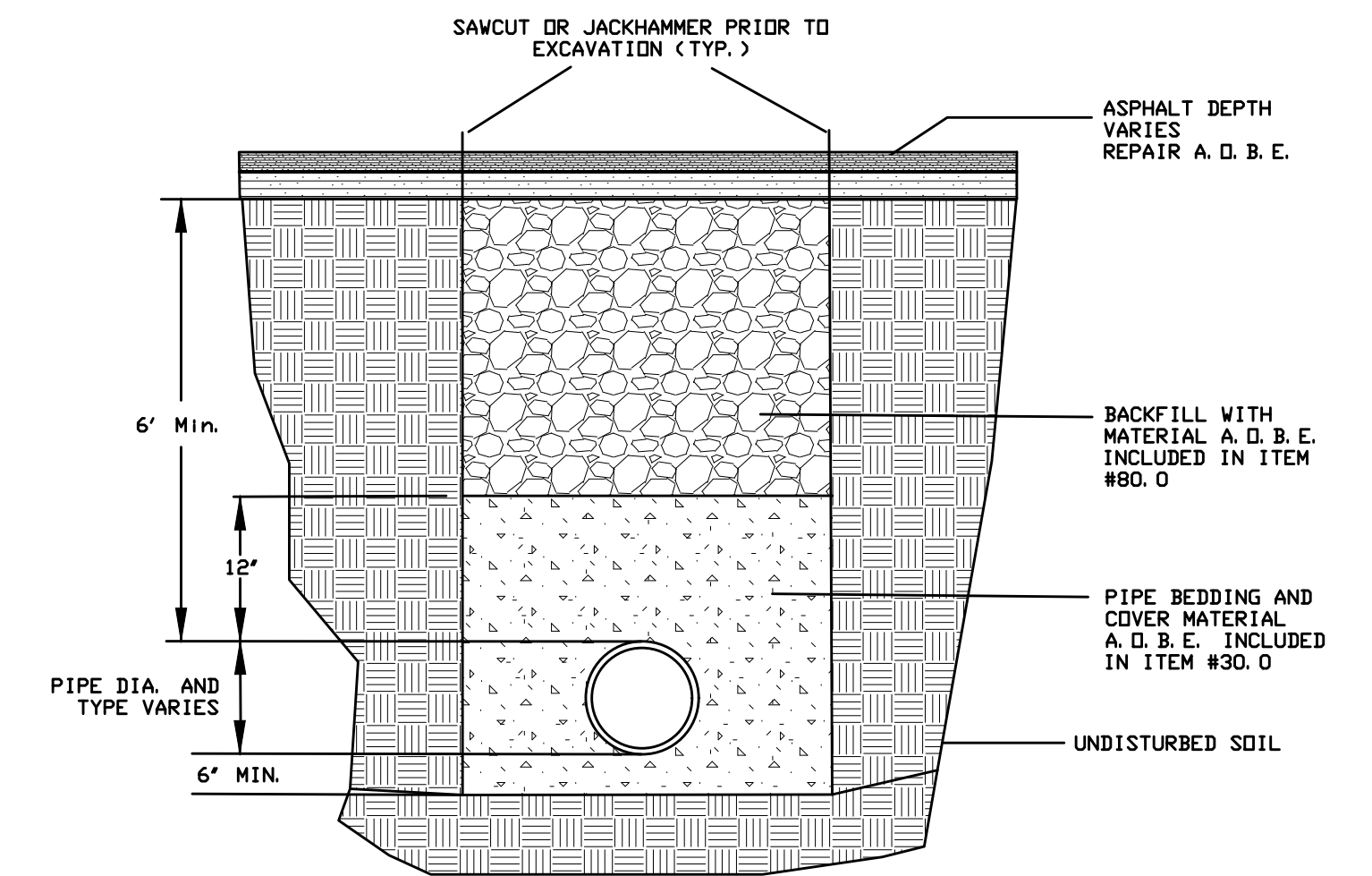


NOT TO SCALE

C NEW PRECAST SANITARY MANHOLE 4' DIA. ITEM #193.0
 NOT TO SCALE



D WATER/STORM OR SANITARY CROSSING
 NOT TO SCALE



NOT TO SCALE

E TRENCH AND BACKFILL DETAIL ITEM #15.0
 NOT TO SCALE

ISSUED FOR BID	DRAWING RELEASE
0 8/9/24	DATE
NO.	

MISCELLANEOUS DETAILS

MBL
 ENGINEERING, PLLC

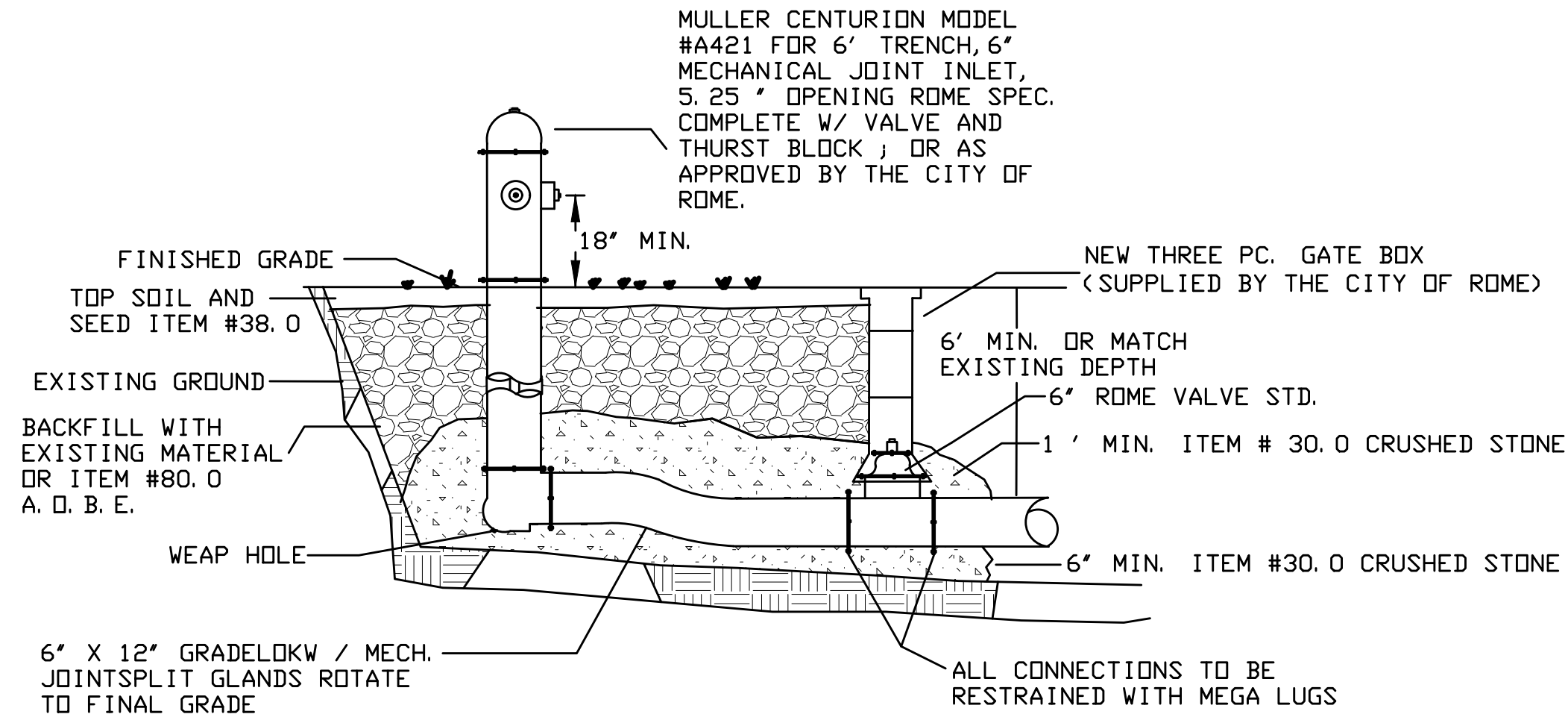
INFRASTRUCTURE EXPANSION
 POTTER ROAD
 CITY OF ROME
 ONEIDA COUNTY

PROJECT #
 22-067

DATE:
 JULY 2024

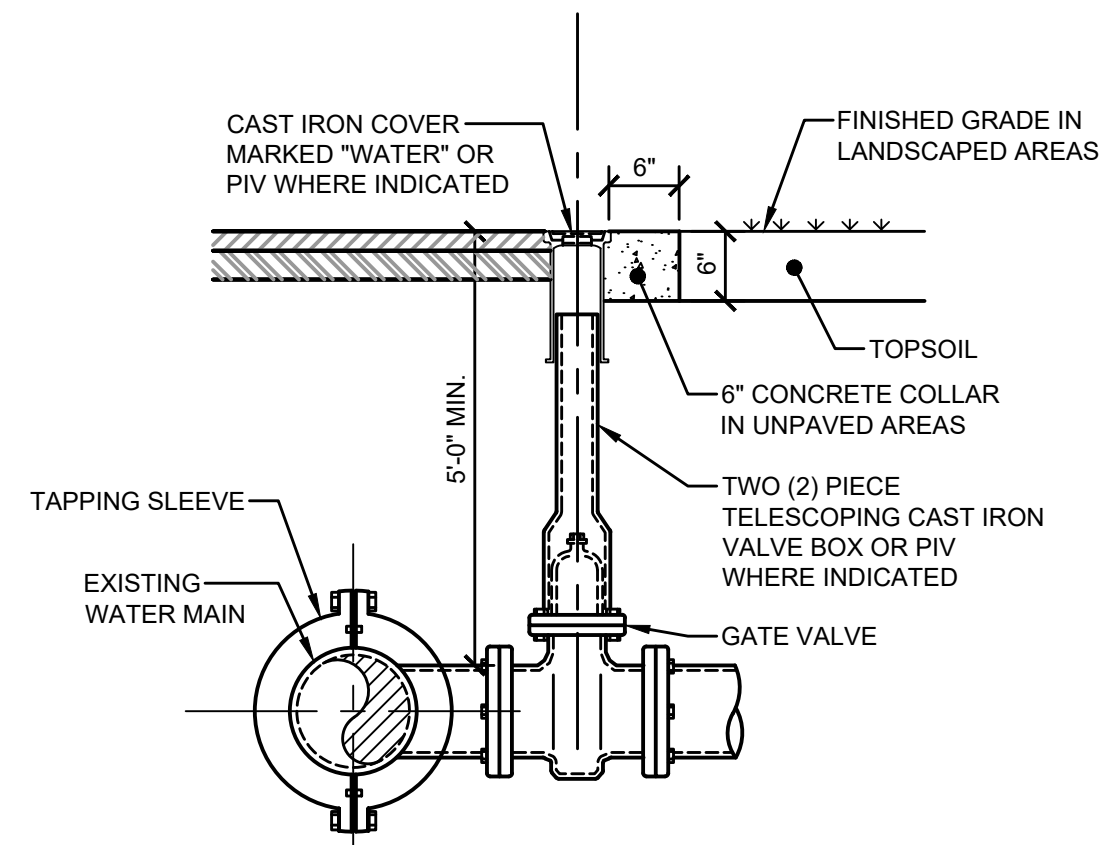
SHEET #
 C-501





NEW HYDRANT COMPLETE WITH 6" VALVE AND GRADELOK

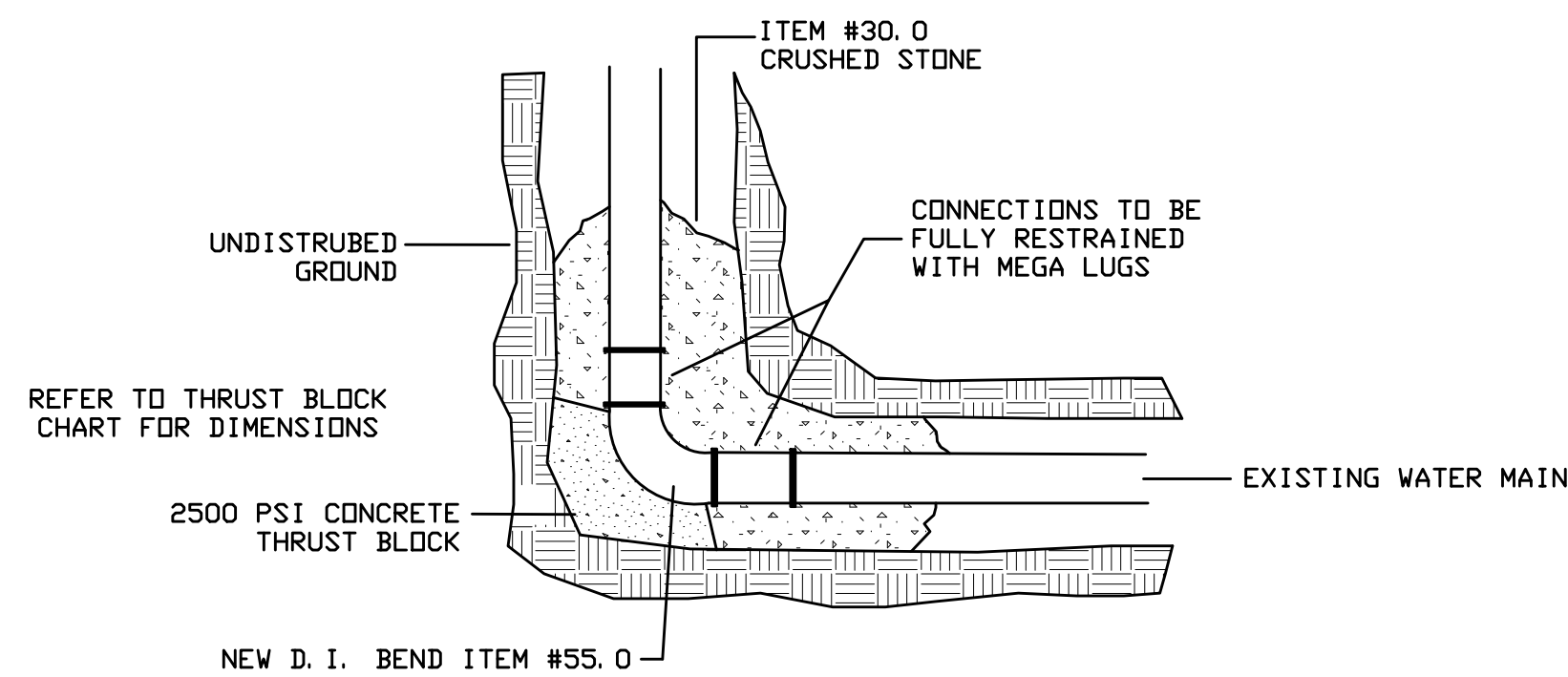
A ITEM #50.0
NOT TO SCALE



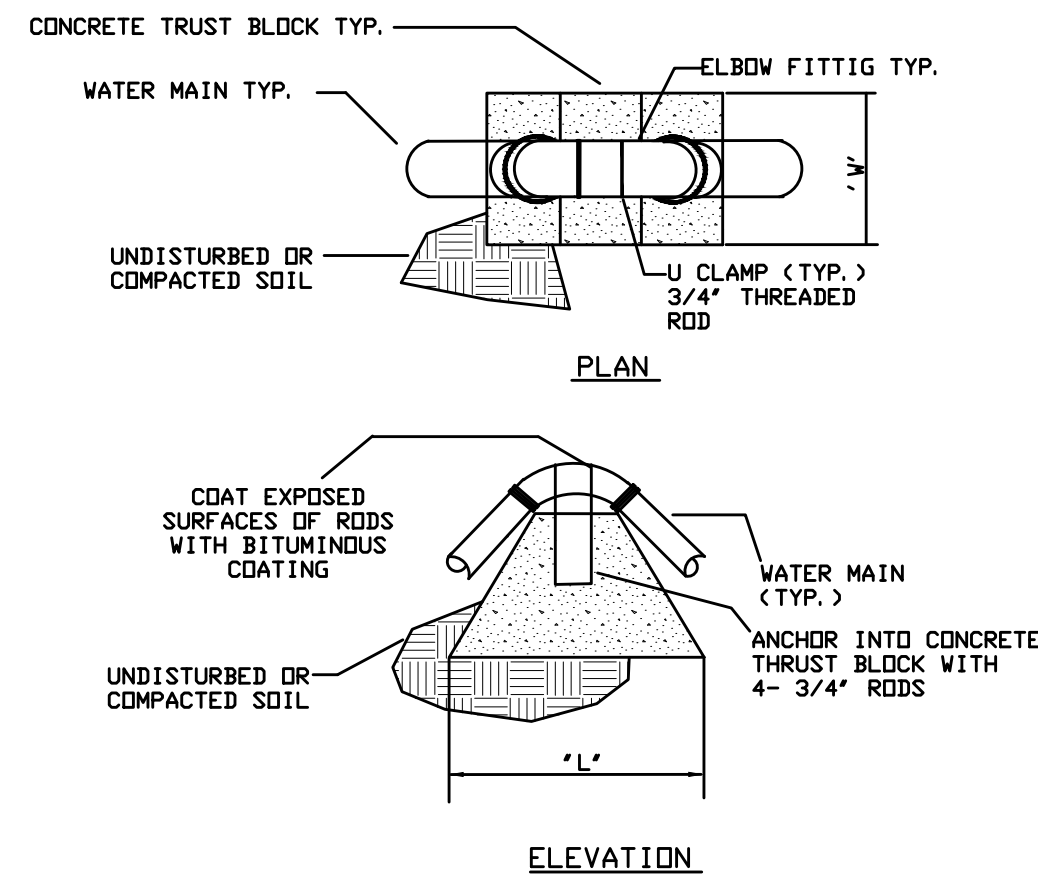
NOTES:

1. TAP OF PUBLIC WATER MAINS SHALL BE PERFORMED UNDER THE SUPERVISION OF THE ENGINEER AND THE AUTHORITY HAVING JURISDICTION.
2. TAPPING SLEEVE SHALL BE SELECTED TO FIT EXISTING PIPE OUTSIDE DIAMETERS.

D TAPPING SLEEVE AND VALVE DETAIL
NOT TO SCALE



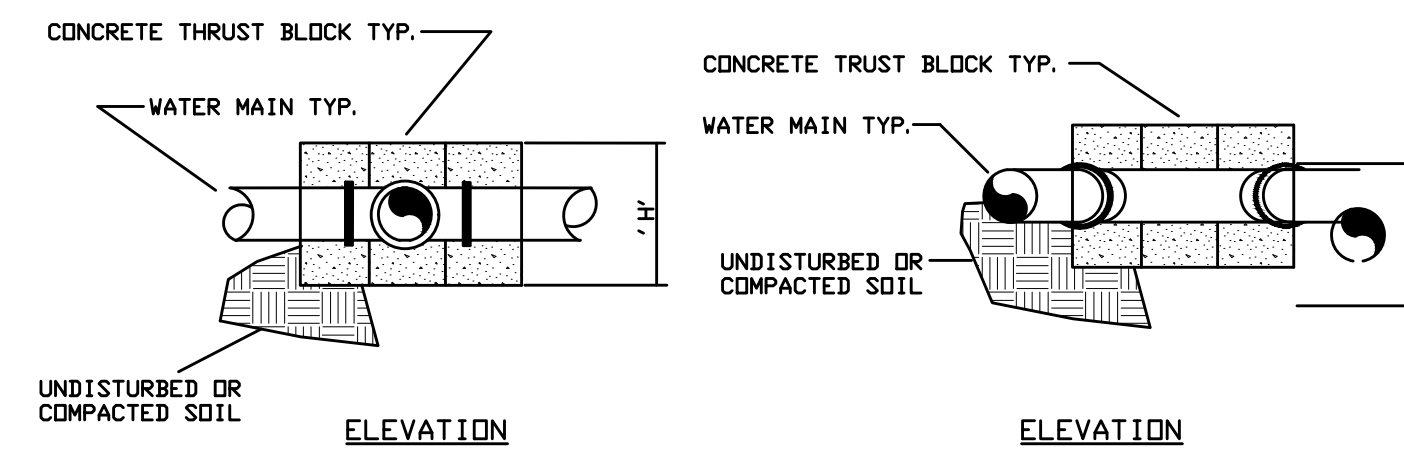
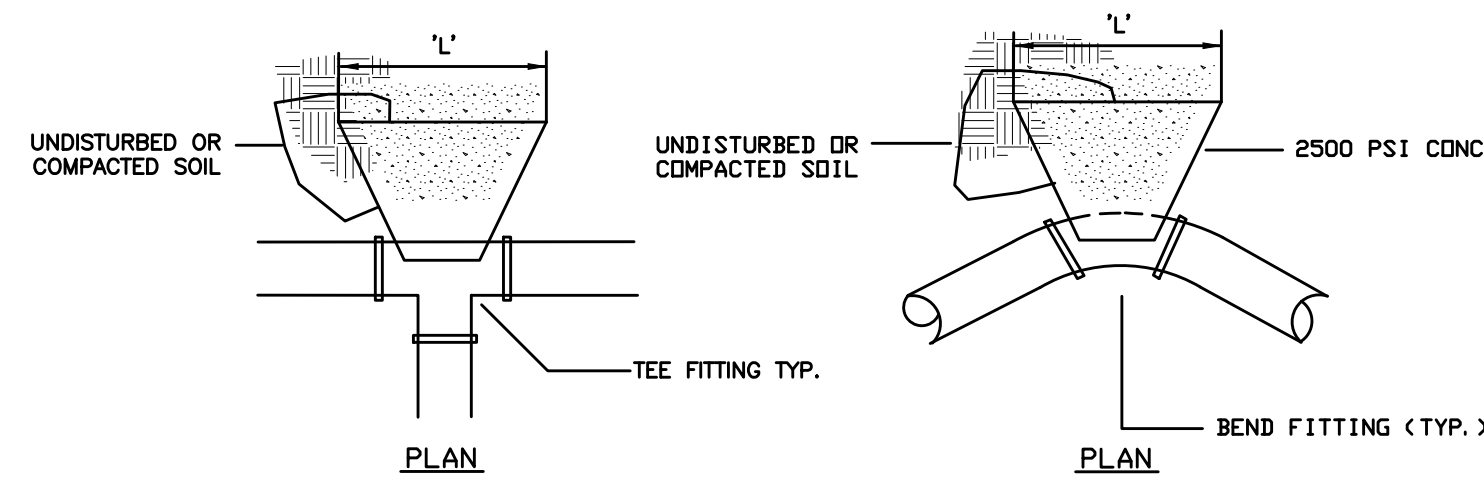
E 11.25° - 90° DIRECTIONAL CHANGE
NOT TO SCALE



DIMENSION SCHEDULE (VERTICAL BENDS)

PIPE SIZE	45 DEGREE BEND		22.5 DEGREE BEND		11.25 DEGREE BEND	
	"H"	"L"	"H"	"L"	"H"	"L"
6"	3'-6"	5'-0"	3'-0"	4'-0"	2'-6"	3'-0"
8"	4'-6"	5'-0"	3'-6"	4'-0"	3'-0"	3'-0"

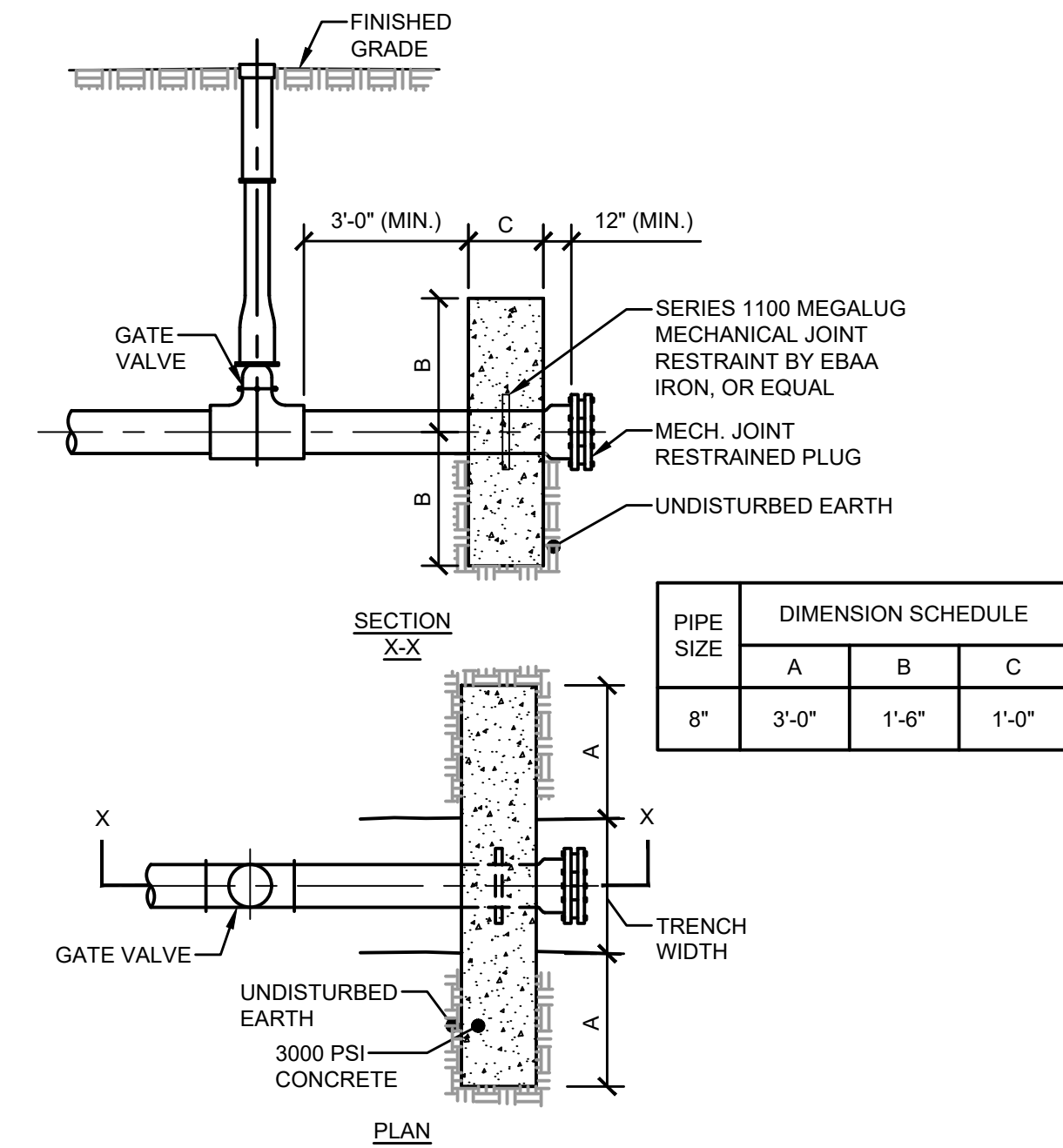
B VERTICAL BENDS THRUST BLOCK DETAIL
NOT TO SCALE



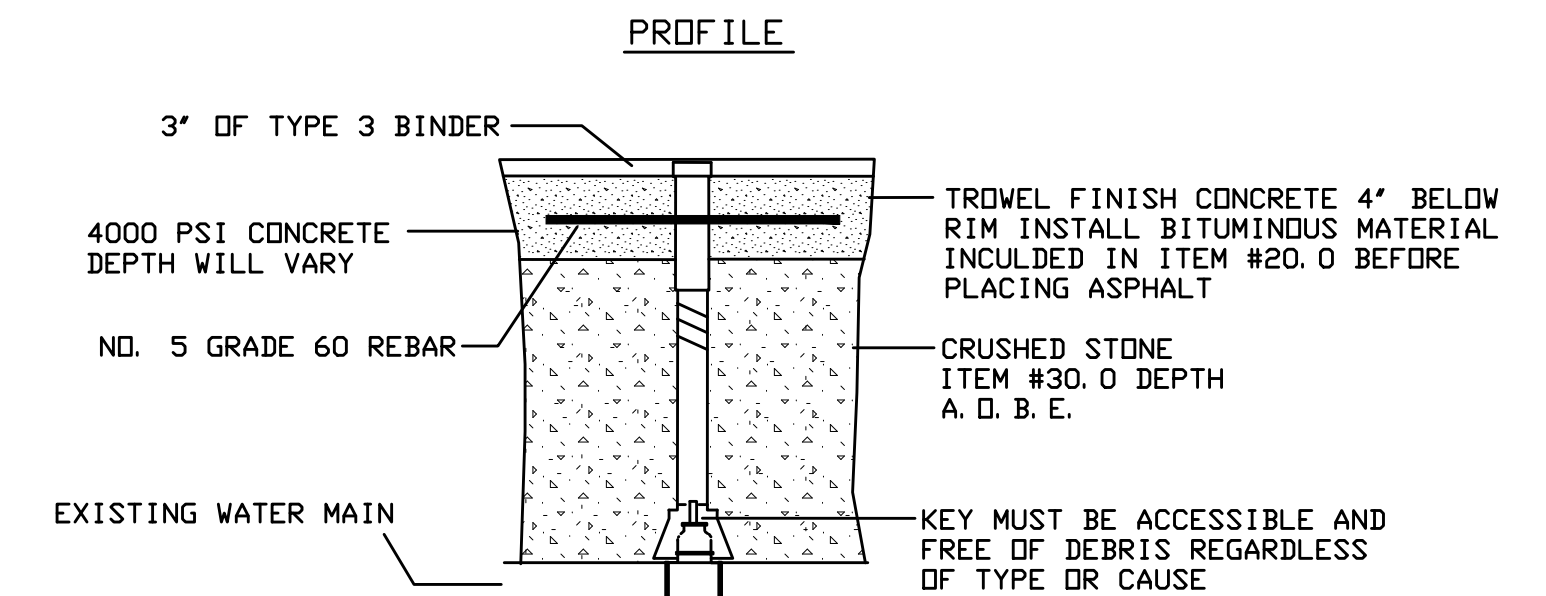
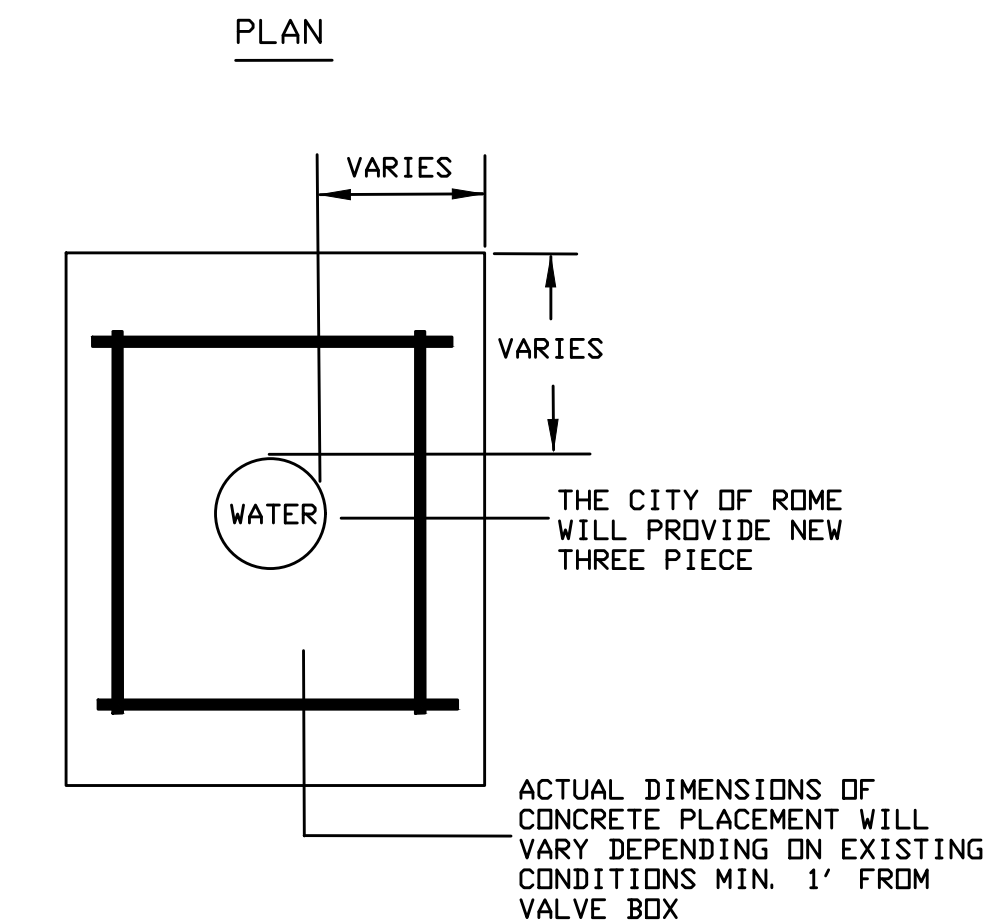
DIMENSION SCHEDULE

PIPE SIZE	90 DEGREE BEND		45 DEGREE BEND		22.5 DEGREE BEND		11.25 DEGREE BEND	
	"H"	"L"	"H"	"L"	"H"	"L"	"H"	"L"
6"	4'-0"	4'-6"	3'-0"	3'-6"	2'-0"	3'-0"	1'-6"	1'-6"
8"	5'-0"	5'-0"	3'-6"	4'-0"	2'-6"	3'-0"	2'-0"	2'-0"

F HORIZONTAL BENDS THRUST BLOCK DETAIL
NOT TO SCALE



C DEAD END DETAIL
NOT TO SCALE



C NEW VALVE BOX THREE PIECE SCREW TYPE ITEM #20.0
NOT TO SCALE



ISSUED FOR BID	DATE	DRAWING RELEASE
0	8/9/24	
NO.		

MISCELLANEOUS DETAILS

MBL ENGINEERING, PLLC

INFRASTRUCTURE EXPANSION
POTTER ROAD
CITY OF ROME
ONEIDA COUNTY

PROJECT #
22-067

DATE:
JULY 2024

SHEET #
C-502

CITY OF ROME, NEW YORK

DEPARTMENT OF ENGINEERS

RFP **RFB 2024-026 Potter Road Infrastructure Extensions**

TOTAL BASE BID

\$ _____

TOTAL BASE BID IN WORDS

_____ Dollars

BIDDER'S NAME:

BY: _____

TITLE: _____

ADDRESS: _____

TELEPHONE NUMBER: _____

FAX NUMBER : _____

DATE: _____

JEFFREY LANIGAN
JOSEPH GUILIANO

MAYOR
COMMISSIONER OF PUBLIC WORKS

PLEASE ATTACH BID BOND OR CERTIFIED CHECK



Michael B. Lasell, P.E., LEED AP BD+C
MBL Engineering, PLLC
July 25, 2024

TABLE OF CONTENTS

CONTRACT DOCUMENTS	SECTION 100	page 2
BID ADVERTISEMENT		page 3-4
INFORMATION TO BIDDERS	SECTION 200	page 38
NON-COLLUSIVE BIDDING DOCUMENT		page 50
BIDDING DOCUMENTS	SECTION 300	page 66
TECHNICAL SPECIFICATIONS	SECTION 400	page 68
NYS DOL WAGE RATES	SECTION 500	page 102

SECTION 100

CONTRACT DOCUMENTS

Bid Advertisement

Sealed proposals will be received by the City Clerk of the City of Rome, New York, until 11:00 a.m. local time September 13, 2024 for the following project:

RFB-2024-026 Potter Road Infrastructure Extensions

BID OPENING

Bid will be publicly opened and read aloud at 11:00 a.m., local time, September 13, 2024 at 198 North Washington St., Rome, NY, 13440, Rome City Hall, 2nd Floor, Council Chambers.

BID SUBMITTAL & FORMS

All bids must be received no later than submission deadline listed above. The City of Rome will not accept late bid submissions. Electronic submissions are not permitted for these bidding documents. Bid packages can be delivered to Rome City Hall and dropped in overnight depository.

All bids shall be made on forms furnished and shall be enclosed in a sealed envelope marked to the attention of the City Clerk as follows:

RFB-2024-026 Potter Road Infrastructure Extensions

BID MATERIALS

Bids will be advertised electronically at:

- <http://www.romenewyork.com/treasurer-purchasing/>
- <https://www.bidnetdirect.com/new-york/city-of-rome>
- <https://www.nyscr.ny.gov/>

OFFICIAL PLAN HOLDERS LIST

Bidders who intend to submit a bid must call or email to be placed on the official plan holders list. Contractors must notify the City of Rome in order to be placed in the official plan holder's list, in order to receive addenda and any other bid correspondence. Bids received from contractors other than those on the official plan holder's list will not be accepted. To be placed on the official plan holders list please contact the Department of Public Works at (315) 339-7632 or (315) 339-7627 . You can also email Joseph Guiliano at jguiliano@romecitygov.com

ADDENDA

The City will not issue Addenda, nor will its Engineer issue addenda nor respond to bidder's questions five (5) days prior to the scheduled bid opening unless stated bid date is postponed.

BID SECURITY

Bids shall be accompanied by money order, certified check, or bid bond in the amount of 5% of the total bid price, payable to the City Treasurer, City of Rome, Rome New York. No bidder may withdraw their bid within forty-five (45) calendar days after the actual date of the opening thereof.

BID ADVERTISEMENT NOTES

It is the policy of the City of Rome to encourage the greatest possible participation of minority and women-owned business enterprises (MWBEs). All qualified MWBE suppliers, contractors, and/or businesses will be afforded equal opportunity without discrimination because of race, color, religion, national origin, sex, age, disability, or sexual preference.

The City of Rome reserves the right to reject any or all proposals or to accept any proposals deemed to be in its best interest.

Dated: September 3, 2024

Eric Seelig, City Clerk
City of Rome
Board of Estimate and Contract

PROPOSAL

To the Board of Estimates and Contract,
City of Rome, NY

Pursuant to and in compliance with your advertisement for bids dated **September 3, 2024** and the information for bidders relating hereto, the undersigned hereby offers to furnish all labor, material, implements, tool, etc., necessary, or proper for, or incidental to:

RFB-2024-026 Potter Road Infrastructure Extensions

as required by and in strict accordance with the Plans and Specifications, for the unit prices set opposite the several items which are attached.

In submitting this bid, the undersigned declares that he is, or they are, the only person, or persons, interested in the said bid; that it is made without any connection with any person making another bid for the same contract; that the bid is in all respects fair and without collusion, fraud or mental reservation; and that no official of the City, or any person in the employment of the City is directly or indirectly interested in said bid or in the supplies or work to which it relates, or in any portion of the profits therein.

The undersigned also hereby declares that he, or they, have carefully examined the plans, specifications, forms of contract, that he has, or they have, personally inspected the actual location of the work together with the local sources of supply and that he has, or they have, satisfied himself, or themselves, as to all the quantities and conditions and understands that in signing this proposal he or they waive all right to plead any misunderstanding regarding the same.

The undersigned further understands and agrees that he is, or they are, to furnish and provide for the respective item price bid, all necessary material, except that furnished by the City of Rome, machinery, implements, tools, labor, services, etc., and to do and perform all the work necessary under the aforesaid conditions to complete the construction of the aforementioned work in accordance with the plans and specifications for said construction, which plans and specifications it is agreed are a part of this proposal and to accept in full compensation thereof the amount of the summation of the products of the actual quantities multiplied by the unit prices bid.

The undersigned further agrees to accept the aforesaid "unit bid" prices in compensation for any additions or deductions caused by variation in quantities due to more accurate measurements, or by any changes or alterations in the plans or specifications of the work.

CONTRACT FOR:
RFB-2024-026 Potter Road Infrastructure Extensions

in Rome, New York, dated _____ by and between the City of Rome New York, a municipal corporation organized and existing under the laws of the State of New York, having a principal place of business at City Hall, 198 North Washington Street, City of Rome, County of Oneida, State of New York (hereinafter referred to as “**Owner**” or “**City**”), and _____, doing business at _____

_____ (hereinafter referred to as the “**Contractor**”).

WITNESS that the **Owner** and the **Contractor** in consideration of the promises and of the mutual covenants, considerations and agreements herein contained, agree to be legally bound as follows:

ARTICLE 1. CONTRACT AND CONTRACT DOCUMENTS.

1.1 Except for titles, subtitles, headings, running headlines, tables of content and indices (all of which are printed herein merely for convenience), the following, except for such portions thereof as may be specifically excluded, shall be deemed to be a part of this Contract:

- 1.1.1 All provisions required by law to be inserted in this Contract, whether inserted or not;
- 1.1.2 The Contract Drawings and Specifications;
- 1.1.3 The General Conditions and Special Conditions, if any;
- 1.1.4 The Contract;
- 1.1.5 The Information for Bidders; Request for Proposals; Notice of Solicitation and Proposal for Bids; Bid or Proposal, and if used, the Bid Booklet; and
- 1.1.6 All Addenda issued prior to the receipt of the Bids; the Notice of Award; Performance and Payment Bonds, if required; and the Notice to Proceed with the Work.

1.2 In case of any conflict or inconsistency between the provisions of this Contract and those of the Specifications, the provisions of this Contract shall govern, unless the Contractor shall have asked for and obtained a decision in writing from the Commissioner, of the Agency that is entering into this Contract, before the submission of its bid as to what shall govern.

ARTICLE 2. DEFINITIONS

2.1.1 “**Addendum**” or “**Addenda**” shall mean the Additional Contract provisions issued in writing by the Commissioner prior to the receipt of bids.

2.1.2 “**Agency**” shall mean a city, county or other office, position, department, division, bureau, board or commission, or a corporation, institution or agency of government the expenses of which are paid in whole or in part from the City treasury.

2.1.3 “**City**” shall mean the City of Rome, New York. For purposes of this Contract, the word “**City**” includes the “**City Engineer**” and “**Commissioner**”, and “**City**” and “**Owner**” are synonymous and may be used interchangeably.

2.1.4 “**City Engineer**” shall mean an Engineer for the City of Rome, duly designated by the Commissioner to be his/her representative at the site of the Work.

2.1.5 “**Commissioner**” shall mean the City of Rome Commissioner of Public Works, or his/her duly authorized representative.

2.1.6 “**Contract**” or “**Contract Documents**” shall mean each of the various parts of the contract referred to in Article 1 hereof, both as a whole and severally.

2.1.7 “**Contract Work**” shall mean everything required to be furnished and done by the Contractor by any one or more of the parts of the Contract referred to in Article 1, except “**Extra Work**” as hereinafter defined.

2.1.8 “**Contractor**” shall mean the entity which executed the Contract, whether a corporation, firm, partnership, joint venture, individual, or any combination thereof, and it(s), their, his/her successors, personal representatives, executors, administrators, sub-contractors and assigns, and any person, firm, partnership, joint venture, individual, or corporation which shall at any time be substituted in the place of the Contractor under this Contract.

2.1.9 “**Days**” shall mean calendar days, except where otherwise specified.

2.1.10 “**Engineer**” or “**Architect**” or “**Project Manager**” shall mean the person so designated in writing by the Commissioner to act as such in relation to this Contract, including a private Architect or Engineer or Project Manager, as the case may be. For projects on which the City outsources engineering, architecture or management services, any reference to “**City Engineer**” shall be deemed to mean “**Engineer**” or “**Architect**” or “**Project Manager**”, whichever is applicable.

2.1.10(a) “**Employee**” shall mean those persons employed and supervised by **Contractor**, or any **Subcontractor(s)**, to perform the **Work** contemplated under this Contract. For purposes of this Contract, the City of Rome has no obligation to protect any “**Employee**” from any injury or harm as the result of working under this Contract, as said obligation rests solely with **Contractor** and/or **Subcontractor(s)**.

2.1.11 “**Extra Work**” shall mean Work other than that required by the Contract at the time of award, which is authorized by the Commissioner pursuant to Article 16 of this Contract.

2.1.12 “**Final Acceptance**” shall mean final written acceptance of all the Work by the Commissioner, a copy of which shall be sent to the Contractor.

2.1.13 **“Final Approved Punch List”** shall mean a list, approved in writing by the Engineer, specifying those items of Work to be completed by the Contractor after Substantial Completion and dates for the completion of each item of Work.

2.1.14 **“Law” or “Laws”** shall mean the Constitution of the State of New York, the City of Rome Charter, a statute of the United States or of the State of New York, a local law of the City of Rome, New York, any ordinance, rule or regulations having the force of law, or common law.

2.1.15 **“Materialman”** shall mean any corporation, firm, partnership, joint venture, or individual, other than employees of the Contractor, who or which contracts with the Contractor or any Subcontractor, to fabricate or deliver, or who actually fabricates or delivers, plant, material or equipment to be incorporated in the Work.

2.1.16 **“Means and Methods of Construction”** shall mean the labor, materials, temporary structures, tools, plant and construction equipment, and the manner and time of their use, necessary to accomplish the result intended by this Contract.

2.1.17 **“Notice”** shall mean and include written notice. Written notice shall be deemed to have been duly served when delivered to or at the last known business address of the person, firm, or corporation for whom intended, or to his, their or its duly authorized agent, representative or office; or when enclosed in a postage prepaid wrapper or envelope addressed to such person, firm or corporation at his, their or its last known business address and deposited in a United States mail box.

2.1.18 **“Owner”** shall mean the City of Rome, New York. For purposes of this **Contract**, the word **“Owner”** includes the **“City Engineer”** and **“Commissioner”**, and the words **“Owner”** and **“City”** are synonymous and may be used interchangeably.

2.1.19 **“Project”** shall mean the public improvement to which this Contract relates.

2.1.20 **“Required Quantity”** in a unit price Contract shall mean the actual quantity of any item of Work or materials which is required to be performed or furnished in order to comply with the Contract.

2.1.21 **“Site”** shall mean the area upon or in which the Contractor’s operations and work under this Contract are carried on, and such other public areas immediately adjacent thereto as may be designated as such by the Engineer. The word **“Site”** shall not include private property utilized by Contractor for any purpose.

2.1.22 **“Specifications”** shall mean all of the directions, requirements and standards of performance applying to the Work as hereinafter detailed and designated under the Specifications.

2.1.23 **“Subcontractor”** shall mean any person, firm or corporation, other than Employees of the Contractor, who or which contracts with the Contractor or with its Subcontractors to furnish, or actually furnishes labor, or labor and materials, or labor and equipment, at the site. Wherever the word Subcontractor appears, it shall also mean Sub-Subcontractor.

2.1.24 **“Substantial Completion”** shall mean the written determination by the Commissioner that the Work required under this Contract is substantially, but not entirely complete.

2.1.25 “**Treasurer**” shall mean the Treasurer or Chief Financial Officer of the City of Rome, New York.

2.1.26 “**Work**” shall mean all services required to complete the Project in accordance with the Contract Documents, including without limitation, labor, material, superintendence, management, administration, equipment, and incidentals, and shall include both Contract Work and Extra Work.

ARTICLE 2A. NOTICE OF AWARD AND NOTICE TO PROCEED

2A.1 Upon the acceptance of the contractor's bid by the **City**, the **City** will issue a “Notice of Award”, which shall detail the **Contract** requirements, insurance documents and any other pertinent information. All requirements of the Notice of Award must be submitted to the **City** within ten (10) working days of the Notice. In the event that the **Contractor** fails to submit the correct requirements as determined solely by the **City Engineer**, the **Contractor** will be deemed in non-compliance and will forfeit its bid security to the **City**.

2A.2 The Notice to Proceed will detail the **Contract** time and other details pertinent to the **Contract**, i.e. submittals, listing of subcontractors, contact numbers, etc.

ARTICLE 3. THE WORK AND ITS PERFORMANCE

3.1 Unless otherwise expressly provided in the **Contract Drawings, Specifications** and **Addenda**, the **Work** shall be performed in accordance with the best modern practice, utilizing, unless otherwise specified in writing, new and unused materials of standard first grade quality and workmanship and design of the highest quality, to the satisfaction of the **Commissioner**.

3.2 The **Contractor** will furnish all labor, materials, supplies, equipment and other facilities and things necessary or proper for or incidental to the work contemplated by this contract as required by and in strict accordance with the applicable plans and specifications prepared by the **City Engineer** or **Engineer** or **Architect**.

RFB-2024-026 Potter Road Infrastructure Extensions

3.3 By executing this **Contract**, the **Contractor** is precluded and debarred from pleading misunderstanding or deception because of estimates of quantities, character, location or other conditions surrounding the **Project Work** covered by the **Contract**.

ARTICLE 3A. COMPENSATION TO BE PAID CONTRACTOR

3A.1 The **City** will pay, and the **Contractor** will accept in full consideration for the performance of the **Contract**, subject to additions and deductions as provided herein,

the total sum of _____ Dollars,

(\$.), this said sum being the Amount at which the **Contract** was awarded to the **Contractor** at a public letting thereof, based upon the **Contractor's** bid for the **Contract**.

ARTICLE 4. MEANS AND METHODS OF CONSTRUCTION

4.1 Unless otherwise expressly provided in the **Contract Drawings, Specifications** and/or **Addenda**, the **Means and Methods of Construction** shall be such as the **Contractor** may choose; subject, however, to the **City Engineer's** right to reject the **Means and Methods of Construction** proposed by the **Contractor** which in the opinion of the **City Engineer**:

4.1.1 Will constitute or create a hazard to the **Work**, to persons of the general public or public property. **Contractor** and **Subcontractor(s)** are responsible for supervising the safety of their own employees, both on and off the **Work Site**, and maintaining the integrity, condition and safety of any property; or

4.1.2 Will not produce finished **Work** in accordance with the terms of the **Contract**; or

4.1.3 Will be detrimental to the overall progress of the **Project**.

4.2 The **City Engineer's** approval of the **Contractor's Means and Methods of Construction**, or his/her failure to exercise his/her right to reject such means or methods, shall not relieve the **Contractor** of its obligation to complete the **Work** as provided in this **Contract**; nor shall the exercise of such right to reject create a cause of action for damages.

4.3 Nothing herein shall be interpreted to mean that the **Owner, Commissioner or City Engineer** shall have an obligation or duty to supervise the **Contractor's Means and Methods of Construction** in order to protect the safety of **Contractor's or Subcontractors' Employees**, as said obligation or duty rests solely with the **Contractor or Subcontractor**.

ARTICLE 4A. SURVEYS, GRADE AND PERMITS.

The **Contractor will be responsible for all** lines and grades necessary for the satisfactory completion of the work called for by this **Contract**. It will be the responsibility of the **Contractor** to adhere to lines and grades provided. If it is determined by the **City Engineer** that adjustments and changes to lines and grades will be necessary, then the **Contractor shall** take direction from the **City Engineer** and make changes accordingly. There is no additional payment made when the **City Engineer** determines it is necessary to make field changes for satisfactory completion of this **Contract**. The **City Engineer** may give the **Contractor** a Miscellaneous Order(s) to correct drainage problems, for which the **City Engineer** will supply grades and elevations. It will be the **Contractor's** responsibility to conform to the grades and elevations contained in said Miscellaneous Order. If **Contractor** does not conform to the ordered grade elevations, the **Contractor** will correct work at his own cost, as directed by the **City Engineer**.

The **Contractor** shall have the right to cut the pavement in any street or alley through which the work herein described is laid out, without any further permits. All other permits and licenses necessary for the prosecution of the work shall be secured and paid for by the **Contractor**. Upon completion of the **Work** covered by this **Contract**, said license to enter the City's streets or alleys to make cuts shall be revoked.

ARTICLE 5. INSPECTION

5.1 During the progress of the **Work** and up to the date of **Final Acceptance**, the **Contractor** shall at all times afford the representatives of the **City** every reasonable, safe and proper facility for inspecting all **Work** done or being done at the **Site**, and also for inspecting the manufacture or preparation of materials and equipment at the place of such manufacture or preparation.

5.2 The **Contractor's** obligation hereunder shall include the uncovering or taking down of finished **Work** and its restoration thereafter; provided, however, that the order to uncover, take down and restore shall be in writing, and further provided that if **Work** thus exposed proves satisfactory, and if the **Contractor** has complied with Article 5.1, such uncovering or taking down and restoration shall be considered an item of **Extra Work** to be paid for in accordance with the provisions of Article 16. If the **Work** thus exposed proves unsatisfactory, the **City** has no obligation to compensate the **Contractor** for the uncovering, taking down or restoration.

5.3 Inspection and approval by the **Commissioner** or **City Engineer**, of finished **Work** or of **Work** being performed, or of materials and equipment at the place of manufacture or preparation, shall not relieve the **Contractor** of its obligation to perform the **Work** in strict accordance with the **Contract** or of its obligation to protect its **Employees** from injury or harm for work performed under this **Contract**. Finished or unfinished **Work** not found to be in strict accordance with the **Contract** shall be replaced as directed by the **City Engineer**, even though such **Work** may have been previously approved and paid for. Such corrective work is **Contract Work** and shall not be deemed **Extra Work**.

5.4 Rejected **Work** and materials shall be promptly taken down and removed from the **Site**, which must at all times be kept in a reasonably clean and neat condition.

5.5 Nothing herein shall be interpreted to mean that the inspection authority provided to the **City** by this Article 5 creates any obligation or duty on the **City** to protect the safety of **Contractor's** or **Subcontractors Employees** or to protect the safety, integrity or condition of any property, as said obligations and duties rest solely with the **Contractor** or **Subcontractor**.

ARTICLE 6. PROTECTION OF WORK AND OF PERSONS AND PROPERTY

6.1 During the performance of the **Work** and up to the date of **Final Acceptance**, the **Contractor** shall be under an absolute obligation to protect **Employees**, both on and off the **Work Site**, the finished and unfinished **Work**, equipment, materials, tools, machinery, vehicles and the site against any injury, damage, loss, theft and/or vandalism, and in the event of such injury, damage, loss, theft and/or vandalism, it shall promptly secure, remove, replace or repair such **Work**, **Employee**, equipment, materials, tools, machinery, vehicles and the site, whichever the **Commissioner** or **City Engineer** shall determine to be preferable. The obligation to deliver finished **Work** in strict accordance with the **Contract** prior to **Final Acceptance** shall be absolute and shall not be affected by the **Commissioner's** or **City Engineer's** approval of, or failure to prohibit, the **Means and Methods of Construction** used by the **Contractor**.

6.2 The **City** may require the **Contractor** to secure, remove, replace or repair any **Employee**, finished and unfinished **Work**, equipment, materials, tools, machinery, vehicles, which, in the

opinion of the **City, Commissioner or City Engineer**, is/are a danger to persons of the public or public property.

6.3 During the performance of the **Work** and up to the date of **Final Acceptance**, the **Contractor** shall take all reasonable precautions to protect the persons and property of the **City** and of others from damage, loss or injury resulting from the **Contractor's**, and/or its **Subcontractors** operations or storage under this **Contract**. The **Contractor's** obligation to protect shall include the duty to provide, place or replace and adequately maintain at or about the **Site** suitable and sufficient protection such as lights, signage, barricades and enclosures.

6.4 The **Contractor** shall notify the **Commissioner, Treasurer**, the commercial general liability insurance carrier, and, where applicable, the worker's compensation and/or other insurance carrier in writing, of any loss, damage or injury to **Work**, persons or property arising out of the operations or storage of the **Contractor** and/or its **Subcontractors** under this **Contract**, or any accidents on the **Site**, within thirty (30) days of the occurrence. The **Contractor's** notice to the insurance carrier must expressly specify that "this notice is being given on behalf of the City of Rome, New York as additional insured as well as [the **Contractor**] as named insured." Within three (3) **Days** after the notice to the **Contractor** of the happening of any such loss, damage or injury to **Work**, persons or property, or any accidents, the **Contractor** shall make a full and complete report thereof in writing to the **City Engineer**.

6.4.1 Notice to the **Treasurer** pursuant to 6.3 shall specify the name of the **Contract**, the date of the incident, the location (street address) of the incident, the identity of the persons or things injured, damaged or lost, and the name of the insurance carrier that issued the commercial liability insurance policy pursuant to Article 12 of this **Contract**. Such notice shall be sent to the Corporation Counsel's Office, Suite 3A, City Hall, 198 North Washington Street, Rome, New York 13440.

6.5 If any person or property sustains any loss, damage, cost, expense or injury arising out of the operations of the **Contractor** and/or its **Subcontractors** in the performance of this **Contract**, the **Contractor** shall indemnify, defend and hold the **City**, its employees and agents harmless against any and all claims, liens, demands, judgments, penalties, fines, liabilities, settlements, damages, costs and expenses of whatever kind or nature (including, without limitation, attorney's fees and disbursements), known or unknown, contingent or otherwise, arising from or in any way related to such operations, or failure to comply with any of the provisions of this **Contract** or of the **Law**. Insofar as the facts and **Law** relating to any claim would preclude the **City** from being completely indemnified by the **Contractor**, the **City** shall be partially indemnified by the **Contractor** to the fullest extent provided by **Law**.

6.6 The **Contractor** shall, at its own expense, defend, indemnify and hold the **City** harmless from any and all claims (even if the allegations of the suit are without merit) or judgments for damages (including, but not limited to, delay damages from **Other Contractors**) and from costs and expenses to which **City** may be subjected or which it may suffer or incur allegedly arising out of or in connection with any operations of the **Contractor** and/or its **Subcontractors**, or their failure to comply with the provisions of this **Contract** or of the **Laws**. Insofar as the facts and **Law** relating to any claim would preclude the **City** from being completely indemnified by the **Contractor**, the **City** shall be partially indemnified by the **Contractor** to the fullest extent provided by **Law**.

6.7 To the extent required by law, by public authority or by local conditions, the **Contractor** will adequately protect adjacent property and will provide and maintain all passage ways, railroad crossings, guard fences, lights and other facilities for protection.

6.8 In the event of the existence of an unsafe condition at the work site, which in the opinion of the **City**, endangers the health, safety or welfare of the public or the well-being, condition or integrity of any property, the **City** will contact the **Contractor** at its Emergency contact number. If **Contractor** does not abate the unsafe condition to **City's** satisfaction within the time period set by **City**, **City** may use its own resources to abate the unsafe condition. Any costs to **City**, including all material and labor costs, will be charged to **Contractor** and may be withheld from payments due to **Contractor**.

6.8.1 In the event the **City** abates the unsafe condition pursuant to Section 6.8, the **Contractor** shall indemnify and hold the **City** harmless as provided for at Sections 6.5 and 6.6 of this **Contract** for any injury, loss, damage, cost or expense to any person or property arising out of the work performed by **City** to abate the unsafe condition.

6.8.2 Nothing in Section 6.8 of this **Contract** shall be construed to establish a duty or obligation on the **City** to protect the safety, health or well-being of **Contractor**, **Subcontractor(s)** and/or **Employees** or to protect the well-being, condition or integrity of property affected by this Agreement, as said duties and obligations rest solely with the **Contractor** and/or **Subcontractor**.

6.9 The provisions of this Article shall not be deemed to create any new right of action in favor of third parties against the **Contractor** or the **City**.

6.10 Contractor will immediately notify Owner of any and all claims that Contractor allegedly caused injury to the persons or damage to the property of any third party. Contractor will also immediately notify the Rome Police Department or Oneida County Sheriff's Department, (dependent on location), of any and all claims that Contractor allegedly caused injury to the persons or damage to the property of any third party.

6.11 Nothing herein shall be interpreted to mean that the **City** has an obligation or duty to protect the safety of **Contractor's/Subcontractors' Employees** or to protect the safety, condition or integrity of any private property, as said obligation and duty rest solely with the **Contractor** or **Subcontractors**.

6.12 The **Contractor** shall be solely responsible for the storage and maintenance of equipment, materials, tools, etc., wherever said equipment, materials or tools are stored.

ARTICLE 7. COMMENCEMENT AND PROSECUTION OF THE WORK

7.1 The **Contractor** shall commence **Work** on the date specified in a written notice signed by the **Commissioner**. The time for performance of the **Work** under the **Contract** shall be computed from the date specified in such written notice. **TIME BEING OF THE ESSENCE** to the **City**, the **Contractor** shall thereafter prosecute the **Work** diligently, using such **Means and Methods of Construction** as are in accord with Article 3 herein and as will assure its completion not later than the date specified herein, or on the date to which the time for completion may be extended.

7.2 Time for completion of the **Work** as specified shall be: **May 30, 2025**
Extensive Liquidated Damages Procedure set forth in first three pages of Information to Bidders (Section 200).

ARTICLE 8. PROGRESS SCHEDULES

8.1 To enable the **Work** to be performed in an orderly and expeditious manner, the **Contractor**, within fifteen (15) **Days** after the **Notice to Proceed** with this **Contract**, unless otherwise directed by the **City Engineer**, shall submit to the **City Engineer** a proposed progress schedule in the form of a bar graph or in such other form as specified by the **City Engineer**, and monthly cash flow requirements, showing:

8.1.1 The anticipated time of commencement and completion of each of the various operations to be performed under this **Contract**; and

8.1.2 The sequence and interrelation of each of these operations with the others and with those of other related **Contracts**; and

8.1.3 The estimated time required for fabrication or delivery, or both, of all materials and equipment required for the **Work**; and

8.1.4 The estimated amount in dollars the **Contractor** will claim on a monthly basis.

8.2 The proposed schedule shall be revised as directed by the **City Engineer**, until finally approved by the **City Engineer**, and after such approval, shall be strictly adhered to by the **Contractor**.

8.3 If the **Contractor** shall fail to adhere to the approved progress schedule, it shall promptly adopt such other or additional **Means and Methods of Construction** as will make up for the time lost and will assure completion in accordance with the approved progress schedule. The approval by the **City** of a progress schedule which is shorter than the time allotted under the **Contract** shall not create any liability for the **City** if the approved progress schedule is not met.

8.4 The **Contractor** will not receive any payments until the proposed progress schedule is submitted.

ARTICLE 9. COMPLETION AND FINAL ACCEPTANCE OF THE WORK

9.1 Date for **Substantial Completion**: The **Contractor** shall substantially complete the **Work** within the time fixed at article 7.2 or as set forth in the General Conditions, or within the time to which such **Substantial Completion** may be extended as permitted by the **Commissioner**.

9.2 Determining the Date of **Substantial Completion**: The **Work** shall be deemed to be substantially complete when the two conditions set forth in 9.2.1 and 9.2.2 have been met. The **Commissioner** will then issue a Certificate of **Substantial Completion**.

9.2.1 Inspection: The **City Engineer** has inspected the **Work** and has made a written determination that it is substantially complete.

9.2.2 Approval of the Final Punch List and Date for **Final Acceptance**: Following inspection of the **Work**, the **City Engineer** shall furnish the **Contractor** a final punch list, specifying all items of **Work** to be completed. The **Contractor** shall then submit to the **City Engineer** dates for the completion of each specified item of **Work**.

Within a reasonable time after receipt, the **City Engineer**, in a written notification to the **Contractor**, shall approve the **Contractor's** completion dates or, if they are unable to agree, shall establish dates for the completion of each item of **Work**. The latest completion date specified shall be the date for **Final Acceptance** of the **Work**.

9.3 Determining the Date of **Final Acceptance**: The **Work** will be accepted as final and complete as of the date of **City Engineer's** inspection if, upon such inspection, the **City Engineer** finds that all items on the **Final Approved Punch List** are complete and no further **Work** remains to be done. The **Commissioner** will then issue a written determination of **Final Acceptance**.

9.4 Request for Inspection: Inspection of the **Work** by the **City Engineer** for the purpose of **Substantial Completion** or **Final Acceptance** shall be made within ten (10) **Days** after receipt of the **Contractor's** written request therefor.

9.5 Request for Re-inspection: If upon inspection for the purpose of **Substantial Completion** or **Final Acceptance**, the **City Engineer** determines that there are items of **Work** still to be performed, the **Contractor** shall promptly perform them and then request a re-inspection. If upon re-inspection, the **City Engineer** determines that the **Work** is substantially complete or finally accepted, the date of such re-inspection shall be the date of **Substantial Completion** or **Final Acceptance**. Re-inspection by the **City Engineer** shall be made within ten (10) **Days** after receipt of the **Contractor's** written request therefor.

9.6 Initiation of Inspection by the **City Engineer**: If the **Contractor** does not request inspection or re-inspection of the **Work** for the purpose of **Substantial Completion** or **Final Acceptance**, the **City Engineer** may initiate such inspection or re-inspection.

ARTICLE 10. LIQUIDATED DAMAGES

10.1 In the event the **Contractor** fails to complete the **Work** within the time fixed for such completion in article 7.2 or as set forth in the General Conditions, plus authorized time extensions, or if the **Contractor**, in the sole determination of the **Commissioner**, has abandoned the **Work**, the **Contractor** shall pay to the **City** the sum fixed in the General Conditions, for each and every **Day** that the time consumed in completing the **Work** exceeds the time allowed therefor; which said sum, in view of the difficulty of accurately ascertaining the loss which the **City** will suffer by reason of delay in the completion of the **Work** hereunder, is hereby fixed and agreed as the liquidated damages that the **City** will suffer by reason of such delay, and not as a penalty. This article shall apply to the **Contractor** if it is defaulted pursuant to article 32 of this **Contract**. Neither the failure to assess liquidated damages nor the granting of any time extension shall operate as a waiver or release of any claim the **City** may have against the **Contractor** for either actual or liquidated damages.

10.2 Liquidated damages received hereunder are not intended to be nor shall they be treated as either a partial or full waiver or discharge of the **City's** right to indemnification, or the **Contractor's** obligation to indemnify the **City**, or to any other remedy provided for in this **Contract** or by **Law**.

10.3 The **Commissioner** may deduct and retain out of the monies which may become due hereunder, the amount of any such liquidated damages; and in case the amount which may become due hereunder shall be less than the amount of liquidated damages suffered by the **City**, the **Contractor** shall be liable to pay the difference.

ARTICLE 11. ASSIGNMENTS

11.1 The **Contractor** shall not assign, transfer, convey or otherwise dispose of this **Contract**, or the right to execute it, or the right, title or interest in or to it or any part thereof, or assign, by power of attorney or otherwise, any of the monies due or to become due under this **Contract**, unless the previous written consent of the **Commissioner** shall first be obtained thereto, and the giving of any such consent to a particular assignment shall not dispense with the necessity of such consent to any further or other assignments.

11.2 Such assignment, transfer or conveyance shall not be valid until filed in the office of the **Commissioner** and the **Treasurer**, with the written consent of the **Commissioner** endorsed thereon or attached thereto.

11.3 Failure to obtain the previous written consent of the **Commissioner** to such an assignment, transfer or conveyance, may result in the revocation and annulment of this **Contract**. The **City** shall thereupon be relieved and discharged from any further liability to the **Contractor**, its assignees, transferees or sub-lessees, who shall forfeit and lose all monies therefor earned under the **Contract**, except so much as may be required to pay the **Contractor's** employees.

11.4 The provisions of this clause shall not hinder, prevent or affect an assignment by the **Contractor** for the benefit of its creditors made pursuant to the **Laws** of the State of New York.

11.5 This **Contract** may be assigned by the **City** to any corporation, agency or instrumentality having authority to accept such assignment.

ARTICLE 12. INSURANCE

12.1 General Requirements for Insurance Policies. The Contractor shall not commence work under this contract until he has obtained all insurance required under this paragraph, and such insurance has been approved by the Owner; nor shall the Contractor allow any Sub-Contractor to commence work on his Sub-Contractor until all similar insurance required of the Sub-Contractor has been so obtained and approved. Where applicable, all Insurance required shall be maintained throughout the term of this **Contract** and said Insurance coverage shall be "occurrence" based rather than "claim-made". All required insurance policies shall be maintained with companies licensed and authorized to do business in the State of New York by the New York State Department of Insurance. The **Contractor** shall be solely responsible for the payment of all premiums for all required policies and all deductibles to which such policies are subject, whether or not the **City** is an insured under the policy.

12.2. Types of Insurance.

12.2.1 Compensation Insurance - The Contractor shall take out and maintain during the life of this contract adequate Workmen's Compensation Insurance for all of such Contractor's employees who will be engaged in work at the site of the project and if any part of this contract is sublet, the Contractor will require his Sub-Contractor to maintain such insurance for all of the Sub-Contractor's employees who will be so engaged unless the latter's employees are protected by the Contractor's Compensation Insurance.

12.2.2 Commercial General Liability Insurance - The **Contractor** shall provide a Commercial General Liability Insurance Policy in an amount not less than **\$2,000,000.00**, in the **Contractor's** name and naming the **City** as an Additional Insured thereunder and endorsed to cover the liability assumed by the **Contractor** under the indemnity provisions of this **Contract**. The insurance policy shall be maintained throughout the term of this **Contract** and shall protect the **City**, the **Contractor** and/or its **Subcontractors** performing **Work** at the **Site** from claims for property damage and/or bodily injury, including accidental death, which may arise from operations under this **Contract**.

12.1.3 Public Liability Insurance in an amount not less than **\$2,000,000** for injuries, including wrongful death, to any one person, and subject to the same limit for each person, in an amount not less than **\$2,000,000** on account of one accident;

12.1.4 Employer's Liability Insurance: The **Contractor** shall provide Employer's Liability Insurance affording compensation due to bodily injury by accident or disease sustained by any employee of the insured arising out of and in the course of his/her employment by the insured; and

12.1.5 Automobile Liability Insurance: The **Contractor** shall provide commercial auto liability insurance covering all owned, non-owned and hired vehicles to be used in connection with this **Contract**.

12.3 Miscellaneous Provisions.

12.3.1 Notice under the Policy to the City as an Additional Insured shall be addressed to each of the following: (1) the **Commissioner**; and (2) the **Corporation Counsel's Office**, at Rome City Hall, 198 North Washington Street, Rome, New York 13440;

12.3.1(a) Notwithstanding any provision of this **Contract** to the contrary, notice by or on behalf of the **City** as an Additional Insured of any occurrence, offense, or claim, if such notice is required, will be deemed timely if given to the Insurance Company as soon as practicable after a Notice of Claim adequately specifying the occurrence, offense, or claim as one potentially covered under the policy has been filed with the **Commissioner**; however, in no event shall "as soon as practicable" be a period of less than one hundred eighty (180) **Days** thereafter; and

12.3.1(b) Notice of Cancellation of Policy. In addition to any other requirements concerning notice of cancellation, this policy shall not be cancelled, terminated, modified or changed by the Insurance Company unless thirty (30) **Days** prior written notice is sent to the Named Insured by Registered Mail and also sent by Registered Mail to both the **Commissioner** and the **Corporation Counsel's Office**, nor shall this policy be cancelled, terminated, modified or changed by the Named Insured without the prior written consent of the **Commissioner**.

12.3.2 Proof of Insurance:

12.3.2(a) Within ten (10) **Days** of award, the **Contractor** shall, for each policy required under this **Contract**, file a Certificate of Insurance with the **Commissioner** and the **Corporation Counsel**. Such certificate(s) shall certify insurance coverage in all ways in conformance with this article and shall include the following, or similar, text: “The above-named broker/producer represents and warrants to the **City** that it is an Additional Insured under the insurance policies listed herein and that such policies are in full compliance with the **Contract**.”

12.3.2(b) Certificates confirming renewals of insurances shall be submitted to each of the **City** offices specified in 12.3.1, not less than thirty (30) **Days** prior to the expiration date of coverage until all operations under this **Contract** are deemed complete.

12.3.2(c) Failure to submit the required certificate(s) of insurance or renewals, will permit the **City** to postpone the commencement of or cease **Work** on the **Project** until such time the **Contractor** complies with this article. The **City** shall assume no liability for postponing or ceasing **Work** under this article; however, the **Contractor** may be liable to the **City** for any expenses or cost the **City** incurs due to said postponement or delay.

ARTICLE 13. MONEY RETAINED AGAINST CLAIMS

13.1 If any claim shall be made by any person or entity (including other **Contractors** with the **City** on this **Project**) against the **City** or against the **Contractor** and the **City**:

13.1.1 For an alleged loss, damage, injury, theft and/or vandalism of the kind referred to in Article 6, which in the opinion of the **Corporation Counsel**, may not be covered by the contingent liability, commercial general liability or property damage insurance policy, or which, together with previously filed claims, is in excess of the amount payable under such policies; or

13.1.2 For damage claimed to have been caused directly or indirectly by the failure of the **Contractor** to perform the **Work** in strict accordance with this **Contract**.

13.2 The amount of such claims as referred to in article 13.1.1 and 13.1.2, or so much thereof as the **Commissioner** or the **Corporation Counsel** may deem necessary, may be withheld by the **Treasurer**, as security against such claim, from any money due hereunder. The **Commissioner**, in his/her discretion, may permit the **Contractor** to substitute other satisfactory security in lieu of the monies so withheld.

13.3 If an action on such claim is timely commenced and the liability of the **City**, or the **Contractor**, or both, shall have been established therein by a final judgment of a Court of competent jurisdiction, or if such claim shall have been admitted by the **Contractor** to be valid, the **Treasurer** shall pay such judgment or admitted claim out of the monies retained by the **Treasurer** under the provisions of this article, and return the balance, if any without interest, to the **Contractor**.

13.4 Liens: If at any time before or within thirty (30) **Days** after the **Work** is completed and accepted by the **City**, any persons claiming to have performed any labor or furnished any material toward the performance or completion of this **Contract**, shall file with the **Commissioner** and **Treasurer** any notice as is described in the New York State Lien Law, or any act of the Legislature

of the State of New York, the **City** shall retain from the monies due or to become due under this **Contract**, so much of monies as shall be sufficient to pay the amount claimed in said notice, together with the reasonable costs of any action or actions brought or that may be brought to enforce such lien. The monies so retained shall be held by the **City** until such time the **Contractor** submits to the **Commissioner** a Release of Liens and notice, showing all liens thereon are discharged pursuant to **Law**. No interest shall be paid by **City** to **Contractor** for monies held pursuant to a lien or liens properly filed.

ARTICLE 14. MAINTENANCE AND GUARANTEE

14.1 The **Contractor** shall promptly repair, replace, restore or rebuild, as the **Commissioner** may determine, any finished **Work** in which defects of materials or workmanship may appear or to which damage may occur because of such defects, during the one (1) year period subsequent to the date of **Final Payment**, except where other periods of maintenance and guarantee are provided for.

14.2 As security for the faithful performance of its obligations hereunder, the **Contractor** must deliver to the **Owner** an executed bond in the amount of one hundred percent (100%) of the accepted bid as security for the faithful performance of his contract, and for the payment of all persons performing labor and furnishing materials in connection therewith, and having as surety thereon such surety company, or companies, as are acceptable to and approved by the **Owner**.

14.3 Notice by the **Commissioner** to the **Contractor** to repair, replace, rebuild or restore such defective or damaged **Work** shall be timely, pursuant to this article, if given not later than the expiration of the one (1) year period or other periods provided for herein.

14.4 If the **Contractor** shall fail to repair, replace, rebuild or restore such defective or damaged **Work** promptly after receiving such notice, the **Commissioner** shall have the right to have the **Work** done by others, for which **Contractor** may be liable for additional costs or expenses the **Owner** incurs for performing said work.

14.5 If a security payment so deposited is insufficient to cover the cost of such **Work**, the **Contractor** shall be liable to pay such deficiency on demand by the **Commissioner**.

14.6 The **City Engineer's** certificate setting forth the fair and reasonable cost of repairing, replacing, rebuilding or restoring any damaged or defective **Work** when performed by one other than the **Contractor**, shall be binding and conclusive upon the **Contractor** as to the amount thereof.

ARTICLE 15. CHANGES

15.1 Changes may be made to this **Contract** only as duly authorized in writing by the **Commissioner** in accordance with the **Law**. All such changes, modifications and amendments will become a part of the **Contract**. **Work** so ordered shall be performed by the **Contractor**.

15.2 Contract changes will be made only for **Work** necessary to complete the **Work** included in the original scope and/or for non-material changes to the scope of the **Contract**. Changes are not permitted for any material alteration in the scope of **Work**.

15.3. The **Contractor** shall be entitled to a price adjustment for **Extra Work** performed pursuant to a written change order. Adjustments to price shall be computed in one or more of the ways:

15.3.1 By applicable unit prices specified in the **Contract**; and/or

15.3.2 By agreement of a fixed price; and/or

15.3.3 By time and material record; and/or

15.3.4 In any other manner approved by the **Commissioner** or **Treasurer**.

15.4 Any construction **Contract** increase and any change to the **Contract** for construction-related professional services that cumulatively exceed the greater of ten percent (10%) of the **Contract** price or one hundred thousand dollars (\$100,000.00) shall be approved by the Board of Estimate & Contract and/or the Common Council of the City of Rome.

16. EXTRA WORK AND METHODS OF PAYMENT FOR EXTRA WORK

16.1 The **Owner** may at any time, by a written order, and without notice to the sureties, required the performance of such **Extra Work** or changes in the work as it may find necessary or desirable. The amount of compensation to be paid to the **Contractor** for any **Extra Work**, as so ordered, shall be determined as follows:

16.1(a) By such applicable unit prices, if any, as are set forth in the contract; and/or

16.1(b) If no unit prices are so set forth, then by a lump sum mutually agreed upon by the **Owner** and the **Contractor**; and/or

16.1(c) If no such unit prices are set forth and if the parties can not agree upon a lump sum, then by the actual net cost in money to the **Contractor** or the materials and of the wages of applied labor (including premiums for Workmen's Compensation Insurance) required for such extra work, plus such rental for plant and equipment (other than small tools) required and approved for such **Extra Work**, plus fifteen percent (15%) as compensation for all other items of profit, and costs or expenses including administration, overhead, superintendence, Insurance (other than Workmen's Compensation Insurance), materials used in temporary structures, allowance made by the **Contractor** to **Subcontractors**, additional premiums upon the performance bond of the **Contractor**, and the use of small tools. The provisions hereof shall not affect the power of the **Contractor** to act in case of emergency, as hereinafter provided.

16.2 Where a change is ordered, involving both **Extra Work** and omitted or reduced **Contract Work**, the **Contract** price shall be adjusted in an amount based on the difference between the cost of such **Extra Work** and of the omitted or reduced **Work**. The cost of such **Extra Work** and of such omitted or reduced **Work** shall be computed based upon applicable **Contract** unit prices. Where there are no applicable **Contract** unit prices, the cost of such **Extra Work** and of such omitted or reduced **Contract Work** shall be computed in accordance with the items Article 16.1(c). If the cost of such **Extra Work** exceeds the costs of such omitted or reduced **Contract Work**, the **Contract** price shall be increased by the difference, plus percentages for overhead and profit as provided in 16.1(c). If the cost of

omitted or reduced **Contract Work** exceeds the cost of the **Extra Work**, then the **Contract** price shall be reduced by the difference.

ARTICLE 17. OMITTED WORK

17.1 If any **Contract Work** in a lump sum **Contract**, or if any part of a lump sum item in a unit price, lump sum, or percentage-bid **Contract** is omitted by the **Commissioner** pursuant article 20, the **Contract** price shall be reduced by a pro rata portion of the lump sum bid amount based upon the percent of **Work** omitted. For the purpose of determining the pro rata portion of the lump sum bid amount, the bid breakdown submitted shall be considered, but shall not be the determining factor.

17.2 If the whole of a lump sum item or units of any other item is so omitted by the **Commissioner** in a unit price, lump sum, or percentage-bid **Contract**, then no payment will be made therefor except as provided in article 17.4.

17.3 For units that have been ordered but are only partially completed, the unit price shall be reduced by a pro rata portion of the unit price bid based upon the percentage of **Work** omitted subject to article 17.4.

17.4 In the event the **Contractor**, with respect to any omitted **Work**, has purchased any non-cancelable material and/or equipment that is not capable of use except in the performance of this **Contract** and has been specifically fabricated for the sole purpose of this **Contract**, **Contractor** shall be paid for such material and/or equipment; provided, however, such payment is contingent upon the **Contractor's** delivery of such material and/or equipment in acceptable condition to a location designated by the **City**.

17.5 The **Contractor** agrees to make no claim for damages or for loss of overhead and profit with regard to any omitted work.

ARTICLE 18. THE CITY ENGINEER

18.1 The **City Engineer** shall have the power to inspect, supervise and control the performance of the **Work**, subject to review by the **Commissioner**. In relation to this **Contract** and the Project, the **City Engineer** shall, with the consent and designation by the **Commissioner**, have the power to perform any act, power, determination or approval of the **Commissioner**; however, the **City Engineer** has no duty or obligation to protect the safety of **Employees** of **Contractor** or any **Subcontractors**, either on or off the **Work Site**, or to protect the safety, integrity or condition of private property;

18.2 The **City Engineer** shall determine the amount, quality, acceptability and fitness of all parts of the work, shall interpret the plans, specifications, contract documents and any extra work orders, and shall decide all other questions in connection with the work;

18.3 To determine how the **Work** of this **Contract** shall be coordinated with **Work** of other **Contractors** engaged simultaneously on this **Project**; including the power to suspend all or any part of the **Work**;

18.5 Upon request, the **City Engineer** shall confirm in writing any oral order, direction, requirement or determination; and

18.6 The **City Engineer** may at any time demand that the **Contractor** submit samples of material for testing to demonstrate that they conform to the specifications. Samples shall be furnished at the expense of **Contractor**.

ARTICLE 19. CONTRACTOR

19.1 In the performance of the work, the **Contractor** shall abide by all orders, directions and requirements of the **City Engineer** and shall perform all work to the satisfaction of the **City Engineer**, and at such time and places, by such methods and in such manner and sequence as he may require.

19.2 The **Contractor** shall employ no plant, equipment, materials, methods or men to which the **City Engineer** objects, and shall remove no plant, materials, equipment or other facilities from the **Work Site** without the **City Engineer's** permission.

19.3 The **Contractor** will employ at the **Work Site**, during the performance of **Work** under this **Contract**, a competent foreman, or superintendent, who shall be satisfactory to the **City Engineer**, and who shall not be changed except with the consent of the **City Engineer** unless he shall cease to be in the employ of the **Contractor**. Such foreman, or superintendent, shall represent and have full authority to act for the **Contractor** in his absence and all directions given such foreman, or superintendent, shall be as binding as if given to the **Contractor**.

19.4 Contractor may not perform any work without the presence of a competent foreman or superintendent.

19.5 Contractor will be subject to liquidated damages, in the amount set forth in the Information to Bidders, for each calendar day that it fails to employ a competent foreman or superintendent at the site of the work. Said amount shall be deducted from any money due the **Contractor** not as a penalty but as liquidated damages.

19.6 The **Contractor** represents and warrants:

19.6.1 That he is financially solvent and that he is experienced in and competent to perform the type of work or to furnish the plant, materials, supplies or equipment to be so performed or furnished by him; and

19.6.2 That such temporary and permanent work required by the contract documents as is to be done by him can be satisfactorily constructed and used for the purposes for which it is intended, and that such construction will not injure any person or damage any property; and

19.6.3 That he has carefully examined the plans, the specifications, and the site of the work, and that, from his own investigations, he has satisfied himself as to the nature and location of the work, the character, quality and quantity of surface and subsurface materials likely to be encountered, the character of equipment and other facilities needed for the performance of the work, the general and local conditions, and all other materials which may in any way affect the work or its performance.

19.7 Contractor shall attend a mandatory weekly / bi-weekly meeting with Engineer

19.8 Contractor is solely responsible for the safety and protection of its **Employees**, either on or off the **Work Site**, and the protection of the condition, safety and integrity of any property affected by this **Contract**.

19.9 If at any time before the final acceptance of the work, any material is discovered which does not comply with the **Contract Documents**, such material shall be removed by **Contractor** within seven (7) days of written notice from **Owner**, solely at Contractor's expense, and shall be replaced at Contractor's expense.

19.10 The **Contractor** shall be solely responsible for the storage and maintenance of equipment, materials, tools, etc., wherever said equipment, materials or tools are stored.

ARTICLE 20. COMMISSIONER

20.1 The **Commissioner**, in addition to those matters elsewhere herein expressly made subject to his/her determination, direction or approval, shall have the power:

20.1.1 To review and make final determinations on any and all questions in relation to this **Contract** and its performance;

20.1.2 To modify or change this **Contract** so as to require the performance of **Extra Work** or the omission of **Contract Work**;

20.1.3 To suspend the whole or any part of the **Work** whenever in his/her judgment such suspension is required:

20.1.3(a) In the interest of the **City** generally; or

20.1.3(b) To coordinate the **Work** of the various **Contractors** engaged on this **Project**; or

20.1.3(c) To expedite the completion of the entire **Project** even though the completion of this particular **Contract** may thereby be delayed.

20.1.4 The **Commissioner** shall have the express authority to designate the **City Engineer** to perform any or all matters elsewhere herein expressly made subject to the **Commissioner's** determination, direction or approval, as well as those matters identified at Articles 20.1.3(a), 20.1.3(b) and 20.1.3(c).

20.1.5 Nothing herein shall create a duty or obligation on the **Commissioner** to protect the health, safety or well being of **Employees of Contractor or Subcontractor**, or to protect the integrity, safety or condition of private property, as said obligation or duty rests solely with the **Contractor** and/or **Subcontractor**.

ARTICLE 21. THE ENGINEER OR ARCHITECT OR PROJECT MANAGER

21.1 The **Engineer** or **Architect** or **Project Manager**, in addition to those matters elsewhere herein delegated to the **Engineer** and expressly made subject to his/her determination, direction or approval, shall have the power, subject to review by the **Commissioner** or the **City Engineer**:

21.1.1 To determine the amount, quality and location of the **Work** to be paid hereunder;

21.1.2 To determine all questions in relation to the **Work**, to interpret the **Contract Drawings, Specifications and Addenda**, and to resolve all patent inconsistencies or ambiguities therein;

21.1.3 To determine how the **Work** of this **Contract** shall be coordinated with **Work** of other **Contractors** engaged simultaneously on this **Project**; including the power to suspend any part of the **Work**, but not the whole thereof;

21.1.4 To make minor changes in the **Work** as he/she deems necessary, provided such changes do not result in a net change in cost to the **City** or to the **Contractor** of the **Work** to be done under the **Contract**; and

21.1.5 To amplify the **Contract Drawings**, add explanatory information and furnish additional **Specifications** and drawings, consistent with this **Contract**.

21.2 The **Engineer** shall, on **Projects** for which the **City Engineer** does not perform engineering or construction management duties, have the power to perform those activities, determinations, approvals, etc., specifically designated to the **City Engineer**.

ARTICLE 22. EMPLOYEES

22.1 The **Contractor** and its **Subcontractors** shall not employ on the **Work**:

22.1.1 Anyone who is not competent, faithful and skilled in the **Work** for which he/she shall be employed, and whenever the **Commissioner** or **City Engineer** shall inform the **Contractor**, in writing, that any employee is, in his/her opinion, incompetent, unfaithful or disobedient, that employee shall be discharged from the **Work** forthwith, and shall not again be employed upon it;

22.1.2 Any labor, materials or means whose employment, or utilization during the course of this **Contract**, may tend to or in any way cause or result in strikes, work stoppages, delays, suspension of **Work** or similar troubles by workers employed by the **Contractor** or its **Subcontractors**, or by any of the trades working in or about the buildings and premises where **Work** is being performed under this **Contract**, or **Other Contractors** or their **Subcontractors** pursuant to other **Contracts**, or on any other building or premises owned or operated by the **City**, its **Agencies**, departments, boards or authorities. Any violation by the **Contractor** of this requirement may, upon certification of the **Commissioner**, be considered as proper and sufficient cause for declaring the **Contractor** to be in default, and for the **City** to act against it in a manner the **Commissioner** may deem proper.

ARTICLE 23. LABOR LAW

23.1 The **Contractor** shall strictly comply with all applicable provisions of the Labor Law, as amended.

23.2 The **Contractor** specifically agrees, as required by Labor Law Section 220 and 224-d, as amended, that:

23.2.1 No laborer, workman or mechanic in the employ of the **Contractor** or **Subcontractor**, or other person doing or contracting to do the whole or a part of the **Work** contemplated by this **Contract** shall be permitted or required to work more than eight (8) hours in any one (1) calendar day or more than five (5) days in any one (1) week except in cases of extraordinary emergency including fire, flood or danger to life or property, or in case of national emergency when so proclaimed by the President of the United States of America. In the event of such proclamation of a national emergency by the President, application for dispensation from the provisions of this section must be made pursuant to the provisions of the war emergency dispensation act of nineteen hundred forty-two, and such dispensation granted pursuant thereto, before any laborer, workman or mechanic may be employed beyond the hours specified in this section.

23.2.2 Prevailing Rate of Wages: The wages to be paid for a legal day's work, as herein before defined, to laborers, workmen or mechanics employed under this contract, shall not be less than the prevailing rates of wages as ascertained by the Treasurer of the City of Rome, or as found from time to time from the New York State Department of Labor, Albany, New York. The prevailing wage rates and supplemental benefits to be paid are those in effect at the time the **Work** is being performed.

23.3 Working Conditions: No part of the **Work**, labor or services shall be performed or rendered by the **Contractor** in any plants, factories, buildings or surroundings, at the **Site** or under working conditions which are unsanitary or hazardous or dangerous to the health and safety of employees engaged in the performance of this **Contract**. Compliance with the safety, sanitary and factory inspection **Laws** of the state in which the **Work** is to be performed shall be prima facie evidence of compliance with this article. **City** shall have no duty or obligation to protect the safety, health or well-being of **Employees** or to protect the integrity, safety or condition of property, as said duties and obligations rest solely with the **Contractor**.

23.4 The **Contractor** and its **Subcontractors** shall keep such employment and payroll records as are required by Section 220 of the Labor **Law**.

23.5 At the time the **Contractor** makes application for each partial payment, the **Contractor** shall submit to the **Commissioner** or **City Engineer** a written payroll certification of compliance with the prevailing wage, minimum wage and other provisions and stipulations required by Labor **Law** 220. This certification of compliance with the provisions of this article shall be a condition precedent to payment and no payment shall be made to the **Contractor** unless and until each such certification shall have been submitted to and received by the **Commissioner**.

23.6 This **Contract** is executed by the **Contractor** with the express warranty and representation that the **Contractor** is not disqualified under the provisions of Section 220 of the Labor **Law** for the award of the **Contract**.

23.7 Any breach or violation of any of the foregoing shall be deemed a breach or violation of a material provision of this **Contract**, and the grounds for cancellation thereof by the **City**.

ARTICLE 24. PAYROLL REPORTS

24.1 The **Contractor** shall maintain on the **Site** all the original payrolls or transcripts thereof which the **Contractor** and **Subcontractor(s)** are required to maintain pursuant to Labor Section 220. The **Contractor** and **Subcontractor(s)** shall submit original payrolls or transcripts, subscribed and affirmed by it as true, with each and every payment requisition. The **Contractor** and **Subcontractor(s)** shall produce within five (5) **Days** on the **Site** of the **Work** and upon a written order of the **Commissioner, City Engineer** or **Treasurer**, such original payrolls or transcripts thereof, subscribed and affirmed by it as true, and the statements signed by each worker. In addition, the **Contractor** and **Subcontractor(s)** shall furnish to the **Engineer** upon written demand any other information to satisfy the **Commissioner, City Engineer** or **Treasurer**, that the provisions of this **Contract** and the **Labor Law**, as to the hours of employment and rates of wages, are being observed. The **Contractor** shall maintain the payrolls or transcripts thereof for six (6) years from the date of completion of the **Work** on this **Contract**.

24.2 When directed by the **City Engineer**, the **Contractor** or **Subcontractor** shall provide the **City Engineer** with an attendance sheet for each **Day** on which **Work** is performed on the **Site**. Such attendance sheet shall be in a form acceptable to the **Agency** and shall provide information for employees of the **Contractor** and **Subcontractor(s)**.

ARTICLE 25. CONTRACT PRICE

25.1 City will pay and the **Contractor** agrees to accept in full consideration for Contractor's performance of the **Work** subject to the terms and conditions hereof, the lump sum price or unit prices upon which this **Contract** was awarded, plus the amount required to be paid for any **Extra Work** ordered by the **Commissioner** or **City Engineer**, less credit for any **Work** omitted under this **Contract**.

ARTICLE 26. BID BREAKDOWN ON LUMP SUM

26.1 Within fifteen (15) **Days** after the commencement date specified in Notice to Proceeds, unless otherwise directed by the **City Engineer**, the **Contractor** shall submit to the **City Engineer** a breakdown of its bid price, or of lump sum bid for items of the **Contract**, showing various operations to be performed under the **Contract**, as directed in the progress schedule required under this **Contract**, and the value of each of such operations, the total of such items to equal the lump sum price bid. Said breakdown must be approved in writing by the **City Engineer**.

26.2 No partial payment will be approved until the **Contractor** submits a bid breakdown that is acceptable to the **City Engineer**.

26.3 The **Contractor** shall also submit such other information relating to the bid breakdown as directed by the **City Engineer**. Thereafter, the breakdown may be used only for checking the **Contractor's** applications for partial payments hereunder, but shall not be binding upon the **City**, the **Commissioner**, the **City Engineer** or the **Engineer** for any purpose whatsoever.

ARTICLE 27. PAYMENT AND PARTIAL PAYMENTS

27.1 From time to time as the **Work** progresses satisfactorily but not more often than once a month, the **Contractor** may submit to the **City Engineer** a requisition for a partial payment in the prescribed form, which shall contain an estimate of the quantity and the fair value of the **Work** done

during the payment period. The **City Engineer** will process a payment monthly unless the payment request does not exceed one thousand (\$1000) dollars. If the payment is less than one thousand (\$1000) dollars, the **Owner** reserves the right to carry forward the value of work until the next process for payment. The **Owner** will pay the **Contractor** in accordance with the terms of this contract less any amount previously paid the contractor which have not been suitably discharged and less any retained amount as hereafter described.

27.2 Partial payments may be made for materials, fixtures and equipment in advance of their actual incorporation in the **Work**, as the **Commissioner** may approve, and upon the terms and conditions set forth in the General Conditions.

27.3 The **Contractor** shall also submit to the **Commissioner** or **City Engineer**, in connection with every application for partial payment, a verified statement setting forth the information required under Labor **Law** Section 220-a.

27.4 Within thirty (30) **Days** after receipt of such satisfactory payment application, the **City Engineer** will prepare and certify, and the **Commissioner** will approve, a voucher for a partial payment in the amount of such approved estimate, less any and all deductions authorized to be made by the **Commissioner** under the term of this **Contract** or by **Law**.

ARTICLE 28. PROMPT PAYMENT

28.1 The **Contractor** shall pay each **Subcontractor** or **Materialman** not later than seven (7) **Days** after receipt of payment out of amounts paid to the **Contractor** by the **City** for **Work** performed by the **Subcontractor** or **Materialman** under this **Contract**.

28.2 The **Contractor** shall include in each of its subcontracts a provision requiring each **Subcontractor** to make payment to each of its **Subcontractors** or suppliers for **Work** performed under this **Contract** in the same manner and within the same time period set forth above.

ARTICLE 29. FINAL PAYMENT

29.1 After completion and **Final Acceptance** of the **Work**, the **Contractor** shall submit all required certificates and documents, including Release of Liens, together with a requisition for the balance claimed to be due under the **Contract**, less the amount authorized to be retained for maintenance under Article 14. A verified statement similar to that required in connection with applications for partial payments shall also be submitted to the **Commissioner**.

29.2 Preparation of Final Voucher: Upon determining the balance due hereunder, other than on account of claims, the **City Engineer** will prepare and certify, for the **Commissioner's** approval, a voucher for final payment in that amount less any and all deductions authorized to be made by the **Commissioner** under this **Contract** or by **Law**. In the case of a lump sum **Contract**, the **Commissioner** shall certify the voucher for final payment within thirty (30) **Days** from the date of completion and acceptance of the **Work**, provided all requests for extensions of time have been acted upon.

29.2.1 All prior certificates and vouchers upon which partial payments were made, being merely estimates made to enable the **Contractor** to prosecute the **Work** more advantageously, shall be subject to correction in the final voucher, and the certification of the **City Engineer** thereon and the approval of the **Commissioner** thereof, shall be conditions precedent to the right of the **Contractor** to receive any

money hereunder. Such final voucher shall be binding and conclusive upon the **Contractor**.

29.2.2 Payment pursuant to such final voucher, less any deductions authorized to be made by the **Commissioner** under this **Contract** or by **Law**, shall constitute the final payment, and shall be made by the **Treasurer** within thirty (30) **Days** after the filing of such voucher in his/her office.

ARTICLE 30. OWNER'S RIGHT TO WITHHOLD PAYMENTS.

30.1 The **Owner** may withhold from the **Contractor** so much of any approved payments due him as may in the judgment of the **Owner** be necessary:

30.1(a) to assure the payment of just claims then due and unpaid of any persons supplying labor or materials for the work;

30.1(b) to protect the **Owner** from loss due to defective work not remedied; or

30.1(c) to protect the **Owner** from loss due to injury to persons or damage to the work or property of other **Contractors**, **Sub-Contractors**, or any of his **Sub-Contractors**.

30.2 The **Owner** shall have the right to apply any such amounts so withheld in such manner as the **Owner** may deem proper to satisfy such claims or to secure such protection. Such application of such money shall be deemed payments for the account of the **Contractor**.

ARTICLE 31. ACCEPTANCE OF FINAL PAYMENT

31.1 The acceptance by the **Contractor**, or by anyone claiming by or through it, of the final payment, whether such payment be made pursuant to any judgment of any Court, or otherwise, shall constitute and operate as a release to the **City** from any and all claims of and liability to the **Contractor** for anything heretofore done or furnished for the **Contractor** relating to or arising out of this **Contract** and the **Work** done hereunder, and for any prior act, neglect or default on part of the **City** or any of its officers, agents or employees, excepting only a claim against the **City** for the amounts deducted or retained in accordance with the terms and provisions of this **Contract** or by **Law**, and excepting any claims, not otherwise invalid, or any pending dispute resolution procedures which are contained in the verified statement filed with the **Contractor's** final requisition pursuant to the terms of this **Contract**.

31.2 The **Contractor** is warned that the execution by it of a release, in connection with the acceptance of the final payment, containing language purporting to reserve claims other than those herein specifically excepted from the operation of this article, or those for amounts deducted by the **Commissioner** from the final requisition or by the **Treasurer** from the final payment as certified by the **City Engineer** and approved by the **Commissioner**, shall not be effective to reserve such claims, anything stated to the **Contractor** orally or in writing by any officer, agent or employee of the **City** to the contrary notwithstanding.

31.3 Should the **Contractor** refuse to accept final payment as tendered by the **Treasurer**, it shall constitute a waiver of any right to interest thereon.

**ARTICLE 32. COMMISSIONER’S RIGHT TO DECLARE CONTRACTOR IN
DEFAULT**

32.1 In addition to those instances specifically referred to in other Articles herein, the **Commissioner** shall have the right to declare the **Contractor** in default of this **Contract** if:

32.1.1 The **Contractor** fails to commence **Work** when notified to do so by the **Commissioner** or **City Engineer**; or if

32.1.2 The **Contractor** shall abandon the **Work**; or if

32.1.3 The **Contractor** shall refuse to proceed with the **Work** when and as directed by the **Commissioner** or **City Engineer**; or if

32.1.4 The **Contractor** shall, without just cause, reduce its working force to a number which, if maintained, would be insufficient, in the opinion of the **Commissioner** or **City Engineer**, to complete the **Work** in accordance with the Progress Schedule; or if

32.1.5 The **Contractor** shall fail or refuse to increase sufficiently such working force when ordered to do so by the **Commissioner**; or if

32.1.6 The **Contractor** shall sublet, assign, transfer, convert or otherwise dispose of this **Contract** other than as herein specified; or sell or assign a majority interest in the **Contractor**; or if

32.1.7 The **Contractor** fails to secure and maintain all required insurance; or if

32.1.8 A receiver or receivers are appointed to take charge of **Contractor’s** property or affairs, which is not dismissed within twenty (20) days after such appointment, or the proceedings in connection therewith shall not be stayed on appeal within the said twenty (20) days; or if

32.1.9 The **Commissioner** shall be of the opinion that the **Contractor** is or has been unnecessarily or unreasonably or willfully delaying the performance and completion of the **Work**, or the award of necessary subcontracts, or the placing of necessary material and equipment orders; or if

32.1.10 The **Commissioner** shall be of the opinion that the **Contractor** is or has been willfully or in bad faith violating any of the provisions of this **Contract**; or if

32.1.11 The **Commissioner** shall be of the opinion that the **Work** cannot be completed within the time herein provided therefor or within the time to which such completion may have been extended; provided, however, that the impossibility of timely completion is, in the **Commissioner’s** opinion, attributable to conditions within the **Contractor’s** control; or if

32.1.12 The **Work** is not completed within the time herein provided therefor or within the time to which the **Contractor** may be entitled to have such completion extended; or if

32.1.13 Any statement or representation of the **Contractor** in the **Contract** or in any document submitted by the **Contractor** with respect to the **Work**, the **Project**, or the **Contract** (or for purposes of securing the **Contract**) was untrue or incorrect when made; or if

32.1.14 The **Contractor** or any of its officers, directors, partners, five percent (5%) shareholders, principals, or other persons substantially involved in its activities, commits any of the acts or omission of an illegal nature; or if

32.1.15 The **Contractor** shall be adjudged bankrupt or make an assignment for the benefit of creditors; or if

32.1.16 The **Contractor** shall fail to make prompt payment to persons supplying labor or materials for the work; or if

32.1.17 The **Contractor** shall fail or refuse to regard and adhere to the **Laws** or ordinances that apply to this Contract, or the instructions of the **City Engineer**;

32.2 Before the **Commissioner** shall exercise his/her right to declare the **Contractor** in default, the **Commissioner** shall give the **Contractor** an opportunity to be heard, upon not less than two (2) **Days** notice.

ARTICLE 33. EXERCISE OF THE RIGHT TO DECLARE DEFAULT

33.1 The right to declare **Contractor** in default for any of the grounds specified or referred to in the previous article shall be exercised by sending the **Contractor** a notice, signed by the **Commissioner**, setting forth the ground or grounds upon which such default is declared (hereinafter referred to as a "Notice of Default").

33.2 The **Commissioner's** determination that the **Contractor** is in default shall be conclusive, final and binding on the parties and such a finding shall preclude the **Contractor** from commencing a plenary action for any damages relating to the **Contract**. If the **Contractor** protests the determination of the **Commissioner**, the **Contractor** may commence a lawsuit in a court of competent jurisdiction of the State of New York under Article 78 of the New York Civil Practice Law and Rules.

ARTICLE 34. QUITTING THE SITE

34.1 Upon receipt of such Notice of Default the **Contractor** shall immediately discontinue all further operations under this **Contract** and shall immediately quit the **Site**, leaving untouched all plant, materials, equipment, tools and supplies then on the **Site**.

ARTICLE 35. COMPLETION OF THE WORK

35.1 The **Commissioner**, after declaring the **Contractor** in default, may then have the **Work** completed by such means and in such manner, by **Contract** with or without public letting, or otherwise, as he/she may deem advisable, utilizing for such purpose such of the **Contractor's** plant, materials, equipment, tools and supplies remaining on the **Site**, and also such **Subcontractors**, as he/she may deem advisable.

35.2 After such completion, the **Commissioner** shall make a certificate stating the expense incurred in such completion, which shall include the cost of re-letting and also the total amount of liquidated damages (at the rate provided for in the **Contract Documents**) from the date when the **Work** should have been completed by the **Contractor** in accordance with the terms hereof to the date of actual completion of the **Work**. Such certificate shall be binding and conclusive upon the **Contractor**, its Sureties, and any person claiming under the **Contractor**, as to the amount thereof.

35.3 The expense of such completion, including any and all related and incidental costs, as co certified by the **Commissioner**, and any liquidated damages assessed against the **Contractor**, shall be charged against and deducted out of monies which are earned by the **Contractor** prior to the date of default. Should the expense of such completion, as certified by the **Commissioner**, exceed the total sum which would have been payable under the **Contract** if it had been completed by the **Contractor**, any excess shall be paid by the **Contractor**.

ARTICLE 36. PARTIAL DEFAULT

36.1 In case the **Commissioner** shall declare the **Contractor** in default as to a part of the **Work** only, the **Contractor** shall discontinue such part, shall continue performing the remainder of the **Work** in strict conformity with the terms of this **Contract**, and shall in no way hinder or interfere with any other Contractor(s) or persons whom the **Commissioner** may engage to complete the **Work** as to which the **Contractor** was declared in default.

36.2 The provisions of this **Contract** relating to declaring the **Contractor** in default as to the entire **Work** shall be equally applicable to a declaration of partial default, except that the **Commissioner** shall be entitled to utilize for completion of the part of the **Work** as to which the **Contractor** was declared in default only such plant, materials, equipment, tools and supplies as had been previously used by the **Contractor** on such part.

ARTICLE 37. PERFORMANCE OF UNCOMPLETED WORK

37.1 In completing the whole or any part of the **Work** under the provision of this **Contract**, the **Commissioner** shall have the power to depart from or change or vary the terms and provisions of this **Contract**, provided, however, that such departure, change or variation is made for the purpose of reducing the time or expense of such completion. Such departure, change or variation, even to the extent of accepting a lesser or different performance, shall not affect the conclusiveness of the **Commissioner's** certificate of the cost of completion referred to in this **Contract**, nor shall it constitute a defense to an action to recover the amount by which such certificate exceeds the amount which would have been payable to the **Contractor** hereunder but for its default.

ARTICLE 38. OTHER REMEDIES

38.1 In addition to the right to declare the **Contractor** in default pursuant to this **Contract**, the **Commissioner** shall have the absolute right, in his/her sole discretion and without a hearing, to complete or cause to complete in the same manner as described in this **Contract**, any or all unsatisfactory or uncompleted punch list **Work** that remains after the completion date specified in the Final Approved Punch List. A written notice of the exercise of this right shall be sent to the **Contractor** who shall immediately quit the **Site** in accordance with the provisions of this **Contract**.

38.2 Any remedies contained in the **Contract** shall be in addition to any and all other legal or equitable remedies available to the parties.

38.3 The exercise by the **City** of any remedy set forth herein shall not be deemed a waiver by the **City** of any other legal or equitable remedy contained in this **Contract** or provided under **Law**.

ARTICLE 39. TERMINATION BY THE CITY

39.1 In addition to termination pursuant to any other article of this **Contract**, the **Commissioner** may, at any time, terminate this **Contract** by written notice to the **Contractor**. In the event of termination, the **Contractor** shall, upon receipt of such notice, unless otherwise directed by the **Commissioner**:

39.1.1 Stop **Work** on the date specified in the notice;

39.1.2 Take such action as may be necessary for the protection and preservation of the **City's** materials and property;

39.1.3 Cancel all cancelable orders for material and equipment;

39.1.4 Assign to the **City** and deliver to the **Site** or another location designated by the **Commissioner**, any no-cancelable orders for material and equipment that is not capable of use except in the performance of this **Contract** and has been specifically fabricated for the sole purpose of this **Contract** and not incorporated in the **Work**;

39.1.5 Take no action which will increase the amounts payable by the **City** under this **Contract**.

39.2 In the event of termination by the **City** pursuant to this article, payment to the **Contractor** will be for work completed prior to the termination:

39.2.1 On lump sum **Contracts** or on lump sum items, payment shall be on a pro rata portion of the lump sum bid amount, plus approved change orders, based on the percent completion of **Work**, as determined by the **Commissioner** less all payments previously made to the **Contractor**. For purpose of determining the pro rata portion of this lump sum bid amount to which the **Contractor** is entitled, the Bid Breakdown submitted by **Contractor** for this **Contract** shall be considered but not dispositive. The **Commissioner's** determination hereunder shall be final, binding and conclusive.

39.2.2 On unit price contracts or items, payment for all completed units will be the unit price stated in the **Contract**, and for units that have been ordered but are only partially completed, payment will be a pro rata portion of the unit price stated in the

Contract based upon the percent completion of the unit, less any payments previously made pursuant to this **Contract**.

39.3 In no event shall any payments under this article exceed the **Contract** price for such items.

39.4 The **City** may deduct or set off against any sums due and payable pursuant to this article, any deductions authorized by this **Contract** or by **Law** (including but not limited to damages) and any claims it may have against the **Contractor**. The **City's** exercise of the right to terminate the **Contract** pursuant to this article shall not impair or otherwise affect the **City's** right to assert any claims it may have against the **Contractor** in a plenary action.

39.5 Where the **Work** covered by the **Contract** has been substantially completed, as determined in writing by the **Commissioner**, termination of the **Work** shall be handled as an omission of **Work** pursuant to this **Contract**, in which case a Change Order will be issued to reflect an appropriate reduction in the **Contract** Sum, or if the amount is determined after final payment, such amount shall be paid by **Contractor**.

ARTICLE 40. NO DISCRIMINATION

40.1 The **Contractor** specifically agrees that:

40.1.1 In the hiring of employees for the performance of **Work** under this **Contract** or any subcontract hereunder, neither the **Contractor**, **Subcontractor**, nor any person acting on behalf of such **Contractor** or **Subcontractor**, shall by reason of race, creed, color or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the **Work** to which the employment relates;

40.1.2 It will not engage in any unlawful discrimination against any employees or applicant for employment because of race, creed, color, national origin, sex, age, disability, marital status or sexual orientation with respect to all employment decisions including, but not limited to, recruitment, hiring, upgrading, demotion, downgrading, transfer, training, rates of pay or other forms of compensation, layoff, termination, and all other terms and conditions of employment;

40.1.3 It will not engage in any unlawful discrimination in the selection of **Subcontractors** on the basis of the owner's race, color, creed, national origin, sex, age, disability, marital status or sexual orientation.

40.2 Remedies for Violating Non-Discrimination:

40.2.1 There may be deducted from the amount payable to the **Contractor** by the **City** under this **Contract** a penalty of one hundred dollars (\$100.00) for each person for each **Day** during which such person was discriminated against or intimidated in violation of the provisions of this **Contract**;

40.2.2 This **Contract** may be cancelled or terminated by the **City** and all moneys due or to become due hereunder may be forfeited, for a second or any subsequent violation(s) of the terms or conditions of this article.

ARTICLE 41 . MISCELLANEOUS PROVISIONS

41.1 No Claims Against Officers, Agents or Employees: No claim whatsoever shall be made by the **Contractor** against any officer, agent or employee of the **City** for, or on account of, anything done or omitted to be done in connections with this **Contract**.

41.2 Notices: The **Contractor** hereby designates the business address specified in its bid, as the place where all notices, directions or other communications to the **Contractor** may be delivered, or to which they may be mailed. Actual delivery of any such notice, direction or communication to the aforesaid place, or depositing it in a postpaid wrapper addressed thereto in any post office box (P.O. Box) regularly maintained by the United States Postal Service, shall be conclusively deemed to be sufficient service thereof upon the **Contractor** as the date of such delivery or deposit. Such address may be changed at any time by an instrument in writing, executed and acknowledged by the **Contractor**, and delivered to the **Commissioner**. Nothing herein shall preclude, are render inoperative the service of any notice, direction or communication upon the **Contractor** personally, or, if the **Contractor** is a corporation, upon any officer thereof.

41.3 Unlawful Provisions Stricken: If this **Contract** contains any unlawful provision not an essential part of the **Contract** and which shall not appear to have been a controlling or material inducement to the making thereof, the same shall be deemed of no effect and shall, upon notice by either party, be deemed stricken from the **Contract** without effecting the binding force of the remainder.

41.4 All Legal Provisions Deemed Included: It is the intent and understanding of the parties to this **Contract** that each and every provision of **Law** required to be inserted in this **Contract** shall be and is inserted herein. Furthermore, it is hereby stipulated that every such provision is to be deemed to be inserted herein, and if, through mistake or otherwise, any such provision is not inserted, or is not inserted in correct form, then this **Contract** shall forthwith upon the application of either party may be amended by such insertion so as to comply strictly with the **Law** and without prejudice to the rights of either party hereunder.

41.5 Tax Exemption: The **City** is exempt from payment of Federal, State, local taxes and Sales and Compensation Use Taxes of the State of New York and of cities and counties on all materials and supplies sold to the **City** pursuant to the provisions of this **Contract**. These taxes are not to be included in bids. However, this exemption does not apply to tools, machinery, equipment or other property leased by or to the **Contractor** or a **Subcontractor**, or to supplies and materials which even though they are consumed, are not incorporated into the completed **Work** (consumable supplies), and the **Contractor** and its **Subcontractors** shall be responsible for and pay any and all applicable taxes, including Sales and Compensation Use Taxes, on such leased tools, machinery, equipment or other property and upon all such unincorporated supplies and materials.

41.6 Choice of Law, Consent to Jurisdiction and Venue: This **Contract** shall be deemed to be executed in the **City** of Rome, New York, County of Oneida, New York, State of New York regardless of the domicile of the **Contractor**, and shall be governed by and construed in accordance with the **Laws** of the State of New York and the **Laws** of the United States, where applicable. The parties agree that any and all claims asserted against the **City** arising under this **Contract** or related thereto shall be heard and determined in the courts of the State of New York or Courts of the United States located in Oneida County, New York.

IN WITNESS WHEREOF, the parties have executed this **Contract** on the day and year first written above.

THE CITY OF ROME, NEW YORK

By: _____
(Signature of Mayor)

(Printed Name of Mayor)
MAYOR

(Contractor's Name)

By: _____
(Signature of Executing Officer)

(Printed Name of Officer)

(Title)

City Clerk

(ACKNOWLEDGMENT OF OFFICER OF OWNER EXECUTING CONTRACT)

STATE OF NEW YORK }
 } ss.
COUNTY OF ONEIDA }

On this _____ day of _____, 2____ before me personally came and appeared _____ to me known, who being duly sworn, did depose and say that he/she is the _____ of the City of Rome, New York, described herein, and he/she executed the foregoing instrument; that by virtue of the authority conferred on him by law he/she

subscribed his name to the foregoing instrument and that he/she executed the same for the purposes therein mentioned.

Notary Public (seal)

(ACKNOWLEDGMENT OF CONTRACTOR, IF A CORPORATION)

STATE OF _____ }
COUNTY OF _____ } ss.

On this _____ day of _____, 2__ before me
personally came and appeared _____,

to me personally known, who being by me duly sworn did depose and say that he resides
at _____; that he/she is the

_____ of _____, the corporation described
herein, and which executed the foregoing instrument; that he/she knows the seal of said corporation;
that one of the seals affixed to said instrument is such seal; that it was so affixed by order of the
directors of said Corporation, and that he/she signed his name thereto by like order.

Notary Public (seal)

(ACKNOWLEDGMENT OF CONTRACTOR, IF A PARTNERSHIP)

STATE OF _____ }
COUNTY OF _____ } ss.

On this _____ day of _____, 2__ before me personally
came and appeared _____ to me personally
known, and known to me to be one of the members of the firm

_____, the partnership described herein, and who executed the foregoing instrument and he/she acknowledged to me that he/she executed the same as and for the act and deed of said firm.

Notary Public

(seal)

(ACKNOWLEDGMENT OF CONTRACTOR, IF AN INDIVIDUAL)

STATE OF _____ }
 } ss:
COUNTY OF _____ }

On this _____ day of _____, 2____ before me

personally came and appeared _____, to me known to be the person described in, and who executed the foregoing instrument and acknowledged that he executed the same.

Notary Public

(seal)

I, the undersigned, _____ the duly authorized and acting legal representative of THE CITY OF ROME, NEW YORK, do hereby certify as follows:

I have examined the foregoing contract and surety bond and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements has been duly executed by the proper parties thereto acting through their authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with the terms, conditions and provisions thereof.

Corporation Counsel

Dated:

INFORMATION TO BIDDERS

1. RECEIPT OF BIDS.

The City of Rome, New York (hereinafter “Owner” or “City”), invites bids on the form attached hereto, all blanks on which must be appropriately filled in.

All bids must be enclosed in a sealed envelope or container, which will be addressed to “Board of Estimate and Contract, City of Rome, New York,” and shall be endorsed

RFB-2024-026 Potter Road Infrastructure Extensions

The Owner may consider as informal any bid not prepared and submitted in accordance with the provisions hereof.

2. QUALIFICATION OF BIDDERS.

In determining the qualifications of a Bidder, the Owner will consider his record in the performance of any contracts for construction work into which he may have previously entered with the Owner, or with public bodies or corporations, and the Owner expressly reserves the right to reject the Bid of such Bidder if such record discloses that such Bidder, in the opinion of the Owner has not properly performed such Contracts or has habitually and without just cause neglected the payment of bills or has otherwise disregarded his obligations to Subcontractors, material men or employees.

The Owner may make such investigation as he deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any Bid if the evidence submitted by or investigation of such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein. Conditional bids will Owner, as liquidated damages for such failure, or refusal, the security deposited with his bid.

3. CONDITIONS OF WORK.

Each Bidder must inform himself fully of the conditions relating to the construction and labor under which the work is now or will be performed, failure to do so will not relieve a successful Bidder of his obligation to furnish all material and labor necessary to carry out the provisions of the Contract documents and to complete the contemplated work for the consideration set forth in his Bid.

4. CONSTRUCTION TERMS AND CONDITIONS.

The Bidder is warned that (1) the Construction Terms and Conditions hereinafter fully set forth in the Form of Contract will be rigidly enforced; (2) preference in the employment of workers shall be given to persons living in Rome, New York.

5. SECURITY FOR FAITHFUL PERFORMANCE.

Simultaneously with his delivery of the executed contract, the successful bidder must deliver to the Owner an executed bond in the amount of one hundred percent (100%) of the accepted Bid as security for the faithful performance of his contract and for the payment of all persons performing labor and furnishing materials in connection therewith, and having as surety thereon such surety company, or companies, as are acceptable to and approved by the Owner.

6. UNIT PRICES.

Proposals must be filled in on proposal sheets attached. The blank spaces in the proposal must be filled in as noted, and no change shall be made in the phraseology of the proposal or in the items mentioned therein. All unit prices to be written in words in the spaces provided and in figures in the space provided.

Proposals that contain any omissions, erasures, alterations, additions or items not called for in the itemized proposal, or that contain irregularities of any kind, may be rejected as informal.

7. TIME FOR COMPLETION.

The completion date for the project is **May 30, 2025**

Extensive Liquidated Damages Procedure set forth in first three pages of Information to Bidders. (Section 200)

8. OBLIGATION OF BIDDER.

At the time of the opening of Bids each Bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the Plans and Contract Documents. The failure or omission of any Bidder to receive or examine any form, instrument or document shall in no way relieve any Bidder from any obligation in respect to his Bid.

9. INTENT OF CONTRACT.

The attention of persons intending to make Proposals is specifically called to that paragraph of the Contract, which debars a Contractor from pleading misunderstanding, or deception because of estimates of quantities, character, location or other conditions surrounding same.

10. AWARD OF CONTRACT.

The Board of Estimate and Contract reserves the right to reject any or all Proposals, and may advertise for new Proposals, if in its opinion the best interests of the City will thereby be promoted.

After Bids have been opened and tabulated, the Contract shall be awarded to the lowest responsible Bidder. Upon award of the Contract, the Bidder to whom the Contract is awarded shall be referred to as the "Contractor".

11. ESTIMATES AND PAYMENTS.

In computing amounts in estimate of work done the unit price bid will be used.

Payment of all estimates, including the final, will be made only for actual quantities involved in executing the Contract, and this determination as to the quantities involved in this contract shall be accepted as final, conclusive and binding upon the Contractor.

Upon the completion of the required work as shown on the Plans and Specifications, should the final estimate of quantities show either an increase, or decrease from the approximate estimate of quantities, then such variation will be computed at the unit price bid.

12. SCOPE OF WORK.

Shall be directed by the Engineer in charge (hereinafter as "Engineer in charge", "E. I.C." or "Engineer"), and said Engineer shall either be the City Engineer, or an Engineer, Architect or Construction Manager hired by City, whichever the case may be. All items of work in this contract shall be governed by the New York State Department of Transportation specifications unless explicit instructions are included in these contract documents for any item of work. The Contractor shall obtain all work permits necessary to do work herein contained.

During the performance of this contract, the Contractor agrees as follows:

- a) The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color or national origin, and will take affirmative action to insure that they are afforded equal employment opportunities without discrimination because of race, creed, color or national origin. Such action shall be taken with reference, but not be limited to: recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff or termination, rates of pay or other forms of compensation, and selection for training or retraining, including apprenticeship and on-the-job training;
- b) The Contractor will send to each labor union or representative of workers with which he has or is bound by a collective bargaining or other agreement or understanding, a notice to be provided by the State Commission for Human Rights, advising such labor union or representative of the Contractor's agreement under clauses (a) through (9) (hereinafter called "non-discrimination clauses"). If the Contractor is directed to do so by the contracting agency as such labor union or representative to furnish him with a written statement that such labor union or representative will not discriminate because of race, creed, color or national origin and that such labor union or representative either will affirmatively cooperate, within the limits of its legal and contractual authority, in the implementation of the policy and provisions of these nondiscrimination clauses or that it consents and agrees that recruitment, employment and the terms and conditions of employment under this contract shall be in accordance with the purposes and provisions of these non-discrimination clauses. If such labor union or representative fails or refuses to comply with such a request that furnishes such a statement, the Contractor shall promptly notify the State Commission for Human Rights of such failure or refusal;
- c) The Contractor will post and keep posted in conspicuous places, available to employees and applicants for employment, notices to be provided by the State Commission for Human Rights setting forth the substance of the provision of clauses (a) and (b) and such provisions of the State's laws against discrimination as the State Commission for Human Rights shall determine;

d) The Contractor will state, in all solicitations, or advertisements for employees placed by or on behalf of the Contractor, that all qualified applicants will be afforded equal opportunities without discrimination because of race, creed, color or national origin;

e) The Contractor will comply with the provisions of Sections 291-299 of the Executive Law and the Civil Rights Law, will furnish all information and reports deemed necessary by the State Commission for Human Rights under these non-discrimination clauses and such sections of the Executive Law, and will permit access to his books, reports and accounts by the State Commission for Human Rights, the Attorney General and the Industrial Commissioner for the purposes of investigation to ascertain compliance with these non-discrimination clauses and such sections of the Executive Law and Civil Rights Law;

f) The Contract may be forthwith canceled, terminated or suspended, in whole or in part, by the contracting agency upon the basis of a finding made by the State Commission for Human Rights that the Contractor has not complied with these non-discrimination clauses, and the Contractor may be declared ineligible for future contracts made by or on behalf of the State or a public authority or agency of the State, until he satisfies the State Commission for Human Rights that he has established and is carrying out a program in conformity with the provisions of these non-discrimination clauses. Such findings shall be made by the State Commission for Human Rights after conciliation efforts by the Commission have failed to achieve compliance with these non-discrimination clauses and after a verified complaint has been filed with the Commission, notice thereof has been given to the Contractor and an opportunity has been afforded him to be heard publicly before three members of the Commission. Such sanctions may be imposed and remedies involved independently of or in addition to sanctions and remedies otherwise provided by law;

g) The Contractor will include the provisions of clause (a) through (f) in every subcontract or purchase order in such a manner that such provisions will be binding upon each Subcontractor or vendor as to operations to be performed within the State of New York. The Contractor will take such action in enforcing such provisions of such subcontract or purchase order as the contracting agency may direct, including sanctions or remedies for non-compliance. If the Contractor becomes involved in or is threatened with litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the Contractor shall promptly so notify the Attorney General, requesting him to intervene and protect the interests of the State of New York.

GENERAL MUNICIPAL LAW

STATE OF NEW YORK

Section 103-a

Effective July 1,1969

"Upon the refusal of a persons, when called before a Grand Jury to testify concerning any transaction or contract had with the State, any political subdivision thereof, a public authority or with any public department, agency or official of the State or any political subdivision thereof or of a public authority, to sign a waiver of immunity against subsequent criminal prosecution or to answer any relevant question concerning such transaction or contract. (a) such persons, and any firm, partnership or corporation of which he is a member, partner, director or officer shall be disqualified from thereafter selling to or submitting bids to or receiving awards from or entering into any contracts with any municipal corporation or any public department, agency or official thereof, for goods, work or services for a period of five year after such refusal, and (b) any and all contracts made with any municipal corporation or any public department, agency or official thereof, since the effective date of this law, by such person, and by any firm, partnership, or corporation of which he is a member, partner, director or officer may be canceled or terminated by the municipal corporation without incurring any penalty or damages on account of such cancellation or termination, but any moneys owing by the municipal corporation for goods delivered or work done prior to the cancellation or termination shall be paid, all pertinent to Section 103-a of the General Municipal Law of the State of New York."

**EQUAL EMPLOYMENT OPPORTUNITY
EXECUTIVE ORDER 11246
PART II - NONDISCRIMINATION IN EMPLOYMENT
BY GOVERNMENT CONTRACTORS AND SUBCONTRACTORS**

1. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following, employment, upgrading, demotion, or transfer; recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.
2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
3. The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the Contractors' commitments under Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
5. The Contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
6. In the event of the Contractor's noncompliance with the non-discrimination clauses of this contract or with any of such rules, regulations, or orders, this Contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
7. The Contractor will include the provisions of Paragraphs 1 through 7 in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance, PROVIDED, HOWEVER, that in the even the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such directions by the contracting agency, the Contractor may request the United States to enter into such litigation to protect the interest of the United States.

NOTICE TO BIDDERS

UNIT BID PRICES

1. UNBALANCED BIDS may be rejected where the unit bid prices are unrealistic to the reasonably estimated cost of performing the work. Bids may be considered informal and rejected, as determined by the Engineer.

CONTRACTOR MUST NOTE

THE ROME COMMON COUNCIL, on March 24, 1993, adopted Resolution No. 52 relative to the hiring of Rome residents. The Common Council of the City of Rome, New York, does recommend that parties bidding on public works projects in the City of Rome take measures to ensure that not less than seventy five percent (75%) of labor hired to perform such work shall be residents of the City of Rome, New York. To accomplish this goal, the successful Bidder, must make a good faith effort to meet the intent of this Resolution.

The successful bidder prior to receipt of final payment must communicate to the Common Council, in writing, all efforts made to accomplish the intent of Resolution No. 52.

WORKERS' COMPENSATION LAW.

Section 57 Restriction on Issue of permits and the entering into Contract unless compensation is secured.

1. The head of a state or municipal department, board, commission or office authorized or required by law to issue any permit for or in connection with any work involving the employment of employees in a hazardous employment defined by this chapter, and notwithstanding any general or special statute requiring or authorizing the issue of such permits, shall not issue such permit unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that compensation for all employees has been secured as provided by this chapter. Nothing herein, however, shall be construed as creating any liability on the part of such state or municipal department, board, commission or office to pay any compensation to any such employee if so employed.

2. The head of a state or municipal department, board, commission or office authorized or required by law to enter into any contract for or in connection with any work involving the employment of employees in a hazardous employment defined by this chapter, notwithstanding any general or special statute requiring or authorizing any such contract, shall not enter into any such contract unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that compensation for all employees has been secured as provided by this chapter.

State of New York

WORKERS' COMPENSATION BOARD

THIS AGENCY EMPLOYS AND SERVES PEOPLE WITH DISABILITIES WITHOUT DISCRIMINATION.

ROBERT R. SNASHAIL

CHAIRMAN

Dear Sir/Madam:

The Workers' Compensation Law requires that a New York State or municipal agency, department, board, commission or office issues any permit or license, the applicant must submit, to such agency or department, proof that he or she has obtained the required workers' compensation and disability benefits coverage, or that he or she is not required to provide coverage under these Laws. (See attached copies of Section 57 of the Workers' Compensation Law and Section 220, sub. 8 of the Disability Benefits Law.) These requirements also apply to the renewal of an application for a permit or license, and any and all work covered by the permit or license, whether or not a governmental agency is involved.

In addition, effective April 7, 1993, Chapter 213 amended the above Laws to require that before a New York State or municipal agency, department, board, commission or office enters into any contract, the contractor must also submit proof that he or she has obtained the required workers' compensation and disability benefits coverage, or that he or she is not required to provide coverage. These requirements also apply to the renewal of such contracts.

I would appreciate your notifying the permit-issuing and contract-making agencies or departments within your jurisdiction of these requirements so that they may be able to comply with the Law. State Agencies are specifically requested to notify each department or group within their agency, which issues licenses or permits or makes contracts, of the Law's requirements.

Enclosed are samples of Forms C-105.2 and DB-120.1 (Certificates of Insurance), and Form SI-12 (Affidavit Certifying That Compensation has Been Secured), which are designed to provide necessary proof of coverage when completed by the insurance canter and/or the Workers' Compensation Board. Also enclosed is a sample of Form DB-155 (Compliance with DB Law), which may be submitted by self-insured employers under Disability Benefits Law as acceptable proof that disability benefits coverage has been obtained.

Please note that it is acceptable for employers insured by the State Insurance Fund to submit the Fund's computer-generated certificate of insurance as proof of coverage, Form U-26.3 (sample enclosed), in place of prescribed Form C-105.2.

Employers who are not required by Law to provide workers' compensation and/or disability benefits coverage must submit Form C-105.21 (Statement That Applicant Does Not Require W.C. or D.B. Coverage), which when completed by the Workers' Compensation Board is proof that the applicant is not required to carry either type of insurance.

Thank you for your assistance in the enforcement of the above. If you require additional information regarding this or any other workers' compensation or disability benefits matter, please feel free to contact Mr. Frank Rends, Director, WC Compliance, Workers' Compensation Board, 100 Broadway-Menands, Albany, New York 12241 [telephone number (518) 486-51171.

DISABILITY BENEFITS LAW

Section 220 Penalties

8. (a) The head of a state or municipal department, board, commission or office authorized or required by law to issue any permit for or in connection with any work involving the employment of employees in employment as defined in this article, and notwithstanding any general or special statute requiring or authorizing the issue of such permits, shall not issue such permit unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that the payment of disability benefits for all employees has been secured as provided by this article. Nothing herein, however, shall be construed as creating any liability on the part of such state or municipal department, board, commission or office to pay any disability benefits to any such employee so employed.

(b) The head of a state or municipal department, board, commission or office authorized or required by law to enter into any contract for or in connection with any work involving the employment of employees in employment as defined in this article, and notwithstanding any general or special statute requiring or authorizing any such contract, shall not enter into any such contract unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that the payment of disability benefits for all employees has been secured as provided by this article.

STATE OF NEW YORK
WORKERS COMPENSATION BOARD
APPLICATION FOR CERTIFICATE OF WORKERS' COMPENSATION INSURANCE

The undersigned Employer desires to obtain a Certificate of Workers' Compensation Insurance from the Insurance Carrier:

as satisfactory proof required under the provisions of Section 57 of the Workers' Compensation Law, to be filed with

Name: _____
(Name of Bureau, Department, Corporation, Firm or Individual)

Address: _____

Locations of operations: _____

Date operations to begin: _____

Telephone No.: _____

Signature: _____

(Name & Title)

(Name of Employer)

(Date)

NOTE: This application must be signed by the Employer if an individual, or if a co-partnership by member of the co-partnership, or by an officer if a corporation.

CERTIFICATE OF WORKERS' COMPENSATION INSURANCE

This is to certify that _____
(name of individual, partnership or corporation)

is insured with _____
(name of insurance provider)

under Policy No. _____ covering the entire obligation of this employer for workers' compensation under the New York Workers' Compensation Law with respect to the locations named in the foregoing application.

The policy term covers the period from _____

To _____. If said policy is changed or cancelled during its term in such manner as to affect this Certificate, thirty (30) days written notice of such change or cancellation shall be provided to the Owner, and ten (10) days written notice in the event of cancellation for non-payment of premiums.

Signature: _____

(Name and Title)

Telephone No. _____

Title _____

THE WORKERS' COMPENSATION BOARD EMPLOYS AND SERVES PEOPLE WITH DISABILITIES WITHOUT DISCRIMINATION

C-105.2(10-94)

NON-COLLUSIVE BIDDING CERTIFICATE

Pursuant to Chapter 675, Laws of 1966

(a) By submission of this Bid, each Bidder and each person signing on behalf of any Bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:

(1) The prices in this Bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor,

(2) Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the Bidder and will not knowingly or indirectly, to any other Bidder or to any competitor and

(3) No attempt has been made or will be made by the Bidder to induce any other person, partnership or corporation to submit or not submit a bid for the purpose of restricting competition.

(BIDDER)

BY: _____

(Title)

PROJECT: RFB 2024-026 Potter Road infrastructure Extensions

EMERGENCY CONTACT NUMBERS

Contact _____
Name or Names of person(s) to be contacted in case of emergency

<u>CONTACT PERSON</u>	<u>NOS. CAN BE REACHED AT*</u>
1. _____	_____
2. _____	_____
3. _____	_____

WEEKEND, AFTER HOURS AND HOLIDAYS CONTACT PERSON

<u>CONTACT PERSON</u>	<u>NOS. CAN BE REACHED AT*</u>
1. _____	_____
2. _____	_____
3. _____	_____

* Please indicate land line telephone, cell-phone and pager numbers (if applicable)
The Engineer will use ONLY numbers listed above to contact Contractor's Representative. The contact person shall have full authority and capability to mobilize forces promptly as required to respond to an emergency and protect the public.

FAILURE TO COMPLETE WORK ON TIME

For each calendar day that any work shall remain uncompleted after the Contract date specified for the completion of the work provided for in the Contract, the amount per calendar day specified in Table 108-1, Schedule of Liquidated Damages will be deducted from any money due the Contractor, not as a penalty but as liquidated damages; provided, however, that due account shall be taken of any adjustment of the contract time for completion of the work as provided for elsewhere in the Contract or Specifications.

Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion or after the date to which the time for completion may have been extended will in no way operate as a waiver on the part of the City of any of its rights under the contract.

The Commissioner of Public Works (hereinafter referred to as “Commissioner”) may waive such portions of the liquidated damages as may accrue if he deems the work is in such condition as to be safe and convenient for the use by the traveling and/or parking public.

The assessing of liquidated damages shall be, in addition to engineering charges as provided for in 108-04 Extension of Time, of these specifications.

TABLE 108-1 SCHEDULE OF LIQUIDATED DAMAGES

<u>Original Contract Amount</u>	<u>Liquidated Damages</u>	
<u>From More Than</u>	<u>To and Including</u>	<u>Per Calendar Day</u>
\$ 0	\$ 25,000	\$ 50
\$25,001	\$ 50,000	\$ 75
\$50,001	\$100,000	\$ 200
\$100,001	\$500,000	\$ 500
\$500,001	\$2,000,000	\$ 600
\$2,000,001	\$5,000,000	\$700
\$5,000,000	\$10,000,000	\$800
\$10,000,000		\$1,000

NOTE: Liquidated Damages for Special very large contracts will be specified in the contract proposal.

EXTENSION OF TIME

When the work embraced in the Contract is not completed on or before the date specified therein, all appropriate engineering and inspection expenses incurred by the City, its consultants and inspection agencies, and by railroad companies, from the scheduled contract completion date to the final date of completion of the work, may be charged to the Contractor. When assessed, the charges shall be deducted from any moneys due the Contractor.

Before assessing such charges, the Commissioner will give due consideration to factors attributing to such delay due to extenuating circumstances beyond the control of the Contractor limited to the following:

1. The work or the presence on the Contract site of any third party, including but not limited to that of other contractors or personnel employed by the City, by other public bodies, by railroad, transportation or utility companies or corporations, or by private enterprises, or any delay in progressing such work;
2. The existence of any facility or appurtenance owned, operated, or maintained by any third party;
3. The act, or failure to act, of any public or governmental body, including, but not limited to, approvals, permits, restrictions, regulations or ordinances;
4. Restraining order, injunctions, or judgments issued by a court;
5. Any industry-wide labor boycotts, strikes, picketing or similar situations, as differentiated from jurisdictional disputes or labor actions affecting a single or small group of contractors or suppliers;
6. Any industry-wide shortages of supplies or materials required by the contract work, as differentiated from delays in delivery by a specific or small group of suppliers;
7. Unusually severe storms of extended duration or impact, other than heavy storms or climatic conditions which could generally be anticipated by the bidders, as well as floods, droughts, tidal waves, fires, hurricanes, earthquakes, landslides, or other catastrophes;
8. Determination by the Department to open certain sections of the project to traffic before the entire work is completed;
9. Major unanticipated additional work, which significantly affects the scheduled completion of the contract;
10. Failure of the City to provide individual rights-of-way parcels for an extended period of time beyond that indicated by the contract if such unavailability, as determined by the Commissioner, significantly affects the scheduled completion of the contract.

Such charges will be assessed in cases where the work has been unduly delayed by the Contractor for unwarranted reasons, inefficient operations, or for any other reason for which the City determines the Contractor to be liable. Reasonable time necessary for reviews by the City or its agents of shop drawings, for changes or additions to the work to meet field conditions which do not significantly affect the scheduled completion of the Contract, delays incurred by seasonal and weather limitations, localized labor actions and shortages of supplies or materials, and other situations which should be anticipated are neither compensatory nor eligible for extensions of time without the assessment of engineering and inspection charges.

NOTICE TO BIDDERS

1. All work shall be done in such a manner as to not obstruct, impede or interfere with the operation of National Grid Power Corporation's facilities. All earth or soil disturbed by the work being performed by the Contractor shall be replaced with proper fill and the surface thereof restored to natural ground level.

2. Contractor, in excavating with mechanized excavating equipment, blasting or demolition, shall not strike or damage any gas pipe or its protective coating or any other underground facilities of National Grid Power Corporation, which is part of its gas system and shall protect said facilities against possible damage. If such facilities having been staked or marked in accordance with the standard procedure of National Grid Power Corporation are to be exposed or are likely to be exposed, hand-digging only shall be used in such circumstances, and such support as may be necessary for the protection of the facilities shall be employed, and such support must be approved by a representative of National Grid Power Corporation, provided, however, that nothing contained herein shall limit or reduce the statutory duty as provided for in Section 322-a of the General Business Law of the State of New York, reference to which is hereby made.

3. In the event that damage does occur to underground gas pipes or other facilities, including damage to coating of the gas pipe, Contractor shall immediately notify National Grid Power Corporation. Said damages are to be repaired by National Grid Power Corporation at the cost and expense of the Contractor.

4. Contractor shall avoid shock loading of National Grid Power Corporation's pipes, such as would be experienced with the use of hydro hammers.

CAUTION TO BIDDERS

Erasures or crossing out figures or words in the amount columns of Bid Sheet **will NOT be permitted**. If erasures or crossing out appears on any sheet, it will justify the Board of Estimate and Contract of the City of Rome, New York, to disqualify the entire contract bid in which it appears.

In the event errors are made on any Bid Sheet, the bidder may call for and receive new ones from the Department of Engineers by surrendering the sheet the errors were made on.

CAUTION TO BIDDERS

If, for any reason caused by construction, reconstruction, removal or relocation, any STOP, YIELD, or other TRAFFIC SIGN DEVICE at any street intersection is removed, it **MUST BE IMMEDIATELY RESET** to assure maintenance of traffic as established by Ordinance and Law of the City of Rome.

If, for any reason, there should be a temporary delay in resetting a device, it will be the obligation of the Contractor to furnish a flagman or other suitable guidance of traffic and the proper authorities are to be NOTIFIED.

CERTIFICATION OF MATERIALS

The Contractor shall provide the City of Rome with certified records of testing and/or certified statements from the manufacturer that materials furnished under this contract have been manufactured and tested in conformity with the specifications.

DEFECTIVE WORK OR MATERIALS

The inspection of the work shall not relieve the Contractor of any of his obligations to fulfill his Contract as herein prescribed and defective work shall be made good and unsuitable materials may be rejected, notwithstanding that such work and materials may have been previously inspected by the City of Rome and accepted or estimated for payment.

INSPECTION OF THE SITE

The Contractor is advised to carefully examine the work areas to make his own determination of the existing conditions. Submission of the proposal for performance of the work implies that the bidder has examined the existing work areas, and has acquainted himself by means of site inspection and other means with all the requirements of the work. No claims for additional compensation will be considered because of the bidder's failure to fully inform himself or his subcontractors of all said requirements.

NO GUARANTEE

The Owner does not guarantee that structures, equipment, piping, conduits and other appurtenances encountered during construction will be the same as those indicated on the drawings of the specifications. The Contractor must satisfy himself regarding the character, quantities and conditions of the various materials and the work to be done. The Contractor shall make necessary modifications in the work relating to existing structures as may be required where existing equipment and appurtenances, etc. are not found exactly as indicated, without additional compensation or extension of time.

DIMENSIONS OF EXISTING STRUCTURES AND EQUIPMENT

Where the dimensions and locations of existing structures, piping, equipment or appurtenances are of critical importance to the performance of the work, the Contractor shall establish or verify such dimensions and locations in the field before the fabrication of any material or equipment which is dependent on the accuracy of such information.

EQUIPMENT AND PIPE LOCATION

Equipment and pipelines shall be located substantially as indicated on the drawings, but the right is reserved by the owner to make such modifications in locating as may be found desirable to avoid interference with existing structures, piping or for other reasons where pipe material or fittings, etc. are noted on the contract drawings, such notation is for the Contractor's convenience and does not relieve him from laying or jointing different or additional items where required without additional compensation.

The locations of existing underground utilities and structures are shown in an approximate way. The Contractor shall determine the exact location of all existing utilities before commencing

work, and agrees to 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.

COMPACTION OF SOILS AND PAVEMENT

Compaction of soils and pavement shall be achieved by the use of suitable methods and adequate equipment. The minimum density to be obtained in compaction soils shall be the following percentages of "maximum density" as defined in ASTM D 698, Moisture Density Relations of Soils (Standard Proctor Compaction Test), Method C, including Note 2:

LOCATION PERCENTAGE

a) Foundation material under slabs on grade, piping and other structures	95%
b) Backfill of trenches Compaction	95% when pavement will be placed atop the backfill; and 90% when grass will be place atop the backfill.
c) Fill for seeded and other open areas	90%
d) Fill under pavements	95%
e) Base course of pavement	98%

Compacted fill and pavement course not meeting required density when tested in place shall be replaced or re-worked until additional tests, at Contractor's expense, indicate compliance with the Specifications.

In reference to Erosion Control the specifications are as follows:

1G1 - GENERAL

In concert with the policy established by the United States Environmental Protection Agency (USEPA) memorandum 78-1, it shall be the Contractor's responsibility to control erosion of and sediment-runoff from disturbed lands or excavations in connection with his operations. Such control measures may be in the form of specific construction practices combined with a planned sequence of operations, including use of temporary structures, dams, ditches, basins, pumping systems, etc. (as applicable) to accomplish this objective.

USEPA concern in this matter is expressed by the following paragraph, which appears in PRM 78-1:

"Problems associated with erosion and sediment loads resulting from construction activity have long been recognized. Erosion and subsequent excess sediment runoff are among the major factors directly responsible for non-point source pollution in streams and lakes. Additional problems which can occur include logging of streams and lakes, alteration of natural habitats, damage to the aesthetics of surface waters."

IG2 - SCHEDULE

Considering specific constraints or other criteria outlined herein, the Contractor shall prepare a detailed schedule which sets forth his program of operations to effectively control erosion and sediment runoff at all times during construction of the work. Two (2) copies shall be kept at the Project site at all times, and shall be made available for examination by authorized representatives of the regulatory agencies having jurisdiction over the Project.

The schedule shall be arranged so as to include:

- a) Chronological completion dates for each temporary (and permanent) measure for controlling erosion and sediment;
- b) Location, type and purpose for each temporary measure to be undertaken;
- c) Dates when those temporary measures will be removed.

Permanent structures, which may be specified elsewhere in the Contract Document, shall be incorporated in the regular Progress Schedule for completing the work.

IG3 - ADJUSTMENTS

If the planned measures do not result in effective control of erosion and sediment runoff, to the satisfaction of the regulatory agencies having jurisdiction over the Project, the Contractor shall immediately adjust his program and/or institute additional measures so as to eliminate excessive erosion and sediment runoff.

STOCKPILING

All materials will be stockpiled before any material is used or brought on site. The Engineer in charge will inspect such stockpiles. The stockpiles will state type of material and item number. The Engineer will require sieve analysis and soundness test

MAINTENANCE AND PROTECTION OF TRAFFIC

SURFACE

The Contractor shall maintain the condition of the traveled way so it is consistent with the appropriate speed limit.

The Contractor shall provide a traveled way suitable for two lanes of moving traffic unless otherwise stated in the Contract Documents. The traveled way shall be kept reasonably smooth and hard at all times, and shall be well drained and free of potholes, bumps, irregularities and depressions that hold or retain water. Construction operations shall be conducted to insure a minimum of delay to traffic. Stopping traffic for more than five minutes shall not be permitted unless specifically authorized in writing by the Owner. The necessary equipment and personnel to attain and maintain a satisfactory riding surface shall be available and used as needed at all times when work is under way and when work is temporarily suspended for any period of time. Special attention to maintenance of a satisfactory traveled way shall be given during weekends, holidays and the winter season.

The Contractor shall keep the traveled way free of foreign objects such as spilled earth, rock, timber and other items that may fall from transporting vehicles. Materials spilled or dropped from the undercarriage of any vehicle used in the Contractor's operations along or across any public traveled way both within or outside the Contract limits shall be removed immediately.

Dusty conditions resulting from the Contractor's operations shall be corrected by the use of calcium chloride and/or water. Water used as a dust palliative shall be distributed uniformly over a minimum width of eight feet by the use of suitable spray heads or spray bar. Existing paved surfaces are to be kept dust free by brooming, washing with water or use of calcium chloride.

DRAINAGE

All drainage facilities and other highway elements on the existing roadways and temporary detours must be adequately maintained. Ditches shall be provided at all times, even during grading operations and periods of accumulated plowed snow, to adequately drain the traveled way and the remainder of the right-of-way areas. Storm water access to catch basins and storm drains to be maintained.

SNOW REMOVAL

The Contractor shall maintain the traveled way in such a condition and conduct operations in such a manner that snow and ice may be readily controlled by others as necessary, and in such a manner that proper drainage is provided for the melting snow in the banks resulting from normal plowing. This shall include, but not be limited to, the cutting of weeps through banked or accumulated snow to provide proper drainage of surface runoff into the highway ditches and/or culverts. The Contractor shall not, however, be responsible for snow and ice control on the pavement or traveled way.

DELINEATION

The Contractor shall furnish, erect, move and remove delineation and guiding devices as required and directed by the Engineer. In areas where grading is being done, a safe and reasonable roadway shall be properly delineated at all times, either by the use of guiding devices or flagman. The Contractor shall delineate areas where there is a drop-off near the edge of the traveled way and areas on which it is unsafe to travel.

Where the drop-off is less than six inches, and where soft or unsafe areas occur, an approved delineator shall be placed along the edge of the traveled way at intervals of not more than 200 feet. Where the drop-off is greater than 18 inches, a continuous delineation consisting of 2 inches or wider brightly colored tape, ribbon, or other similar, flexible material as approved by the Engineer shall be used in addition to the individual delineators spaced not over 50 feet apart.

Plastic drums or containers set on end may be used as delineators, provided they are properly painted and contain reflective delineators in accordance with the MUTCD. They shall be kept clean at all times. Other markers or delineators may be circular or rectangular in shape and shall be constructed of reflective buttons having a minimum diameter of 3 inches. All reflective delineators or markers shall conform to the requirements of the MUTCD. Steel drums shall not be used as delineators.

REMOVAL OF EXISTING PAVEMENT MARKINGS

The Contractor shall remove the existing pavement markings to the extent as shown on the plans and in all cases where they may cause confusion for the planned traffic flow. This shall include any pavement markings that are added during the course of the work.

The method of removal is subject to the approval of the Engineer. Painting out pavement markings with black paint will only be approved for short-term use, and when the pavement area will be resurfaced or removed during this contract. If, in the opinion of the Engineer, the paint over the markings wears off to the point where it could cause confusion to the motoring public, then the Contractor shall re-paint or otherwise remove the markings at his own expense. Grinding, scraping, sandblasting, etc., to remove markings shall be conducted in such a manner that the finished pavement surface is not damaged or left in a pattern that could confuse the motoring public.

PAVEMENT MARKINGS

The Contractor shall furnish and apply pavement markings where shown on the plans or as ordered by the Engineer in accordance with the MUTCD. Any course of Asphalt Concrete, including base and binder course, upon which traffic will be maintained shall be properly marked in accordance with this Specification before the end of the working day, except for residential streets or rural roads not previously marked.

Temporary pavement markings shall be paint, tape, or raised reflective markers.

Paint materials and application should be as described in NYSDOT Standard Specification Section 640 - Reflective Pavement Marking Paints. Stripe width shall be between 4 and 6 inches.

Temporary marking tape shall be between 4 and 6 inches wide, and conform to the shape of, and adhere to the surface upon which it is applied. Tape shall be applied in conformance with the manufacturer's recommendations.

Temporary raised reflective markers shall be Stimsonite Model 66 as manufactured by America Corporation; or equal. They shall be applied in conformance with the manufacturer's recommendations. The distance between markers shall be as shown in the plans. Raised reflective markers will not be used during the winter season.

Temporary pavement markings shall be the same length and pattern as required for permanent markings except under the following circumstances. Two-foot length skip marks may be considered acceptable for a period of seven days or less.

EXISTING SIGNING

All official existing highway signs, markers, delineators and their supports located within the contract limits shall remain under the control and jurisdiction of the NYSDOT, County Highway Department, or local highway department and shall be maintained for the duration of the contract by the Contractor as directed by each sign Owner.

Should sign relocation be necessary at various stages of construction, they shall be placed in conformance with the MUTCD or as required by the Owner.

Should sign relocations be necessary at various stages of construction, they shall be placed in conformance with the MUTCD or as required by the Owner. Appropriate directional signing shall also be used in conjunction with route marker signs.

The Contractor shall remove existing signs, markers and delineators and their supports which interfere with his construction operations; signs, markers and delineators not to be replaced, shall be cleaned and delivered to the highway department. Signs, markers and delineators lost or damaged because of negligence on the part of the Contractor, shall be replaced at the Contractor's expense.

NEW CONSTRUCTION SIGNING

The Contractor shall furnish and erect, move and remove, as required by MUTCD requirements, as shown on the plans or as required by the Owner, reflective signs to adequately and safely inform and direct the motorist and to satisfy legal requirements.

All signs shall be kept clean, mounted at the required height on adequate supports and placed in proper position and alignment so as to give maximum visibility both night and day. All wood supports, and backs of plywood sign panels shall be painted with two coats of white paint. Sign types and sizes shall conform to the MUTCD.

All signs shall be mounted in accordance with the MUTCD. All signs shall be mounted at a height of at least five feet unless otherwise shown on the plans.

All signs shall be the property of the Contractor and shall be maintained in good condition for the duration of the Contract and removed from the work site when the work is complete.

DETOURS

It is the Contractor's responsibility to submit for review and receive approval for all proposed detours from City Engineer and Owners, Police, Fire and highway departments, and secure the required permits, if any, prior to construction of the detour. All detour signing, markings, flagmen, and temporary construction must be in place before commencement of work that is within the traveled way or adjacent shoulder.

Not more than one block, nor more than one cross-street intersection may be torn up, obstructed, or closed to travel at one time without permission of the Owner. If the project involves pipe-laying operations, and if more than one pipe-laying crew is operating at separate locations in the work area, this requirement shall apply to each crew's operations, but shall be consistent with traffic maintenance procedures required by the Owner.

The Contractor shall assume full responsibility for providing access to any dwelling, building, or hospital in case of fire or other emergency. We shall review with, and obtain approval from, the local fire and police departments regarding any anticipated detours, obstruction to the flow of traffic, fire apparatus, ambulances or otherwise.

When the normal route of vehicular access to any property must be temporarily obstructed, the Contractor shall notify the affected property owner at least 24 hours in advance of his intended operations than one day following the start of construction at that location. Vehicular access to hospitals, fire and police departments must be provided at all times.

FLAGMEN

The Contractor shall provide competent flagmen at all times at work sites when it is required to stop traffic intermittently as necessitated by work progress or to maintain continuous traffic past a work site at reduced speeds or the number of usable traffic lanes are reduced by the Contractor's operations.

The flagmen shall possess the following minimum qualifications:

1. Average intelligence.
2. Good physical condition, including sight and hearing.
3. Mental alertness.
4. Courteous but firm manner.
5. Neat appearance.
6. Sense of responsibility for safety of public and crew.

The flagmen shall be trained in flagging procedures and wear orange hard-hats and vests in conformance with the applied sections of the MUTCD. If, in the opinion of the Engineer, the flagmen selected by the Contractor do not possess the minimum qualifications they shall be removed from the work site and replaced with competent individuals from the Contractor's crew. If the Contractor is unable to supply a competent person or persons from his own crew, the Contractor shall coordinate and compensate as required, at his own expense, a local police officer to perform flagging procedures for the remainder of the contract.

SITE RESTORATION

The Contractor shall restore the Project site to the same conditions they found before commencing operations or they shall modify and develop the site to the finished conditions shown on the drawings. All areas which are damaged or disturbed by the contractors' operations shall be restored, repaired or replaced to the same or superior condition which existed prior to the construction operation unless otherwise shown on the drawings. Existing cultivated or landscaped items such as trees, shrubs, hedges, saplings, vines, ground cover vegetation, etc. shall be reestablished or replaced with new materials.

AWARD OF CONTRACT

Owner reserves the right to reject any and all Bids, to waive any and all informalities not involving price, time or changes in the work and to negotiate contract terms with the successful bidder and the right to disregard all non-conforming, non-responsive, unbalanced or conditional bids. Also, Owner reserves the right to reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Owner and/or project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by owner. Bidder to whom contract is awarded shall be referred to as the "Contractor".

Discrepancies between words or figures will be resolved in favor of words. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Bids containing incomplete or no price information for any bid item which thus prevents evaluation of the extended total for that Bid item will be rejected.

SECURITY AND GUARANTEE:

Before the final payment is made to the contractor by the City for **all work** performed under this contract, the Contractor must deliver to the City an Executed Guarantee Bond or Maintenance Bond in the amount of 100 percent (100%) of the final estimate for all work. This Bond will be in effect for **ONE 1 YEAR** from the date of final acceptance of the work, and, notwithstanding any provision of the Contract or this document to the contrary, for purposes of this provision, the final acceptance date will be the date of final payment, or as approved by the Commissioner of Public Works. The bond shall be approved by the Corporation Counsel.

NOTICE TO ALL BIDDERS

Prior to the exceeding of any item, which will result in the increase in the total Contract price, approval of the City of Rome Board of Estimate and Contract must be obtained. The Contractor must give written notice of exceeding the price of any item to the Commissioner of Public Works or his representative. Without formal approval of the Board of Estimate and Contract, or the written acceptance by at least 3 (three) board members, the Contractor is not authorized to proceed. If the Contractor undertakes any work without approvals listed above, it is at their full responsibility and does not obligate the City or its agents in any way.

The Department of Engineers' will reserve the right to delete or add any items or special projects to this project

Contractors and/or Subcontractors are hereby put on notice that the provisions of Industrial Code Rule 53 (12 NYCRR) effective April 1, 1975 apply to this project and no direct payment for any work required by the Code will be made.

INFORMATION TO BIDDERS

The City of Rome recognizes the importance of having public works projects completed efficiently, on time and within budget. The City further understands an important element in obtaining these goals is the utilization of capable, well-trained persons. The City acknowledges that Trade Unions are a potential source of such persons.

The City recognizes the possibility for individual contractors to enter into agreements with Labor Unions for the provision of skilled laborers and encourages the execution of such agreements.

The City of Rome will give significant attention to Contractors utilizing Union labor and to Contractors whom agree to the use of project labor agreements with the local trades.

SOIL EROSION, WATER AND AIR POLLUTION ABATEMENT.

The Contractor shall schedule and conduct his operations to minimize erosion of soils and to minimize silting and muddying of streams, rivers, irrigation systems, impoundments (lakes, reservoirs, etc.) and lands adjacent to or affected by the work. Construction of drainage facilities and

performance of other contract work, which will contribute to the control of erosion and sedimentation, shall be carried out in conjunction with earthwork operations, or as soon thereafter as practicable. The area of bare soil exposed at any one time by construction operations shall be kept to a minimum.

At the pre-construction conference or prior to the start of the applicable construction, the Contractor shall submit to the Engineer, for acceptance, schedules for accomplishment of temporary and permanent erosion control work as are applicable for clearing and grubbing; grading; and bridges and other structures at watercourses; construction; and paving. In addition, he shall also submit for acceptance, at the same time, his proposed method of erosion control on haul roads and borrow pits, and his plan for disposal of surplus excavated materials. No work shall be started until the erosion control schedules and methods of operation have been accepted by the Engineer. If conditions change during construction, the Contractor may be required to submit a revised schedule for acceptance as directed by the Engineer.

Whenever the Contractor's operations, carried out in accordance with the approved erosion control schedule, result in a situation where temporary erosion control measures not shown on the plans, must be taken and these measures are approved or ordered by the Engineer, the Contractor shall conduct this work in accordance with the provisions in NYSDOT §209, "Temporary Soil Erosion and Water Pollution Control."

In carrying out the control measures under this subsection, the Contractor will be guided by, but not limited to, the following controls:

A. When borrow material is obtained from other than commercially operated sources, erosion of the borrow site shall be so controlled both during and after completion of the work that erosion will be minimized and minimal sediment will enter waterways, impoundments or adjacent properties. Waste or spoil areas and construction roads shall be located, constructed and maintained in a manner that will minimize sediment entering waterways and impoundments. The Contractor shall submit grading plans for all borrow pits or areas, spoil or waste areas to the Engineer for acceptance prior to the start of work on, or the use of, such areas. The grading plans shall indicate the sequence of operations, temporary slopes, and other factors, which may have an influence on erosion control;

B. Frequent fording of live waterways will not be permitted; therefore, temporary bridges or other structures shall be used wherever an appreciable number of waterway crossings are necessary. Unless otherwise approved in writing by the Engineer, mechanized equipment shall not be operated in live waterways;

C. When work areas or gravel pits are located in or adjacent to live waterways and impoundments, such areas shall be separated from the rest of the waterway or impoundment by a dike or other barrier to minimize sediment entering a flowing waterway or impoundment. Care shall be taken during the construction and removal of such barriers to minimize the muddying of a waterway or impoundment;

D. All waterways shall be cleared as soon as practicable of false-work, piling, debris or other obstructions placed during construction operations and which are not a part of the finished work. Ditches which are filled, or partly inoperative shall be cleaned and made operative before the Contractor stops work for any day, and shall be maintained in a condition satisfactory to the Engineer for the duration of the contract;

E. Water from aggregate washing or other operations containing sediment shall be treated by filtration, settling basin or other means sufficient to reduce the turbidity so as not to cause a substantial visible contrast to natural conditions. Wash water or waste from concrete mixing operations shall not be allowed to enter waterways or impoundments;

F. Pollutants such as fuels, lubricants, bitumen's, raw sewage and other harmful materials shall not be discharged in, on or near waterways and impoundments or into natural or manmade channels leading thereto;

G. All applicable regulations of fish and wildlife agencies and statutes relating to the prevention and abatement of pollution shall be complied with in the performance of the contract;

H. Any material generated by any activity for the development, modification and construction of any transportation facility *shall not* be burned on or off the contract site. This shall include but not be limited to land clearing material and demolition material. Such material shall hereinafter be referred to as disposable material in the clearing and grubbing specifications;

I. The Contractor shall not discharge dust into the atmosphere of such quantity, character or duration that it unreasonably interferes with the comfortable enjoyment of life and property or is harmful to plants or animals.

No payment will be made for any labor, material or equipment needed for soil erosion, water and air pollution abatement as described above.

When it becomes necessary, the Engineer will inform the Contractor of unsatisfactory construction procedures and operations insofar as erosion control, water and air pollution are concerned. If the unsatisfactory construction procedures and operations are not corrected promptly, the Engineer may suspend the performance of any or all of other construction until the unsatisfactory condition has been corrected.

SUBMITTALS

Whenever a material or article is specific or described and/or a particular manufacturer or vendor is mentioned, the specific item/method shall be understood as established. The type of function or quality desired from other products of equivalent function or quality will be accepted. The low Bidder will submit other products to be reviewed and approved by the Engineer in charge prior to award of Project.

The following submittal will be required and to be approved before work begins. All submittals will include material certifications:

1. Precast concrete Manholes, frames and grates;
2. Precast concrete Drainage Inlet Structures, frames and grates;
3. All pipe items: concrete, copper, P.V.C., HDPE, D.I.;
4. Soil, topsoil and supplier;
5. Concrete and Concrete supplier;
6. Gravel, stone and supplier;
7. Water valves boxes;
8. Granite, curb supplier;
9. Bitumen and supplier;
10. Precast concrete Leach basins, frames and grates;
11. Stabilization fabric;
12. All Water Service items curb stop, Corporation and couplers;
13. Epoxy road marking paint

Some items will require testing as directed by the Engineer.

SECTION 300

BIDDING DOCUMENTS

PROJECT: Potter Road Bid Sheet					
RFB 2024-026 Potter Road - Sanitary and 8" Water extension					
Item #	Description	Quantity	Units	Unit Price	Amount
1	Unclassified Excavation	150.00	CY		\$ -
13.2	8" PVC SDR 26/35, COMPLETE, IN PLACE	1,300.00	LF		\$ -
15.0	TRENCH AND BACKFILL	2,500.00	CY		\$ -
28.1	NYS DOT TYPE 3 BINDER COURSE ITEM 403.138902 - HW	100.00	TON		\$ -
29.1	NYS DOT TYPE 7 TOP COURSE ITEM 403.178902 - HW	50.00	TON		\$ -
30.0	NYS DOT ITEM 623.02 CRUSHED GRAVEL OR CRUSHED STONE	900.00	TON		\$ -
38	GRADING, TOPSOIL AND SEEDING	1,900.00	SQYD		\$ -
50.0	HYDRANT ROME STANDARD W/6" WATER VALVE COMPLETE	3.00	EA		\$ -
52.1	NEW 8" WATERMAIN CLASS 52 DUCTILE IRON PIPE	1,400.00	LF		\$ -
54.1	8" x 8" CAST IRON TEE - IN PLACE COMPLETE	1.00	EA		\$ -
57	DUCTILE IRON CAP IN PLACE	2.00	EA		\$ -
64.0	CONNECT TO EXISTING MANHOLE OR CATCHBASIN	1.00	EA		\$ -
79.0	NYS DOT TYPE 2, 304-2.02 MATERIAL	200.00	TON		\$ -
80.0	NYS DOT TYPE 4, 304-2.02 MATERIAL	300.00	CY		\$ -
90.1	WYE BRANCH CONNECTION	2.00	EA		\$ -
91.1	SANITARY LATERAL 6" PVC SDR 35 IN PLACE	50.00	LF		\$ -
193.0	NEW PRECAST SANITARY MONHOLE, 4' DIA,DEPTH UP TO 4'	5.00	EA		\$ -
195.0	ADDITIONAL DEPTH 4' DIA MH OR CB	30.00	VF		\$ -
1000	FIELD CHANGE	1.00	ALLOW		\$ 10,000.00

SUBTOTAL

214.0	Maintenance and Protection of Traffic	1	EA		
234.0	Mobilization must not exceed 4% of Subtotal (see specification)	1	LS		

\$

Please insert this total to front cover

SPECIAL NOTICE TO BIDDERS FOR:

1. BID SECURITY.

Each bid must be accompanied by cash, Bid Bond, or by the certified check of the bidder in amount not less than five percent (5%) of the amount of the bid.

2. LIQUIDATED DAMAGES. (Execution of Contract and Bond)

The successful bidder, upon his failure, or refusal, to execute and deliver the contract and bond required within ten (10) days after he has received notice of the acceptance of his bid, shall be subject to Liquidated Damages as set forth at Table

108-1 of Section 200--INFORMATION TO BIDDERS, attached hereto.

3. SUBMISSION OF BIDS-

ALL BIDS TO BE SEALED AND SUBMITTED TO

Rome City Clerk
198 Washington Street
Rome New York 13440

Please label envelope with the project name clearly stated.

4. Contract documents are only available electronically

SECTION 400

**TECHNICAL SPECIFICATIONS
[SEE CONTRACT DRAWINGS]**

ITEM No. 1.0 - UNCLASSIFIED EXCAVATION

1) Any abandoned catch basins or manholes.

2) Any Asphalt , concrete, railroad ties, or any other foundation material.

Street excavation will be done with an excavator or equivalent. The engineer in charge will approve alternate methods and equipment.

The contractor will be paid as follows:

A) Work limits for new construction will be face of new curb to face of new curb. B) The unit bid price per cubic yard (hereinafter "CY") shall include all labor, material, and equipment necessary to do the work. All excavation shall be within 1" of design elevations shown per plan.

ITEM NO. 1.1 - ADDITIONAL EXCESS EXCAVATION

The Contractor shall be paid this item if any additional excavation is required to remove any unknown foundation material such as concrete footing under existing curb, grade change from original excavation, unsuitable material is found, undercuts, cut slopes. The unit bid price per cubic yard (hereinafter "CY") shall include all labor, material, and equipment necessary to do the work.

ITEM NO. 4.1 – COLD MILLING BLACKTOP SURFACE – RANGE OF DEPTH 0" TO 2.5"

This work shall consist of milling the existing asphalt surface of various streets as indicated by the Contract in accordance with these specifications, and as approved by the Engineer.

EQUIPMENT

A. Cold Milling

The milling machine shall be especially designed and built for milling flexible pavements and possess the ability, when encountered, to mill concrete patches in the bituminous pavement and concrete or brick surfaces under the bituminous pavement. It shall be self-propelled and have the means for milling without tearing or gouging the underlying surface and blading the cuttings into a windrow, or milling the existing surfaces and loading the cuttings into trucks. The machine shall consist of a 6 ft. minimum width cutting drum with carbide tip cutting teeth, unless specified in bid document. Variable lacing patterns shall be provided to permit a rough grooved or smooth surface as directed by the Engineer. The striations produced by the lacing patterns shall generally not be greater than 3/8" deep. The machine shall be capable of being operated at speeds from 10 to 40 feet per minute and designed so that the operator can at all times observe the milling operation without leaving his control area. The machine shall be adjustable and shall have the ability to do wedge or key cuts from three inches to zero inches (3" to 0") in depth in one pass. It also shall be capable of cutting the surface immediately adjacent to the existing vertical curb face.

The milled surface shall be free from tears, gouges, shoves, breaks or excessive grooves. The surface tolerance shall be such that when a ten-foot (10') straight edge is laid laterally, the variance shall be less than 3/8", and when the ten foot (10') straight edge is laid longitudinally, the variance will be less than 3/16".

B. General

If the milling machine provided is not self-loading, the Contractor shall provide suitable equipment to pick up the milled material and deposit it in trucks. Sweepers, loaders and trucks of sufficient number and size suitable for handling the milled asphalt shall be provided. All equipment shall be in good repair and be capable of removing all of the milled materials after each day's operation. No loose material will be permitted to remain on the pavement.

CONSTRUCTION DETAIL

Prior to the start of the milling operation, the existing surfaces shall be power swept to remove any material lying on the surface such as debris, mud, sand or any other deposited material. All materials accumulated during the sweeping operation shall be disposed of separately by the Contractor and are not to be mixed with the asphalt material. In addition, the power sweeper shall contain a mechanism to confine any dust, which may evolve during the sweeping operation.

At the end of each workday, the milled pavement shall not have greater than a one-inch (1") difference in elevation from any adjacent pavement surface.

The Engineer will advise the Contractor prior to start of work on each street of the amount of removal to be done (in inches) for each pass. The depth of cut may vary according to field conditions, as ordered by the Engineer, after work starts.

The milled surface shall be free of mud, dust or other foreign material and shall be cleaned in a manner satisfactory to the Engineer as required for application of a new wearing course.

The Contractor shall provide all the necessary labor, material and equipment to load the asphalt cuttings. This material is to be delivered to and dumped at a site so designated by the Engineer. In the case where said designated site is not available, the contractor shall dispose of the cuttings at an approved private landfill at no additional cost to the City.

The Contractor shall protect sidewalks, trees, shrubbery, manholes, curbs, vault covers and any other items which may be damaged by his construction procedures and shall be responsible for repair or replacement of said damaged items at no cost to the City.

It shall be the Contractor's responsibility to prevent cuttings from entering drainage inlets and manholes and any cuttings that enter any drainage inlets or manholes shall be removed at the contractor's expense.

When milling around existing vaults, valve boxes, drainage inlets, manholes, etc., the Contractor shall mill the surface within one foot off the perimeter of all castings. The remaining material shall be removed by use of jackhammers.

OPERATIONS

A. Hours of Work

The hours of work are subject to control by the Engineer but will in no case be less than 6 hours per day.

B. Test Section

Prior to beginning the work, and at the request of the Department of Engineering, the contractor shall construct a test section of at least two hundred (200) feet in length and ten (10) feet in width and shall demonstrate to the satisfaction of the Department of Engineering, the ability of the equipment, workmen, procedures, and methods used to accomplish the work in accordance with the

plans and specifications. In the event the Department of Engineering does not approve the test, they may suspend operation and terminate the contract.

C. The Engineer controls the order in which the work shall be done. He has the right to change the order by giving the Contractor a revised sheet prior to starting any one street.

D. The Engineer has the right to add, delete or substitute streets as needed.

E. The Contractor will be responsible for providing all survey work necessary to assure the removal of material to the depths requested by the Engineer.

F. Prior to the initiation of work on any street, the Contractor shall provide written notification to all residents who front on that street of the upcoming construction. Notification shall indicate information regarding the nature, start and duration of the construction work. Said Notice shall be distributed at least twenty-four (24) hours prior to the actual start of the work.

G. The Engineer will provide the milling limits, including intersections, by marking the pavement before any milling operation begins.

H. All Supplementary work such as sweeping, jack-hammering and cleaning-up operations shall be completed within 24 hours after the milling operations has been completed on any particular City block.

MAINTENANCE AND PROTECTION OF TRAFFIC

The Contractor shall maintain traffic and protect the public from damage to persons and property within the limits of and for the duration of the Contract.

A. Traffic Signs

The Contractor shall place "Road Work Ahead" signs in such locations that all motorists traveling towards the area of construction, including intersecting streets will be notified of the work area at least 100 feet prior to entering the work zone. Signs shall be adequately supported and located so that they are easily readable by the public at all times.

Signs shall remain in advance of the work area at all times, including overnight, until all construction operations are complete. Where construction operations require other information to be displayed to the motorists, additional signs showing this information shall be furnished by the contractor and posted in a manner acceptable to the Engineer. All signs shall conform to NYSDOT standards for size, material and legend.

B. Barricades

The Contractor shall provide and maintain lighted and/or unlighted barricades to prevent traffic movement within a specific area that is unsuitable for use by vehicles in the opinion of the Engineer. Said barricades shall conform to the standards of the Department of Engineering. All barricades to remain overnight shall be lighted.

C. Flagmen

The Contractor shall provide flagmen at all times to maintain vehicular and pedestrian traffic while the work is in progress. All flagmen shall use flagging techniques recommended by the NY State Manual of Uniform Traffic Control Devices.

D. Street Closings

No street shall be closed for milling operations unless authorized by the Engineer.

E. Penalties

When the Contractor fails to comply with instructions of the Engineer regarding the maintenance and protection of traffic, he shall be liable to the City of Rome \$100.00 per calendar day per city block as liquidated damages. This liquidated damage clause shall be in addition to that stipulated for failure to complete the contract on time, as specified at Table 108-1 of Section 200-- INFORMATION TO BIDDERS, attached hereto.

DRIVEWAY RAMPS

On driveways in excess of two(2) inches of elevation, measured from the top of the existing driveway to the milled gutter, the Contractor shall provide a temporary - or, if needed - a permanent ramp. The ramp will consist of NYSDOT Top Course Item 403.198202 material or as directed by the Engineer. If ramp is permanent, the Contractor will be required to clean thoroughly the existing surface prior to placing the ramp. The vertical side of ramp will be tack coated and the ramp compacted by an approved method.

MEASUREMENT & PAYMENT

For purposes of the measurement and payment of cold milling items, the Engineer shall establish, one or more range of depths to be milled, and each range of depth shall be designated as a separate bidding item, for which a separate unit price shall be assigned by the Contractor.

A. Measurement

The quantity to be measured for payment will be a surface measurement, and shall be calculated by determining the total square yards milled for/under the applicable range of depth milled directed by the Engineer, and making no deductions for minor unplanned areas such as basins, inlets or manholes.

B. Payment

Payment for coldmilling items shall be calculated by multiplying the total square yards milled for the applicable directed range of depth by the unit price for said range of depth, as said unit price is established by the Contractor in its Bid. The bid price for each range of depth established shall include the cost of cleaning pavement; removal and disposal of all cuttings that enter the drainage inlets, manholes or other facilities; hand work around all manholes, drainage inlets, water and gas valves, butt joints and along curbs; protection of trees and shrubs; measurements; maintenance and protection of traffic; together with all labor and equipment necessary to complete the work as specified and millings delivered to specified location controlled by the City of Rome. **Payment of this item shall include cleaning all structures, whether reset or not, within the project limits of work.**

The Contractor shall repair any gouging that result from his operation at no additional cost to the City, to the satisfaction of the Engineer.

ITEM NO. 4.1.05 - COLDMILLING BLACKTOP SURFACE – RANGE OF DEPTH 0” TO 2.5”

See item 4.1 for milling description. ITEM 4.1.05 millings are contractor controlled. The contractor will be responsible for removing and disposal of millings.

ITEM NO. 4.2 - COLDMILLING BLACKTOP SURFACE – DEPTH 2.75” TO 4”

See ITEM 4.1 for general milling description for the range of depth 2.75 to 4 inches.

ITEM NO. 28.0 – NYSDOT BINDER COURSE TYPE 3 ITEM 403.138902 must be installed within 48 hours of milling operation

ITEM NO. 4.2.05 - COLDMILLING BLACKTOP SURFACE – DEPTH 2.75” TO 4”

See item 4.1 for milling description. ITEM 4.2.05 millings are contractor controlled. The contractor will be responsible for removing and disposal of millings.

ITEM NO. 4.25.05 - COLDMILLING BLACKTOP SURFACE – DEPTH 4.25” TO 6”

See item 4.1 for milling description. ITEM 4.25.05 millings are contractor controlled. The contractor will be responsible for removing and disposal of millings.

ITEM NO. 4.3 - COLDMILLING BLACKTOP SURFACE – DEPTH 0” - 3”

This item includes the cold milling of small blacktop sections with a range of depth: 0 - 3 inches (0”-3”), including sections as patches and drainage problem areas (birdbaths). See ITEM 4.1 for general milling description.

ITEM NO. 9.0 - 4" CORRUGATED POLYETHYLENE UNDERDRAIN TUBING COMPLETE/IN PLACE

The unit price bid per linear foot (designated on the bid sheets by “LF”) will include all costs, labor and materials necessary to complete the work. The linear foot bid will also include the cost of 1A stone, woven fabric, trench and backfill and all fittings necessary to complete the work.

MATERIAL REQUIREMENTS. Perforated polyvinyl chloride underdrain pipe and fittings shall conform to AASHTO M278 Class PS46.

ITEM NO. 13.0,13.1,13.2,13.3,13.4 - P.V.C. SDR. 26/35 IN-PLACE

MATERIAL REQUIREMENTS. The PVC material for the pipe and fittings shall meet the requirements of ASTM D1784 for Rigid Poly (Vinyl Chloride) Compounds and Chlorinated Poly (Vinyl Chloride) Compounds, Class 12444-B.

The molded or extruded pipe shall conform to ASTM D1785 for Poly (Vinyl Chloride) (PVC) Plastic

ITEM NO. 15.0 - TRENCH & BACKFILL

Payment lines shall be as follows unless otherwise shown or indicated on the contract plans:

A. Bottom Payment Line: The elevation of the bottom payment line shall be the invert elevation of the pipe, conduit, or culvert.

B. Top Payment Line: The payment line at the top surface shall be the existing surface prior to beginning the work.

C. Side Payment Lines: The side payment lines of the excavation shall be vertical to the bottom payment line, regardless of whether sheeting is or is not required or used. Excavation necessary for laying pipe will include any street asphalt concrete foundation, abandoned pipe, etc. Before any excavation begins a neat saw-out or jackhammer blade cut shall be provided along both sides of the excavation. Work shall be paid for in the unit price bid per cubic yard of excavation. For utility lines, exclusive of conduit and cable lines, of less than 12-inch diameter, the excavation width shall be the actual bottom width necessary, as determined by the Engineer, to properly perform the installation work required, or three (3) feet, whichever is less. For pipes, conduits, or culverts of nominal horizontal dimensions of 12 to 144 inches; the width of the excavation at the bottom

payment line shall be the nominal inside horizontal dimension of the pipe, conduit or culvert plus four (4) feet, or three (3) times the nominal inside horizontal dimension, whichever is less; for pipes with a nominal horizontal dimension greater than 144 inches the width will be as shown on the appropriate standard sheets or in the contract documents. For concrete pipe, twice the minimum wall thickness shall be added to the preceding.

The Contractor shall be responsible at all times for the carrying out of all excavation operations in a safe and prudent manner so that the workmen and the public will be protected from unreasonable hazard. All applicable local, state and/or federal requirements shall be observed. It shall be the Contractor's responsibility to use sheeting where necessary to protect employees and satisfactorily complete the work.

"ANY CUT DEEPER THAN 5 FOOT FROM THE SURFACE MUST BE SHORED ON ALL 4 SIDES"

ITEM NO. 15.1 - TEST HOLES

The Contractor will be required to excavate, expose and backfill any utilities; such as sanitary sewer main, water main or sanitary house lateral. This work shall be done prior to the start of the project, and as directed and approved by the Engineer. When it is determined by the Engineer that an exploratory excavation is necessary to determine elevations in conflict with other utilities, or as needed in order to determine elevations of existing utilities so that a design correction can be made, Contractor shall make the directed excavation. Contractor will be paid in appropriate items for backfill and restoration of excavated areas. Payment will be made on a unit price bid per cubic yard, which shall include all labor and equipment necessary to do this work. The Engineer shall approve the size of the backhoe and bucket size.

ITEM NO. 17.2 - REMOVE STUMP ONLY

The contractor shall remove tree stumps completely as directed by the Engineer. Stump grinding will only be allowed with prior written approval from the Engineer in Charge.

ITEM NO. 20.0 - NEW VALVE BOX, THREE PIECE SCREW TYPE

Each unit bid price will include all necessary excavation to remove and install a new 3-piece valve box in/place. After the valve box is set, it will be encased in concrete (4,000# p.s.i.) with four #5 steel reinforcing bars from the bottom of the excavation to 4" below the rim. Within 24 hours, the Contractor will place three inches (3") of type 3 binder. For any water valve in a manhole, the Contractor will remove the manhole completely or as directed by the engineer. All costs to remove the existing manhole will be included in the unit bid price. **THE VALVE BOX WILL BE SUPPLIED BY THE CITY OF ROME.**

The Contractor will be paid for backfill materials under **ITEM NO. 30.0 – NYSDOT 623.03 CRUSHED STONE**. Blacktop binder under **ITEM NO. 28.1 - NYSDOT TYPE 3 BINDER HANDWORK**. The price bid for this item shall include all costs of labor, material, and equipment necessary to complete the work.

ITEM NO. 22.0 – RESET VALVE BOX TO REQUIRED GRADE

Each unit bid price will include all necessary excavation to remove and reset an existing valve box, top section, in place. After the valve box is set, it will be encased in concrete (4,000# p.s.i.) with four #5 steel reinforcing bars from the bottom of the excavation to 4" below the rim. Within 24 hours, the Contractor will place three inches (3") of type 3 binder

the unit bid for this item shall include all costs of labor, material, and equipment necessary to complete the work. The Contractor will be paid for backfill materials under **ITEM NO. 30.0 – NYSDOT 623.03 CRUSHED STONE.**

THE TOP SECTION AND CAP WILL BE SUPPLIED BY THE CITY OF ROME.

ITEM NO. 22.1 - RESET MANHOLE TO REQUIRED GRADE PRECAST GRADE RINGS ONLY

Under this item the Contractor is required to reset any manhole to the required grade. The Contractor will be required to remove 1 to 5 courses of concrete brick. The Engineer in charge will determine how many courses will be removed and replaced with the pre-cast grade rings. Casting will be removed and then reset. The manhole casting will be jacked-out or saw-cut 1.3 ft. from the outside edge of the casting in a square shape. After the casting is set, it will be encased in concrete (4,000# p.s.i.) with four #5 steel reinforcing bars from the bottom of the excavation to 4" below the rim. Within 24 hours, the Contractor will place three inches (3") of type 3 binder and will be paid for under ITEM NO. 28.1. The Contractor is responsible for maintenance of traffic, and to protect traffic and pedestrians from the excavation. If the excavation impedes the flow of traffic and is an unsafe condition, then the Contractor will at his cost install a temporary cap or steel plate over the excavated area. The unit price bid will include all costs, labor, material and equipment necessary to do this work.

. A competent mason shall do all masonry work. Mortar used to set pre-cast concrete rings shall be one-part Portland (Type I or Type II) Cement and two parts mortar sand. All joints shall be completely filled and stuck to a true surface. Interior and exterior surfaces of manholes and catch basins will be parged with a 1/2" thickness of one-part Portland (Type I or Type II) Cement and three parts mortar sand. When resetting manholes, the Contractor will replace any removed curbing. The Contractor will be paid for installing new curb under the appropriate Item No. 24.0

Materials used for resetting castings shall be pre-cast concrete rings and shall meet the specifications of NYSDOT Standard Specifications section 704-13. Built in accordance to ASTM C478 concrete to be a minimum 4000 p.s.i. @ 28 days air entrained 5%-8% reinforcement steel ASTM GRADE 60. The manufacturing plant shall be NYSDOT approved for the current year by the Director of the NYSDOT Materials Bureau.

All manholes within the limits of work will be cleaned and accessible for its intended use. Cleaning will include removal of silt, debris or foreign matter of any kind. It will be the Contractor's responsibility to clean each manhole, catch basin and valve box, even if the condition existed prior to his work on the street. All costs, labor and materials, and equipment necessary to clean and/or make accessible existing manholes will be the responsibility of the contractor and will be included in the unit bid price each for Item 22.1, Reset Manholes

ITEM NO. 22.11 - RESET MANHOLE TO REQUIRED GRADE USING EJ USA STYLE 00302433 PRECAST GRADE RINGS ONLY (Frame and cover not supplied by City of Rome)

See Item. 22.10 for reset detail.

ITEM NO. 22.2 - RESET DRAINAGE INLET TO GRADE REQUIRED PRECAST GRADE RINGS ONLY

Under this item the Contractor is required to reset any Drainage Inlet to the required grade. The Contractor will be required to remove 1 to 5 courses of concrete brick. The Engineer in charge

will determine how many courses will be removed and replaced with the pre-cast grade rings. Casting will be removed and then reset. The Drainage Inlet casting will be jacked-out or saw-cut 1.3 ft. from the outside edge of the casting in a square shape. After the casting is set, it will be encased in concrete (4,000# p.s.i.) with three #5 steel reinforcing bars from the bottom of the excavation to 4" below the rim. Within 24 hours the Contractor will place three inches (3") of type 3 binder and will be paid for under ITEM NO. 28.1. The Contractor is responsible for maintenance of traffic, and to protect traffic and pedestrians from the excavation. If the excavation impedes the flow of traffic and is unsafe condition, the Contractor will at his cost install a temporary cap or steel plate over the excavated area. The unit price bid will include all costs, labor, material and equipment necessary to do this work. When resetting Drain Inlets, the Contractor will replace any removed curbing. The Contractor will be paid for installing new curb under the appropriate Item No. 24.0

All Drainage inlets will be cleaned and accessible for its intended use. Cleaning will include removal of silt, debris or foreign matter of any kind. It will be the Contractor's responsibility to clean each drainage inlets even if the condition existed prior to his work on the street. All costs, labor and materials, and equipment necessary to clean and/or make accessible, will be the responsibility of the Contractor and will be included in the unit bid price each for Item 22.2

. A competent mason shall do all masonry work. Mortar used to set pre-cast concrete rings shall be one part Portland (Type I or Type II) Cement and two parts mortar sand. All joints shall be completely filled and stuck to a true surface. Interior and exterior surfaces of the drainage inlet will be parged with a 1/2" thickness of one part Portland (Type I or Type II) Cement and three parts mortar sand. When resetting Drainage Inlets, the Contractor will replace any removal of existing curbing. The Contractor will be paid for installing new curb under the appropriate items.

Materials used for resetting castings shall be pre-cast concrete rings and shall meet the specifications of NYSDOT Standard Specifications section 704-13. Built in accordance to ASTM C478 concrete to be a minimum 4000 p.s.i. @ 28 days air entrained 5%-8% reinforcement steel ASTM GRADE 60. The manufacturing plant shall be NYSDOT approved for the current year by the Director of the NYSDOT Materials Bureau.

ITEM NO. 22.3 - ADDITIONAL ALTERING OF DRAINAGE INLET AND MANHOLE CASTING

This item will be used when it is necessary to go beyond five courses of brick when resetting manholes (ITEM #22.1) and resetting drainage inlets (ITEM #22.2). The Contractor will alter additional courses only when directed by the Engineer. Measurement for additional courses altered will be from the bottom of 5th course to depth of work performed. All costs, labor, material and equipment will be included in the unit bid price per vertical foot.

Materials used for resetting castings shall be pre-cast concrete pavers and shall meet the specifications of NYSDOT Standard Specifications section 704-13. The bricks shall have a compressive strength of 8000 p.s.i., min. at 28 days, 24-hour absorption of 5.0% max. Freeze- thaw 1.0% loss max. No admixtures or color agents are required. The manufacturing plant shall be NYSDOT approved for the current year by the Director of the NYSDOT Materials Bureau.

ITEM NO. 23.0 - FINE GRADING BETWEEN CURBS

Fine grading will be done with a self-propelled, pneumatic tire grader; the Engineer in charge will approve alternate methods and equipment.

Grading tolerance shall be maintained to within 1/2" of final grade elevation per plan.

ITEM NO. 24.0 - NYSDOT CLASS A OR CLASS J CURB (STRAIGHT / RADIUS)

Class A or J concrete to be used for placement of new curb. The Extruded (slip form paver) curb will be formed 10 feet each side of drainage inlets. Form work will be approved by the Engineer in charge. The Engineer in charge will approve equipment and methods. A drain stone sub-base will be installed to a minimum depth of five inches under all new curb installed. Drain stone is to be NYSDOT 703-0201 Type 1 and/or 2 crushed stone. All excavation, drain stone, labor and equipment necessary to install new curb is to be included in the linear foot price bid for Item 24.0

ITEM NO. 24.1 - NYSDOT CLASS A OR CLASS J CURB (STRAIGHT / RADIUS)

When Contractor is installing new concrete curbing on a **Cold Milled Street**, or project area not considered a reconstruction project, The Contractor will saw-cut a minimum of eighteen (18) inches in front of existing curb or new proposed face of curb where there presently is no curb. This area is to be replaced with a minimum of (six) 6" 4000 p.s.i. concrete after new curb is installed. drain stone sub-base will be installed to a minimum depth of five inches. Drain stone is to be NYSDOT 703-0201 Type 1 and/or 2 crushed stone. Extruded curb will be hand formed 10 feet each side of drainage inlets or as approved by Engineer. See detail sheet for Item No. 24.1. The cost of excavating, saw-cutting in front of the existing curb or proposed new curb line and the concrete will be included in the unit bid price per linear foot of new curb Item No. 24.1. Asphalt restoration on the face side of curb will be paid in appropriate Item's as Directed by Engineer.

ITEM NO. 25.0 – DILUTED TACK COAT NYSDOT 407.0102

This work shall consist of preparing and treating an existing Portland cement concrete surface or hot mix asphalt surface, excluding the surface of permeable base material with tack coat in accordance with the Contract documents and as directed by the Engineer.

Equipment. A distributor shall be used for applying tack coat. The distributor shall be capable of applying the tack coat uniformly on variable widths of surface up to 15 feet, with uniform pressure, and with an allowable variation from any specified rate

. Distributor equipment shall include a quantity measuring system and a thermometer for measuring temperature of tank contents. This equipment shall be calibrated within the last 12 months in accordance with ASTM D 2995 *Standard Practice for Estimating Application Rate of Bituminous Distributors*. A copy of the signed and dated

calibration certification detailing the equipment by its serial number or other unique identifier shall be given to the Engineer prior to use

.Distributors shall be equipped with a power unit for the pump and full circulation spray bars shall be adjustable both laterally and vertically. An attached bristle broom designed such that it drags on the pavement behind the spray bars may be attached to the distributor. If the broom is used, it shall be adjustable laterally and vertically so that the full width of the applied tack coat is bristled uniformly into the pavement surface.

A bituminous material sampling valve shall be attached to the distributor. When samples are taken through such valves, they shall be considered representative of all material in the distributor tank. The distributor tank will be equipped with an agitator that is capable of ensuring the emulsion is homogenous. It is preferred that the asphalt emulsion stored in the distributor tank be heated and maintained at a temperature range between 85°F and 160°F. Smaller hand operated power spray units will be permitted only in areas where the use of a distributor is impractical

.The Engineer will determine the final acceptance of all equipment used for applying the tack coat.

Application of Emulsion Material. The asphalt emulsion contained in the distributor tank shall be homogenous. Emulsified asphalts held in storage tanks, drums, or distributors for long periods are subject to settlement. The asphalt emulsion shall be sufficiently agitated or circulated to ensure a

homogenous emulsion prior to sampling or application. The tack coat shall be applied to a prepared clean pavement and in a manner to offer the least inconvenience to traffic and to reduce pickup or tracking of the bituminous material. Upon application the material shall be as uniformly spread across the width of the designated area. The tack coat shall not be applied on a wet pavement surface or when the pavement surface temperature is below the temperature requirements outlined in Table 402-2 *Temperature and Seasonal Requirements*. The Engineer will approve the temperature and areas to be tack coated prior to application.

Surface Type Application Rate(gallons per square yard)

- New Hot Mix Asphalt 0.05 - 0.06
- Milled Surfaces and Existing Hot Mix Asphalt 0.08 - 0.10
- Portland Cement Concrete 0.08 - 0.10
- Vertical Surfaces (curbs, drainage structures, and appurtenances) 0.09 - 0.11

Note: Tack coat shall be placed between all asphalt layers.

ITEM NO. 26.0 ASPHALT-TREATED PERMEABLE BASE COURSE – TYPE 2 ITEM 403.128902

In the areas of full depth reconstruction and the placement of new curb and underdrain, the Contractor will be responsible for the placement of Asphalt – Treated Permeable Base Course between the subbase and the Base Course as outlined in the Contract Plans. Item No26.0 shall be placed in accordance with Section 400 of the New York State Department of Transportation Standard Specifications. All costs, material, labor, and equipment necessary place the Asphalt – Treated Permeable Base Course shall be included in the unit price for this item per ton. Quality payment adjustments will not be paid for this item.

The Performance Graded Binder used in the production of this item shall be a pg. 64S-22.

ITEM NO. 27.0 – NYSDOT BASE COURSE TYPE 1 ITEM 403.118902

The Contractor shall provide and place in accordance with Section 400 of the New York State Department of Transportation Standard Specifications Base Course as outlined in the Contract Documents. All costs, material, labor, and equipment necessary place the Base Course shall be included in the unit price for this item per ton.

. Quality payment adjustments will not be paid for this item.

The Performance Graded Binder used in the production of this item shall be a pg. 64S-22.

ITEM NO. 28.0 – NYSDOT BINDER COURSE TYPE 3 ITEM 403.138902

The Contractor shall provide and place in accordance with Section 400 of the New York State Department of Transportation Standard Specifications Binder Course as outlined in the Contract Documents. All costs, material, labor, and equipment necessary place the Binder Course shall be included in the unit price for this item per ton.

Quality payment adjustments will not be paid for this item.

The Performance Graded Binder used in the production of this item shall be a PG 64S-22.

ITEM NO. 28.1- NYSDOT BINDER COURSE TYPE 3 ITEM 403.138902 – HAND WORK AND ITEM NO. 29.1– NYSDOT TOP COURSE TYPE 7 ITEM 403.178902 - HAND WORK

Before paving operation, the existing blacktop surface will be saw-cut by the Contractor as directed by the Engineer in charge. All costs, material, labor, compact, fine grade, equipment, etc., necessary to saw cut, remove material, and prepare sub-base for binder course will be included in the unit price for this item per ton.

Quality payment adjustments will not be paid for this item.

The Performance Graded Binder used in the production of this item shall be a PG 64S-22.

ITEM NO. 29.0 – NYSDOT TOP COURSE TYPE 7F2 ITEM 403.198202

The Contractor shall provide and place in accordance with Section 400 of the New York State Department of Transportation Standard Specifications Top Course as outlined in the Contract Documents. All costs, material, labor, and equipment necessary place the Top Course shall be included in the unit price for this item per ton.

Quality payment adjustments will not be paid for this item.

Performance Graded Binder used in the production of this item shall be a PG 64S-22.

All top course asphalt must be installed within 4 calendar weeks of the street section being milled unless otherwise directed by Engineer in Charge.

ITEM 29.2 – NYSDOT TOP TYPE 7 COURSE ITEM 403.178902, TRUE AND LEVELING

Sweeping, jacking, hammering and cleaning up operations shall be complete within 24 hours after milling operations have been completed on any particular city block, unless otherwise directed by the Engineer in charge. The paving of the True and Leveling course must commence within three (3) days after milling operations have been completed on any particular city block.

Quality payment adjustments will not be paid for this item.

The Performance Graded Binder used in the production of this item shall be a PG 64S-22.

ITEM NO. 30.0 - NYSDOT ITEM 623.02 CRUSHED GRAVEL OR 623.03 CRUSHED STONE

This item will be used in pipe embedment or as directed by the engineer. Stone sizes to be used will be determined by the engineer in charge. The unit bid price will be per ton complete in place.

ITEM NO. 33.0 - NEW 6” SIDEWALK NYSDOT CLASS D CONCRETE

This work shall consist of removal and construction of Portland Cement Concrete sidewalks, as shown on contract drawings, or as directed by the Engineer. Removal and construction shall include steps and stoops regardless of shape or depth. All work shall be in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans or established by the Engineer. A minimum of two inches (2”) of NYSDOT Type 2, 304-2.02 material

will be used as subbase and will be paid under ITEM NO. 79.0 – NYSDOT TYPE 2, 304-2.02 MATERIAL.

The contractor will fine grade subbase, compact and place new concrete sidewalk. **All costs**, labor, materials, equipment to fine grade subbase, compact and place new concrete sidewalk will be included in the unit bid price per square foot.

Materials shall meet the specifications of NYSDOT Standard specifications 1990 section 700. CONSTRUCTION.

The general details for placing concrete shall meet the requirements of the City of Rome General Specifications for Portland Cement Concrete. Curing of concrete shall meet the requirements as per specifications for Curing Concrete as described in ITEM NO. 33.0. The concrete shall be placed in one (1) pour to the full depth specified in the details. The concrete shall be finished to produce a smooth surface and then lightly broomed to a uniform texture.

All entrance walks, and pedestrian ramps shall be doweled into any new curb. Dowels shall consist of a No. 5 Grade 60 reinforcing bar. The dowels may be inserted into freshly placed curb or the curb may be drilled and dowels inserted with non-shrinking grout. The Engineer-in Charge or his representative shall specify the number of dowels in any walk.

Concrete joints and edges in mainline or entrance Sidewalks

All joints and edges will be tooled and finished after broom finish is applied to create the “picture frame” affect. Control joints will be spaced every ten feet. The Control joints will be cut to depth of 33% of the thickness of the slab. For a six-inch (6”) thick slab, a two-inch (2”) deep saw cut would be required. Dummy joints shall be evenly spaced between the control joints and cut to a depth of three quarters of an inch (3/4”). Layout for joints will be in square patterns as approved by the Engineer. The Engineer will approve the method and equipment to cut joints. The joints may be saw cut after concrete hardens and may be safely done without dislodging aggregate. Contractor will be responsible for cracking due to failure to cut joints in a timely manner. **All costs**, laborer, materials, and equipment to saw cut joints will be included in the unit bid price per square foot, Item 33.0.

Concrete Joints in large slabs

All joints will be saw cut. Control joints will be spaced no more than eight feet (8’) apart. The panels should be as close to square as possible and not exceed the length to width ratio of 1 to 1.25. The Control joints will be cut a depth of 33% of the thickness of the slab. For a six-inch (6”) thick slab, a two inch (2”) deep saw cut would be required. The Engineer will approve the method and equipment to cut joints. The joints will be saw cut after the concrete hardens and may be safely done without dislodging and aggregate. Contractor will be responsible for cracking due to failure to cut joints in a timely manner. **All costs**, labor, materials, equipment to saw cut joints will be included in the unit bid price per square foot, Item #33.0.

Construction Joints

Half Round Keyed Joints (See Standard Sheet) or No.5 Grade 60 dowels will be used where concrete operations such as end of day or when placing is stopped for other reason, such as weather or equipment breakdown or when ever the work is interrupted. **All costs**, laborer, materials and equipment to install half round Keyed Joints or dowels will be included in the unit Bid price per square foot, Item #33.0.

½” Foam or asphaltic expansion board

Shall be installed full depth at all joints between sidewalks and curbs, pavement, buildings, or as directed by Engineer. **All costs**, laborer, materials, and equipment to place foam will be included in the unit bid price per square foot, Item 33.0.

Monolithic Concrete Curb Section

Shall be placed as per contract standard sheet. **All costs**, laborer, materials, equipment to place monolithic curb will be included in the unit bid price per square foot, Item 33.0.

Curing Concrete

All concrete flatwork shall be cured with Resi-Chem® clear (Type 1 or 1D), Class 3 curing compound or equal. The curing compound will be applied as per manufacturer’s recommendation. **All costs**, laborer, materials, and equipment to cure concrete will be included in the unit bid price per square foot Item 33.0.

Payment

The unit bid price PER SQUARE FOOT shall include **All costs**, laborer, materials, equipment to place concrete as unit bid price per square foot, Item 33.0.

ITEM NO. 33.3 PROVIDE AND INSTALL NEW DURALAST. DETECTABLE WARNING PLATES or Equal

All materials and installation procedures shall conform to ADA Draft Guidelines for Accessible Public Rights-Of-Way. Cast in Place detectable/tactile warning surfaces will be installed as specified in ADA Guidelines. Refer to ADA Title III Regulations, 28 CFR Part 36 ADA STANDARDS FOR ACCESSIBLE DESIGN.

ITEM NO. 34 - NYSDOT 601.02----09 – INTEGRALLY COLORED HOT APPLIED SYNTHETIC ASPHALT WEARING SURFACE – COARSE AGGREGATE TYPE F2 CONDITIONS

DESCRIPTION

Construct architectural pavement treatments for use under vehicle traffic as shown on the contract documents.

MATERIALS

Use Grade 45 Imprint®, a hot applied polymer modified synthetic asphalt compound wearing course produced by Prismo Limited, or an approved equal as determined by the Regional Materials Engineer (RME). The Imprint material incorporates pigment, graded rubber granules, granite aggregates and reinforcing fibers. The integral color and stamped (molded) pattern shall be as indicated on the plans using material available from Imprint® or a RME approved equal.

Coarse Aggregates: The wearing course aggregates must meet the requirements of Standard Specifications Section 703-Aggregates and Section 401-2.02 B. Coarse Aggregate Type F2 Conditions. Aggregate samples shall be submitted to the Materials Bureau for approval 45 days prior to use. Additional quality assurance samples will be retrieved during installation and submitted for testing at a minimum rate of 1 sample per 100m², or as ordered by the Engineer. The coarse aggregates gradation shall be such that 100% passes the 12.5 mm sieve.

Fine Aggregates: Standard Specifications Section 703-01 shall apply except as modified herein. Use silica sand as a topping material at an application rate of approximately 50kg per 50 square meters of surface area. When dry, the silica sand shall meet the following gradation requirements:

Sieve Size	Percent Passing
850 μm	100

600 μm	40-100
300 μm	1-3
150 μm	0 - 0.3

CONSTRUCTION DETAILS

Using *manufacturer certified* installers Place surface treatment in accordance with the manufacturer’s recommended methods at the thicknesses and details as shown in the contract documents. Interfaces with adjacent surfaces shall be flush, providing smooth transition from surface to surface. If material is placed over existing pavement, construct 20mm deep by 150mm wide keyways at all edges. Sawcut the installation boundaries prior to excavating the existing material. All surfaces must be dried and cleaned by use of mechanical sweepers, high pressure air or other methods approved by the Engineer prior to use. Surfaces must be free of all dirt, oil, debris and any other material that might interfere with the bond between the resurfacing material and existing surfaces.

Use a hot compressed air lance (HCA) immediately prior to application to remove any remaining dust and promote good adhesion to the substrate. Use masking tape or other suitable material to protect the area adjacent to the installation. Install grade control devices to ensure the required thickness of Imprint is installed. The method and material used for grade control must be pre-approved by the Engineer in Charge.

Heat the materials in accordance with manufacturer’s recommendations using a thermostatically controlled pre-heater capable of continuous material agitation. Only use heating equipment that has been approved by the Engineer.

Temperature Requirements:

- Imprint materials shall be preheated between 190°C-215°C.
- Silica sand must be completely dried before application to ensure proper adhesion to the Imprint material. A hot compressed air lance may be used to thoroughly dry and preheat the silica sand.
- Material shall not be placed when the ambient air temperature is below 4°C.
- Material shall not be placed if the Engineer determines atmospheric conditions may compromise the surface treatment performance.

Apply, uniformly spread and smooth out the material between the grade control forms utilizing hot irons as recommended by the manufacturer. Apply preheated sand after the material has been smoothed out and before printing. If required, a roughened surface texture can be achieved by using wooden floats versus a hot iron finish.

Imprinted Design (if required): Imprint the semi molten material immediately after the sand application using an approved mold capable of providing a 8mm ± 2mm deep imprint in accordance with the design details shown on the plans. Use a manufacturer approved release agent to prevent Imprint material from sticking to the mold.

METHOD OF MEASUREMENT

This work shall be measured as the number of square feet of material necessary to construct architectural treatments as shown in the contract documents, or as ordered by the Engineer.

BASIS OF PAYMENT

The unit price bid per square feet shall include the cost of all labor, materials and equipment necessary to complete the work.

ITEM NO. 35.0 - BLACKTOP DRIVEWAY - REMOVE AND REPLACE

Before paving operation, the existing blacktop surface will be saw cut as directed by the Engineer in charge. This item will consist of three inches (3") of NYSDOT Binder Course Item 403138902 and one inch (1") of NYSDOT Top Course Item 403.198902. A minimum of 2 inches (2") of NYSDOT Type 2, 304-2.02 Material will be used for subbase material and paid for under ITEM NO. 79.0 – NYSDOT TYPE 2, 304-2.02 MATERIAL. All costs, material, labor and equipment, etc., necessary to saw cut, remove material and prepare sub base for paving will be included in the unit bid price for this item PER SQUARE YARD. All work will be done in an approved manner as determined by the Engineer in charge.

ITEM NO. 36.0 - STONE DRIVEWAY, REMOVE AND REPLACE

The unit bid price per square yard shall include all costs to excavate, place, fine grade and compact four inches (4") of NYSDOT type 2, 304-2.02 material in place.

ITEM NO. 37.0 – FLEXI-PAVE PAVEMENT

This product will be used as specified in various locations. The Engineer in charge will determine color.

Contractor will be responsible for all work associated with the preparation, installation and clean-up / disposal of material resulting from this installation. Payment shall be made in square foot measurement of actual Flexi-pave pavement in-place and will include excavation for and placement of two (2) inches of NYSDOT Type II 304-2.02 as the subbase material. NYSDOT Type II 304-2.02 will be paid for in Item No. 79.

ITEM NO. 37.1- FLEXI-PAVE PAVEMENT INSTALLED OVER 12" STRUCTURAL SOIL

This product will be used as specified in various locations. The Engineer in charge will determine color.

Contractor will be responsible for all work associated with the preparation, installation and clean-up / disposal of material resulting from this installation. Payment shall be made in square foot measurement of actual Flexi-pave pavement in-place and will include excavation for and placement of twelve (12) inches of CU Structural Soil and TYPAR BIOBARRIER installed on the vertical wall adjacent to the pedestrian walk see detail sheet.

ITEM NO. 38.0 - GRADING, SEEDING AND TOPSOIL 4" DEPTH

Grading, seeding and topsoil will be an approved source. The source will be inspected and approved by the Engineer in Charge. THE UNIT FOR PAYMENT WILL BE SQUARE YARD, AND THE UNIT BID PRICE SHALL INCLUDE ALL WORK NECESSARY, ANY EXCAVATION, GRADING, COMPACTION, MULCHING AND ANY OTHER WORK PERTINENT TO PLACING SEEDING AND FOUR INCHES (4") OF TOPSOIL.

Seed will be Agway - Rome Spec. Grass Mix or equal. Type 17-23-6 Fertilizer will be applied at a ratio of 21 pounds for every 5,000 square feet. All costs, materials, labor and equipment will be included in the unit bid price per square yard under Item No. 38 - Grading, Seeding and Topsoil/in place.

Topsoil shall meet following gradation and requirements:

- 1). PH of material shall be between 5.5 - 7.6.

2). The organic content shall be not less than 2% or more than 20%. 3). Gradation:

SIEVE SIZE DESIGNATOR	PERCENT PASSING BY WEIGHT
2"	100%
1"	85-100%
1/4"	65-100%
NO. 200 MESH	20-80%

ITEM NO.38.1 –NEW SOD PLANTING

The work covered under this item shall include preparing the sod bed, furnishing delivering, and caring for sod as directed by the E.I.C.

- A. **Seasons-** the work may be performed during any season of the year unless otherwise specified on the plans. The contractor shall notify the Engineer at least 48 hours in advance of the time he intends to begin to sod and shall not proceed with such work until permission is granted. No frozen sod shall be placed nor shall sod be placed on frozen earth. When delays in conditions are such by reason of frost, excessive moisture or other causes that satisfactory results are not likely to be obtained for any stage of work and it shall be resumed only when the desired results are likely to be obtained.

When sod is placed on the same general area where seeding is to be done under the same contract, the sod work shall be done before the seed is sown.

- B. **Procuring Ground-** the contractor shall exercise extreme care to retain the native soil from roots of the sod during the planting operation. Dumping of sod from vehicles will not be permitted. Sod shall be planted within 24 hours from the time of harvesting, unless it is tightly rolled and or stored root to root in a satisfactory manner. All sod stacks shall be kept moist and protected from exposure to the sun and freezing. The maximum period for storage shall be five days. Sod that is dry or fails to meet the specification requirements will be rejected.
- C. **Ground Preparation-**there shall be a minimum of two inches of topsoil under the sod unless otherwise specified. The sod subgrade shall be excavated to a depth below the finished grade of the sod to accommodate the specified thickness of topsoil and sod. Where sod is to be laid on existing topsoil, the work shall require stripping of the existing topsoil, shaping the subgrade and replacing the topsoil to the depth specified. Fertilizer shall be applied at a rate that provides 50 pounds of nitrogen per acre unless fertilizer has been applied to the topsoil in the sod bed under another item in the contract. Limestone, although not required in the sod bed preparation, will be permitted in the sod bed if applied in a previous operation. Fertilizer applied under this work shall be mixed with the topsoil to a depth of at least two inches before the sod is laid, unless otherwise approved. Mixing shall be accomplished by disking, harrowing, raking or other approved means.
- D. **Finished grade for sod-** sod to be laid in strips parallel to contours shall be between one-half inch and one inch below the surface of the adjacent soil. When laid in strips adjacent to paths, pavements drain inlets and other structures, sod shall be flush with the surface of the adjacent soil and adjacent structures. Sod to be laid in drainage ways, and sod to be continuously or solid sod shall meet the finished grades as shown on the plans. Grades shall be formed with special care at the junction of drainage ways.
- E. **Planting sod-** the soil on which the sod is to laid shall be reasonably moist and shall be watered, if so directed. The sod shall be laid smoothly, edge to edge and all openings shall be

plugged with sod. In drainage ways and where continuous or solid sod is called for on the plans the sod shall be laid with the longest running dimension parallel to the contours. Sod shall start at the base of slopes and progress upward in continuous parallel rows. Vertical joints between sods shall be staggered. Immediately after laying, sod shall be rolled into place so as to eliminate air pockets, provide true and even surfaces, insure knitting and protect all exposed sod edges, but without displacement of the sod or deformation of the sod surface. At the time of planting, the sod areas shall be watered evenly and at a rate of 5 gallons per square yard unless otherwise directed.

- F. **Pegging** – in all drainage ways, on all slopes 1 on 2 or steeper and elsewhere where specified or as directed, sod shall be held in place by stakes. Pegging shall be done immediately after rolling in place. At least one stake shall be driven through each sod to be pegged and the stakes shall be not more than two feet apart. Stakes shall have their flat side against the slope and be driven flush.
- G. **Finishing**- excess sod or excess soil resulting from excavations or trenching shall be disposed of as approved. Excess soil shall not be left to form a ridge adjacent to the sod areas.
- H. **Care during construction**- the contractor shall care for the areas of newly placed sod until all work on the entire contract has been completed and accepted. Such care shall consist of providing protection against traffic by approved warning signs or barricades, and mowing to a height of three inches when the growth reaches a height of six inches. All sod shall be watered at daily intervals for a minimum of four weeks following installation and in accordance with section NYSDOT 615-3.03 unless otherwise specified or directed by Engineer. When watered, sufficient water shall be applied to wet the sod and at least two inches into the topsoil bed. Watering shall be done in a manner, which will not cause erosion or other damage to the finished surfaces. Any surfaces which become gullied or otherwise damaged shall be repaired to re-establish the grade and conditions of the soil prior to placing sod and shall be then re-fertilized and sod replaced as specified under this work.
- I. **Liability**- When in the judgment of the Engineer, at any time prior to the acceptance of the contract, any area which has had sod placed on it fails, for any reason, to produce a satisfactory turf after a suitable period of time has elapsed; the contractor shall re-sod and re-fertilize such areas at the contractor's expense.

BASIS OF PAYMENT- sod will be paid for at the unit price bid per square yard, which payment shall constitute full compensation for furnishing all labor, materials, including topsoil placed under the sod, and necessary excavation, equipment and incidentals necessary to complete and care for the work specified. Watering of the sod shall be included in the unit price bid for sod.

ITEM NO. 50.0 - HYDRANT - ROME STANDARD WITH 6" WATER VALVE/COMPLETE - INCLUDES EXCAVATION

This shall be a Mueller Centurion Model #A421 for 6' trench, 6" mechanical joint inlet, 5 1/4" opening, Rome specification complete with valve and thrust block; Hydrant shall be fully restrained with Megalug mechanical joints as shown on detail sheet. Unit price for this item shall include all work and materials (**including GRADELOK**) from valve to hydrant. All existing hydrants that are replaced will become the property of the City of Rome Water Department. **THE 3 pc. GATE BOX WILL BE SUPPLIED BY THE CITY OF ROME.**

ITEM NOS. 52.0, 52.1, 52.2, 52.3, 52.4 - DUCTILE IRON PIPE - WATER MAIN, CLASS 52

The work shall be done in accordance with AWWA c600, as modified by the plans and the specifications, and shall be completed to the satisfaction of the Engineer and the owners of the water

system. The Contractor shall make all necessary arrangements and pay all charges to satisfy the regulations of the Owner and the water system.

Water main and their appurtenances shall be installed according to the manufacturer recommendations and shall meet the minimum standards of the ANSI/AWWA c600 specifications latest revisions.

The Contractor must obtain prior approval of the local water department before shutdown of any portion of the existing water mains. All mains and fittings shall be installed to provide a minimum cover of 6'-0" unless otherwise shown or ordered by the Engineer.

New water mains installed parallel to sewer or drainage pipe shall have a minimum of ten feet horizontal separation whenever possible, when a minimum of ten feet horizontal separation cannot be maintained a vertical separation of at least 18 inches from the bottom or top of the water main and top or bottom of sewer pipe, as required, shall be maintained. When this situation is encountered water, main joints shall be evenly spaced as far as possible across the sewer pipe joints.

PIPE AND FITTINGS

All water main shall be ductile iron pipe, class 52 double cement lined conforming to ANSI/AWWA c151/a21.51 specifications, with push on joints, gaskets and wedged with three (3) bronze wedges per joint, serrated clow f-175/ or equal.

All fittings, unless otherwise noted, shall conform to ANSI/AWWA c110/a21.11 specifications.

All fittings, unless otherwise stated, shall be ductile iron compact mechanical joint fittings conforming to ANSI/AWWA c111/a21.11 specifications. All fittings shall be restrained with rods and thrust blocked as needed.

All pipe and fittings shall have a minimum rated water-working pressure of 350 psig.

BASIS OF PAYMENT

The unit price bid per linear foot, unless otherwise specified shall include the cost of furnishing all labor and material and equipment to complete the work. No separate payment will be made for temporary supporting of existing mains or other utilities encountered, permits, Chlorination, shut-offs, disinfecting and testing disinfection, hauling, loading, storing, temporary bulkheads, and cutting existing water mains to install any fittings, but the cost shall be included in the Contract prices for the various water main items.

ITEMS. 53.0, 53.1, 53.2, 53.3, 53.4 - WATER VALVE IN-PLACE. INCLUDES ALL EXCAVATION & CONNECTIONS

This item shall be a Mueller (or equal) right turn to open, mechanical joint, gate valve. Alternate may be a resilient seat gate valve or butterfly valve. All valve shall be fully restrained with Megalug mechanical joints as shown on detail sheets and meet all applicable AWWA standards for size and type. All fittings shall be mechanical joint ductile or gray iron, meeting all standards of AWWA Standard C-110 (latest revision). All water mains shall be wedged with bronze wedges, serrated Clow F-175 (or equal), minimum three (3) per joint. All valve, plugs, caps, tees, and bends shall be restrained in a manner approved by the Superintendent of the Water Department or engineer. The costs of restraints and thrust blocks shall be included in the bid price for D.I. Pipe. **THE 3 pc. GATE BOX WILL BE SUPPLIED BY THE CITY OF ROME.**

ITEM NO'S 54.0,54.1,54.2,54.3,54.4- NEW CAST IRON TEE IN-PLACE

All fittings shall be mechanical joint ductile or gray iron, meeting all standards of AWWA Standard C-110 (latest revision). All valve, plugs, caps, tees, and bends shall be fully restrained with Megalug mechanical joints as shown on detail sheet restrained in a manner approved by the Superintendent of the Water Department or engineer. The costs of restraints and thrust blocks shall be included in the bid price for the new tee.

ITEM NO'S. 57.0,57.1,57.2,57.3,57.4- NEW DUCTILE IRON CAP/PLUG FOR D.I. CLASS 52 WATER MAIN IN-PLACE

All fittings shall be mechanical joint ductile or gray iron, meeting all standards of AWWA Standard C-110 (latest revision). All valve, plugs, caps, tees, and bends shall be fully restrained with Megalug mechanical joints as shown on detail sheet restrained in a manner approved by the Superintendent of the Water Department or engineer. The costs of restraints and thrust blocks shall be included in the bid price for the new cap/plug.

ITEM NO. 59.2 - 12" COLDMILLING COMPACTED IN-PLACE - 3-4" LIFTS

The unit price bid per square yard will include:

- 1). Hauling from Erie Canal Village on State Route 49/46 to job site;
- 2). Placement, fine grading, and compaction, as delivered on project site; cold milling will not be stockpiled on job site;
- 3). The Engineer in charge will approve fine grading, including compaction, method and equipment;
- 4). If cold millings are depleted and additional material is needed to complete the project, the City of Rome will supply NYSDOT Type 2 material or NYSDOT Type 4 material crushed or an alternate material to be hauled by the Contractor from Erie Canal Village on State Route 49/46.

MEASUREMENT AND PAYMENT:

The unit bid price per square yard shall include all costs, materials, labor and equipment necessary to complete the work.

ITEM NO. 62.0 - NEW LEACH BASIN IN-PLACE 4' INSIDE DIAM. 0- 5' VF

The Contractor shall furnish and install leach-basin of type shown on standard sheets or drawings and as specified herein. The unit bid price per vertical foot will include all costs, labor, equipment, and material necessary to install leach-basin. The item will include pipe connections, whether for new or existing sewers. Also, the item will include masonry, concrete, reinforcing steel, special pipe fittings, pre-cast units, cast in place units, and all other material, costs, labor, and equipment necessary to install a complete structure. The plant shall be currently approved by NYSDOT for the manufacture of concrete products. The manufacturer shall provide the Engineer with shop drawings certifying that all pre-cast concrete sections furnished to this project shall conform to the requirements of contract documents and shall conform to ASTM Specifications C-478 except as modified and/or supplemented in this section of the Specifications.

ITEM NO. 63.0 - ABANDON EXISTING MANHOLE, DRAINAGE INLET OR LEACHBASIN

Contractor will be required to remove abandoned manhole, catch basin or leach basin and fully plug abandon pipes with concrete. The concrete will extend into the abandoned pipe a minimum of twelve inches (12"). The engineer will inspect and certify work performed before contractor backfills. All costs, material, labor and equipment will be included in the unit bid price each. The Contractor will be paid for abandon manhole, catch basin or leach basin only when the abandon manhole, catch basin or leach basin is outside the trench excavation or outside excavation limits of the new manhole, catch basin or leach basin. Existing sewer invert must remain clean and free of debris during construction phase. Any debris that enters the channel will be removed by contractor.

ITEM NO. 63.1 - ABANDON EXISTING LAMP HOLE

This item will be used when the Engineer in charge has deemed an existing lamp hole as unusable. The contractor shall excavate the existing structure down one (1) foot below the new elevation of the road surface and oriented in a four (4) foot square.

The existing casting shall be used to cover existing pipe exposed after excavation and encased in concrete to an elevation four (4) inches below new elevation of the road surface. The appropriate asphalt items will be used to restore road surface.

ITEM NO. 64.0 - CONNECT TO EXISTING MANHOLE OR DRAINAGE INLET

This item will be used when design calls for the installation of a new utility line where existing manhole or catch basin, be it precast concrete or brick/block construction, needs to be utilized. Connection shall be made with pipe material as specified by work on project or as ordered by Engineer in charge. Connection will be water tight when completed with new pipe extending to inside face of existing structure being connected to. Inside and outside faces of structure will be parged to smooth surface. Backfill will be paid by items according to Engineer in Charge. The connection will be paid in each quantity.

ITEM NO. 79.0 - NYSDOT, TYPE 2, 304-2.02 MATERIAL IN-PLACE

This item shall follow specifications for NYSDOT Item 304-2.02 Type 2 material. It shall consist solely of approved blast furnace slag or of stone, which is a product of crushing ledge rock. The unit price bid shall include all costs of this item compacted in place.

ITEM NO. 80.0 - NYSDOT, TYPE 4, 304-2.02 MATERIAL IN-PLACE

This item shall follow specifications for NYSDOT Item 304-2.02 Type 4 material. The material will consist of approved blast furnace slag, stone, sand and gravel or blends of these materials.

ITEM 80.1 CUSHION SAND

Cushion sand shall consist of clean, hard, durable, uncoated particles, free from lumps of clay and all deleterious substances.

When dry the sand shall meet the following gradation requirements:

Sieve size	6.3 mm	300µm	150µm
Percent passing by weight	100	0-35	0-10

The sand may be determined to be unacceptable for cushion sand if it contains more than 10 percent by volume of loam or silt.

Method of payment will be by U.S tons

ITEM NO. 81.1 - HOT TACK EDGES BEFORE TOP AND SEAL EDGES WITH HOT AC-20

The unit price bid will include labor, materials and equipment necessary to complete the work. The work shall be done in a manner approved by the Engineer.

ITEM NO. 86.0 - GEO-TEXTILE MATERIAL WOVEN OR NONWOVEN

DESCRIPTION

The work shall consist of furnishing and installing approved Geo-textiles at the location and in the manner shown on the plans or as directed by the Engineer, prior to performing the work.

MATERIALS

The Geo-textiles shall be the type appropriate for the intended use as shown on the plans or specifications or approved by the Engineer. The Geo-textile material shall be a woven or nonwoven fabric.

CONSTRUCTION DETAILS

The Geo-textiles shall be protected from exposure to sunlight during transport and storage. The Geo-Textiles shall be placed and anchored on a prepared surface free from any puncturing material and approved by the Engineer. In areas of curb each construction, the Geo-textile shall be placed prior to construction and shall extend a minimum of six (6) inches beyond the curb. Traffic or construction equipment will not be permitted directly on the Geo-textile. Geo-textiles may be joined by either sewing or overlapping. Sewn seams shall be lapped a minimum of four (4) inches and double sewn. The thread used to sew the seam shall be nylon or polypropylene. Overlapped seams shall have a minimum overlap of eighteen (18) inches except where placed underwater, where the overlap shall be a minimum of three (3) feet. All seams shall be subject to the approval of the Engineer. Geo-textile, which becomes torn or damaged, shall be replaced or patched. The patch shall extend three (3) feet beyond the perimeter of the tear or damage. The Geo-textile shall be laid loosely so that placement of the overlying material will not stretch or tear the Geo-textile. The overlying course shall be placed and maintained in one (1) lift of eight (8) inch minimum thickness and compacted as approved by the Engineer. Granular material shall not be dropped onto the Geo-textile from a height exceeding three (3) feet. Holes cut in the fabric for catch-basins, manholes, valve boxes or other structures must be neat and only large enough to accommodate the structure. Where Geo-textile is placed on a slope, backfill placement shall begin at the toe and proceed up the slope. Where Geo-textile is placed under water, the long dimension shall be placed parallel to the direction of flow. Successive Geo-textile sheets shall be overlapped in such a manner that the upstream sheet is placed over the downstream sheet. As the Geo-textile is placed under water, the backfill material shall be placed on it to the required thickness. The Geo-textile placement shall not progress more

than fifty (50) feet ahead of the backfill placement. Rip Rap or stone shall not be dropped onto the Geo-textile from a height exceeding one (1) foot.

MEASUREMENT AND PAYMENT

The quantity of Geo-textile will be the number of square yards measured in place. Measurement will not be made for Geo-textile used for repairs, seams or overlaps. The unit price bid per square yard for this item shall include the cost of furnishing all labor, equipment and materials necessary to complete the work, including the cost of preparing the surface upon which the Geo-textile is placed.

ITEM 90.0 – WYE BRANCH CONNECTION

Wye connection shall be PVC SDR 35. The engineer in charge will spot this connection on site, as the work progresses. The unit bid price shall include all costs, material, labor, equipment and excavation to install wye connection.

ITEM 90.1 - WYE BRANCH CONNECTION REPLACEMENT - SMALL SECTION ONLY

This item shall be used when it is determined, by the Engineer in charge, that a sanitary wye connection need to be replaced or inserted into an existing sanitary sewer.

MATERIALS:

The Contractor shall provide and install each P.V.C. SDR-26/35 wye connection (size may vary), all pipe up to ten linear feet of P.V.C. SDR-26/35 (size may vary) and fernco type connectors necessary to complete the job. The pipe shall be bedded in a minimum of six inches of Item No. 30 Crushed Stone and covered to a depth of twelve inches above the pipe with Item No. 30 Crushed Stone. This item shall include all excavation necessary.

MEASUREMENT AND PAYMENT:

The unit bid price per each wye replacement shall include all costs, materials, labor, equipment, excavation, pipe and connectors necessary to complete the job.

Stone shall be paid for under ITEM NO. 30.0. Any additional pipe over ten feet shall be paid for under the appropriate pipe item.

ITEM NO. 91.0 - SANITARY LATERAL, 4" PVC SDR 35 COMPLETE

This item will be used when replacing existing sanitary laterals or installing a new sanitary system. The Engineer will determine how many linear feet will be installed. All costs including excavation, labor, materials, and equipment to perform work will be included in the unit price bid per linear feet.

ITEM NO. 112 – NEW MUELLER CURB BOX OR APPROVED EQUAL, IN PLACE

This item will be used when an existing shut off falls inside the new roadway or curb line or it is deemed necessary to replace a shut off or curb box. The curb box shall be Mueller 11-10314 with lid or approved equal. The unit price bid for this item shall include all costs of labor, materials, equipment, excavation, connections and fittings necessary to complete the work.

ITEM NO. 113.0,113.1,113.2,113.3, NEW CURB STOP – FORD BALL VALVE, COMPLETE, IN PLACE

This item will be used when an existing shut off falls inside the new roadway or curb line or it is deemed necessary to replace a shut off. Curb stop shall be Ford 3/4" Ball Valve or approved equal.

The unit price bid for this item shall include all costs of labor, materials, equipment, excavation, connections and fittings necessary to complete the work.

ITEM NOS. 114.0, 114.1 - NEW CORPORATION STOP, IN PLACE

This item will be used for new construction or when the existing corporation is deemed necessary to be replaced. All costs, material, labor and equipment necessary shall be included in the unit bid price per each. The new corporation shall be Mueller h-1500 corporation stop.

ITEM NOS. 115.0, 115.1, 115.2, 115.3 – NEW COPPER WATER SERVICE, COMPLETE

This item will be used where an existing curb box (shut-off) falls inside of the new curb line or is deemed necessary to be replaced. All costs, labor, materials, equipment necessary to disconnect

and remove old service and connect and install new copper service from the existing water-main to the new curb box will be included in the unit bid price each.

The unit bid price each shall also include all excavation, removal of existing concrete base and/or blacktop.

When it is required for the Contractor to drive under existing pavement, the new water services will be incased in approved steel casing or equal and extend beyond the existing ditch. The new water service will be a minimum of 5 feet in depth at ditch line.

. The Engineer in charge or a representative from the City of Rome Water Department will be on-site for all taps.

ITEM NO. 117.0 - ABANDON WATER SERVICE

Under this item, the Contractor shall excavate and expose corporation at water-main. The Contractor shall then put the corporation in the shut-off position and then disconnect the abandoned water service. The unit bid price each will include all costs, labor, material, equipment necessary to excavate, turn-off corporation and disconnect existing water service. The shut-off and disconnect will be verified by the field engineer for the project. The unit bid price each will include all necessary excavation, removal of concrete base and/or blacktop to complete work.

ITEM 118.0 –NEW CONCRETE VALLEY GUTTER CURB

New concrete valley gutter curb can be extruded, or hand formed and poured with class A or J concrete. Concrete shall be six inches in depth. Crushed stone (drain stone-crushed #1's) shall be used to bed the new curb and will be included in the price per linear foot of Item no. 118. Cross slope and construction as per detail sheets.

ITEM 119.0- NEW GRANITE CURB

New Granite curb shall be quarry split face with a sawed hammered or thermal finish top. New granite curb shall be Type "A". All joints to be finished with non-shrink grout. Curb stone is to have continuous three (3) inch dry mix and dry mix concrete pedestal with concrete backing at each joint. The backing at each joint shall extend a minimum of twelve (12) inches on both sides of joint.

ITEM #119.1 RESET GRANITE CURB

The unit bid price per foot shall include the all costs of labor equipment and materials to remove, haul, store and properly reset existing curb. All joints to be finished with non-shrink grout. Curb stone is to have continuous three (3) dry mix and dry mix concrete pedestals with concrete backing at each joint. The backing at each joint shall extend a minimum of twelve (12) inches on both sides of joint. Any existing curb stones damaged by contractor, at the Engineers discretion, during this operation will be replaced by contractor, in kind, at the contractor's expense. The Contractor will saw-cut a minimum of eighteen (18) inches in front of existing curb. This area is to be replaced with a minimum of (six) 6" 4000 p.s.i. concrete after reset curb is installed. Drain stone sub-base will be installed to a minimum depth of five inches. Drain stone is to be NYSDOT 703-0201 Type 1 and/or 2 crushed stone. The cost of excavating and saw-cutting in front of the existing curb and the concrete will be included in the unit bid price per linear foot of new curb Item No. 119.1. Asphalt restoration on the face side of curb will paid in appropriate Item's as Directed by Engineer.

ITEM NO. 163.0 FULL DEPTH PATCH

Full depth repair will be utilized to replace temporary repairs on utility cuts. The temporary repair will be removed one foot outside existing temporary repair as marked by Engineer in Charge and to a depth of six inches below finished grade of road. Replaced with 4.5" compacted NYSDOT 403.138902 Type 3 Binder and 1.5" compacted NYSDOT 403.198902 Type 7 top. If unsuitable material, as determined by Engineer in Charge, is found in excavation, it will be removed and replaced with compacted NYSDOT Type 2 304.2-02 and paid in Item #79.

PAYMENT

The unit bid price will be square yards as measured when repair is complete and shall include all labor, excavation, Ac-20 tack coat and materials to complete the repair.

ITEM NO. 165.01, .02, .03 and .04 Epoxy Road Markings

The unit price bid per each shall include the cost of all material, labor and equipment necessary to satisfactorily complete the work including all necessary excavation, removal and resetting of top piece and cover of valve box to existing or new pavement grade, backfill and the removal and replacement of any pavement, foundation, pencil vibrating new concrete in repair area, reinforcement, shoulder and sidewalk courses, sub-courses, curbs, drains, lawns, and other surfaces. Also included is the cost of joint sealing and tack coating. Any damage that occurs to the water system through carelessness on the part of the contractor shall be replaced at the contractor's expense.

165.11 White Epoxy Reflectorized Pavement Stripes

165.12 Yellow Epoxy Reflectorized Pavement Stripes-

165.13 White Epoxy Reflectorized Pavement Letters-

165.14 White Epoxy Reflectorized Pavement Symbols-

Under these items the contractor shall furnish and apply epoxy reflectorized pavement markings, including glass beads at the locations and in accordance with patterns indicated on the plans or as ordered by the City Engineer. All work shall be in conformance with these specifications and NYS M.U.T.C.D.

The epoxy marking material should be hot-applied by spray methods onto bituminous and Portland cement concrete pavement surfaces at the thickness and width shown on the Contract Documents. Following an application of glass beads, the cured epoxy marking shall be an adherent reflectorized stripe.

Sprayed on white and yellow epoxy reflectorized pavement markings and glass beads shall conform New York State D.O.T. Standard Specifications, Section 685, Epoxy Reflectorized Pavement Markings.

General

All pavement markings and patterns shall be placed as shown on the Contract Documents and in accordance with the New York State, Manual of Uniform Traffic Control Devices 'M.U.T.C.D.'.

On new construction projects, pavement markings and patterns shall be applied within five (5) working days after placement of the final asphaltic top course. Should contractor fail to install pavement markings within the above time frame the City may elect to have the markings installed under the 'Failure to Perform' section of the General Conditions of this contract.

Before any pavement marking work is begun, a schedule of operations shall be submitted for the approval of the City Engineer and his/her authorized representative.

At least five (5) days prior to starting striping, the contractor shall provide the Engineer with the epoxy manufacturer's written instructions for use. These instructions shall include, but not be limited to, material mixing ratios and application temperatures.

When pavement markings are applied under traffic, the contractor shall provide all necessary flags, markers, signs, etc. in accordance with the M.U.T.C.D. to maintain and protect traffic, and

to protect marking operations and the markings until thoroughly set.

The application of pavement markings shall be done in the general direction of traffic. Striping against the direction of traffic flow shall not be allowed.

The contractor shall be responsible for removing, to the satisfaction of the Engineer, all tracking marks, spilled epoxy, and epoxy markings applied in unauthorized areas.

When necessary the contractor shall establish marking line points at nine-meter intervals throughout the length of the pavement or as directed by the Engineer.

Atmospheric Conditions

Epoxy pavement markings shall only be applied during conditions of dry weather and on substantially dry pavement surfaces. At the time of installation, the pavement surface temperature shall be minimum of 10°C and the ambient temperature shall be a minimum of 10°C and rising. The Engineer shall be the sole determiner as to when atmospheric conditions and pavement surface conditions are such to produce satisfactory results.

Surface Preparation

The contractor shall clean the pavement and existing durable markings to the satisfaction of the Engineer.

Surface cleaning and preparation work shall be performed only in the area of the epoxy markings application.

At the time of application, all pavement surfaces and existing durable markings shall be free of oil, dirt, dust, grease and similar foreign materials. The cost of cleaning these contaminants shall be included in the bid price of this item.

In addition, concrete curing compounds on new Portland cement concrete surfaces and existing painted pavement markings on both concrete and bituminous pavement surfaces shall be cleaned in accordance with New York State DOT Standard Specifications Section 635, Cleaning and Preparation of Pavement Surfaces for Pavement Markings. Payment to be included in price bid for items

Epoxy Application Equipment

Mobile application equipment for the placement of epoxy reflectorized pavement markings shall be approved by the City Engineer prior to the start of work.

In general, the mobile applicator shall be a truck mounted, self-contained pavement marking machine, specifically designed to apply epoxy resin materials and reflective glass spheres in continuous and skip-line patterns. The application equipment shall be maneuverable to the extent that straight lines can be followed, and normal curves can be made in true arc. In addition, the truck mounted unit shall be provided with accessories to allow for the marking of legends, symbols, crosswalks, and other special patterns.

At any time throughout the duration of the project, the contractor shall provide free access to his epoxy application equipment for inspection by the Engineer or his authorized representative.

The Engineer may approve the use of a portable applicator in lieu of mobile truck mounted accessories for use in applying special markings only, provided such equipment can demonstrate satisfactory application of reflectorized epoxy markings in accordance with these specifications. The application equipment shall be capable of installing a minimum of 30,000

M. of epoxy reflectorized pavement markings in an eight-hour day and shall include the following features:

1. Individual tanks for the storage of Part A and Part B of the epoxy resin components at the reflective glass spheres.
2. Heating equipment of sufficient Capacity to maintain the individual epoxy resin components at the manufacturer's recommended temperature for spray application.
3. Glass bead dispensing equipment and the Capacity of applying the spheres a minimum rate of 2.4 kg/L of epoxy resin composition.
4. Metering devices or pressure gauges on the proportioning pumps, positioned to be readily visible to the Engineer.
5. All necessary spray equipment, mixers, compressors, and other

appurtenances for the placement of epoxy reflectorized pavement markings in a simultaneous sequence of operations as described in New York State DOT Standard Specifications subsection 6853.05 Application of Epoxy Reflectorized Pavement Markings.

Application of Epoxy Reflectorized Pavement Markings

Epoxy reflectorized pavement markings shall be placed at the width, thickness, and pattern designated by the Contract Documents.

Marking operations shall not begin until applicable surface preparation work is completed and approved by the Engineer, and the atmospheric conditions and pavement surface temperature are acceptable to the Engineer.

Pavement markings shall be applied by the following simultaneous operation:

- I. The pavement surface is air-blasted to remove dirt and residues .
2. The epoxy resin, mixed and heated in accordance with the manufacturer's recommendations, is uniformly hot-sprayed onto the pavement surface at the minimum specified thickness.
3. Reflective glass spheres are injected into, or dropped onto, the liquid epoxy marking at a minimum rate of 2.4 kg/L of epoxy resin.

Defective Epoxy Pavement Markings

Epoxy reflectorized pavement markings, which after application and curing are determined by the Engineer to be defective and not in conformance with this specification, shall be repaired. Repair of defective markings shall be the responsibility of the contractor and shall be performed to the satisfaction of the Engineer as follows:

- I. Insufficient film thickness and line width; insufficient glass bead coverage or inadequate glass bead retention

Repair Method - Prepare the surface of the defective epoxy marking by grinding or blast cleaning. No other cleaning methods will be allowed. Surface preparation shall be performed to the extent that a substantial amount of the reflective glass spheres are removed and a roughened epoxy marking surface remains. Immediately after surface preparation remove loose particles and foreign debris by brooming or blasting with compressed air. Repair shall be made by re-striping over the cleaned surface in accordance with the requirements of this specification and at the full thickness indicated on the Contract Documents.

Repair Method -The defective epoxy marking shall be completely removed and cleaned to the underlying pavement surface in accordance with the requirements of

Section 635- Cleaning and Preparation of Pavement Surfaces, at the contractor's expense. The extent of

removal shall be the defective area plus any adjacent epoxy pavement marking material extending" one meter in any direction. After surface preparation work is complete, repair shall be made by reapplying epoxy over the cleaned pavement surface in accordance with the requirements of this specification.

*Uncured epoxy shall be defined as applied material that fails to cure 'dry' in accordance with requirements of New York State DOT Standard Specifications subsection 727-03 Material Requirements, A., 2.0 paragraph d. Drying Time 'Field' or applied material that fails to cure 'dry' within a reasonable time period under actual field conditions, as defined by the Engineer.

*Discoloration shall be defined as localized areas or patches of brown, grayish or black colored epoxy marking material. These areas often occur in a cyclic pattern and often are not visible until several days or weeks after markings are applied.

Other defects not noted above, but determined by the Engineer to need repair, shall be repaired or replaced as directed by and to the satisfaction of the Engineer.

All work in conjunction with the repair or replacement of defective epoxy reflectorized pavement markings shall be performed by the contractor at no additional cost to the City.

Measurement and Payment

Pavement striping will be measured in linear feet along the centerline of the pavement stripe and will be based on a 4" wide stripe. Measurement for striping with a plan width greater or less than the basic 4" as shown on the plans or directed by the Engineer, will be made by the following method:

$$\frac{\text{Plan Width of Striping '}}{\text{Inches ' x Linear Feet 4}} \\ \text{Inches}$$

Letters and symbols will be measured by each unit applied. A unit will consist of one letter or one symbol. Example: 'SCHOOL' would be paid as six units. Double and triple headed arrows will be measured as a single unit, the 'X' in railroad grade crossing markings 'M.U.T.C.D. figure 263-33' will be measured by linear feet of 4" stripe.

The accepted quantities of markings will be paid for at the contract unit price, which shall include the cost of furnishing labor, materials and equipment to satisfactorily complete the work. The cost for maintaining and protecting traffic during the marking operations shall be included in price bid for each item.

No payment will be made for the number of linear feet of skips in the dashed line. Payment will be made under:

<u>Item No.</u>	<u>Item</u>	<u>Pay Unit</u>
165.11	White Epoxy Reflectorized Pavement Stripes-20 mils	Lineal Foot
165.12	Yellow Epoxy Reflectorized Pavement Stripes-20 mils	Lineal Foot
165.13	White Epoxy Reflectorized Pavement Letters-20 mils	Each
165.14	White Epoxy Reflectorized Pavement Symbols-20 mils	Each

ITEM NOS. 192.0, 193.0 - NEW PRECAST MANHOLE, 4' DIAMETER, DEPTH UP TO 4'

MATERIAL: The pre-cast reinforced concrete manhole section shall be 4000 p.s.i., at 28 days with 5% entrained air, ASTM A497. Reinforcing steel shall be ASTM A615 - A497. AASHTO H 20 loading with 30% impact, and 30 p.s.f. soil pressure. A current NYSDOT approved supplier shall manufacture the pre-cast manhole. All joints shall be sealed with butyl rope sealant as per manufacturer instructions.

The unit bid price for manhole complete will include all costs, labor, equipment and materials, etc. necessary to construct manhole, including DROP MANHOLES, as shown on the plans. The drop manholes inside or outside will include the cost of all bends, elbows, fittings pipe, and 4000 p.s.i. concrete encasement, as shown on detailed drawings.

The Contractor shall furnish and install precast manhole structures of the type shown on standard sheets or drawings and as specified herein. The unit bid price for each item will include all costs, material, labor and equipment necessary to install the manhole. Also, the item will include masonry, concrete, reinforcing steel, special pipe fittings, pre-cast units, cast in place units, and all other costs, material, labor, and equipment necessary to install a complete structure. Contractors shall backfill with existing material or use appropriate items as directed by the Engineer. Manholes shall be "Underground Drainage and Sewer Piping". Pre-cast reinforced concrete sections utilized to construct manholes shall be produced in a plant approved by the Engineer. The plant shall be currently approved by NYSDOT for the manufacture of concrete products. The manufacturer shall provide the Engineer with shop drawings certifying that all pre-cast concrete manholes furnished to this project shall conform to the requirements of Contract documents and shall conform to ASTM C-478 except as modified and/or supplemented in this section of the Specifications. Connection of piping shall be done by means of a water tight rubber gasket connection for sanitary sewers (Kor-N-Seal, A-Lok, Z-Lok). Piping connections for storm manholes shall be done with

high-density concrete pavers and mortar and installed in a manner to obtain a watertight seal. All connections shall be parged with mortar inside and outside of the structure

PAYMENT LIMITS

The unit bid price per each structure and per vertical foot shall include all excavation, pipe connections, labor, costs, materials and equipment to install the structure complete.

- 1) The pre-cast catch-basin or manhole shall be paid per each unit for all structures from 0 ft to 4 ft in height;
- 2) All additional pre-cast sections over 4 ft shall be paid per vertical foot under the appropriated item number for Extra Additional Depth, Manhole. The measurement for final payment shall be taken as follows:
 - A) For sanitary manholes the depth shall be measured and calculated from the lowest invert to the bottom of the cast iron frame set to grade;
 - B) For all storm manholes the depth shall be measured and calculated from the bottom of sump to the bottom of the cast iron frame set to grade;
 - C) For all drainage inlets the depth shall be measured and calculated from the bottom of sump to the bottom of the cast iron frame set to grade.

So that there will be no misunderstanding as to payment for all pre-cast structures: all structures will be paid up to and including four feet in depth per each unit. Any depth over four feet will be paid as additional depth per vertical foot in Item 27.3

** If a structure is measured between the payment lines and is less than four feet the complete bid price **will be** paid for that item.

ITEM NO. 199.0 - 2X2 PRECAST DRAINAGE INLET

MATERIAL

The pre-cast reinforced concrete drainage inlet section shall be 4000 p.s.i. at 28 days with 5% entrained air, ASTM A497. Reinforcing steel shall be ASTM A615 - A497. AASHTO H 20 loading with 30% impact and 30 p.s.f. soil pressure. A current NYSDOT approved supplier shall manufacture the pre-cast structure. All joints shall be sealed with butyl rope sealant as per manufacturer instructions.

Drainage Inlet structure shall be 2' x 2' inside standard pre-cast, with 6" base.

The unit bid price for drainage inlets will include all costs, labor, equipment and materials, etc., necessary to construct all drainage inlets.

The Contractor shall furnish and install Drainage Inlets of the type shown on standard sheets or drawings and as specified herein. The unit bid price for each item will include all costs, material, labor and equipment necessary to install the drainage inlet. Also, the item will include masonry, concrete, reinforcing steel, pre-cast units, cast in

place units, and all other costs, material, labor, and equipment necessary to install a complete structure. Contractors will backfill with existing material or use appropriate items as directed by the Engineer. Pre-cast reinforced concrete sections utilized to construct drainage inlets shall be produced in a plant approved by the Engineer. The plant shall be currently approved by NYSDOT for the manufacture of concrete products. The manufacturer shall provide the Engineer with shop drawings certifying that all pre-cast concrete drainage inlet sections furnished to this Project shall conform to the requirements of Contract documents, and shall conform to ASTM C-478 except as modified and/or supplemented in this section of the Specifications. Piping connections for drainage inlets shall be done with high-density concrete pavers and mortar and installed in a manner to obtain a watertight seal. All connections shall be parged with mortar inside and outside of the structure.

PAYMENT

The unit bid price per each structure will be in **VERTICAL FEET (from the sump to the bottom of the specified casting)** and shall include pre-cast structure, setting the city supplied casting and cover, all excavation, pipe connections, labor costs, materials and equipment to install the structure complete.

ITEM NOS. 202.0, 202.1, 202.2, 202.3, 202.4, 202.5, 202.6 - FERNCO COUPLING.

GENERAL

This item will be paid when it is necessary to repair an existing sanitary or storm sewer main only. This item will not be paid when using Fernco's to connect new sanitary laterals to existing.

MATERIAL

The Fernco specified by the E.I.C. shall be of the appropriate type to complete the job. (P.V.C. to tile, P.V.C. to C.I., P.V.C. to concrete or P.V.C. to P.V.C.) Including all stainless-steel straps necessary to firmly secure all connections.

PAYMENT

The unit bid price per each Fernco shall be paid complete and in place including all costs, labor, materials, and equipment to complete the job as specified by the Engineer in charge. The unit bid price shall be paid per each Fernco according to pipe diameter regardless of pipe material.

ITEM NO. 212-FIELD CHANGE PAYMENT

The Field Change Payment provides a contract contingency allowance for the timely payment of authorized extra work that was completed to fulfill the intent of the contract documents.

BASIS OF PAYMENT-

The work to be paid under the Field Change Payment item must receive prior authorization in conformance with changes, contingencies, extra work and deductions.

Disputed work, force account work or payments for time related provisions are not eligible for Field Change Payment.

Field Change Payment item payments will be determined from the quantities and the unit prices of eligible work that have been completed. Work for which Field Change Payment item payments are processed will be paid in accordance with the specifications governing the work.

Prior to processing the final agreement, the Field Change Payment item payments will be reconciled through an Order-on Contract, such that the amount of Field Change Payment item is converted to the corresponding quantities of the pertinent contract pay items. When the amount of Field Change Payment item payments is transferred to the appropriate items, the remaining amount of Field Change Payment funds will be deleted.

ITEM NO. 234 - MOBILIZATION

DESCRIPTION

Under this work the Contractor shall provide all required bonds, insurance, and pre-financing and shall set up any necessary general plant, including shops, storage area, office and such sanitary and other facilities as required by local or state regulation. It shall include all costs including labor and equipment to move and relocate all equipment necessary to complete the work throughout the city.

MATERIALS

Such materials as required for mobilization and that are not to be part of the completed contract shall be as determined by the Contractor, except that they shall conform to any local or State law, regulation or code.

CONSTRUCTION DETAILS

The work required to provide the above facilities and service for mobilization shall be done in a safe workmanlike manner and shall conform with any pertinent local, or State law, regulation or code. Good housekeeping consistent with safety shall be maintained.

METHOD OF MEASUREMENT

Payment for mobilization shall be made by two equal payments based upon completion of TEN (10%) and THIRTY (30%) of the work. Each payment will represent FIFTY (50%) of the lump sum bid.

BASIS OF PAYMENT

The amount bid for mobilization shall not exceed FOUR percent (4%) the total contract bid price excluding the bid price for mobilization. Should the bidder exceed the foregoing FOUR percent (4%), the Department will make the necessary adjustments to determine the total amount bid based on the arithmetically correct proposal. The amount bid shall include the furnishing and maintaining of services and facilities noted under Item 234 DESCRIPTION, to the extent and at the time the Contractor deems necessary

for his operations, consistent with the requirements of this work and the respective contract.

The amount bid shall be payable to the Contractor whenever he shall have completed TEN percent (10%) and Thirty (30%) of the contract work. For purposes of this item, 10% and 30% of the work shall be considered completed when the total payments earned as reflected by the estimates of the work done, as per payment section of BID DOCUMENTS. Payment of Estimates, not including the amount bid for this work, shall exceed 10% and 30% of the total amount of the Contractor's bid for this contract.

SECTION 500

NYSDOL PREVAILING WAGE RATES

The last section of this Contract document is prevailing wage rate schedule for applicable work in this Contract. The wage rate and supplements to be paid to laborers, workers, or mechanics on public work must not be less than the prevailing wages and supplements for the same occupation in the locality of the work.

All Contractors and Subcontractors will be required to submit certified weekly wage rate reports and statement of compliance prior to or along with payment request.

[Wage Schedule](#) · [Submit Notice Of Award](#) · [Submit Notice Of Project Completion](#)

PRC#: 2024010369
Type of Contracting Agency: City

Acceptance Status: Accepted Article 8

Contracting Agency	Send Reply To
City of Rome New York Joseph Guliano Commissioner of Public Works 198 Washington Street Suite 3C City of Rome NY 13440 (315) 339-7627 (315) 838- 1167 Fax jguliano@romecitygov.com	

Project Information	
Project Title	Potter Road Infrastructure Ex
Description of Work	extend water and sanitary transmission mains
Contract Id No.	RFB 2024-026
Project Location(s)	City of Rome
Route No / Street Address	198 Washington Street
Village / City	City of Rome
Town	City of Rome
State / Zip	NY 13440
Nature of Project	New Sewer or Waterline
Approximate Bid Date	09/12/2024
Checked Occupation(s)	Construction (Building, Heavy & Highway, Sewer, Water, Tunnel)

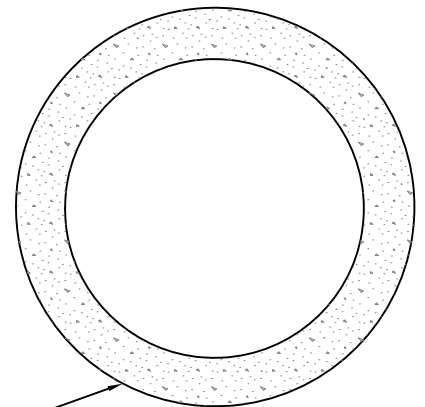
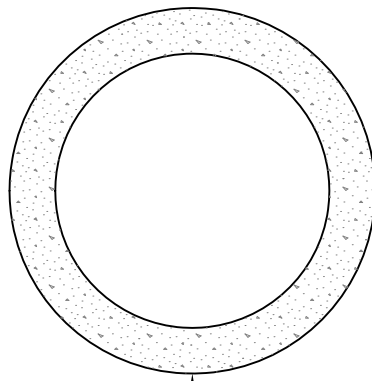
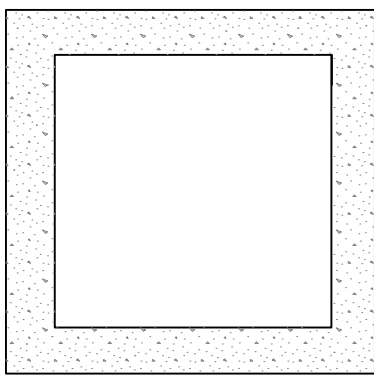
Applicable Counties
Oneida

PRECAST CONCRETE ADJUSTMENT RINGS

24" SQUARE

24" ROUND

30" ROUND

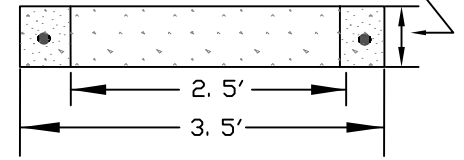
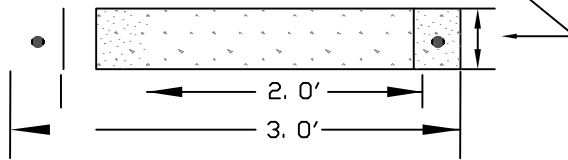
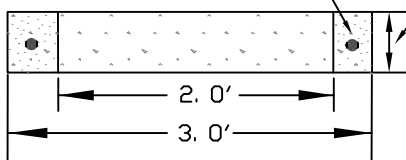


4000 PSI CONCRETE

#4 BAR (TYP.)

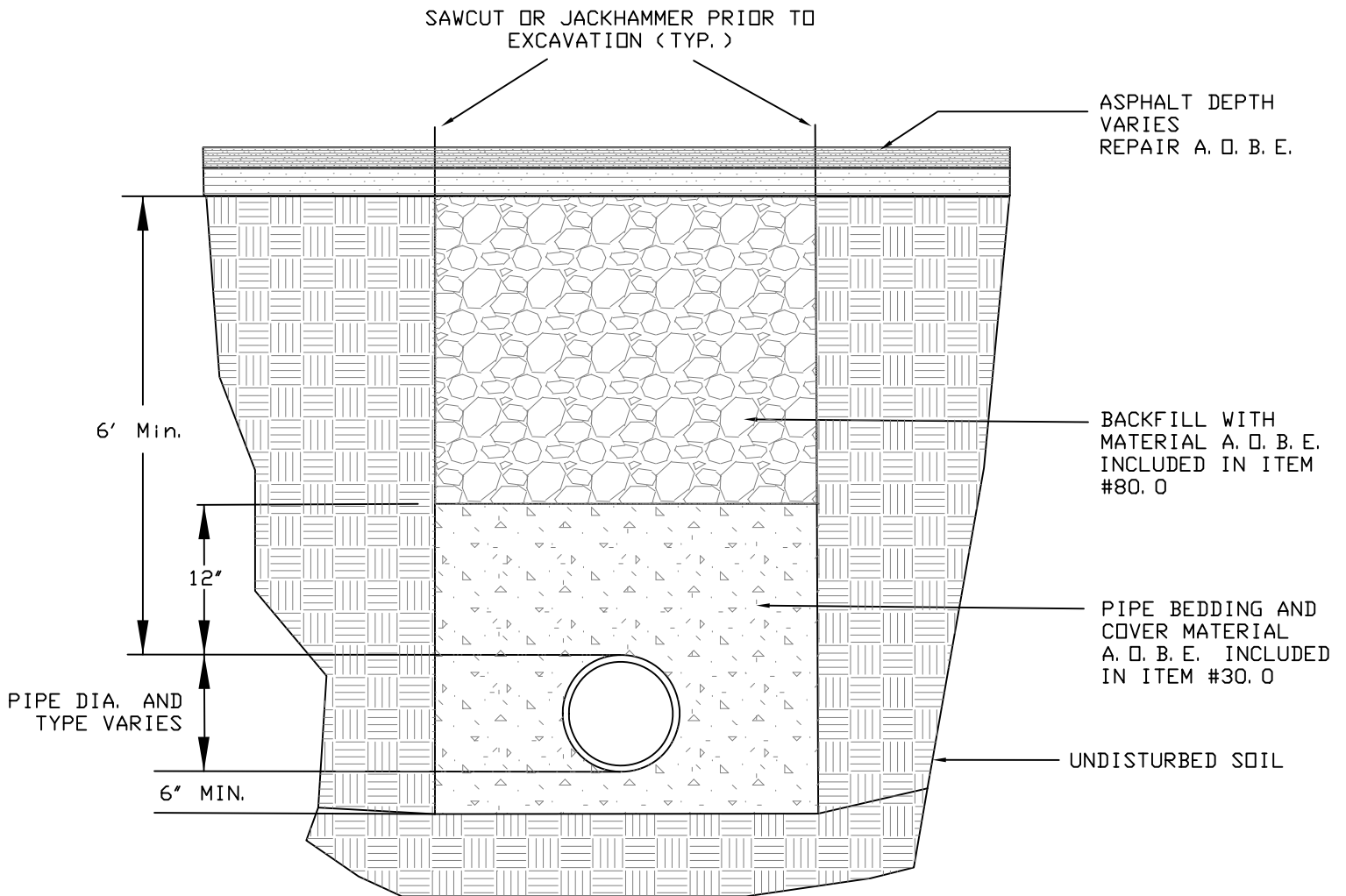
2", 4" OR 6"

3", 4" OR 6"



TRENCH AND BACKFILL

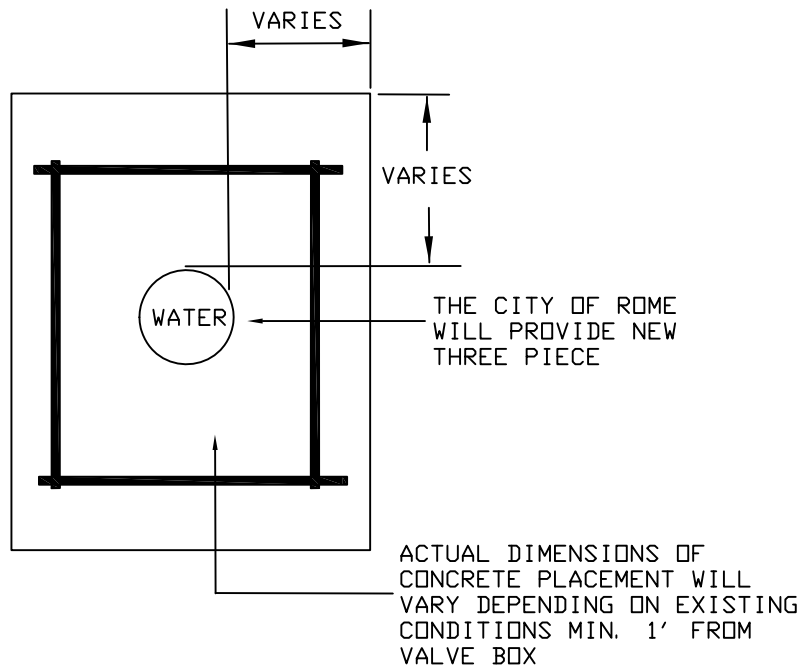
ITEM #15.0



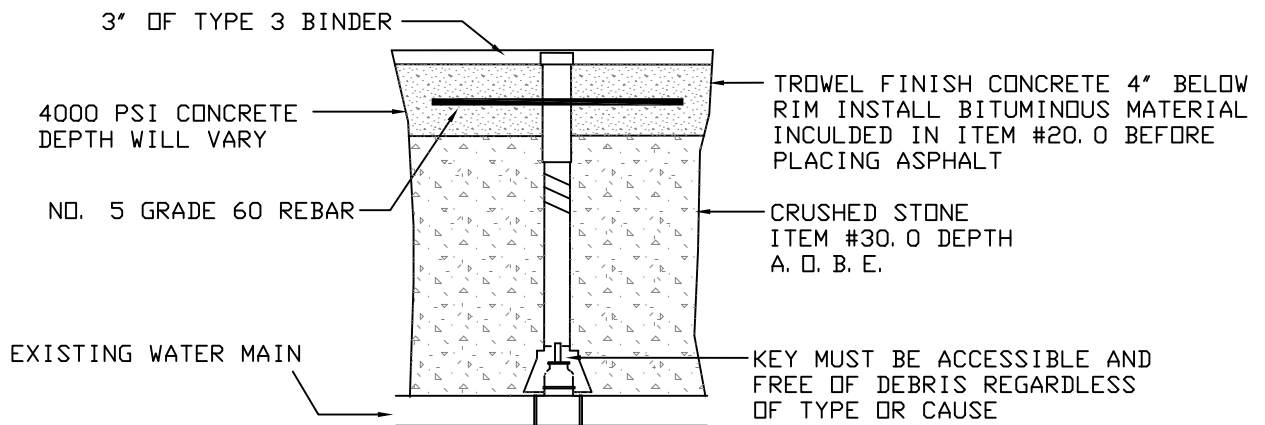
NOT TO SCALE

NEW VALVE BOX THREE PIECE SCREW TYPE ITEM #20.0

PLAN



PROFILE

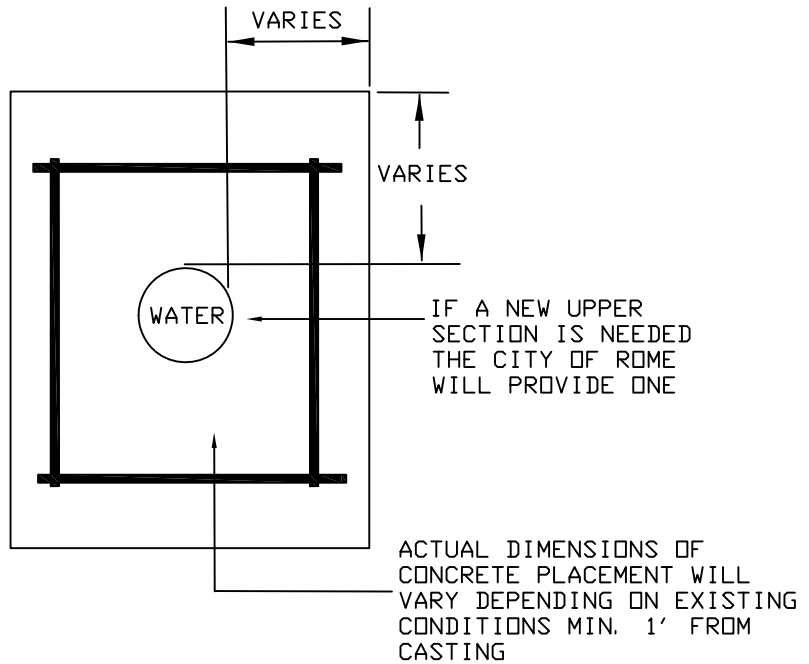


NOT TO SCALE

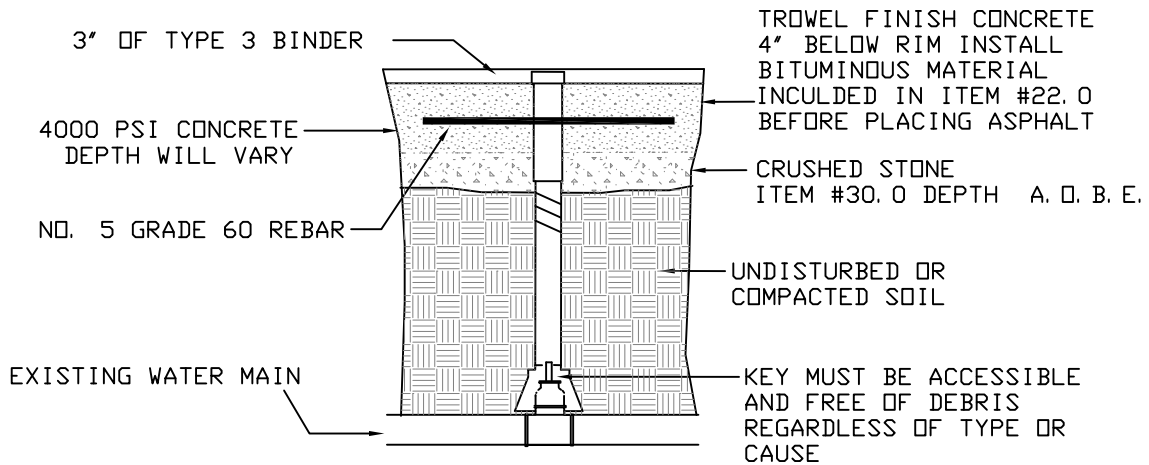
RESET VALVE BOX UPPER SECTION

ITEM #22.0

PLAN



PROFILE

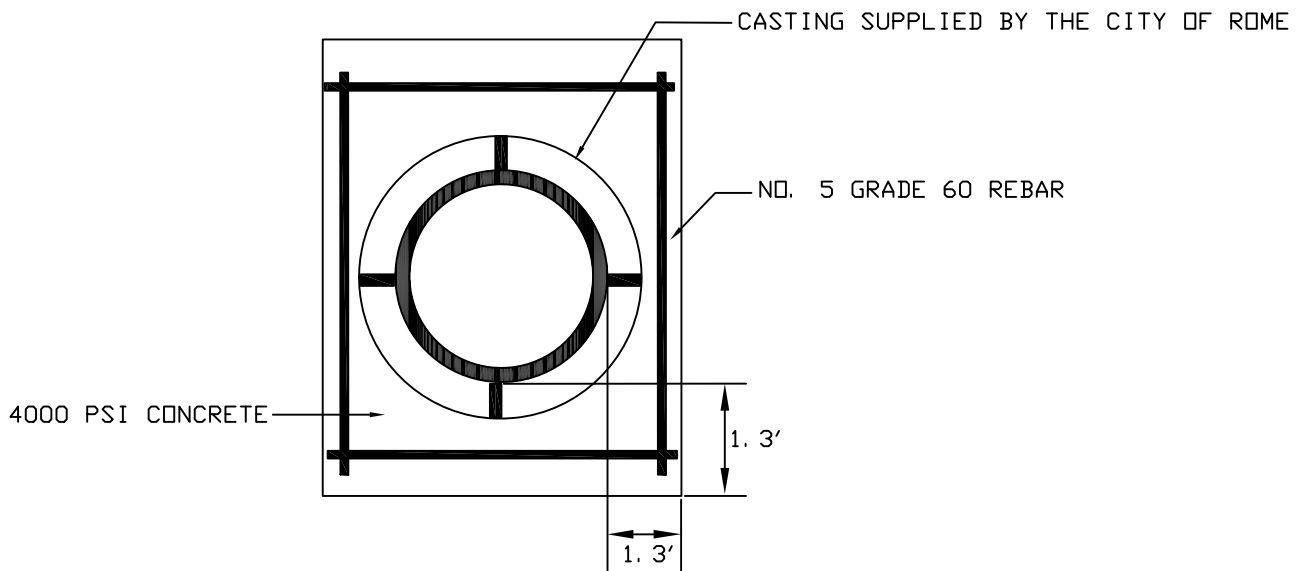


NOT TO SCALE

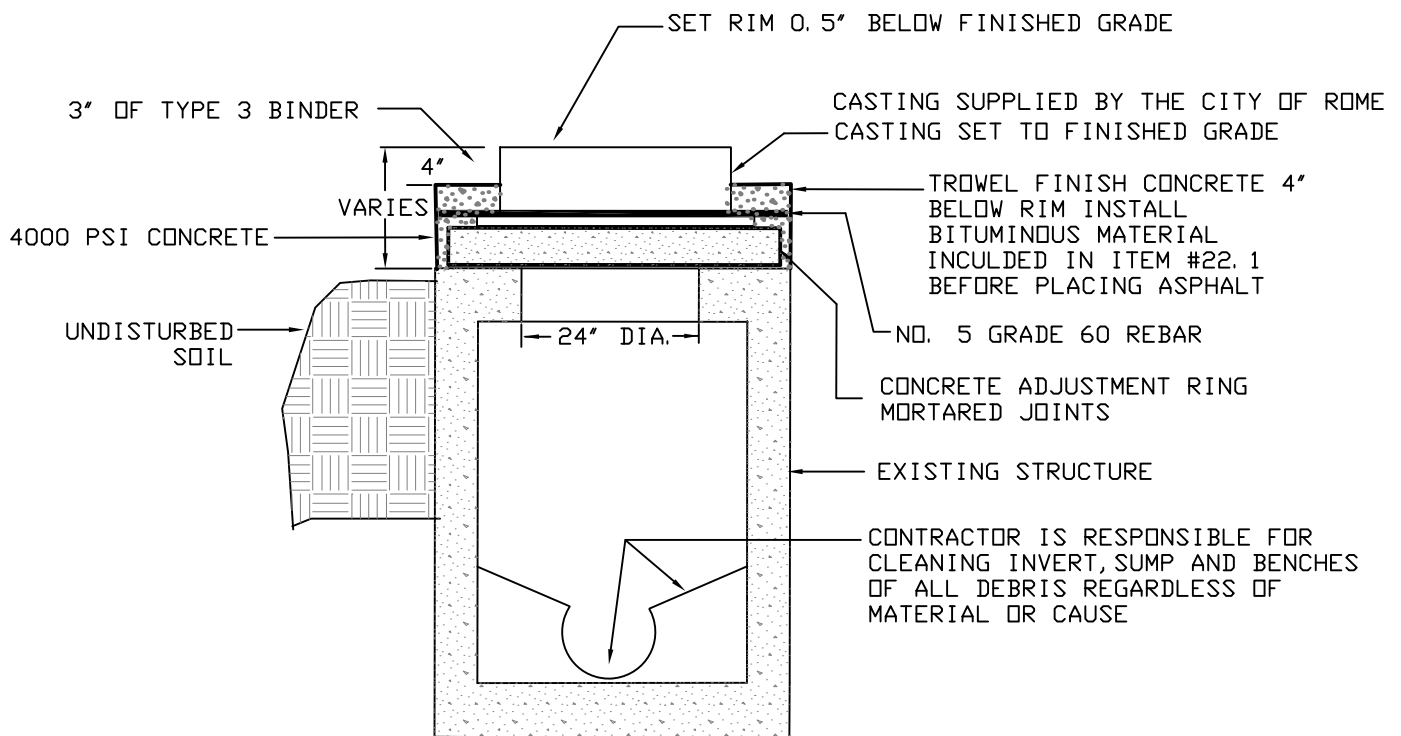
RESET MANHOLE WITH PRECAST GRADE RINGS

ITEM #22.1

PLAN

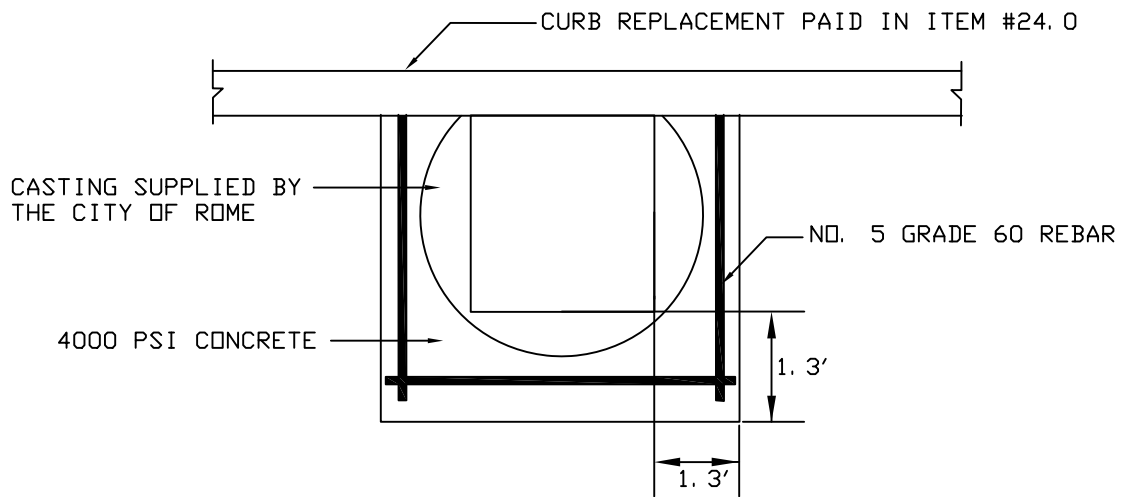


PROFILE

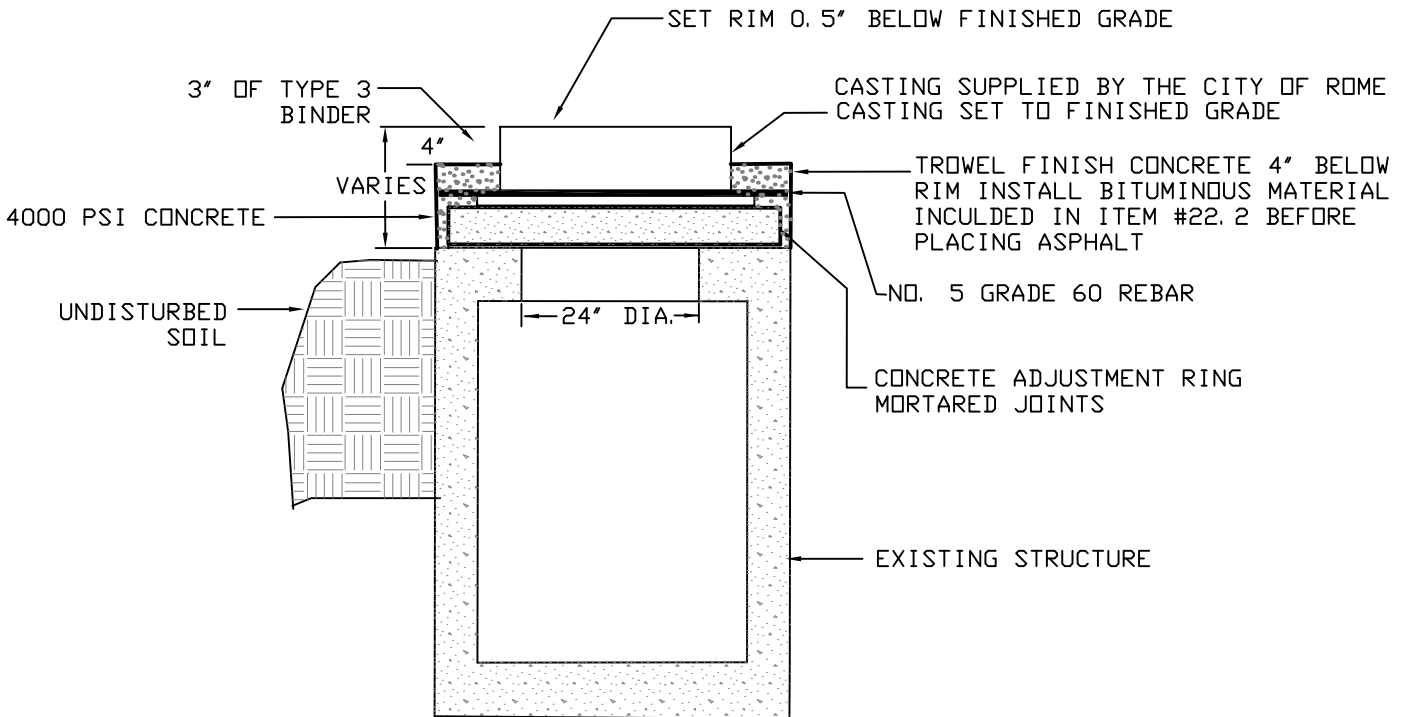


RESET DRAINAGE INLET WITH PRECAST GRADE RINGS ITEM #22.2

PLAN

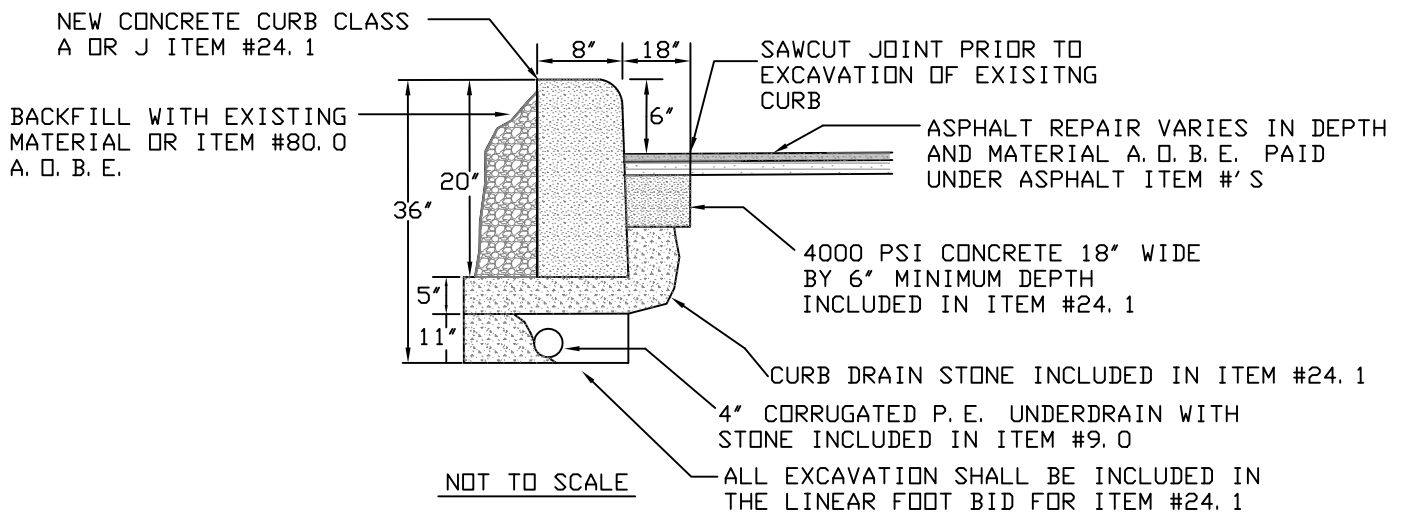


PROFILE



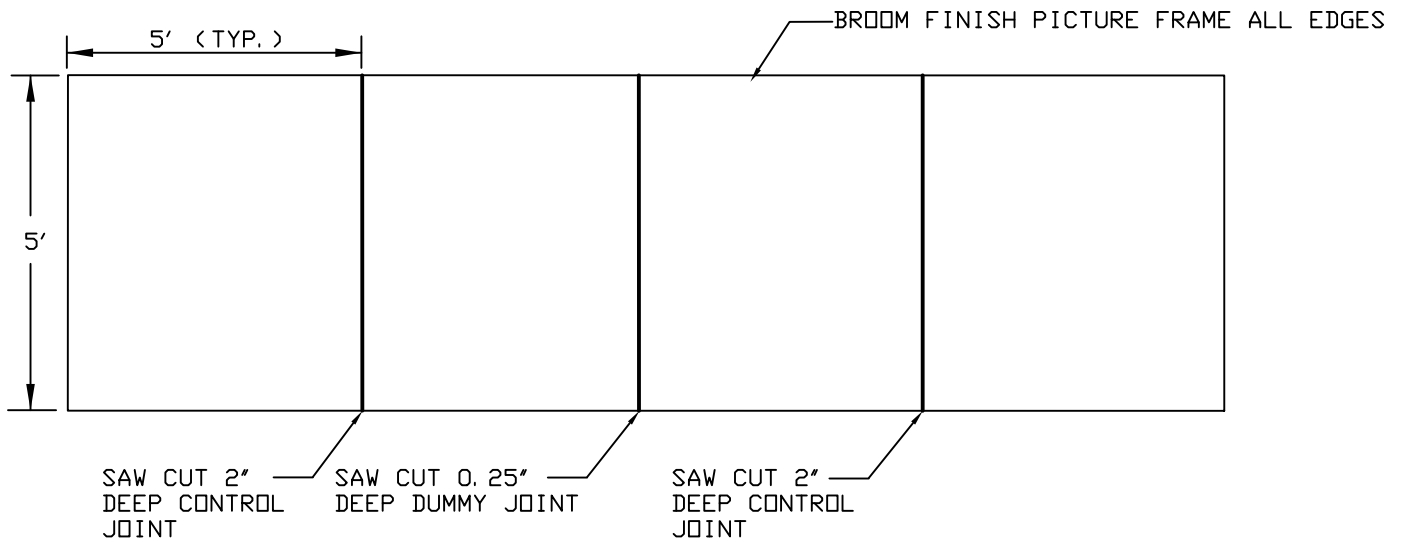
NOT TO SCALE

NYSDOT CLASS "A" OR "J" CONCRETE CURB STRAIGHT OR RADIUS ITEM #24.1



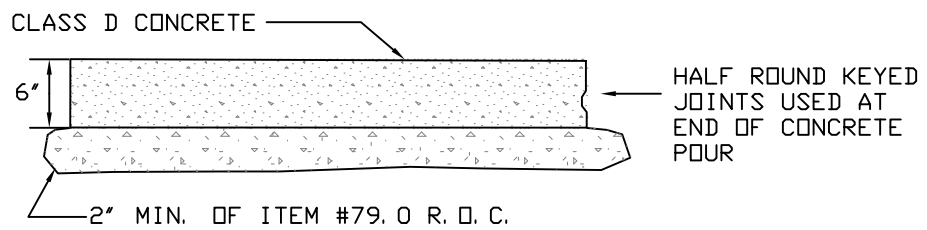
NEW CLASS D CONCRETE
MAINLINE SIDEWALK
ITEM #33.0

PLAN



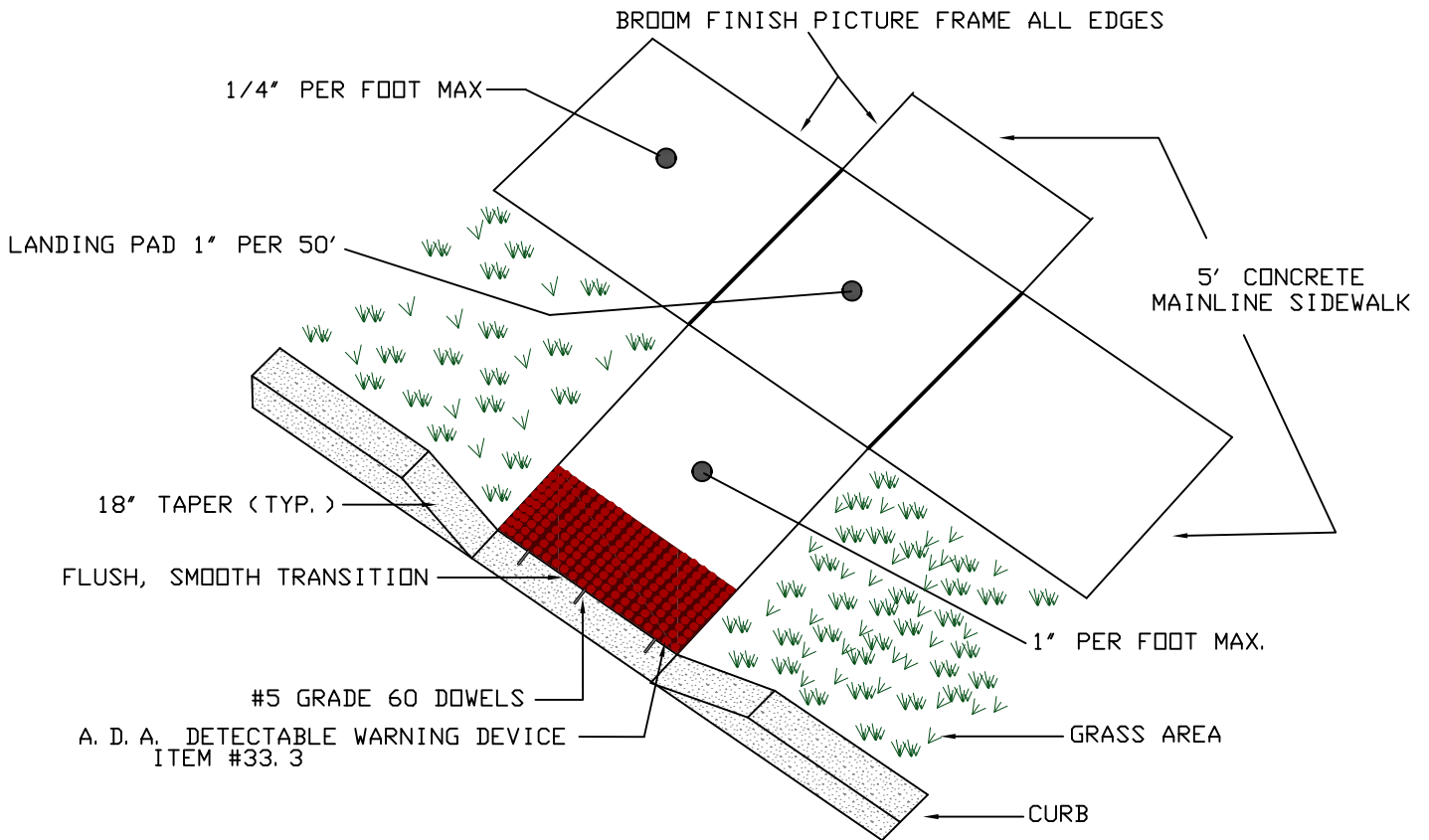
NOT TO SCALE

PROFILE



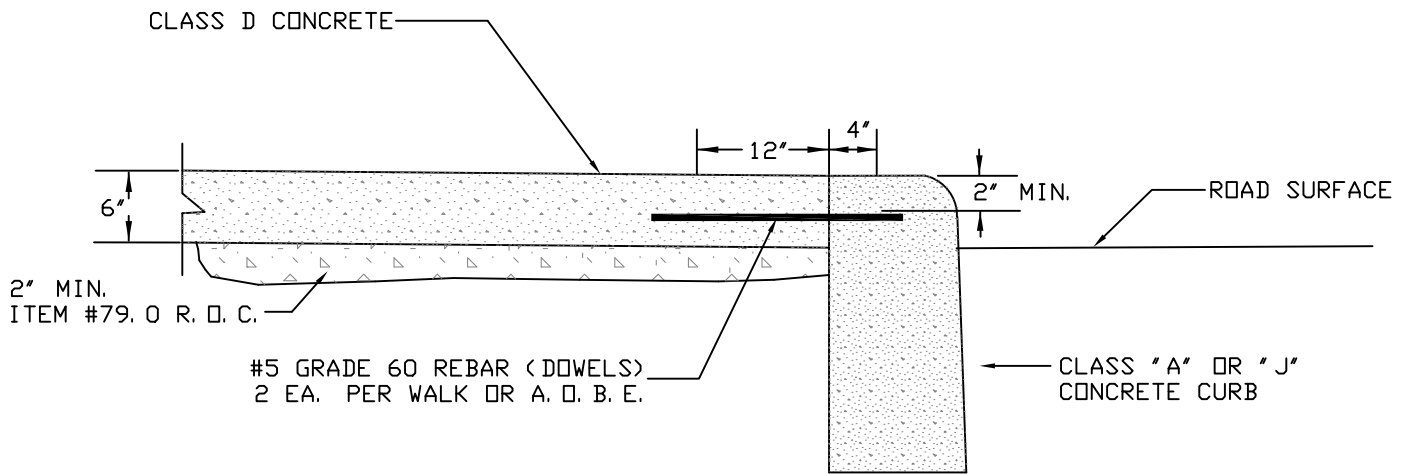
NOT TO SCALE

PEDESTRIAN ACCESS RAMP INCLUDED IN ITEM #33.0



NOT TO SCALE

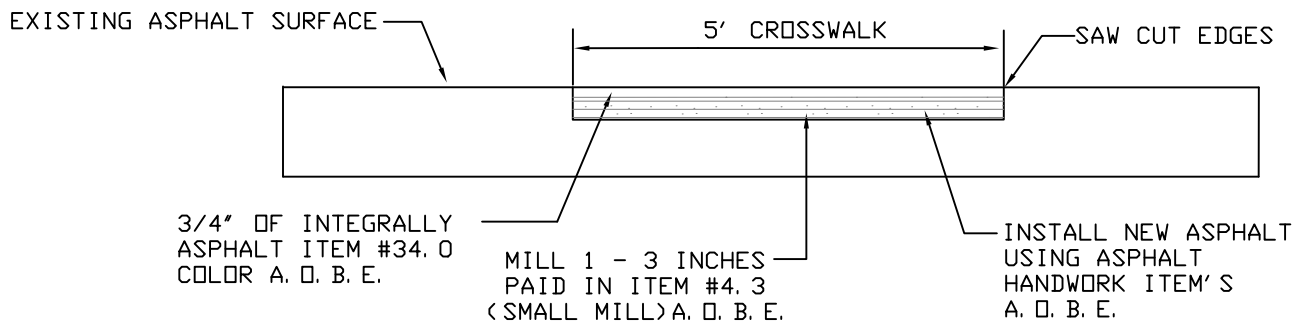
CONCRETE ENTRANCE WALK
INCLUDED IN ITEM #33.0



NOTE: DOWELS MAY BE POSITIONED IN FRESHLY PLACED CURB OR
MAY BE DRILLED AND INSERTED WITH NON-SHRINKING GROUT

NOT TO SCALE

INTERGRALLY COLORED HOT APPLIED
SYNTHETIC ASPHALT
ITEM #34.0

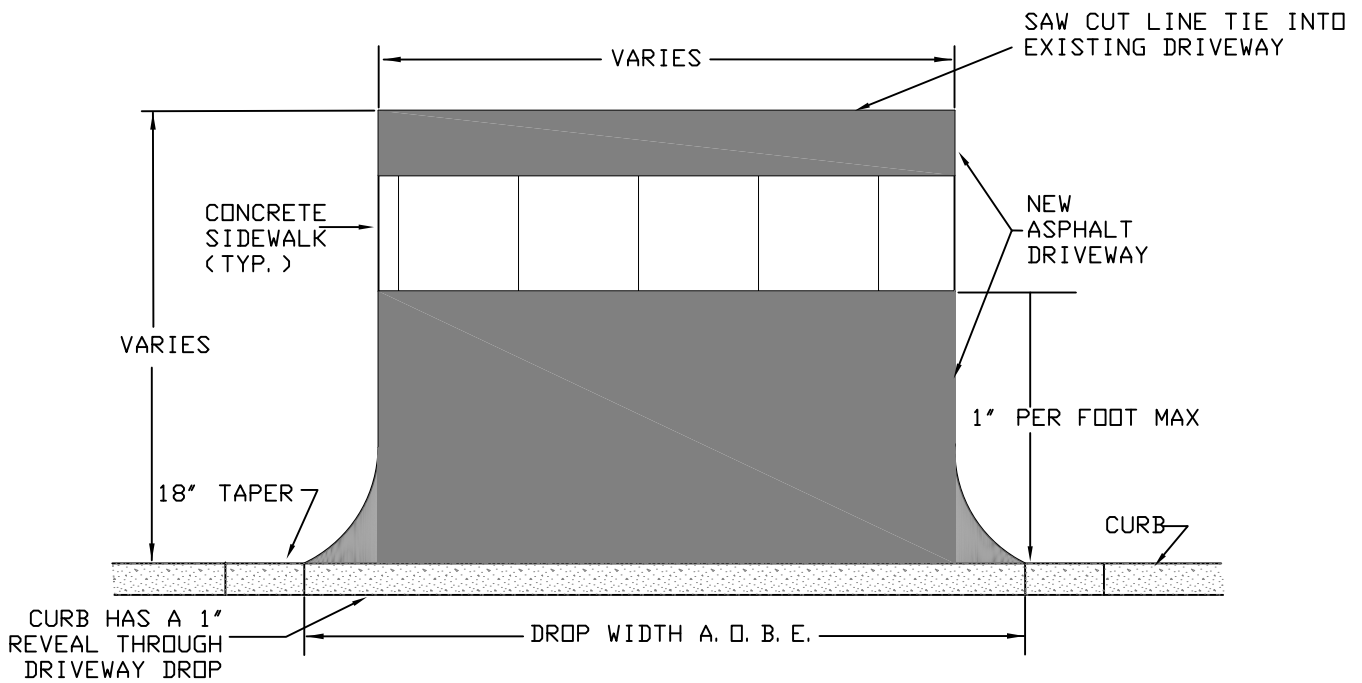


NOT TO SCALE

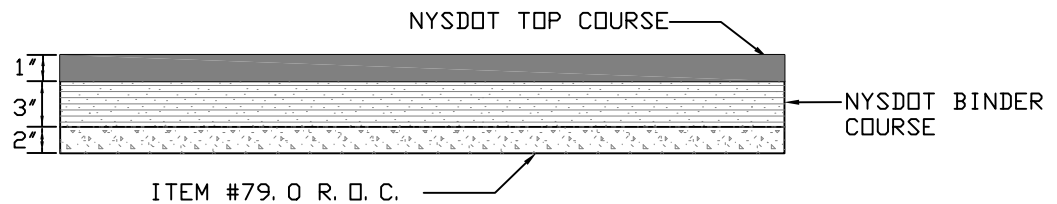
NEW ASPHALT DRIVEWAY

ITEM #35.0

PLAN



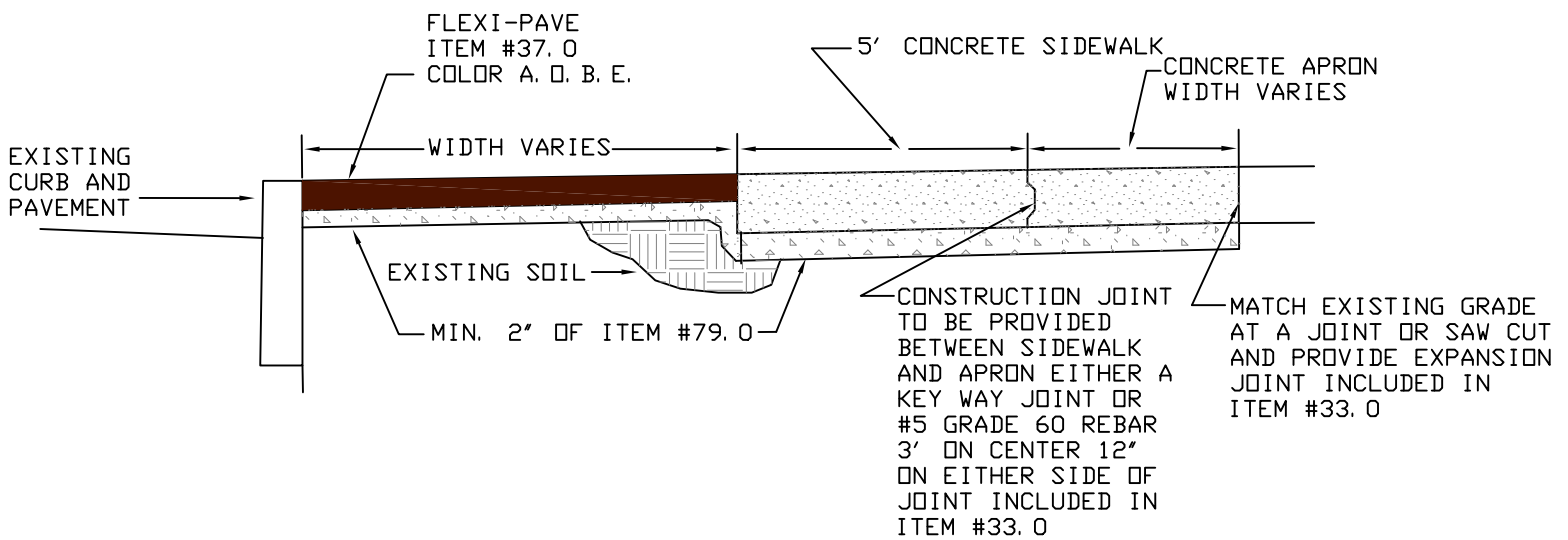
PROFILE



NOT TO SCALE

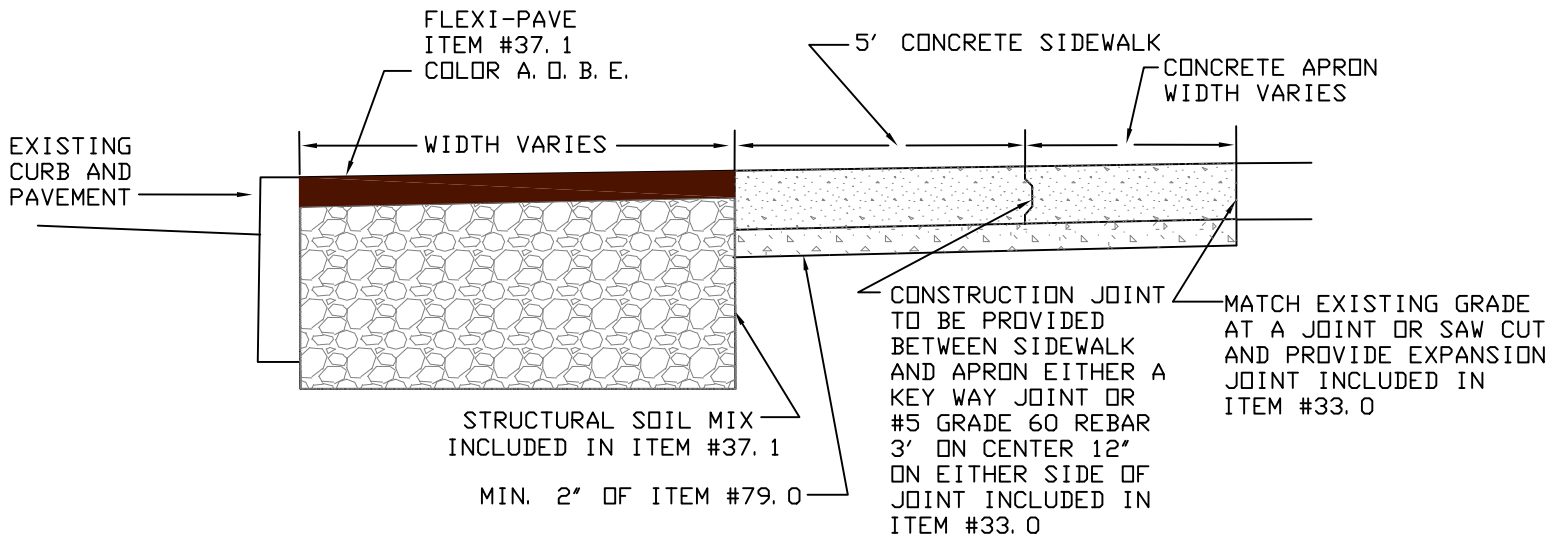
FLEXI-PAVE HD 2000

ITEM #37.0



NOT TO SCALE

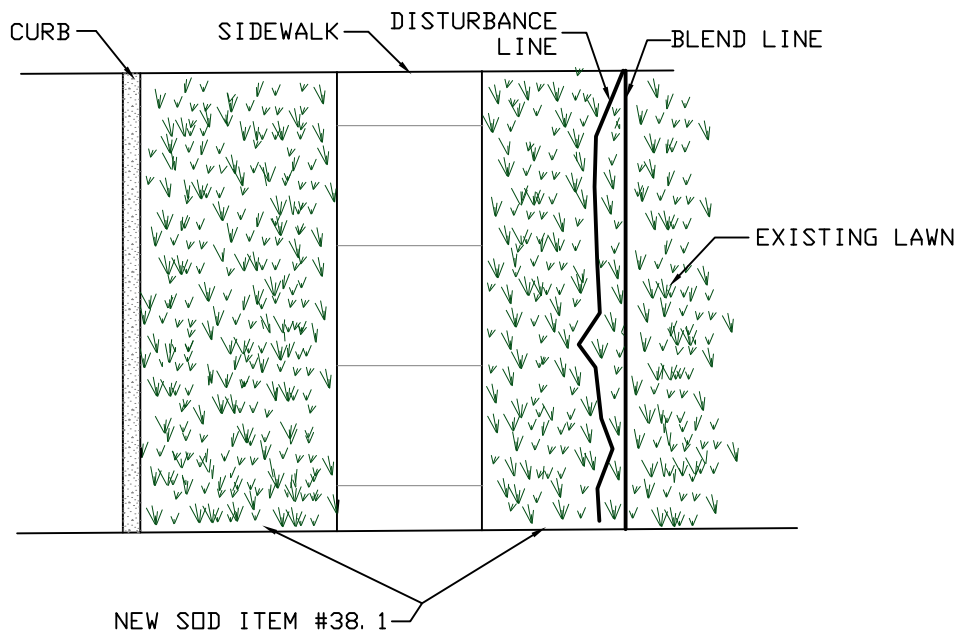
FLEXI-PAVE HD 2000
INSTALLATION WITH STRUCTURAL SOIL
ITEM #37.1



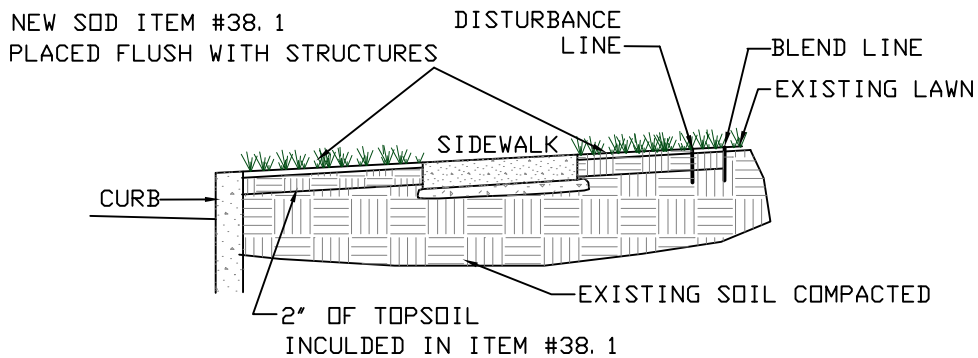
NOT TO SCALE

NEW SOD PLANTING ITEM #38.1

PLAN



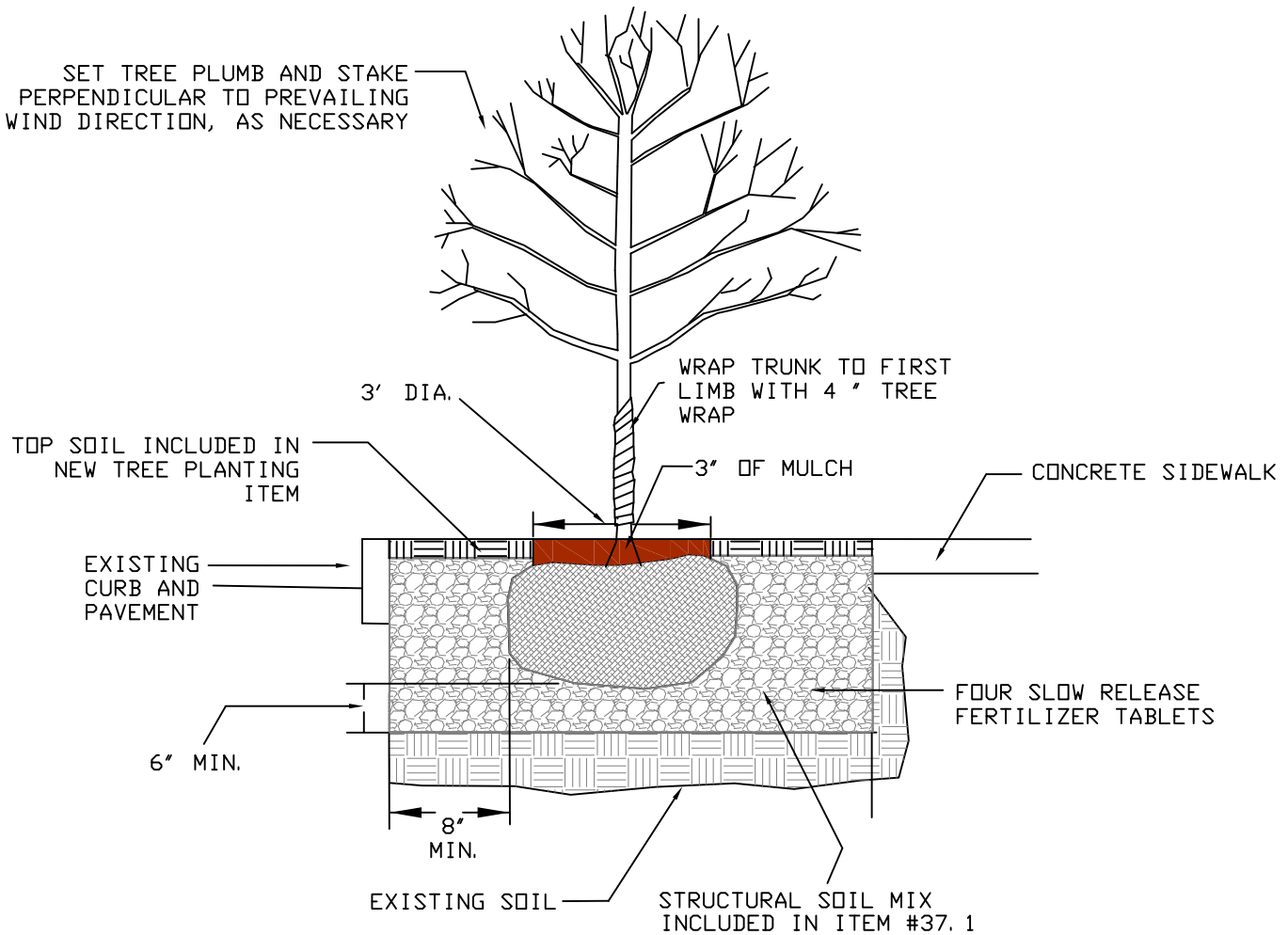
PROFILE



NOTE : TOPSOIL TO MEET SPECIFICATION SET FORTH IN ITEM #38.0

NEW TREE PLANTING

ITEM #39.0

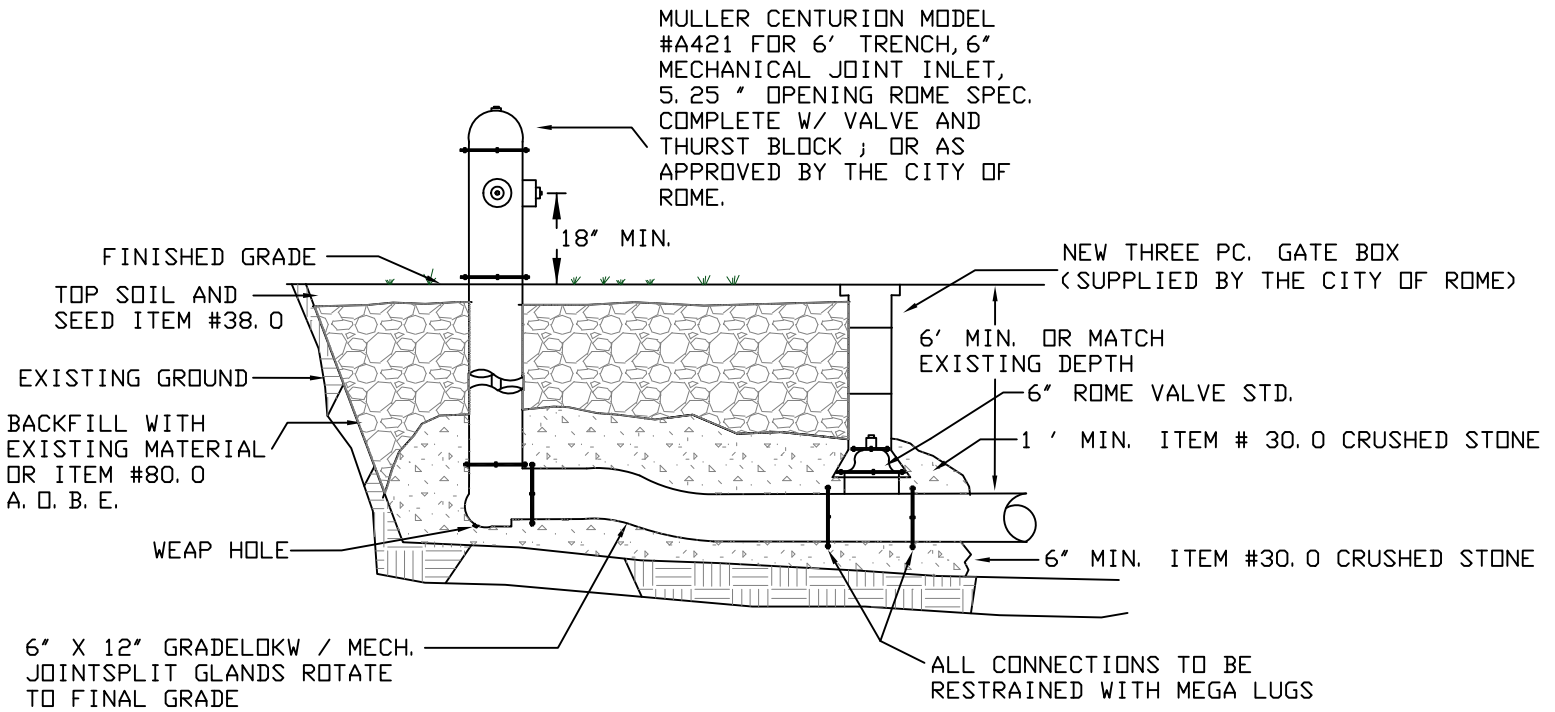


NOT TO SCALE

NOTES:

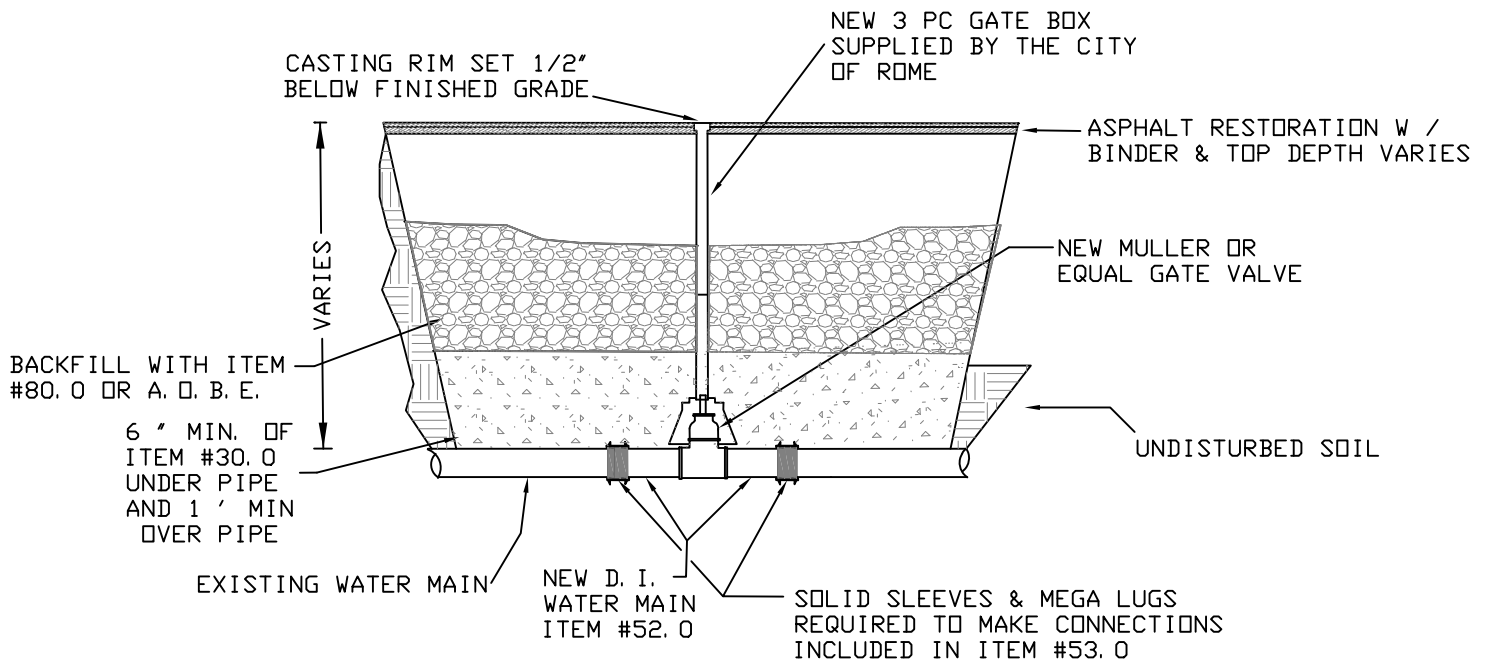
1. Structural soil mix shall be from Cornell University.
2. Structural soil shall not be placed in excessively moist conditions.
3. "Biobarrier" by Tytar shall be installed parallel to sidewalk.
4. The bottom and side walls of excavation shall be scarified with rake.
5. Cut away wire basket, twine, rope and remove from hole. Slit burlap horizontally and vertically several times before installing.
6. Water trees immediately after planting with 1 gallon, then water once a week for 3 growing seasons.
7. Fertilizer shall comply with U. S. & N. Y. State fertilizer laws.
8. Fertilizer shall have continuous controlled nitrogen for a period of no more than 12 months.

NEW HYDRANT COMPLETE WITH 6" VALVE AND GRADELOK ITEM #50.0



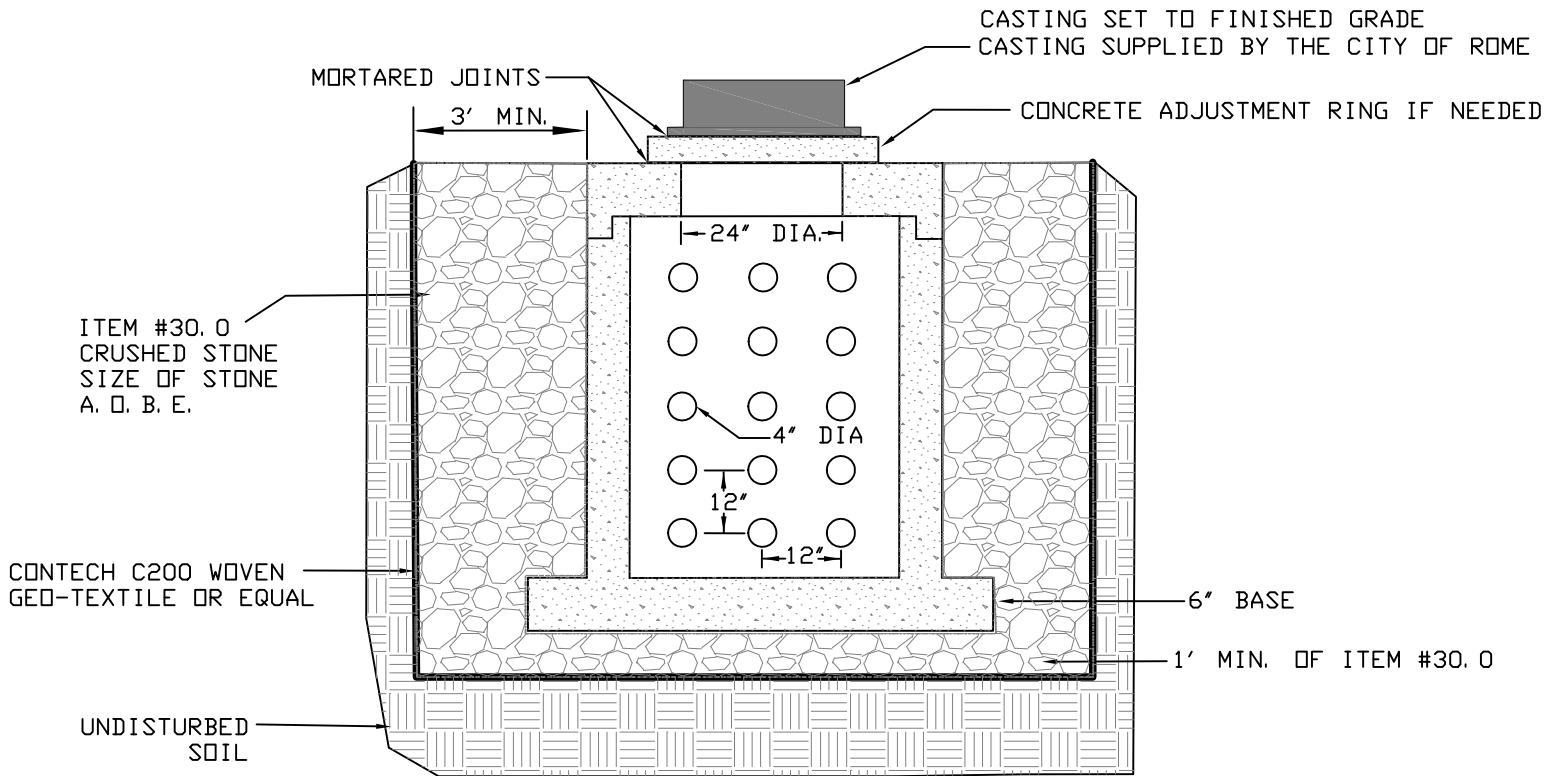
NOT TO SCALE

NEW WATER VALVE COMPLETE INSTALLED ON
EXISTING WATER MAIN
ITEM #53.0



NOT TO SCALE

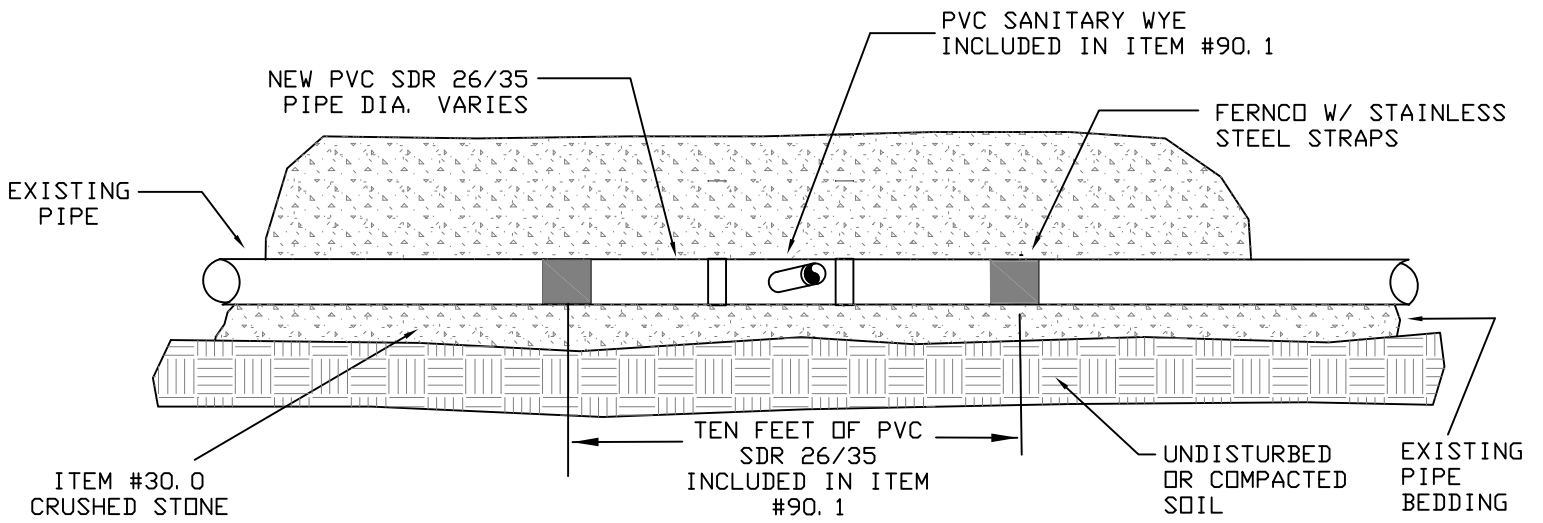
NEW PRECAST CONCRETE
LEACH BASIN 4' DIAMETER
ITEM #62.0



NOT TO SCALE

SANITARY WYE BRANCH REPLACEMENT

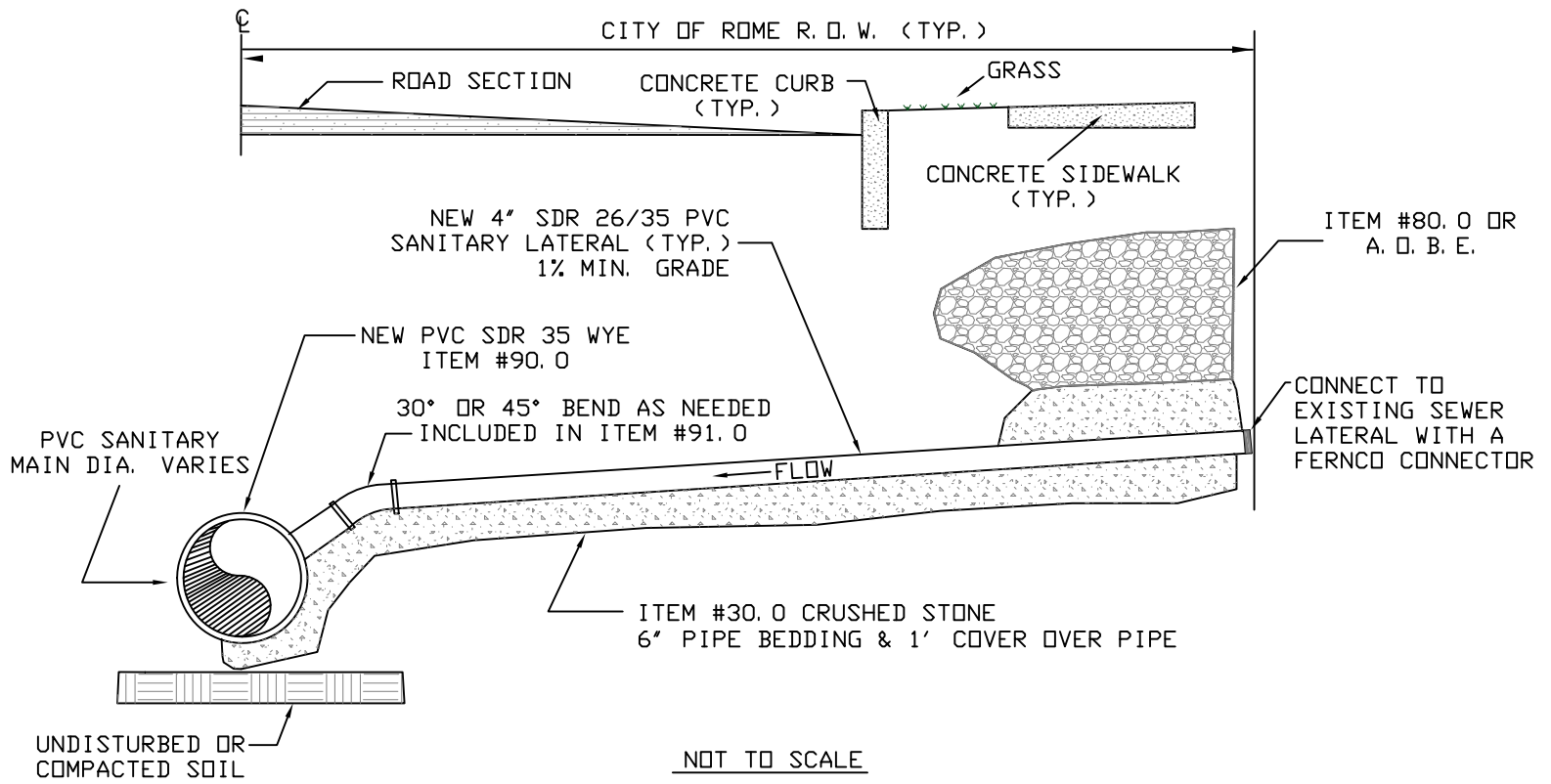
ITEM #90.1



NOT TO SCALE

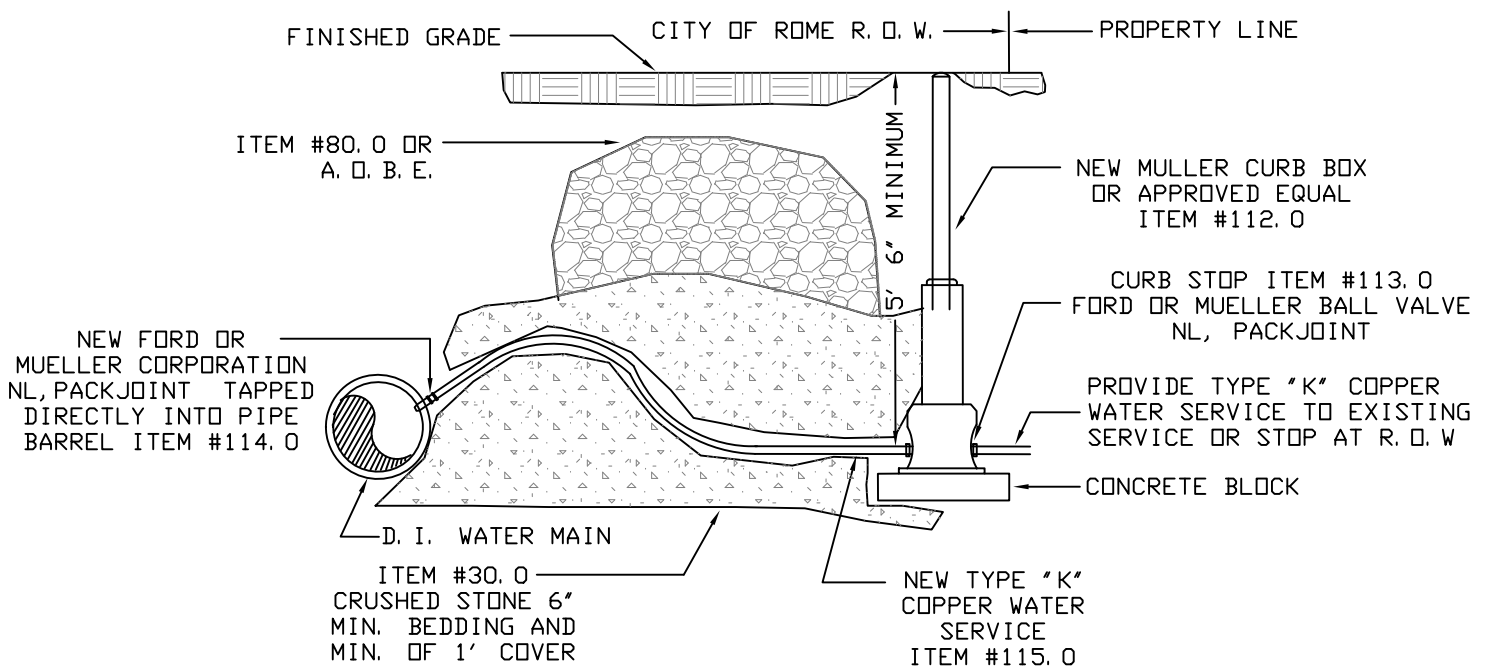
SANITARY LATERAL SERVICE REPLACEMENT

ITEM #91.0



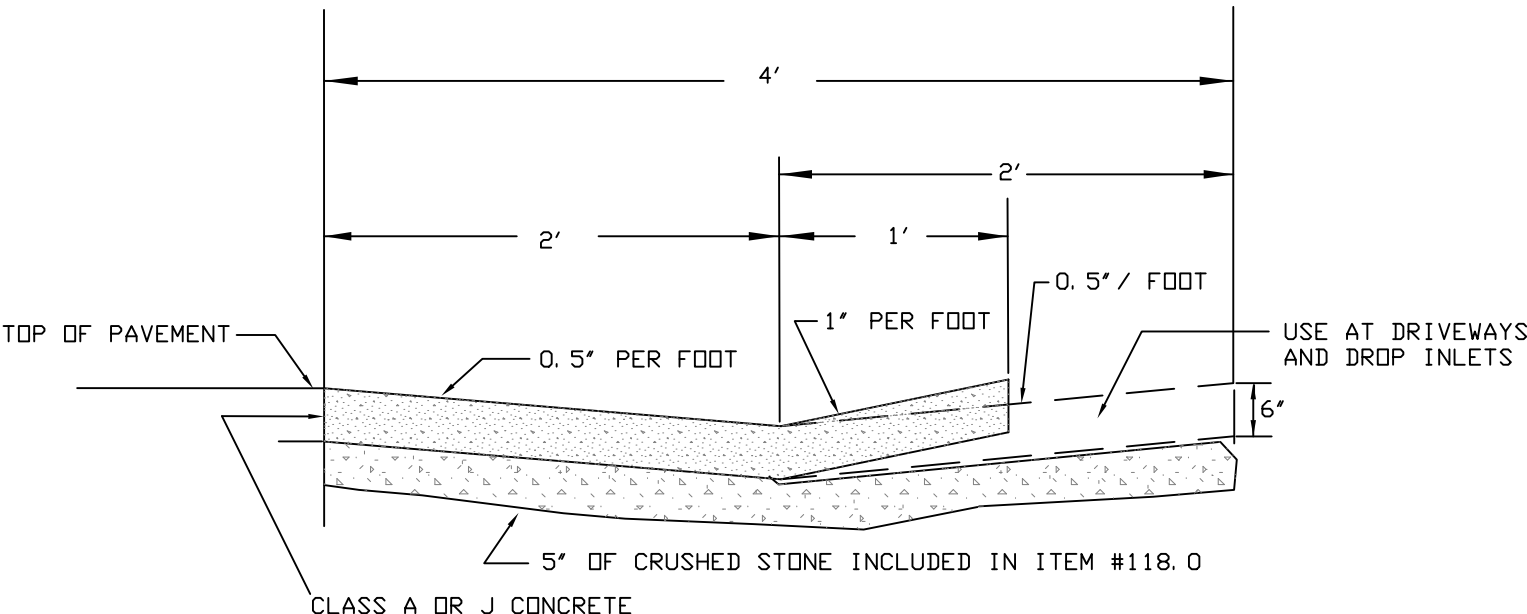
NEW COPPER WATER SERVICE CONNECTION

ITEM #112.0, #113.0, #114.0, #115.0



NOT TO SCALE

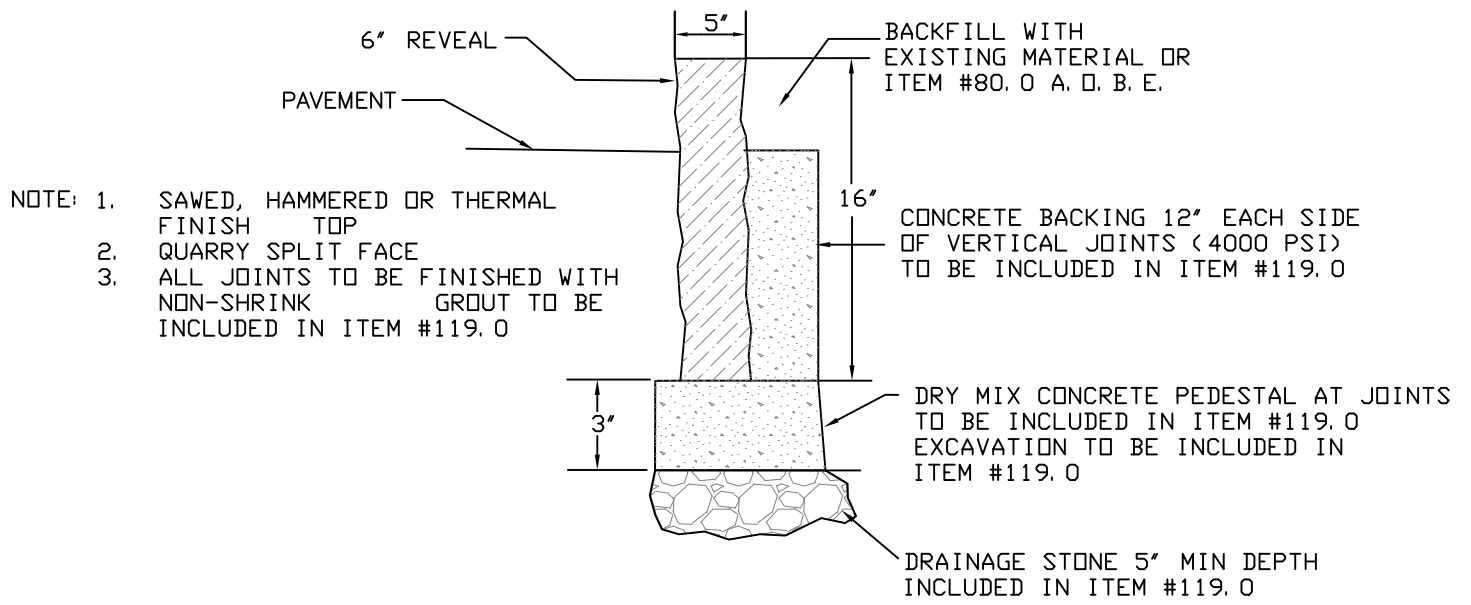
NEW CONCRETE VALLEY GUTTER CURB
ITEM #118.0



NOT TO SCALE

NEW GRANITE CURB TYPE "A"

ITEM #119.0

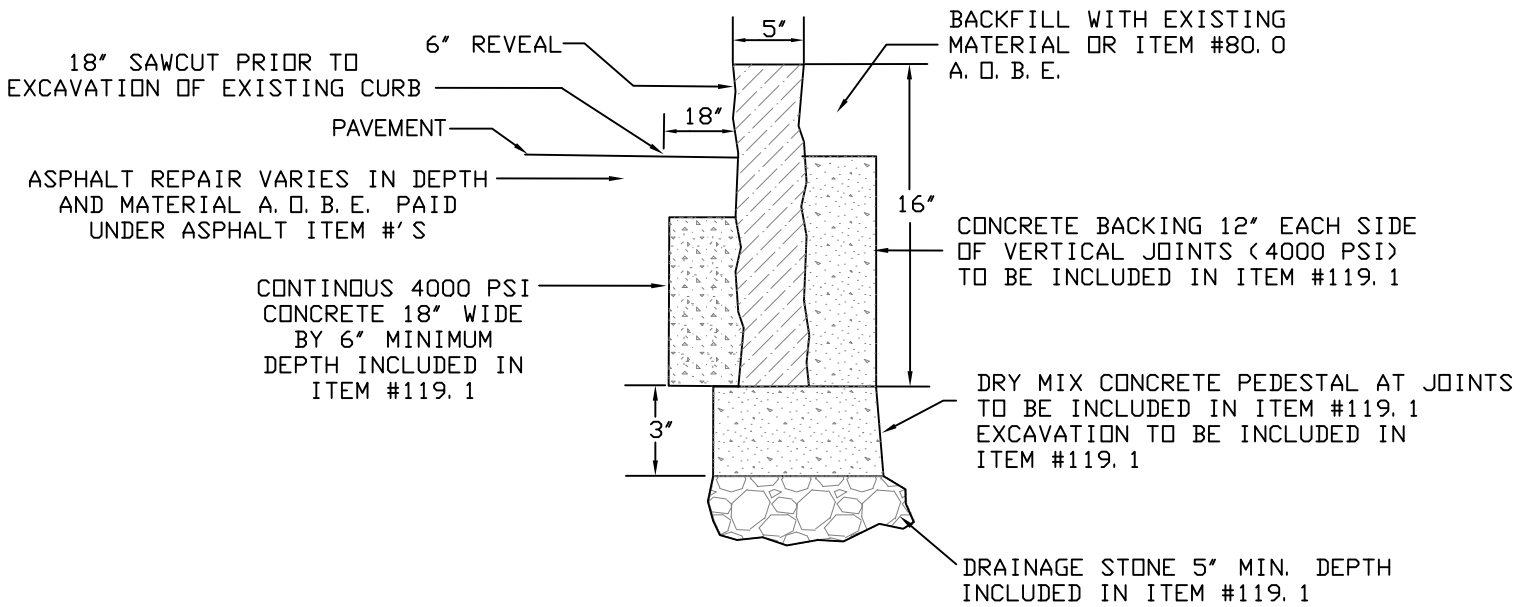


- NOTE: 1. SAWED, HAMMERED OR THERMAL FINISH TOP
 2. QUARRY SPLIT FACE
 3. ALL JOINTS TO BE FINISHED WITH NON-SHRINK GROUT TO BE INCLUDED IN ITEM #119.0

NOT TO SCALE

NEW GRANITE CURB TYPE "A"

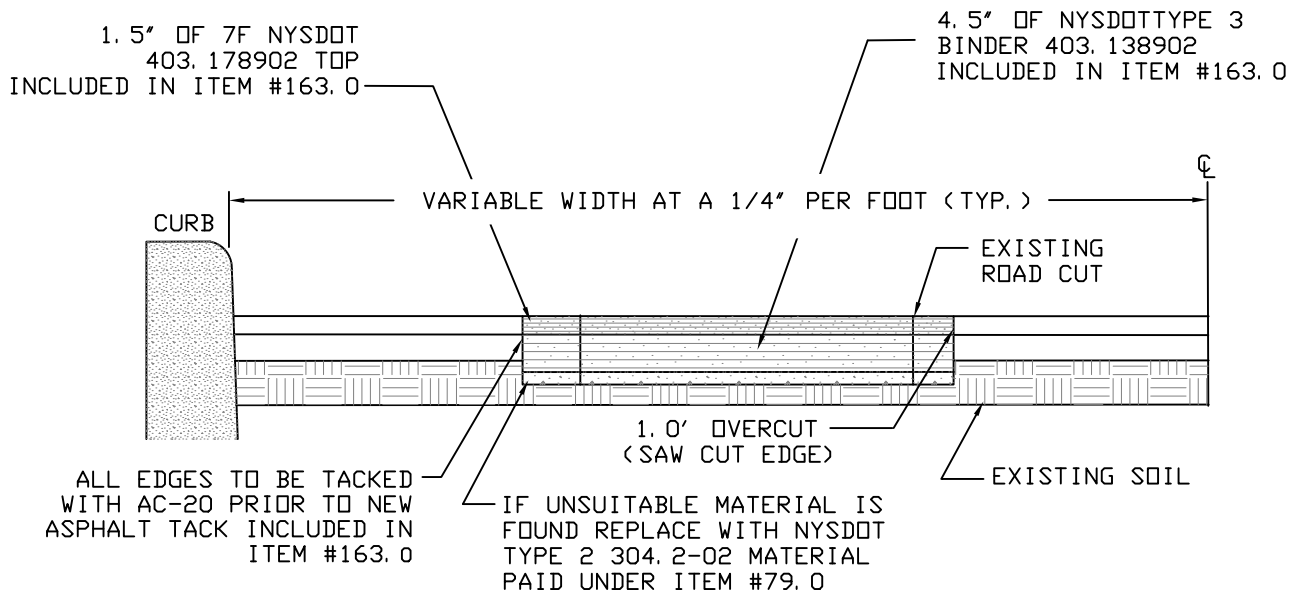
ITEM #119.1



- NOTE: 1. SAWED, HAMMERED OR THERMAL FINISH TOP
2. QUARRY SPLIT FACE
3. ALL JOINTS TO BE FINISHED WITH NON-SHRINK GROUT TO BE INCLUDED IN ITEM #119.0

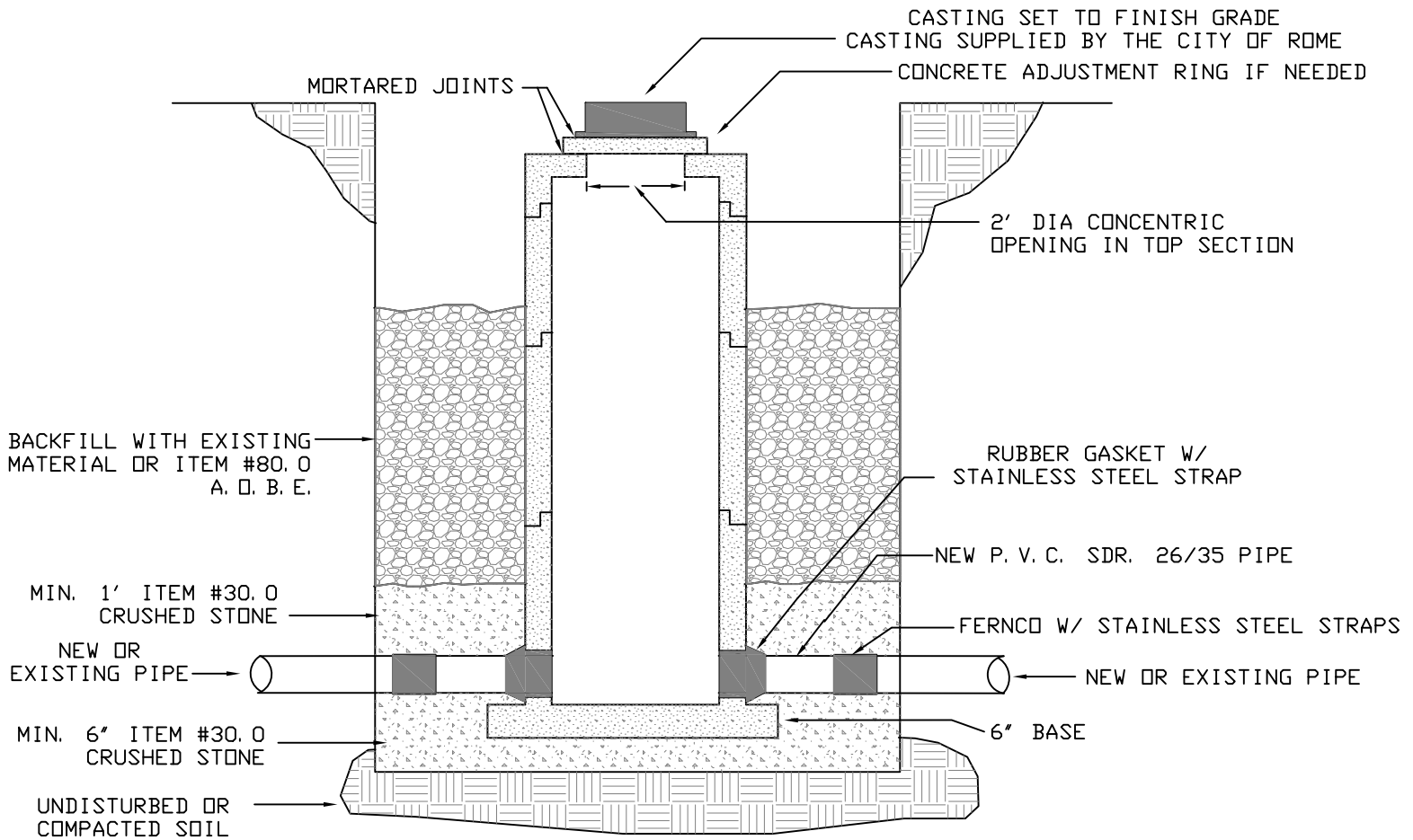
NOT TO SCALE

FULL DEPTH PATCH ITEM #163.0



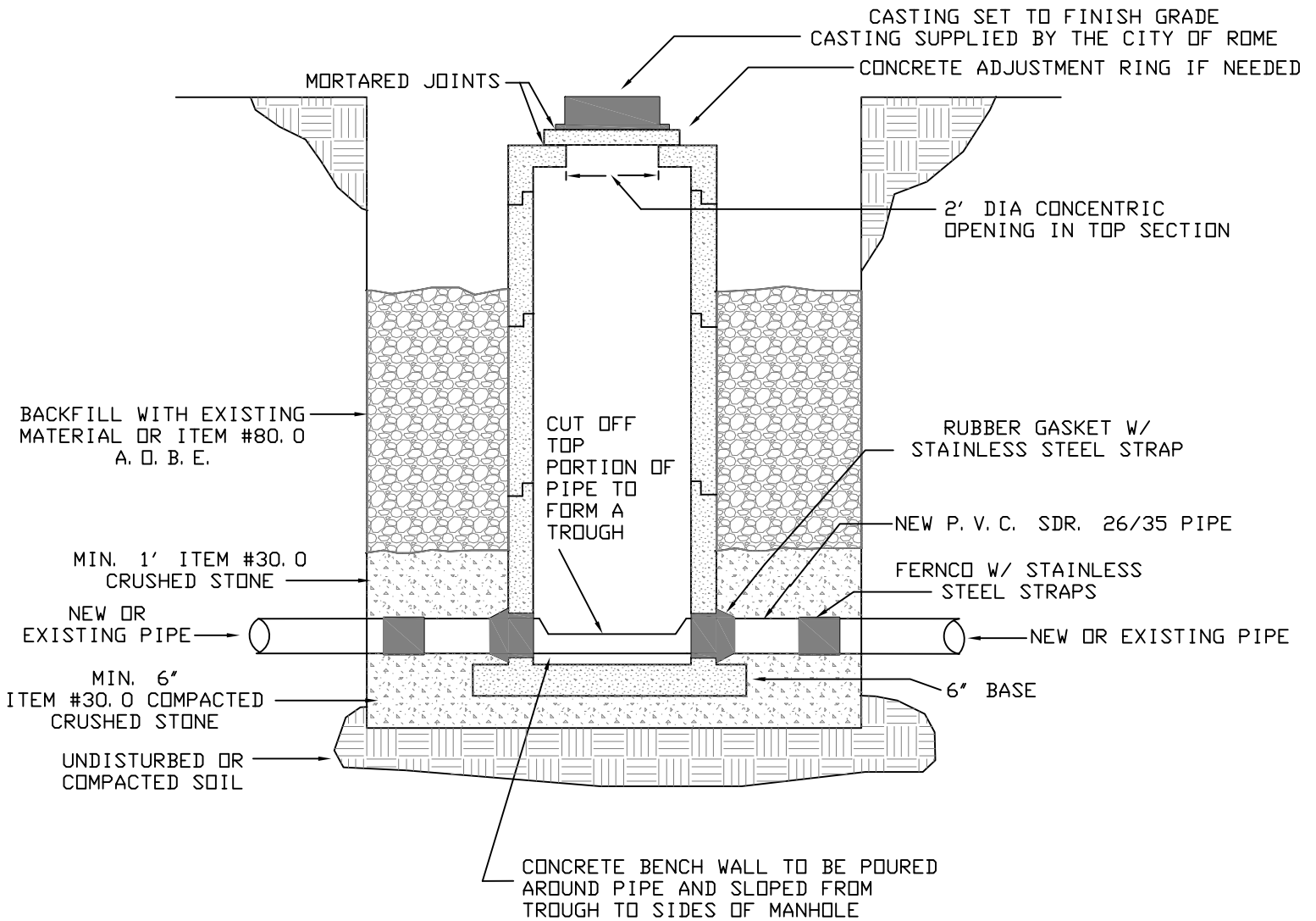
NOT TO SCALE

NEW PRECAST STORM SEWER MANHOLE 4' DIA. ITEM #192.0



NOT TO SCALE

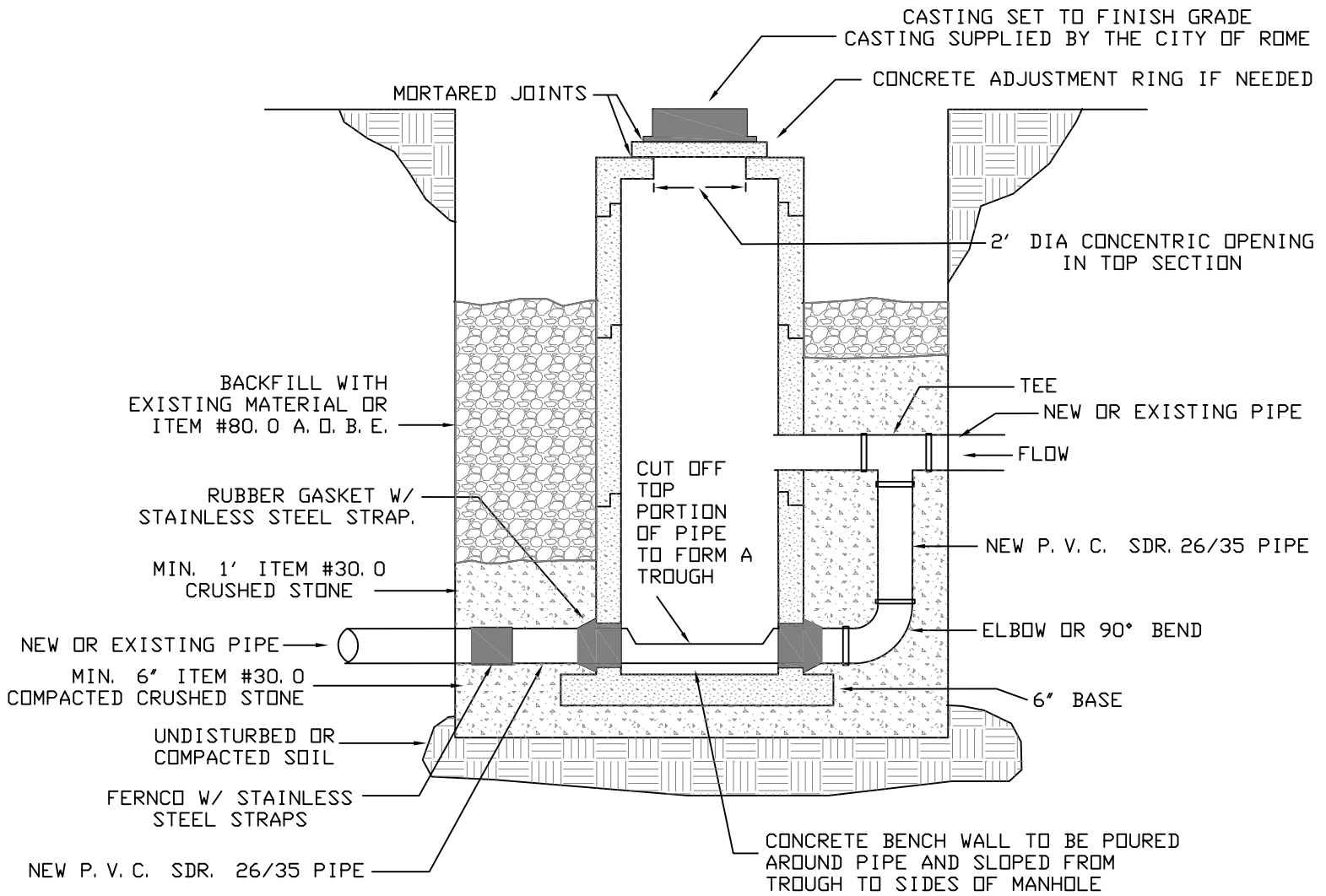
NEW PRECAST SANITARY MANHOLE 4' DIA. ITEM #193.0



NOT TO SCALE

DROP INLRT SANITARY MANHOLE

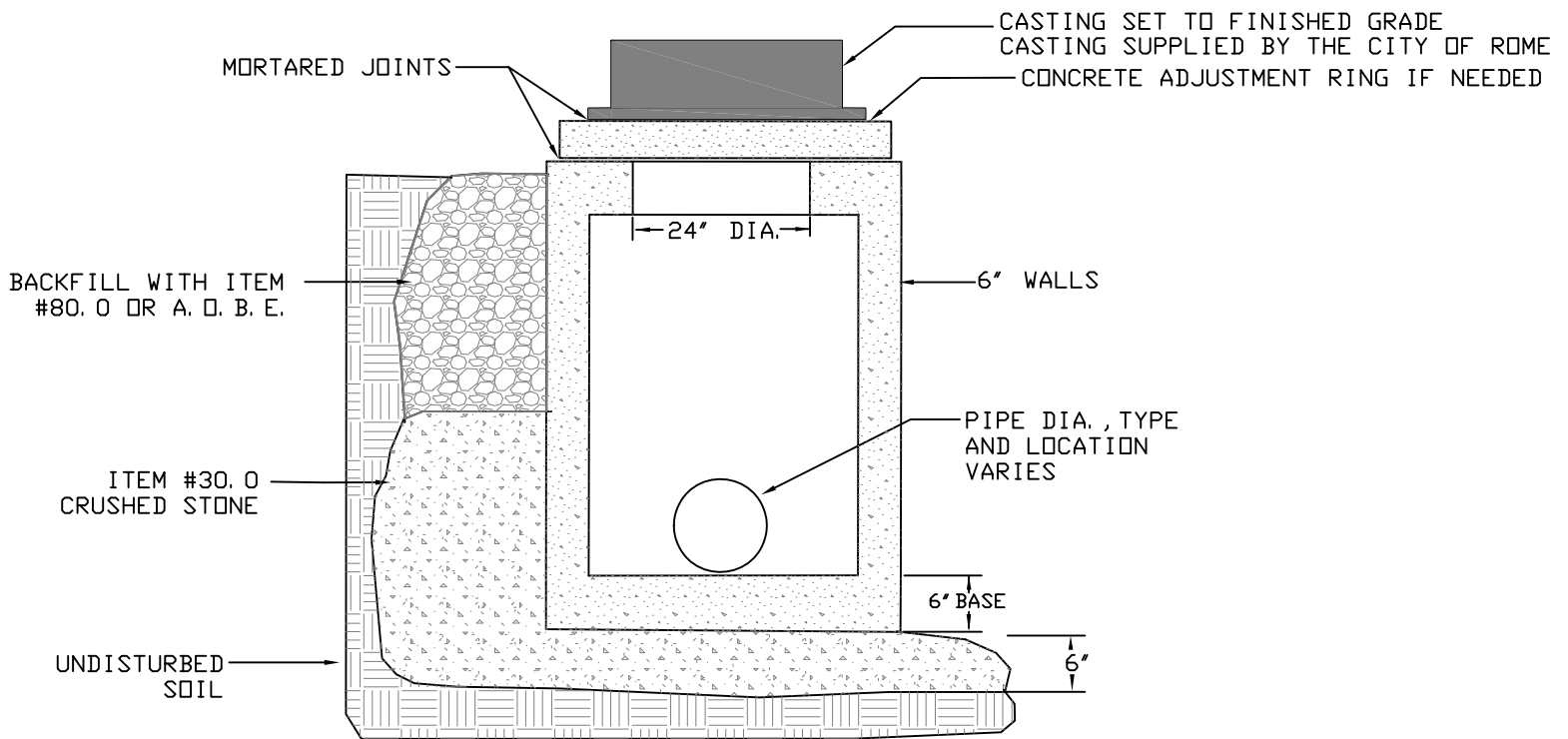
ITEM #193.0



NOT TO SCALE

STANDARD PRECAST DRAINAGE INLET (2X2)

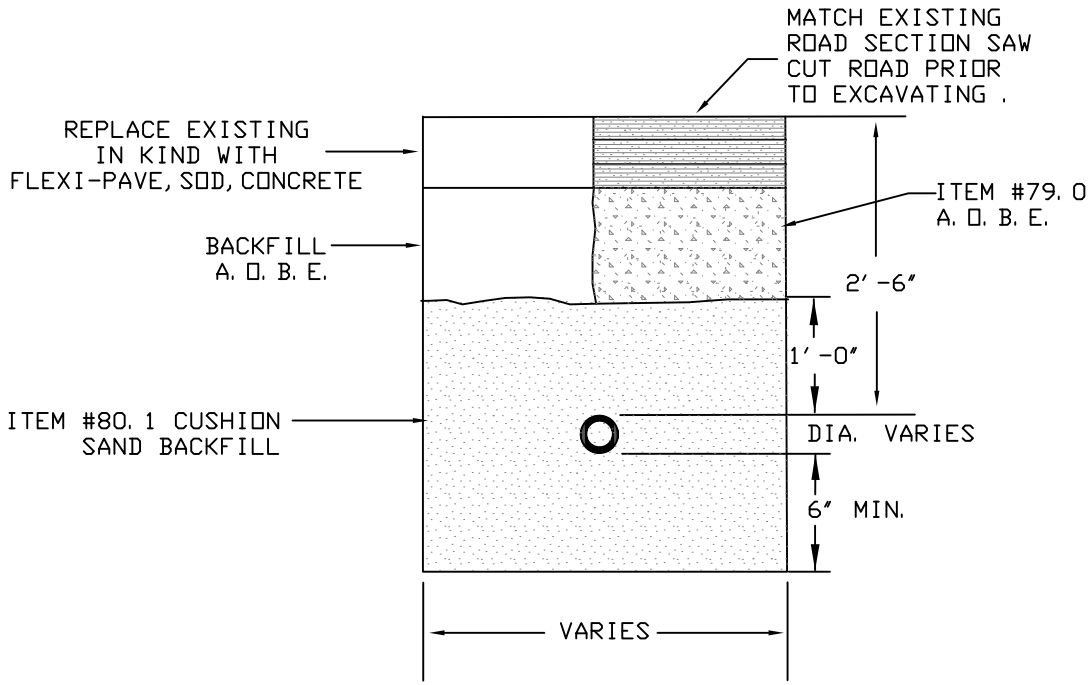
ITEM #199.0



NOT TO SCALE

SCHEDULE 80 PVC CONDUIT

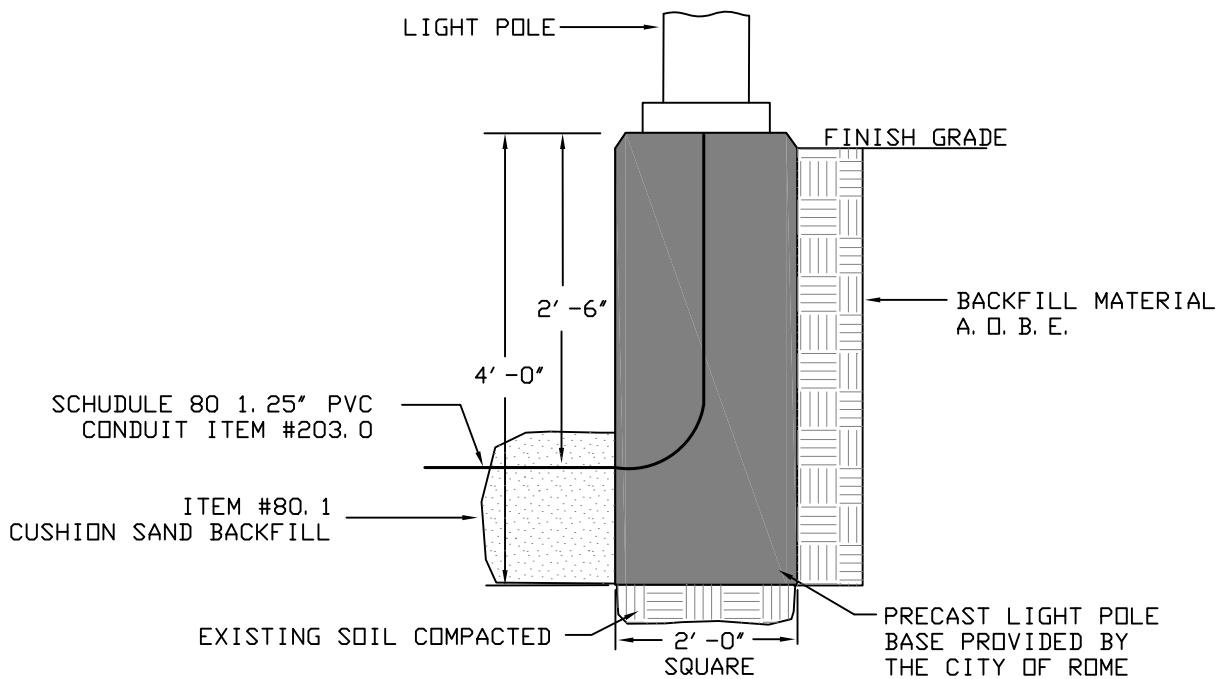
ITEM #203.0



NOT TO SCALE

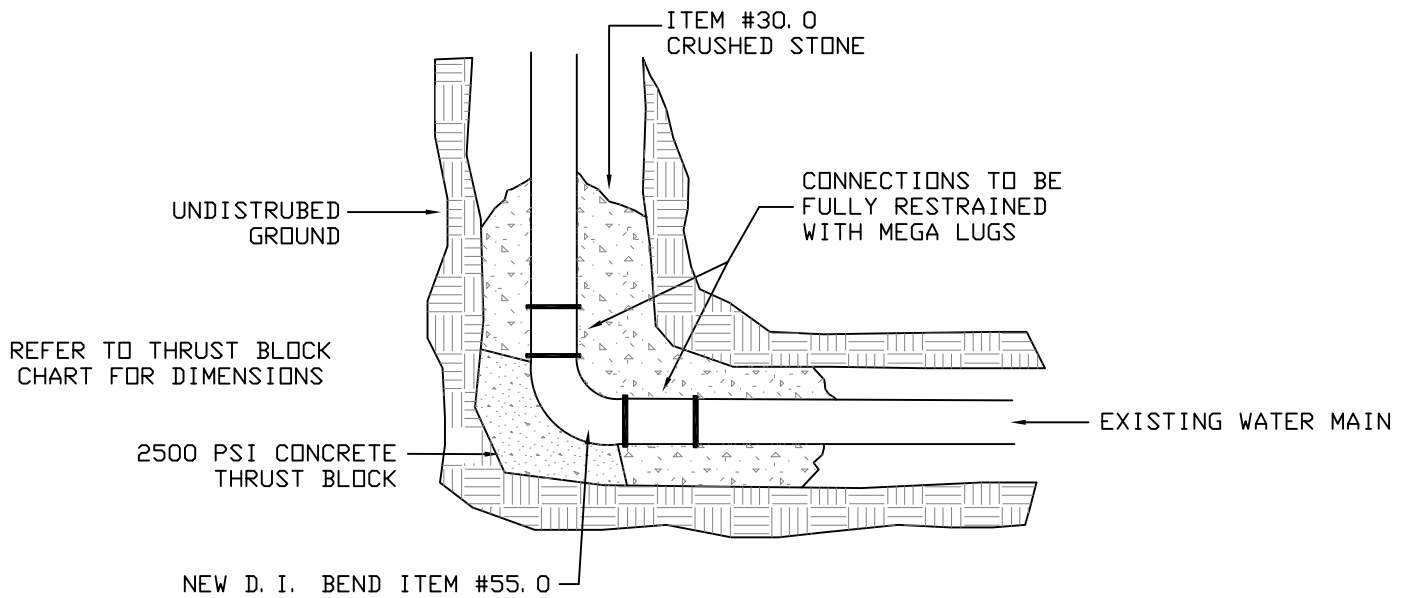
LIGHT POLE BASE

ITEM #205.0



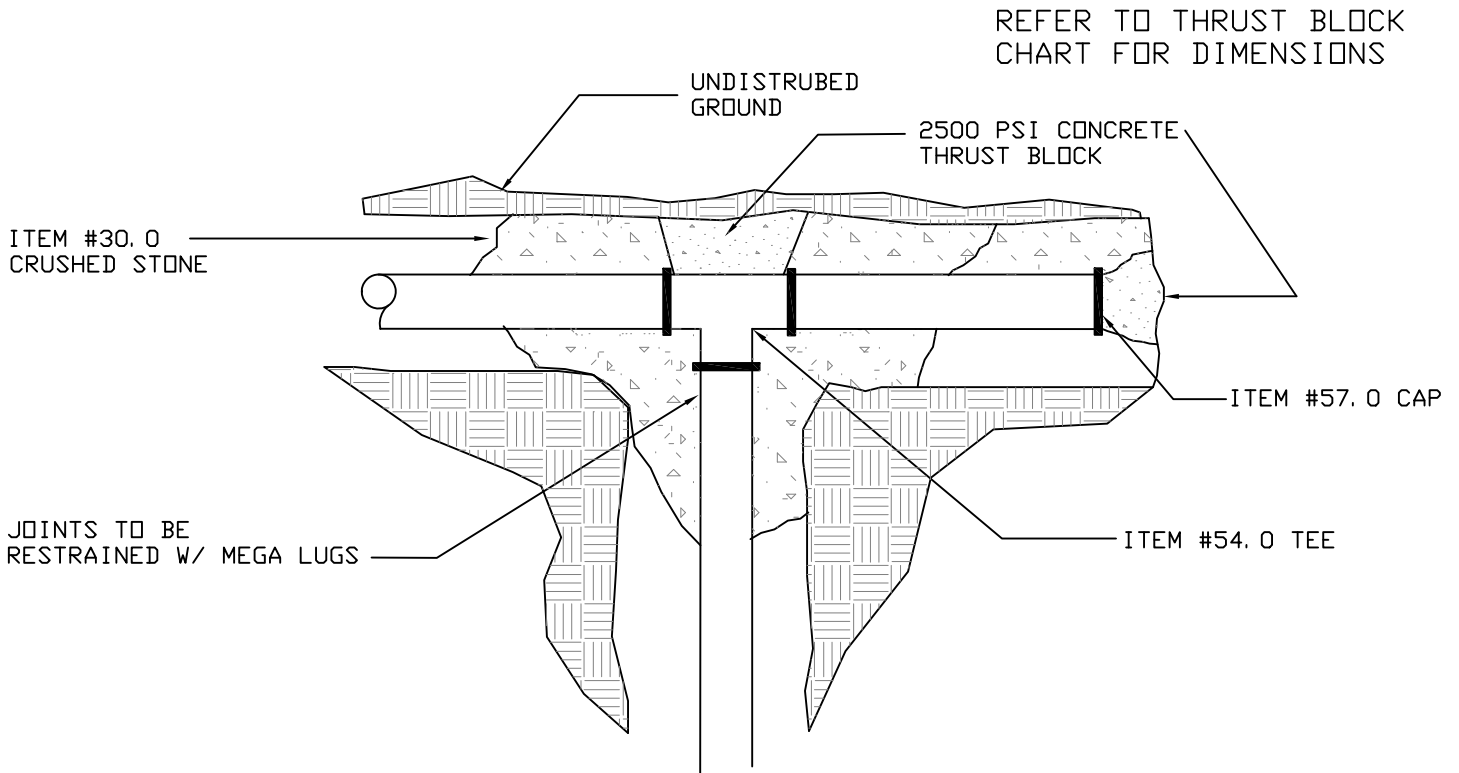
NOT TO SCALE

11. 25° - 90° DIRECTIONAL CHANGE



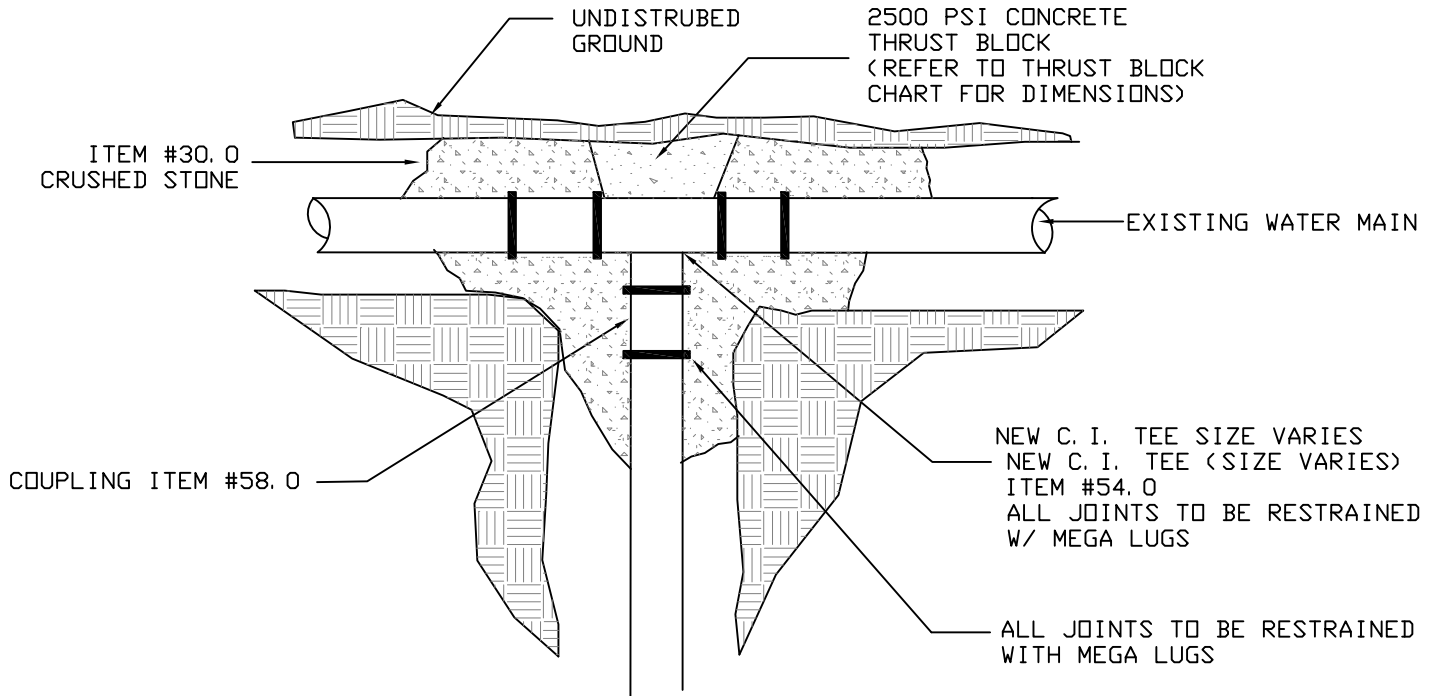
NOT TO SCALE

NEW D. I. WATER MAIN WITH A TEE CONNECTION AND CAPPED END



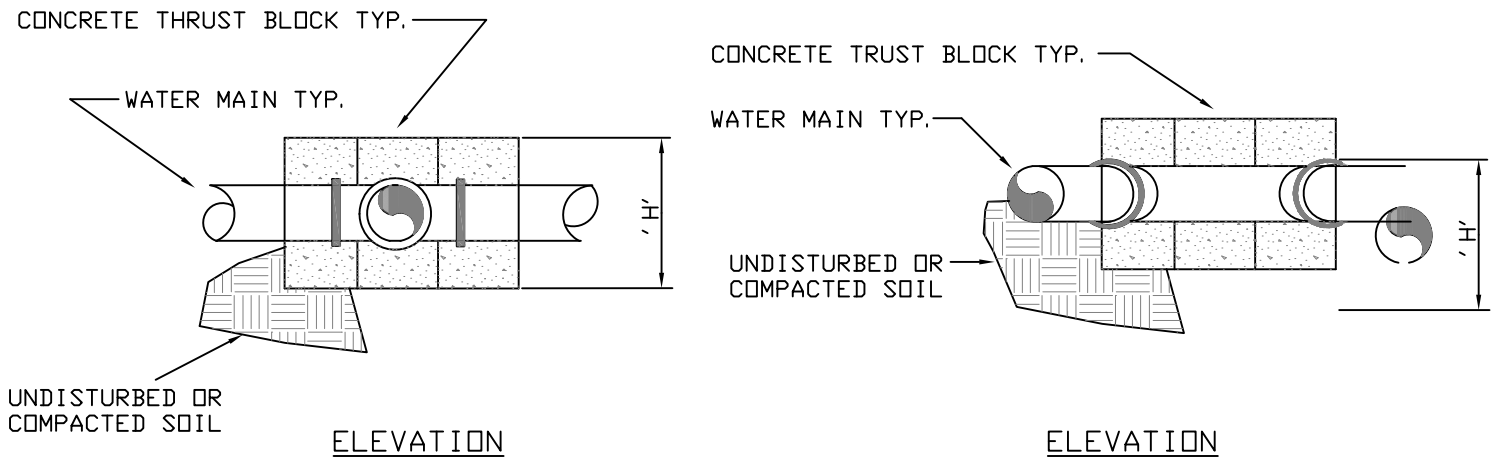
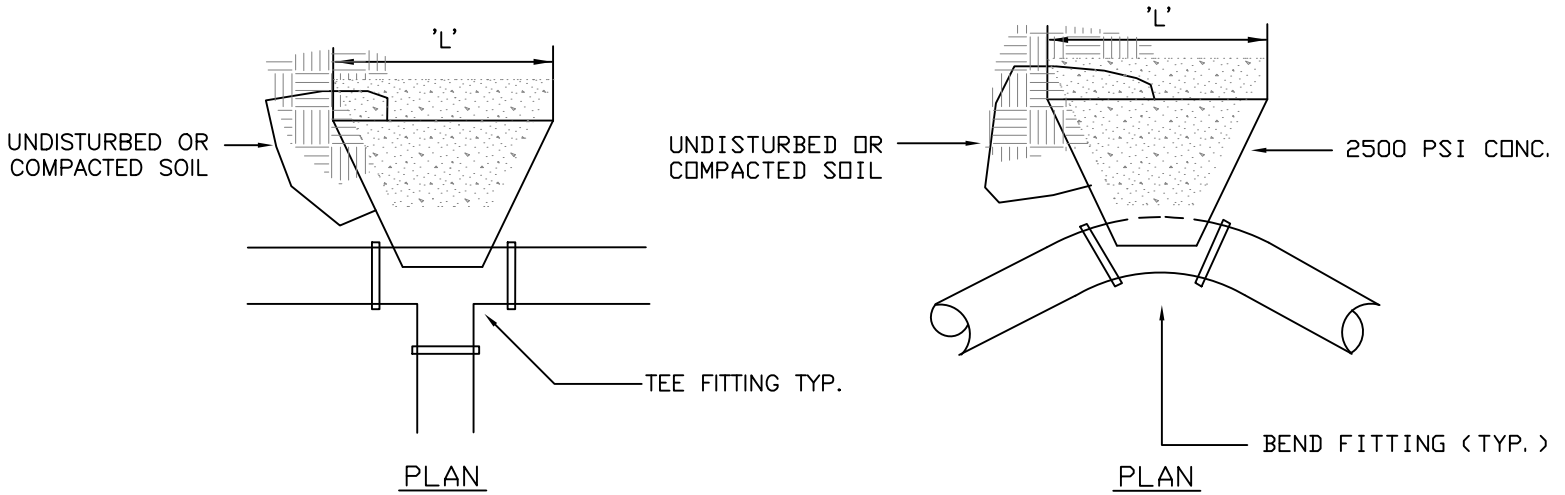
NOT TO SCALE

EXISTING WATER MAIN WITH A NEW C. I. TEE CONNECTION



NOT TO SCALE

THRUST BLOCK DETAIL



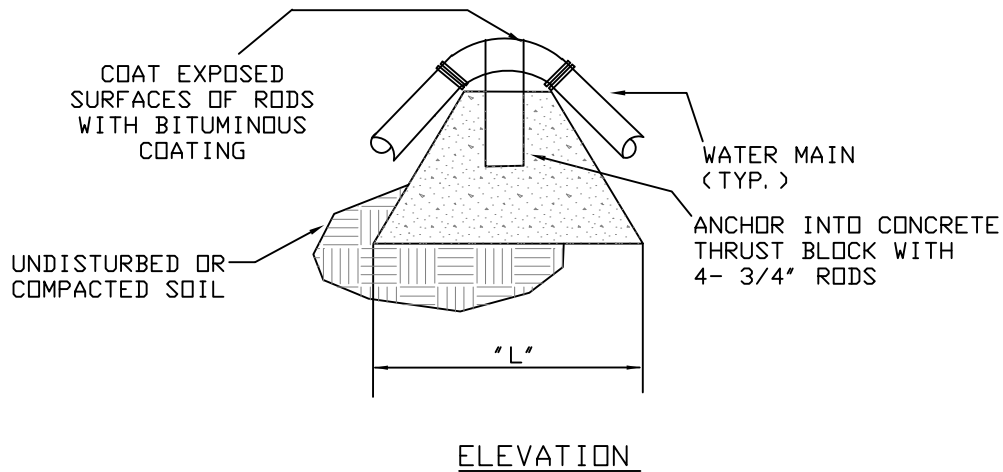
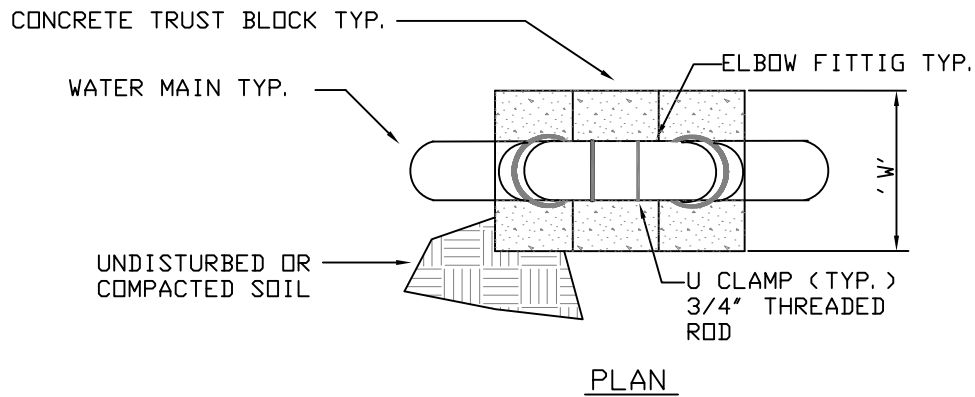
NOT TO SCALE

HORIZONTAL BENDS

DIMENSION SCHEDULE

PIPE SIZE	90 DEGREE BEND		45 DEGREE BEND		22.5 DEGREE BEND		11.25 DEGREE BEND	
	"H"	"L"	"H"	"L"	"H"	"L"	"H"	"L"
4"	4' -0"	4' -6"	3' -0"	3' -6"	2' -0"	3' -0"	1' -6"	1' -6"
6"	4' -0"	4' -6"	3' -0"	3' -6"	2' -0"	3' -0"	1' -6"	1' -6"
8"	5' -0"	5' -0"	3' -6"	4' -0"	2' -6"	3' -0"	2' -0"	2' -0"
10"	5' -6"	6' -0"	4' -0"	4' -6"	2' -6"	4' -0"	2' -0"	2' -6"
12"	6' -0"	7' -0"	4' -6"	5' -0"	3' -0"	4' -0"	2' -6"	3' -0"
16"	6' -6"	7' -0"	5' -6"	5' -6"	3' -6"	4' -6"	3' -6"	4' -6"

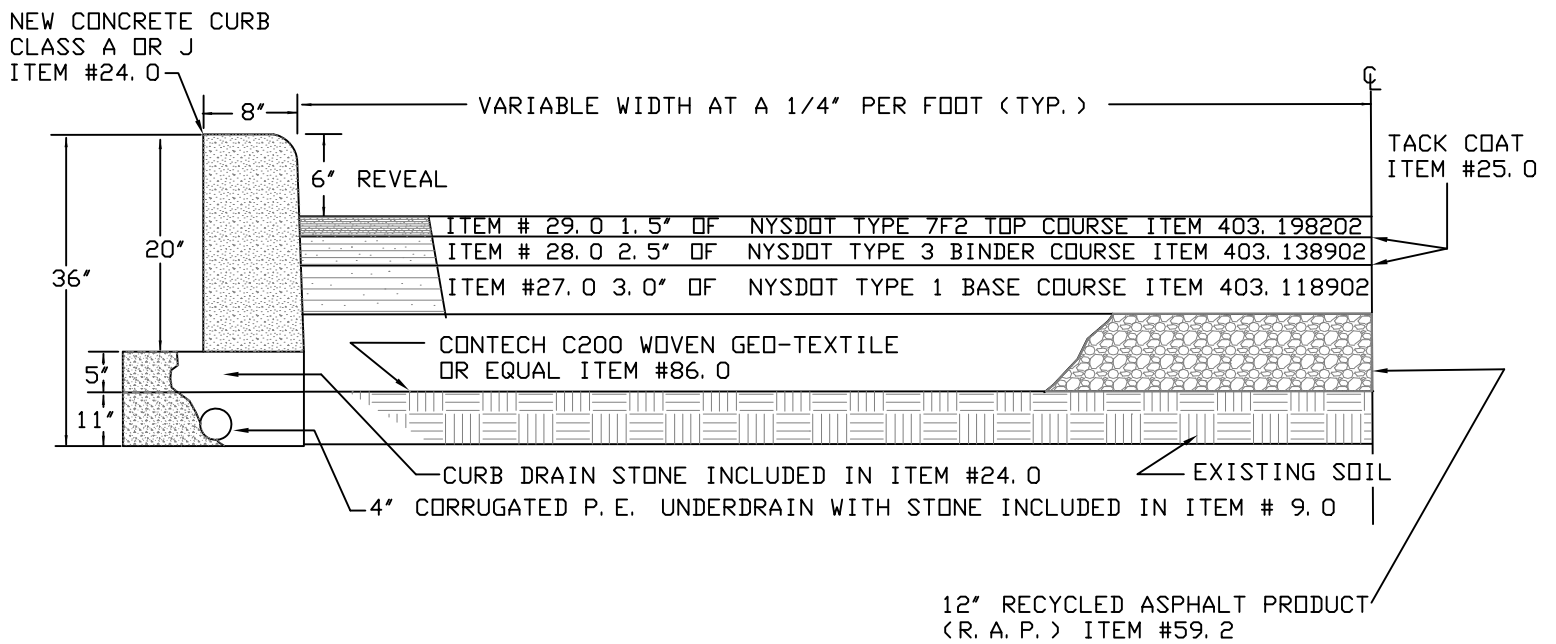
THRUST BLOCK DETAIL



VERTICAL BENDS

DIMENSION SCHEDULE (VERTICAL BENDS)						
PIPE SIZE	45 DEGREE BEND		22.5 DEGREE BEND		11.25 DEGREE BEND	
	"H"	"L"	"H"	"L"	"H"	"L"
4"	3' -6"	5' -0"	3' -0"	4' -0"	2' -6"	3' -0"
6"	3' -6"	5' -0"	3' -0"	4' -0"	2' -6"	3' -0"
8"	4' -6"	5' -0"	3' -6"	4' -0"	3' -0"	3' -0"
10"	5' -6"	5' -6"	4' -0"	4' -0"	3' -6"	3' -6"
12"	6' -6"	6' -6"	5' -0"	5' -0"	4' -0"	4' -0"
16"	6' -6"	7' -6"	5' -0"	6' -0"	5' -0"	5' -6"

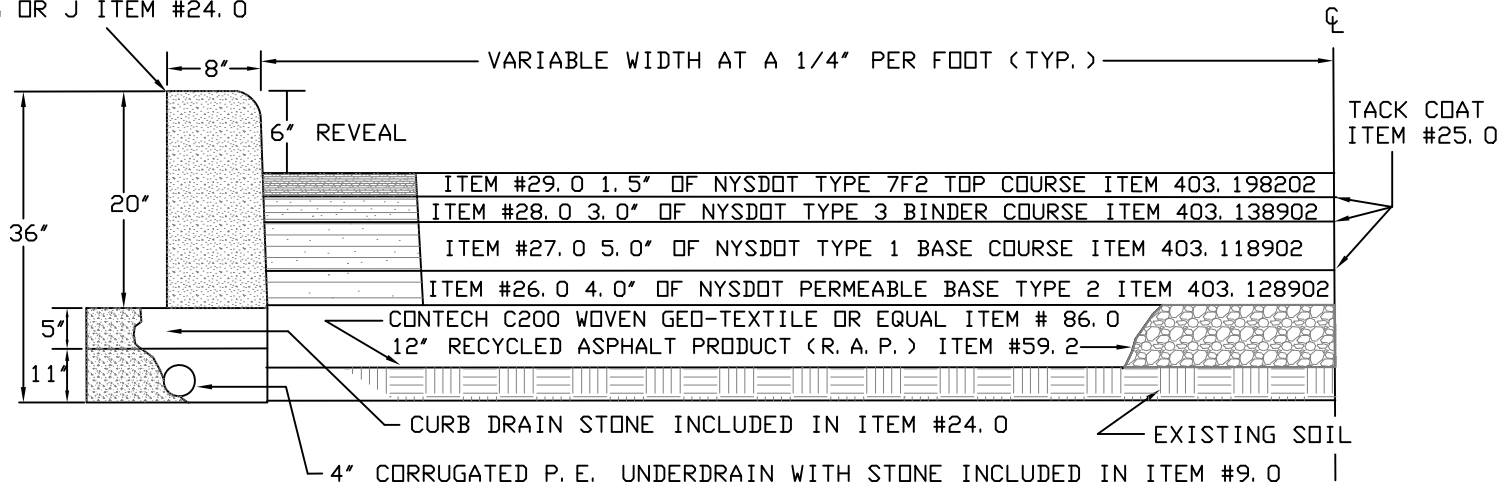
LIGHT DUTY PAVEMENT SECTION WITH NEW CONCRETE CURB



NOT TO SCALE

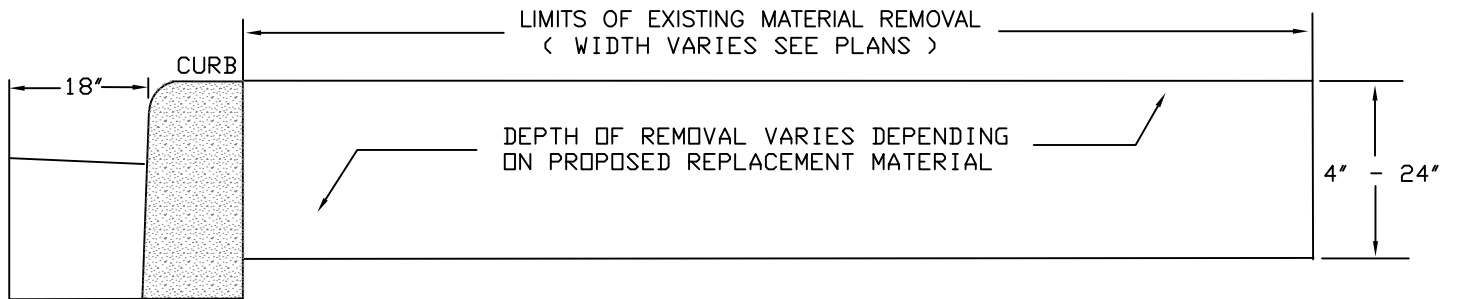
FULL DEPTH PAVEMENT SECTION

NEW CONCRETE CURB CLASS
A OR J ITEM #24.0



NOT TO SCALE

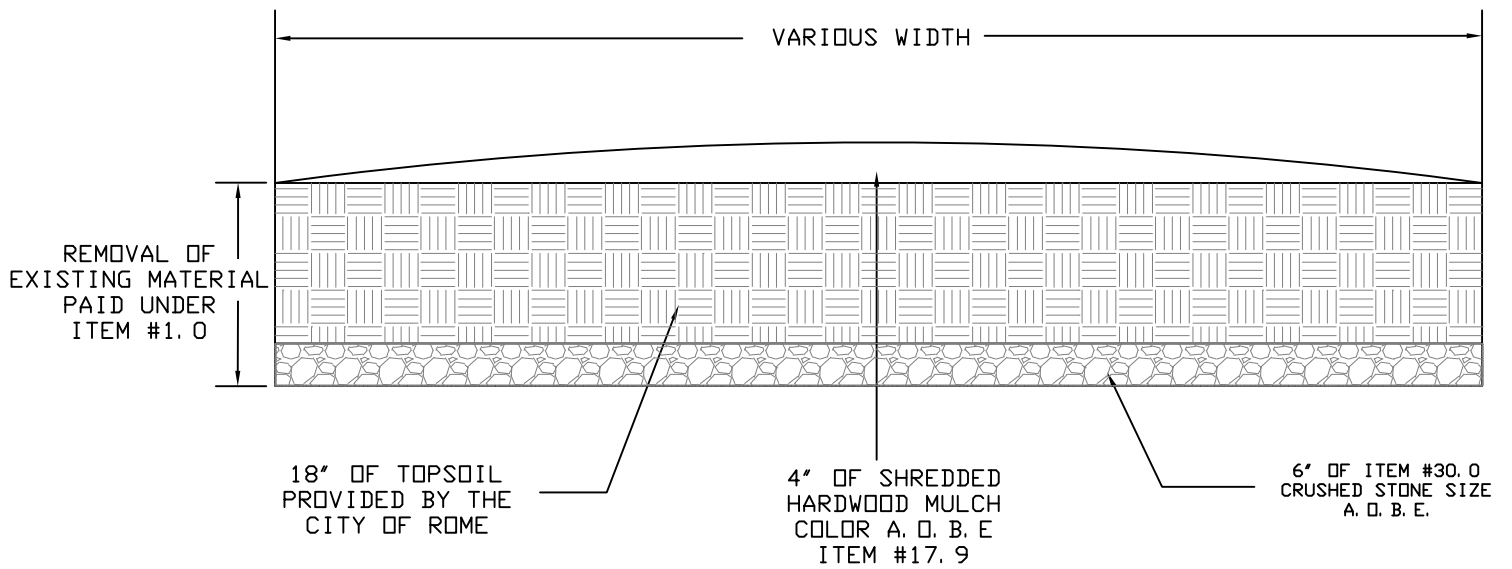
EXISTING MATERIAL REMOVAL DEPTH



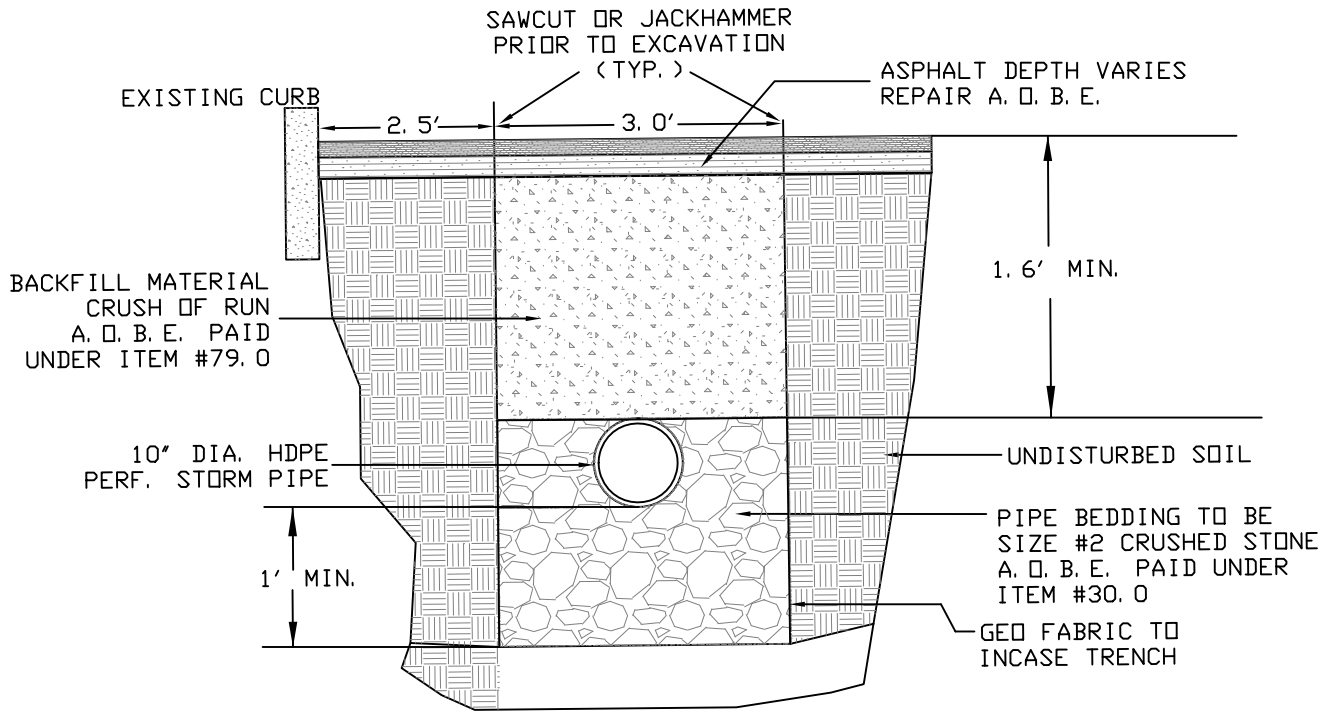
NOT TO SCALE

NEW LANDSCAPING AREA

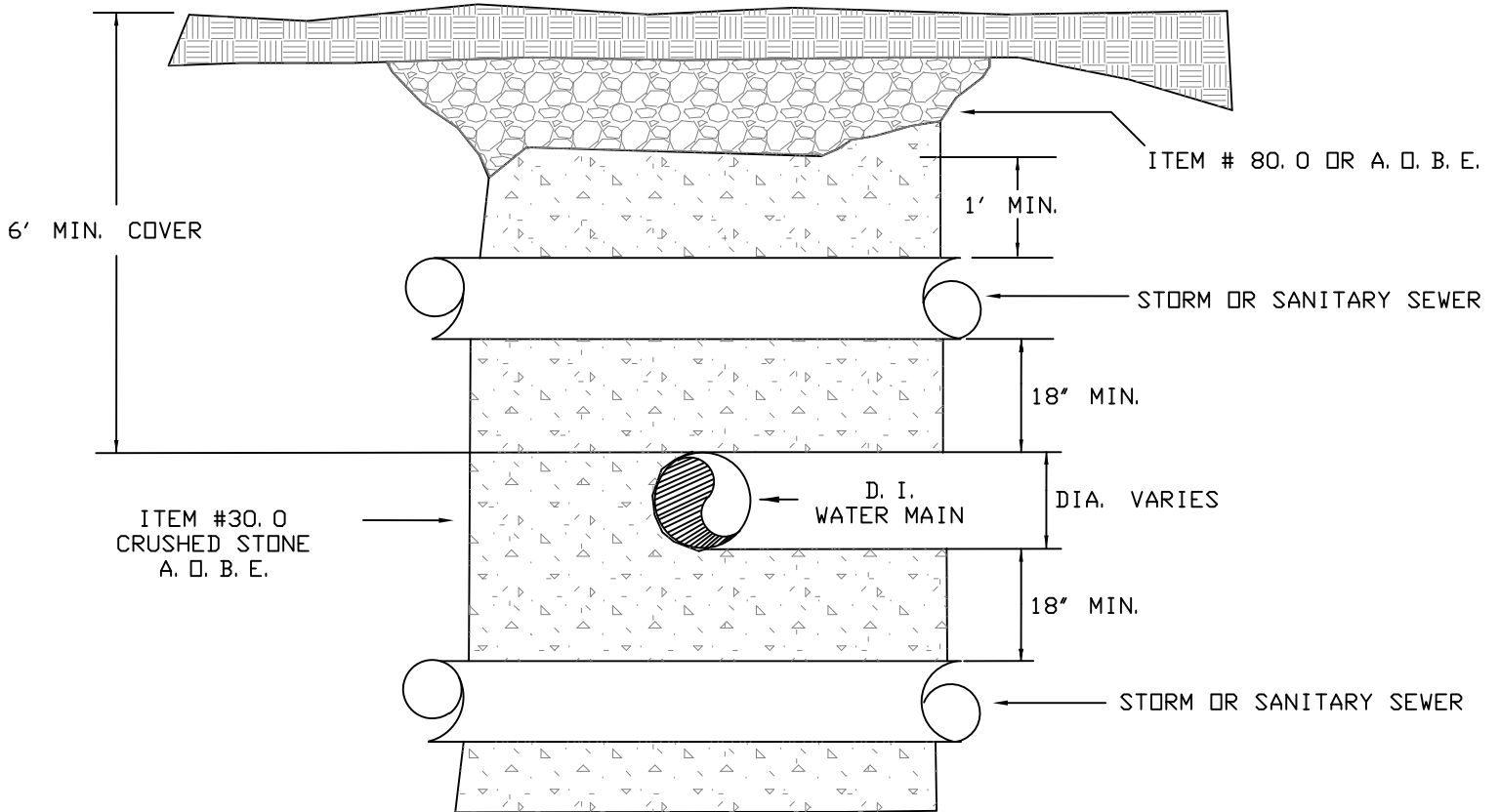
PROFILE



PERFORATED STORM LINE DETAIL

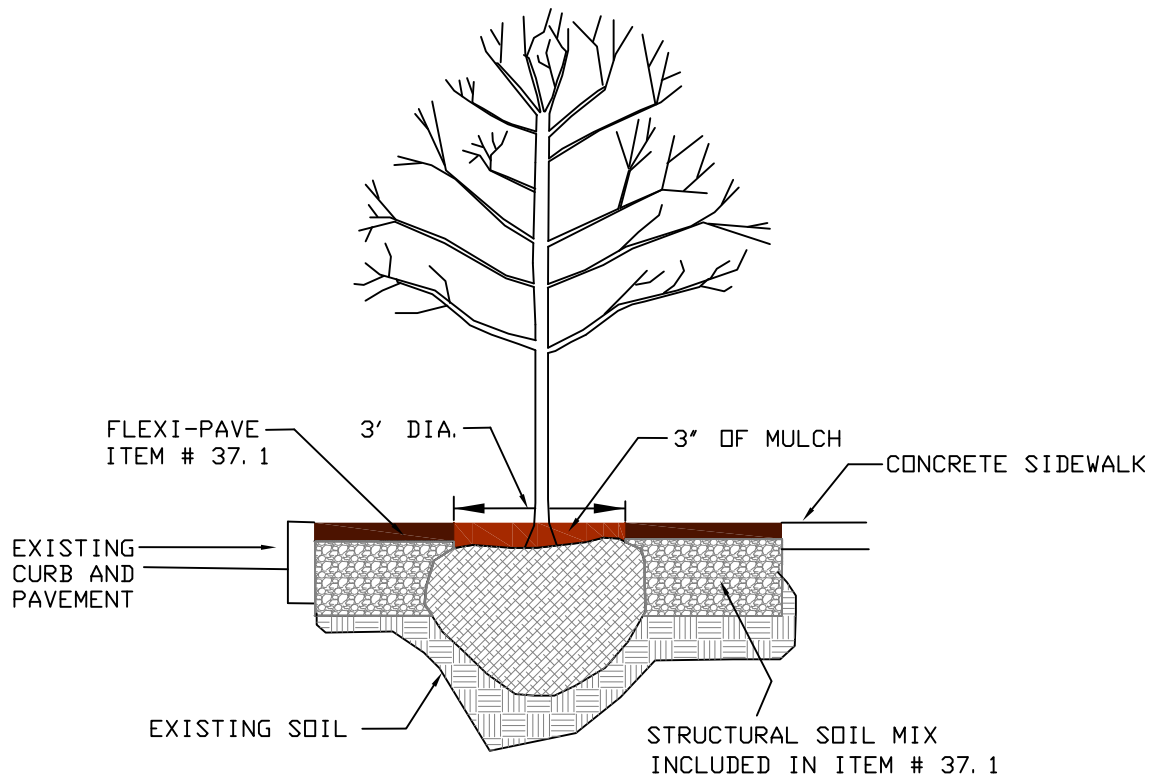


WATER/STORM OR SANITARY CROSSING



NOT TO SCALE

RESTORATION OF EXISTING TREE PLANTING



NOT TO SCALE

NOTES:

1. Structural soil mix shall be from Cornell University.
2. Structural soil shall not be placed in excessively moist conditions.
3. "Biobarrier" by Typar shall be installed parallel to sidewalk.
4. The bottom and side walls of excavation shall be scarified with a rake.

Technical Specifications

Potter Road Infrastructure Extensions

Potter Road
City of Rome, NY



July 25, 2024



Michael B. Lasell, P.E., LEED AP BD+C
MBL Engineering, PLLC
July 25, 2024

Table of Contents:

31 01 01 – Earthwork

31 23 01 – Structural Excavation and Fill

31 23 33 – Trenching and Backfilling

31 01 00.91 – Restoration of Surfaces

31 24 00 - Embankment

32 93 13 – Topsoil and Seeding

03 08 01 – Leakage Test

33 11 00 – Pipeline Installation

33 11 21 – Ductile Iron Pipe

33 12 13 Water Service Connections

33 12 16.01 Gate Valves

33 13 00 – Disinfecting Water Utility Distribution

33 31 50 – PVC Non-Pressure Pipe

33 39 13 – Sanitary utility Sewerage Manholes, Frames and Covers

33 49 00 – Storm Drainage Structures

EARTHWORK

Part 1 - General

1.1 SUMMARY

- A. This Section includes excavation and backfilling including the loosening, removing, refilling, transporting, storage and disposal of all materials classified as "earth" necessary to be removed for the construction and completion of all work under the Contract, and as shown on the Contract Drawings, specified or directed.
- B. Where certain features related to Earthwork are shown on the Contract Drawings, the Contractor shall be entirely responsible for final sequencing, scheduling, coordinating and planning the actual areas and their implementation in accordance with all laws and property ownership. These may include storage and staging areas, temporary stock pile areas, vehicle parking areas, temporary haul roads for construction ingress and egress, and other similar zones and land uses.

1.2 REFERENCES

- A. Comply with the latest revision of the following codes, standards and specifications, except where more stringent requirements have been specified herein:
 - 1. American Society for Testing and Materials (ASTM)
 - a. A328 – Specification for Steel Sheet Piling
 - b. D698 – Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³) (600 kN-m/m³)
 - c. D1556 – Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
 - d. D1557 – Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³) (2,700 kN-m/m³)
 - d. D1760 – Specification for Pressure Treatment of Timber Products
 - e. D2922 – Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

1.3 DEFINITIONS

- A. Excavation (including Trenching)
 - 1. Grubbing, stripping, removing, storing and re-handling of all materials of every name and nature necessary to be removed for all purposes incidental to the construction and completion of all the work under construction.
 - 2. All sheeting, sheet piling, bracing and shoring, and the placing, driving, cutting off and removing of the same.
 - 3. All diking, ditching, fluming, coffer-damming, pumping, bailing, draining, well pointing, or otherwise disposing of water.
 - 4. The removing and disposing of all surplus materials from the excavations in the manner specified.
 - 5. The maintenance, accommodation and protection of traffic and pedestrian travel and the temporary paving of highways, roads and driveways.
 - 6. The supporting and protecting of all tracks, rails, buildings, curbs, sidewalks, pavements, overhead wires, poles, trees, vines, shrubbery, pipes, sewers, conduits

or other structures or property in the vicinity of the work, whether over or underground or which appear within or adjacent to the excavations, and the restoration of the same in case of settlement or other injury.

7. All temporary bridging and fencing and the removing of same.

B. Earth

1. All materials such as sand, gravel, clay, loam, ashes, cinders, pavements, muck, roots or pieces of timber, soft or disintegrated rock, not requiring blasting, barring, or wedging from their original beds, and specifically excluding all ledge or bedrock and individual boulders or masonry larger than one-half cubic yard in volume.

C. Backfill

1. The refilling of excavation and trenches to the line of filling indicated on the Contract Drawings or as directed using materials suitable for refilling of excavations and trenches; and the compacting of all materials used in filling or refilling by rolling, ramming, watering, puddling, etc., as may be required.

D. Spoil

1. Surplus excavated materials not required or not suitable for backfills or embankments.

E. Embankments

1. Fills constructed above the original surface of the ground or such other elevation as specified or directed.

F. Limiting Subgrade

1. The underside of the pipe barrel for pipelines
2. The underside of footing lines for structures

G. Excavation Below Subgrade

1. Excavation below the limiting subgrades of structures or pipelines.
2. Where materials encountered at the limiting subgrades are not suitable for proper support of structures or pipelines, the Contractor shall excavate to such new lines and grades as required.

1.4 COORDINATION REQUIREMENTS

A. Coordinate layout and installation of all Contract work with earthwork activities and space requirements.

B. Submit specially prepared Coordination Drawings for this Project as required to provide for all required coordination, drawn to scale.

1.5 QUALITY ASSURANCE

A. Testing Services:

1. General: Testing of materials, testing for moisture content and compaction during placement and compaction of fill materials, and of compaction requirements for compliance with technical requirements of these Specifications shall be performed by a testing laboratory as specified in Section entitled "Special Provisions", Testing Laboratory Services Furnished by Contractor.
2. Contractor's Testing Agency Scope:
 - a. Test Contractor's proposed materials in the laboratory and field for compliance with these Specifications.
 - b. Perform field moisture content and density tests to verify that the specified compaction of backfill materials has been obtained.
3. Technicians representing the testing laboratory shall inspect the materials in the field and perform tests and shall report their findings to the Engineer and Contractor. When the materials furnished or the Work performed fails to fulfill Specification requirements, the technician will direct the attention of the Engineer and Contractor to such failure.
 - a. The technician shall not act as foreman or perform other duties for Contractor. Work will be checked as it progresses, but failure to detect any defective Work or materials shall not in any way prevent later rejection when such defect is discovered, nor shall it obligate the ENGINEER for final acceptance. Technicians are not authorized to revoke, alter, relax, enlarge, or release any requirements of the Contract Documents, nor to approve or accept any portion of the Work.
4. It shall be the responsibility of Contractor to accomplish the specified compaction for backfill, fill, and other earthwork. It shall be the responsibility of Contractor to control his operations by confirmation tests to verify and confirm that Contractor has complied, and is complying at all times, with the requirements of these Specifications concerning compaction, control, and testing.
 1. The frequency of Contractor's confirmation tests shall be not less than as follows; each test location for trenches shall include tests for each layer, type, or class of backfill from bedding to finish grade:
 - a. Trenches for utilities and piping - One location every 250 linear feet
 - b. For Structural Backfill: On a 100-foot grid under the structure and extending past the foundation a minimum of 50-feet on all sides every compacted lift, but no less than one per lift on each side of the structure for structures less than 60 feet long on a side.
 - c. In General Fill: One per 7,500 square feet on every compacted lift
 2. If compaction fails to conform to the specified requirements, Contractor shall remove and replace the backfill at proper density or shall bring the density up to specified level by other means acceptable to the Engineer. Frequency of confirmation tests for remedial Work shall be double that amount specified for initial confirmation tests.

1.6 SUBMITTALS

- A. Excavation Plan: Prior to start of excavation operations, submit written plan to demonstrate compliance with OSHA Standard 29 CFR Part 1926.650. As a minimum, excavation plan shall include:
 1. Name of competent person, responsibly in charge.
 2. Excavation method(s) or protective system(s) to be used
 3. Copies of "manufacturer's data" or other tabulated data if protective system(s) are designed on the basis of such data.

- B. Contractor shall prepare shop drawings for the following items, as required:
 - 1. Sheeting and bracing, or other protective system(s).
 - 2. Dewatering system, including Control of Water Management Plan
 - 3. Drawings shall be prepared by a Registered Professional Engineer recognized as expert in the specialty involved. Contractor shall be solely responsible for designing, installing, operating and maintaining whatever system is necessary to satisfactorily accomplish all necessary sheeting, bracing, protection, underpinning and dewatering.

1.7 JOB CONDITIONS

- A. Subsurface Information: The contractor shall verify existing soil conditions for rock layers or other obstructions.
- B. Existing Structures: The Drawings show certain surface and underground structures adjacent to the Work. This information has been obtained from existing records. It is not guaranteed to be correct or complete and is shown for the convenience of Contractor. Contractor shall explore ahead of the required excavation to determine the exact location of all structures. They shall be supported and protected from damage by Contractor. If they are broken or damaged, they shall be restored immediately by Contractor at his expense.
- C. Existing Utilities: Locate existing underground utilities in the areas of the Work. If utilities are to remain in place, provide adequate means of protection during all operations.
 - 1. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult piping or utility owner and Engineer immediately for directions as to procedure. Cooperate with Owner and utility owner in keeping services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.
 - 2. Do not interrupt existing utilities serving facilities occupied and used by Owner or others, except when permitted in writing by Engineer and then only after acceptable temporary utility services have been provided.
- D. Protection of Persons and Property: Barricade open excavations occurring as part of the Work and post with warning lights. Operate warning lights during hours from dusk to dawn each day and as otherwise required. See Section entitled "Special Provisions", for additional requirements for Protection of Work and Property.
 - 1. Protect structures, utilities, pavements, embankments, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations
 - 2. Protect all bench marks, monuments, and reference points. If the bench marks, monuments, or reference points are disturbed or destroyed, they shall be replaced to the satisfaction of the Engineer, at the Contractor's expense.
 - 3. Protect and barricade, where necessary, existing trees, shrubs, drainage swales, pavement, and other features outside the work limits from damage due to this construction
 - 4. Protect existing trees and other vegetation indicated to remain in place against unnecessary cutting, breaking, or skinning of roots, skinning and bruising of bark, smothering of trees by stockpiling of materials within drip line.

- E. Dust Control: Conduct all operations and maintain areas of activity, including watering of operations, sweeping and sprinkling of roadways, to minimize creation and dispersion of dust, as specified in the Section entitled “Special Provisions”.

PART 2 - PRODUCTS

2.1 WOOD SHEETING AND BRACING

- A. Wood sheeting and bracing shall be sound and straight; free from cracks, shakes and large or loose knots; and shall have dressed edges where directed.
- B. It shall conform to National Design Specifications for Stress Grade Lumber having a minimum fiber stress of 1200 pounds per square inch.
- C. Sheeting and bracing to be left in place shall be pressure treated in accordance with ASTM D1760 for the type of lumber used and with a preservative approved by the Engineer.

2.2 STEEL SHEETING AND BRACING

- A. Steel sheeting and bracing shall be sound.
- B. It shall conform to ASTM A328 with a minimum thickness of 3/8 inch

2.3 GEOTEXTILE MATERIALS

- A. Geotextile for Silt Fence: Woven geotextile fabric, manufactured for silt fence complying with the following measurements per test methods referenced:
 - 1. Grab Tensile Strength: 247 lbf; ASTM D4632.
 - 2. Sewn Seam Strength: 222 lbf; ASTM D4632.
 - 3. Tear Strength: 90 lbf; ASTM D4533.
 - 4. Puncture Strength: 90 lbf; ASTM 4833.
 - 5. Apparent Opening Size: No. 60 sieve, maximum; ASTM 4751.
 - 6. Permittivity: 0.02 per second, minimum; ASTM D4491.
 - 7. UV Stability: 50 percent after 500 hours' exposure; ASTM D4355.

Product shall be Mirafi 100X, Mirafi Envirofence, or approved equal.

- B. Geotextile for Structural Subgrade Reinforcement: Shall be an integrally formed, biaxial geogrid manufactured from polypropylene, complying with the following measurements per test methods referenced:
 - 1. Tensile Strength @ 2% Strain: 410 lb/ft (MD Value); ASTM D6637.
 - 2. Tensile Strength @ 5% Strain: 810 lb/ft (MD Value); ASTM D6637.
 - 3. Ultimate Tensile Strength: 1310 lb/ft (MD Value); ASTM D6637.
 - 4. Aperture Dimensions: 1x1.3 in. (Nom).
 - 5. Minimum Rib Thickness: 0.05 in. (Nom.)

Product shall be Tensar Earth Technologies, Inc., Biaxial Geogrid BX1200 or approved equal.

- C. Subsurface Drainage Geotextile: Nonwoven needle-punched geotextile, manufactured for subsurface drainage applications, made from polyolefins or polyesters; with elongation greater than 50 percent; complying with AASHTO M 288 and the following, measure per test methods referenced:

1. Grab Tensile Strength: 157 lbf; ASTM D 4632.
2. Sewn Seam Strength: 142 lbf; ASTM D 4632.
3. Tear Strength: 56 lbf; ASTM D 4533.
4. Puncture Strength: 56 lbf; ASTM D 4833.
5. Apparent Opening Size: No. 70 sieve, maximum; ASTM D 4751.
6. Permittivity: 0.1 per second, minimum; ASTM D 4491.

Product shall be Mirafi 140N or approved equal.

- D. Separation Geotextile: Woven geotextile fabric, manufactured for separation applications, made from polyolefins or polyesters; with elongation less than 50 percent; complying with AASHTO M 288 and the following measured per test methods referenced:

1. Grab Tensile Strength; 247 lbf; ASTM D 4632.
2. Sewn Seam Strength; 222 lbf; ASTM D 4632.
3. Tear Strength: 90 lbf; ASTM D 4533.
4. Puncture Strength: 90 lbf; ASTM D 4833.
5. Apparent Opening Size: No.60 sieve, maximum; ASTM D 4751.
6. Permittivity: 0.02 per second, minimum; ASTM D 4491.
7. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.

Product shall be Mirafi 500X or approved equal.

2.4 COMPACTION EQUIPMENT

- A. Vibratory Rollers: Vibratory rollers for compacting granular materials shall be equipped with a smooth steel compaction drum. Rollers shall impart a minimum compactive energy of 30 tons. Maximum loose lift thickness for vibratory compaction shall be limited to 12 inches.
- B. Hand Operated Equipment: Hand operated equipment shall be used for compacting material over pipes and against walls, in corners, and in trenches. Maximum loose lift thickness for hand operated compaction equipment shall be limited to 6 inches. Compaction within 5 ft of tank walls shall be completed using hand operated equipment.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Provide Engineer with sufficient notice and with means to examine the areas and conditions under which excavating, filling, and grading are to be performed. Engineer will notify Contractor, in writing, if conditions are found that may be detrimental to the

proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected in an acceptable manner.

3.2 SITE PREPARATION

- A. Clear all areas to be occupied by permanent construction or embankments of all trees, brush, roots, stumps, logs, wood, asphalt (to the extents indicated on the Drawings), and other materials and debris. Clean and strip subgrades for fills and embankments of vegetation, sod, topsoil and organic matter. All waste materials shall be removed from the Site and properly disposed of by Contractor. Burning will not be permitted
- B. The limits of clearing shall be as indicated on the Contract Drawings. The Contractor shall verify these limits with the Engineer in the field prior to the start of work.
- C. Trees and other miscellaneous features damaged or removed during the performance of the Work that are not designated for removal shall be replaced by the Contractor to the satisfaction of the Engineer at no cost to the Owner.

3.3 UNAUTHORIZED EXCAVATION

- A. Whenever excavations are carried beyond or below the lines and grades shown on the Contract Drawings, or as given or directed by the Engineer, all such excavated space shall be refilled with select fill, controlled low strength material, concrete or other materials as the Engineer may direct. All backfilling and compacting of unauthorized excavations shall be at the Contractor's expense.
- B. All material which slides, falls or caves into the established limits of excavations due to any cause whatsoever, shall be removed and disposed of at the Contractor's expense and no extra compensation will be paid to the Contractor for refilling of the void areas left by the slide, fall or cave-in, including any materials or select fill required.

3.4 CONTROL OF WATER

- A. General
 - 1. The Contractor shall at all times provide and maintain proper and satisfactory means and devices for the control and removal of all water (i.e. surface and ground) entering the excavations, or other parts of the Work and shall remove all such water as fast as it may collect, in such manner as shall not interfere with the prosecution of the work or the proper placing of pipes, structures, or other work.
 - 2. Unless otherwise specified, all excavations which extend down to or below the static groundwater elevations shall be de-watered by lowering and maintaining the groundwater beneath such excavations at all times when work thereon is in progress, during subgrade preparation and the placing of the structure or pipe thereon.
 - 3. Water shall not be allowed to rise over or come in contact with any masonry, concrete or mortar, until at least 24 hours after placement, and no stream of water shall be allowed to flow over such work until such time as the Engineer may permit.
 - 4. Where the presence of fine grained subsurface materials and a high groundwater table may cause the upward flow of water into the excavation with a resulting

quick or unstable condition, the Contractor shall install and operate a well point system to prevent the upward flow of water during construction.

5. Water pumped or drained from excavations, or any sewers, drains or water courses encountered in the work, shall be disposed of in a suitable manner without injury to adjacent property, the work under construction, or to pavements, roads, drives, and water courses. No water shall be discharged to sanitary sewers. Sanitary sewage shall be pumped to sanitary sewers or shall be disposed of by an approved method.
6. All dewatering activities shall be conducted in accordance with laws and permits. All such discharges shall be controlled and pre-treated as necessary.
7. Any damage caused by or resulting from dewatering operations shall be the sole responsibility of the Contractor.

B. Work Included:

1. Preparation and submittal of a written "Control of Water Management Plan" to manage and control dewatering activities.
2. The construction and removal of cofferdams, sheeting and bracing, and the furnishing of materials and labor necessary thereof.
3. The excavation and maintenance of ditches and sluiceways.
4. The furnishing and operation of pumps, well points, and appliances needed to maintain control of water related to the work in a satisfactory manner.
5. The installation and removal of temporary sediment and discharge control devices.

C. Well Point Dewatering Systems

1. Installation
 - a. The well point system shall be designed and installed by or under the supervision of an organization whose principal business is well pointing and which has at least five consecutive years of similar experience and can furnish a representative list of satisfactory similar operations, including contact names and telephone numbers.
 - b. Well point headers, points and other pertinent equipment shall not be placed within the limits of the excavation in such a manner or location as to interfere with the laying of pipe or trenching operations or with the excavation and construction of other structures.
 - c. Detached observation wells of similar construction to the well points shall be installed at intervals of not less than 50 feet along the opposite side of the excavation from the header pipe and line of well points, to a depth of at least 5 feet below the proposed excavation. In addition, one well point in every 50 feet shall be fitted with a tee, plug and valve so that the well point can be converted for use as an observation well. Observation wells shall be not less than 1 inches in diameter.
 - d. Standby gasoline or diesel powered equipment shall be provided so that in the event of failure of the operating equipment, the standby equipment can be readily connected to the system. The standby equipment shall be maintained in good order and actuated regularly not less than twice a week.
2. Operation
 - a. Where well points are used, the groundwater shall be lowered and maintained continuously (day and night) at a level not less than 2 feet below the bottom of the excavation. Excavation will not be permitted at a level

lower than 2 feet above the water level as indicated by the observation wells.

- b. The effluent pumped from the well points shall be examined periodically by qualified personnel to determine if the system is operating satisfactorily without the removal of fines.
- c. The water level shall not be permitted to rise until construction in the immediate area is completed and the excavation backfilled.

3.5 STORAGE OF MATERIALS

A. Sod

1. Any sod cut during excavation shall be removed and stored during construction so as to preserve the grass growth. Sod damaged while in storage shall be replaced in like kind at the sole expense of the Contractor.

B. Topsoil

1. Topsoil suitable for final grading shall be removed and stored separately from other excavated material.
2. Control erosion run-off from stockpiles by installing silt fencing. Maintain silt fence during construction and remove upon completion of work.

C. Excavated Materials

1. All excavated materials shall be stored in locations so as not to endanger the work, and so that easy access may be had at all times to all parts of the excavation. Stored materials shall be kept neatly piled and trimmed, so as to mitigate impact to public travel and to adjoining property owners.
2. Special precautions shall be taken to permit access at all times to fire hydrants, fire alarm boxes, police and fire department driveways, and other points where access may involve the safety and welfare of the general public.

3.6 DISPOSAL OF MATERIALS

A. Spoil Material

1. All spoil materials shall be disposed of as required by the local, state or federal regulations and as described in the Special Provisions and on the Contract Drawings.
2. The surface of all spoil areas shall be graded and dressed and no unsightly mounds or heaps shall be left on completion of the work. On site disposal areas, if permitted, shall be permanently restored with turf establishment or as otherwise specified.

3.7 SHEETING AND BRACING

A. Installation

1. The Contractor shall furnish, place and maintain such sheeting, bracing and shoring as may be required to support the sides and ends of excavations in such manner as to prevent any movement which could, in any way, injure the pipe, structures, or other work; diminish the width necessary for construction; otherwise damage or delay the Work; endanger existing structures, pipes or pavements; or cause the excavation limits to exceed the right-of-way limits.

2. Used material shall be in good condition, not damaged or excessively pitted. All steel or wood sheeting designated to remain in place shall be new. New or used sheeting may be used for temporary work.
3. In no case will bracing be permitted against pipes or structures in trenches or other excavations.
4. Sheeting shall be driven as the excavation progresses, and in such manner as to maintain pressure against the original ground at all times. The sheeting shall be driven vertically with the edges tight together, and all bracing shall be of such design and strength as to maintain the sheeting in its proper position. Seepage that carries fines through the sheeting shall be plugged to retain the fines.
5. Where breast boards are used between soldier pile, the boards shall be back packed with soil to maintain support. All timber used for breast boards (lagging) shall be new or used, meeting the requirements for Douglas Fir Dense Construction grade with a bending strength not less than 1500 psi or Southern Pine No. 2 Dense.
6. Safe and satisfactory sheeting, shoring and bracing shall be the entire responsibility of Contractor.
7. All municipal, County, State and Federal ordinances, codes, regulations and laws shall be observed.

B. Removal

1. In general, all sheeting and bracing, whether of steel, wood or other material, used to support the sides of trenches or other open excavations, shall be withdrawn as the trenches or other open excavations are being refilled. That portion of the sheeting extending below the top of a pipe or structural foundation shall not be withdrawn, unless otherwise directed, before more than 6 inches of earth is placed above the top of the pipe or structural foundation and before any bracing is removed. The voids left by the sheeting shall be carefully refilled with selected material and rammed tight with tools especially adapted for the purpose or otherwise as may be approved.
2. The Contractor shall not remove sheeting and bracing until the work has attained the necessary strength to permit placing of backfill.

C. Left in Place

1. If, to serve any purpose of his own, the Contractor files a written request for permission to leave sheeting or bracing in the trench or excavation, the Engineer may grant such permission, in writing, on condition that the cost of such sheeting and bracing be assumed and paid by the Contractor.
2. The Contractor shall leave in place all sheeting, shoring and bracing which are shown on the Contract Drawings or specified to be left in place or which the Engineer may order, in writing, to be left in place. All shoring, sheeting and bracing shown or ordered to be left in place will be paid for under the appropriate item of the Contract. No payment allowance will be made for wasted ends or for portions above the proposed cutoff level, which are driven down instead of cut-off.
3. In case sheeting is left in place, it shall be cut off or driven down as directed so that no portion of the same shall remain within 12 inches of the street subgrade or finished ground surface.

3.8 TRENCH SHIELDS

- A. Excavation of earth material below the bottom of a shield shall not exceed the limits established by ordinances, codes, laws and regulations.
- B. When using a shield for pipe installation:
 - 1. Any portion of the shield that extends below the mid-diameter of an installed rigid pipe (e.g., PCCP) shall be raised above this point prior to moving the shield ahead for the installation of the next length of pipe.
 - 2. The bottom of the shield shall not extend below the mid-diameter of installed flexible pipe (e.g., Steel, DI, PVC, etc.) at any time.
- C. When using a shield for the installation of structures, the bottom of the shield shall not extend below the top of the bedding for the structures.
- D. When a shield is removed or moved ahead, extreme care shall be taken to prevent the movement of pipe or structures or the disturbance of the bedding for pipe or structures. Pipe or structures that are disturbed shall be removed and reinstalled as specified.

3.9 BACKFILLING

- A. General
 - 1. Contractor shall furnish, place and compact general fill, imported structural fill, crushed stone, leveling course, road subbase and other materials required for structures, embankments, pipelines, utilities and other items to be installed to provide the finished grades as shown and as described herein
 - 2. All excavations shall be backfilled to the original surface of the ground or to such other grades as may be shown, specified or directed.
 - 3. Backfill excavations as promptly as Work permits, but not until completion of the following
 - a. Inspection, testing, approval, and recording of locations of underground ductbanks and utilities
 - b. Removal of concrete formwork
 - c. Removal of shoring and bracing, and backfilling of voids with satisfactory materials
 - d. Removal of trash and debris
 - e. Permanent or temporary horizontal bracing is in place on horizontally supported walls.
 - 4. Backfilling shall be done with suitable excavated materials that can be satisfactorily compacted during refilling of the excavation. In the event the excavated materials are not suitable, Select Fill materials as specified or ordered by the Engineer shall be used for backfilling.
 - 5. Backfill and fill adjacent to structures and over imported structural fill shall be deposited in layers not to exceed 6-inches in un-compacted thickness and mechanically compacted with large vibratory place compactors. Compaction of structures backfilled by rolling will be permitted provided the desired compaction is obtained and damage to the structure is prevented. Compaction of structural backfill and/or general backfill by inundation with water will not be permitted.
 - 6. The material shall be placed at a moisture content and density as specified in the compaction density requirements, a specified in Sections entitled "Excavation and Fill" and "Structural Excavation and Fill". Contractor shall provide

equipment capable of adding measured amounts of water to the backfill and/or select backfill material to bring it to a condition within the range of the required moisture content. CONTRACTOR shall provide equipment capable of discing, aerating, and mixing the soil to provide reasonable uniformity of moisture content throughout the fill material and to reduce the moisture content of the borrow material by air drying, if necessary. If the subgrade or lift of earth material must be moisture conditioned before compaction, the fill material shall be sufficiently mixed or worked on the subgrade to provide a uniform moisture content throughout the lift of material to be compacted. Materials at moisture content in excess of the specified limit shall be dried by aeration or stockpiled for drying.

7. Keep excavations dry during backfilling operations. No backfill or fill material shall be placed when free water is standing on the surface of the area where the fill is to be placed. No compaction of fill will be permitted with free water on any portion of the fill to be compacted. No fill shall be placed or compacted in a frozen condition or on top of frozen material. Any fill containing organic materials or other unacceptable material previously described shall be removed and replaced with approved fill material prior to compaction
8. Any settlement occurring in the backfilled excavations shall be refilled and compacted.

B. Unsuitable Materials

1. Stones and pieces of rock greater than six inches in any single dimension shall not be used in any portion of the backfill.
2. All stones and pieces of rock shall be distributed through the backfill and alternated with earth backfill in such a manner that all interstices between them shall be filled with earth.
3. Stone and pieces of rock greater than 1.5-inches in any single dimension shall not be used in the initial backfill (centerline of pipe to 12-inches above the top of pipe).
4. Fill containing organic materials, ice, frost, or other unacceptable material/debris shall be removed and replaced with approved fill material as specified.

C. Compaction and Density Control

1. Compaction shall be performed with equipment suitable for the type of fill material being placed. The vibratory roller shall impart a minimum compactive force of 30 tons. A minimum of four complete systematic passes shall be made to compact each lift. Hand operated compacting equipment shall be used within a distance of ten feet from the wall of any completed below grade structure or as directed by Engineer. Equipment shall be provided that is capable of compacting in restricted areas next to structures and around piping.
2. Particular care shall be taken to compact structural fill, which will be beneath pipes, roads, or other surface construction or structures. In addition, wherever a trench passes through structure backfill, the structure backfill shall be placed and compacted to a minimum depth of 12-inches above the top of the pipe before the trench is excavated. Compacted areas, in each case, shall be adequate to support the item to be constructed or placed thereon.
3. The compaction shall be as specified for the type of earthwork, i.e., structural, trenching.
 - a. The compaction specified shall be the percent of maximum dry density.

- b. The compaction equipment shall be suitable for the material encountered.
4. Where required, to assure adequate compaction, in-place density test shall at the expense of the Contractor be made by an approved testing laboratory.
 - a. The moisture-density relationship of the backfill material shall be determined by ASTM D698, Method D.
 - 1) Compaction curves for the full range of materials used shall be developed.
 - b. In-place density shall be determined by the methods of ASTM D1556 or ASTM D2922 and shall be expressed as a percentage of maximum dry density.
5. Where required, to obtain the optimum moisture content, the Contractor shall add, at its expense, sufficient water during compaction to assure the specified maximum density of the backfill. If, due to rain or other causes, the material exceeds the optimum moisture content, it shall be allowed to dry, assisted if necessary, before resuming compaction or filling efforts.
6. If the specified densities are not obtained because of improper control of placement or compaction procedures, or because of inadequate or improperly functioning compaction equipment, Contractor shall perform whatever Work is required to provide the required densities. This Work shall include complete removal of unacceptable fill areas, and replacement and re-compaction until acceptable fill is provided, at no additional cost to the Owner.
7. The Contractor shall be responsible for all damage or injury done to pipes, structures, property or persons due to improper placing or compacting of backfill.

3.10 OTHER REQUIREMENTS

A. Drainage

1. All material deposited in roadway ditches or other water courses shall be removed immediately after backfilling is completed and the section, grades and contours of such ditches or water courses restored to their original condition, in order that surface drainage will be obstructed no longer than necessary.

B. Unfinished Work

1. When, for any reason, the work is to be left unfinished, all trenches and excavations shall be filled and all roadways, sidewalks and watercourses left unobstructed with their surfaces in a safe and satisfactory condition. The surface of all roadways and sidewalks shall have a temporary pavement.

C. Hauling Material over Public Roads and Streets

1. When it is necessary to haul material over public streets or pavements, the Contractor shall provide suitable, tight vehicles so as to prevent deposits on the streets or pavements. In all cases where any materials are dropped from the vehicles, the Contractor shall clean up the same as often as required to keep the crosswalks, streets and pavements clean and free from dirt, mud, stone and other hauled material.

D. Dust Control

1. It shall be the sole responsibility of the Contractor to control the dust created by any and all of his operations to such a degree that it will not endanger the safety

and welfare of the general public, as specified in Section entitled “Special Provisions”.

2. Calcium chloride and petroleum products shall not to be used for dust control.

E. Test Pits

1. For the purpose of obtaining detail locations of under-ground obstructions, the Contractor shall make excavations in advance of the work.

END OF SECTION

STRUCTURAL EXCAVATION & FILL

Part 1 - General

1.1 SUMMARY

- A. This Section includes excavation, backfill and compaction as required for the construction of structures in accordance with the applicable provisions of the Section entitled "Earthwork" unless modified herein, or as shown on the Contract Drawings.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 LIMITS OF EXCAVATION

- A. Excavations shall be made to the elevations or subgrades specified and shall be only of sufficient size to allow suitable room for the proper construction of structures and appurtenances, including allowances for sheeting, de-watering, and other similar work necessary for completion of the Contract.
- B. The elevation of the bottom of footings shown shall be considered as approximate only and Engineer may direct such changes in dimensions and elevations as may be required to secure a satisfactory footing. All structure excavations shall be hand-trimmed to permit the placing of full widths, and lengths of footings on horizontal beds. Rounded and undercut edges will not be permitted
- C. Subgrade materials are moisture and disturbance sensitive and every effort should be made to minimize the disturbance of the subgrades during excavations
- D. In no case will undercutting excavation faces be permitted
- E. Notify the Engineer when excavations have reached the required elevations. The Engineer will observe the excavations and bearing conditions. After review by the Engineer, the excavations may be required to proceed deeper or additional measures taken, due to disturbance of the subgrade, variation in subsurface conditions, or the presence of unsuitable soils at the design subgrade level. Replace the excavated material with compacted select fill materials, crushed stone, geotextile inclusions, lean concrete or other suitable material as directed by the Engineer. Excavation and replacement of materials, as described above, due to disturbance of the subgrade by Contractor activities shall be remediated by the Contractor at no additional cost to the Owner.

3.2 SUBSURFACE REINFORCEMENT

- A. Where an unstable subgrade is encountered and subject to the approval of the Engineer, select fill materials may be used for subgrade reinforcement if satisfactory results can be obtained thereby. Such material shall be as specified by Engineer and applied in thin layers, each layer being entirely embedded in the subsoil by thorough tamping.
- B. All excess material shall be removed to compensate for the displacement by the select fill material and the finished elevation shall not be above the specified subgrade.
- C. Where subgrade reinforcement is unsatisfactory, a concrete mud mat of sufficient thickness to withstand subsequent construction operations shall be installed below the specified elevation and the structural concrete deposited thereon.

3.3 REMOVAL OF WATER

- A. The Contractor shall at all times provide and maintain proper and satisfactory means and devices for the removal of all water entering the excavations, and shall remove all such water as fast as it may collect, in such manner as shall not interfere with the prosecution of the work or the proper placing of pipes, structures, or other work.
- B. Where the structure or pipeline is to be placed below the ground water table, well points, sumps/pumps, trench drains, or other acceptable methods shall be used to permit construction of said structure or pipeline under dry conditions. Dry conditions shall prevail until concrete has reached sufficient strength to withstand earth and hydrostatic loads and until the pipelines are properly jointed, tested and backfilled. In addition, protect excavation from flooding. Water level shall be maintained below top of backfill at all times
- C. Dewatering shall not be permitted within the zone of influence (ZOI) of structures.
- D. The removal of water shall be in accordance with the Section entitled "Earthwork".

3.4 BACKFILLING

- A. All structural backfill shall be placed in horizontal loose lifts, not exceeding 12-inches in thickness, and shall be mixed and spread in a manner to provide uniform lift thickness and to obtain the specified densities after placing. Each lift shall be compacted by not less than four complete passes/coverages of the specified compactor. Structural backfill shall be placed to the underside of all concrete slabs.
- B. Backfilling shall be with suitable excavated materials which can be compacted as specified. In the event the excavated materials are not suitable, special backfill as specified or ordered by the Engineer shall be used for backfilling.
- C. Backfilling around structures shall not be commenced before the structure has developed sufficient strength to withstand the loads applied. No backfill material shall be allowed to fall directly on a structure, until at least 12 inches of material has been hand-placed and compacted nor shall any material be pushed directly against a structure in backfilling.

3.5 COMPACTION

- A. Compaction shall be performed with equipment suitable for the type of fill material being placed. The vibratory roller shall impart a minimum compactive force of 30 tons. A minimum of four complete systematic passes shall be made to compact each lift. Hand operated compacting equipment shall be used within a distance of ten feet from the wall of any completed below grade structure or as directed by Engineer. Equipment shall be provided that is capable of compacting in restricted areas next to structures and around piping.
- B. Particular care shall be taken to compact structural fill, which will be beneath pipes, roads, or other surface construction or structures. In addition, wherever a trench passes through structure backfill, the structure backfill shall be placed and compacted to a minimum depth of 12-inches above the top of the pipe before the trench is excavated. Compacted areas, in each case, shall be adequate to support the item to be constructed or placed thereon
- C. Perform backfill around structures using the specified procedures, except that within ten feet of foundations and underground structures, light compaction equipment shall be used, with the gross weight of the equipment not exceeding 7,000 pounds. Provide equipment that is capable of the required compaction within restricted areas next to structures and around piping.
- D. The degree of compaction required for select fill materials shall be as listed below. Material shall be moistened or aerated as necessary to provide the moisture content that will facilitate obtaining the specified compaction
 - 1. Within zone of influence (ZOI) of perimeter footings and tank slabs minimum compaction required shall be 95% maximum density.
 - 2. Non-Load bearing areas adjacent to the structure minimum compaction required shall be 92% maximum density.
 - 3. Paved areas minimum compaction required shall be 92% maximum density up to 3 feet below finished grade and 95% maximum density in the upper 3 feet.
 - 4. Landscaped areas minimum compaction required shall be 90% maximum density.
- E. The density shall be determined as set forth in the Section entitled "Earthwork".

END OF SECTION

Trenching and backfilling

Part 1 - General

1.1 SUMMARY

- A. This Section includes excavation and backfill as required for pipe installation or other construction in the excavation or trench, and removal and disposal of water, in accordance with the applicable provisions of the Section entitled "Earth Moving" unless modified herein, or as shown on the Contract Drawings.

1.2 SUBMITTALS

- 1. Not Used

PART 2 - PRODUCTS

- A. Not used

PART 3 - EXECUTION

3.1 EXCAVATION

- A. The trench excavation shall be located as shown on the Contract Drawings or as specified. Under ordinary conditions, excavation shall be by open cut from the ground surface. Where the depth of trench and soil conditions permit, tunneling may be required beneath cross walks, curbs, gutters, pavements, trees, driveways, railroad tracks and other surface structures. No additional compensation will be allowed for such tunneling over the price bid for open cut excavation of equivalent depths below the ground surface unless such tunnel excavation is specifically provided for in the Contract Documents.
- B. Trenches shall be excavated to maintain the depths as shown on the Contract Drawings or as specified for the type of pipe to be installed.
- C. The alignment and depth shall be determined and maintained by the use of a string line installed on batter boards above the trench, a double string line installed along side of the trench or a laser beam system.
- D. The minimum width of trench excavation shall be 6 inches on each side of the pipe hub for 21-inch diameter pipe and smaller and 12 inches on each side of the pipe hub for 24-inch diameter pipe and larger.
- E. Trenches shall not be opened for more than 300 feet in advance of pipe installation nor left unfilled for more than 100 feet in the rear of the installed pipe when work is in progress without the consent of the Owner's Designated Representative. Open trenches shall be protected and barricaded as required.
- F. Bridging across open trenches shall be constructed and maintained where required.

3.2 SUBGRADE PREPARATION FOR PIPE

- A. Where pipe is to be laid on undisturbed bottom of excavated trench, mechanical excavation shall not extend lower than the finished subgrade elevation at any point.

- B. Where pipe is to be laid on special granular material the excavation below subgrade shall be to the depth specified or directed. The excavation below subgrade shall be refilled with special granular material as specified or directed, shall be deposited in layers not to exceed 6 inches and shall be thoroughly compacted prior to the preparation of pipe subgrade.
- C. The subgrade shall be prepared by shaping with hand tools to the contour of the pipe barrel to allow for uniform and continuous bearing and support on solid undisturbed ground or embedment for the entire length of the pipe.
- D. Pipe subgrade preparation shall be performed immediately prior to installing the pipe in the trench. Where bell holes are required they shall be made after the subgrade preparation is complete and shall be only of sufficient length to prevent any part of the bell from becoming in contact with the trench bottom and allowing space for joint assembly.

3.3 STORAGE OF MATERIALS

- A. Traffic shall be maintained at all times in accordance with the applicable Highway Permits. Where no Highway Permit is required at least one-half of the street must be kept open for traffic.
- B. Where conditions do not permit storage of materials adjacent to the trench, the material excavated from a length as may be required, shall be removed by the Contractor, at his cost and expense, as soon as excavated. The material subsequently excavated shall be used to refill the trench where the pipe had been built, provided it be of suitable character. The excess material shall be removed to locations selected and obtained by the Contractor.
 - 1. The Contractor shall, at his cost and expense, bring back adequate amounts of satisfactory excavated materials as may be required to properly refill the trenches.
- C. If directed by the Owner's Designated Representative, the Contractor shall refill trenches with select fill or other suitable materials and excess excavated materials shall be disposed of as spoil.

3.4 REMOVAL OF WATER AND DRAINAGE

- A. The Contractor shall at all times provide and maintain proper and satisfactory means and devices for the removal of all water entering the trench, and shall remove all such water as fast as it may collect, in such manner as shall not interfere with the prosecution of the work.
- B. The removal of water shall be in accordance with the Section entitled "Earth Moving".

3.5 PIPE EMBEDMENT

- A. All pipes shall be protected from lateral displacement and possible damage resulting from superimposed backfill loads, impact or unbalanced loading during backfilling operations by being adequately embedded in suitable pipe embedment material. To ensure adequate lateral and vertical stability of the installed pipe during pipe jointing and embedment operations, a sufficient amount of the pipe embedment material to hold the pipe in rigid alignment shall be uniformly deposited and thoroughly compacted on each side, and back of the bell, of each pipe as laid.
- B. Concrete cradle and encasement of the class specified shall be installed where and as shown on the Contract Drawings or ordered by the Owner's Designated Representative. Before any concrete is placed, the pipe shall be securely blocked and braced to prevent movement or flotation. The concrete cradle or encasement shall extend the full width of the trench as excavated unless otherwise authorized by the Owner's Designated Representative. Where

concrete is to be placed in a sheeted trench it shall be poured directly against sheeting to be left in place or against a bond-breaker if the sheeting is to be removed.

- C. Embedment materials placed above the centerline of the pipe or above the concrete cradle to a depth of 12 inches above the top of the pipe barrel shall be deposited in such manner as to not damage the pipe. Compaction shall be as required for the type of embedment being installed.

3.6 BACKFILL ABOVE EMBEDMENT

- A. The remaining portion of the pipe trench above the embedment shall be refilled with suitable materials compacted as specified.
 - 1. Where trenches are within the ditch-to-ditch limits of any street or road or within a driveway or sidewalk, or shall be under a structure, the trench shall be refilled in horizontal layers not more than 8 inches in thickness, and compacted to obtain 95% maximum density, and determined as set forth in the Section entitled "Earth Moving".
 - 2. Where trenches are in open fields or unimproved areas outside of the ditch limits of roads, the trench shall be refilled in horizontal layers not more than 8 inches in thickness, and compacted to obtain 90% maximum density, and determined as set forth in the Section entitled "Earthwork".
 - 3. Hand tamping shall be required around buried utility lines or other subsurface features that could be damaged by mechanical compaction equipment.
 - 4. In place density compaction testing as set forth in the Section entitled "Earthwork" shall be completed as directed by the Owner's Designated Representative.
- B. Backfilling of trenches beneath, across or adjacent to drainage ditches and water courses shall be done in such a manner that water will not accumulate in unfilled or partially filled trenches and the backfill shall be protected from surface erosion by adequate means.
 - 1. Where trenches cross waterways, the backfill surface exposed on the bottom and slopes thereof shall be protected by means of stone or concrete rip-rap or pavement.
- C. All settlement of the backfill shall be refilled and compacted as it occurs.
- D. Surfaces shall be restored as specified in the Section entitled "Restoration of Surfaces".

END OF SECTION

EMBANKMENT

Part 1 - General

1.1 SUMMARY

- A. This Section includes construction of earth embankments constructed to established lines and grades at the locations as shown on the Contract Drawings and as directed by the Engineer.

1.2 REFERENCES

- A. Materials and installation shall comply with the latest revision of the following codes, standards and specifications, except where more stringent requirements have been specified herein:
 - 1. American Society for Testing and Materials (ASTM)
 - a. D698 Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³) (600 kN-m/m³)
 - b. D1556 Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
 - c. D2922 Test Methods for Density of Soil and Soil Aggregate in Place by Nuclear Methods (Shallow Depth)

1.3 SUBMITTALS

- A. Submit the following in accordance with the General Conditions/General Requirements.
 - 1. Proposed testing laboratory
 - 2. Source of off-site materials
 - 3. Compaction curves for all materials to be used

1.4 TESTING

- A. All testing, including field and laboratory services, shall be at the Contractor's expense without additional compensation, except where separate payment is specified.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Embankment material shall be free from frost, stumps, trees, roots, sods, muck, marl, vegetable matter or other unsuitable material and shall be suitable for compaction as described in the following provisions. Where embankments are to be placed underwater only acceptable granular materials shall be used.
- B. Embankment materials shall be obtained from acceptable soils on the site, or approved off-site sources.

PART 3 - EXECUTION

3.1 PREPARATION OF SUBGRADE

- A. The entire surface to be covered with embankment shall be grubbed and stripped of all grass, vegetation, topsoil, rubbish, or other unsuitable materials before any embankment material is placed.
 - 1. Topsoil shall be stockpiled or placed as designated.
 - 2. Other grubbed and stripped materials shall be removed as spoil.
- B. Stripped or excavated surfaces on which embankments are to be placed shall be compacted to the required density of the embankment prior to any fill being placed.

3.2 PLACEMENT AND COMPACTION

- A. Materials shall be placed in lifts not greater than 8 inches of thickness unless a greater thickness is allowed by the Engineer upon demonstration by the Contractor that the materials and compaction efforts are adequate to obtain the required density.
- B. Material shall be placed in a uniform lift and thoroughly compacted by compaction equipment suitable for the material encountered to obtain the required density prior to the placement of succeeding lift.
 - 1. Each lift shall be tested for proper compaction before successive lifts are applied.
- C. Stones shall not exceed 6 inches in greatest dimension and shall be well distributed throughout the soil mass. Stone shall be defined as rock material either in its natural or broken state.
- D. Stones not well mixed with soil material shall not be used in earth embankments unless the stone material is sufficiently deteriorated or friable so as to be compactable to achieve minimum voids and required density.
- E. If the required density is not obtained, compaction of the embankment shall continue until specified densities are obtained, before any additional embankment is placed. Improperly compacted embankment shall be removed.
- F. Where required, the Contractor shall, at his expense, add sufficient water during the compaction effort to assure proper density. If, due to rain or other causes, the material exceeds the optimum moisture content for satisfactory compaction, it shall be allowed to dry, assisted by dicing or harrowing, if necessary, before compaction or filling effort is resumed.
- G. The Contractor shall be required to seal the working surface at the close of each day's operation and when practical prior to rainfall. Sealing shall be accomplished by rolling the surface with a smooth wheel steel roller.
- H. Compaction or consolidation achieved by traveling trucks, machines and other equipment will not be accepted unless such procedures are approved by the Engineer and proper compaction density is achieved.

- I. Hand tamping shall be required around buried utility lines or other subsurface features that could be damaged by mechanical compaction equipment.
- J. Embankments shall be constructed to such elevations as to make allowance for any settlement that may occur. Prior to the construction of any structure, roadway or other ground feature and before final acceptance of the contract, the Contractor shall regrade the embankments to conform to the established lines and grades.

3.3 DENSITY CONTROL

- A. Embankments shall be compacted to 90% of maximum dry density as determined by the density tests designated in ASTM D 698, Method D.
 - 1. Compaction curves for the full range of soil materials to be used in the embankment shall be developed by an approved independent testing laboratory.
- B. Field control samples shall be taken and tested by the testing laboratory as required to assure that adequate compaction of the embankment material is being achieved.
- C. A minimum of one (1) in-place density test shall be made for every (10,000) square feet of compacted area per lift.
 - 1. In-place density of soils shall be determined by the methods described in ASTM D1556 or ASTM D2922 and expressed as a percentage of the maximum dry density.

END OF SECTION

Restoration of surfaces

Part 1 - General

1.1 SUMMARY

- A. This Section includes restoration and maintenance of all types of surfaces, sidewalks, curbs, gutters, culverts and other features disturbed, damaged or destroyed during the performance of the work under or as a result of the operations of the Contract.
- B. The quality of materials and the performance of work used in the restoration shall produce a surface or feature equal to the condition of each before the work began.

1.2 REFERENCES

- A. Materials and installation shall comply with the latest revision of the following codes, standards and specifications, except where more stringent requirements have been specified herein:
 - 1. American Society for Testing and Materials (ASTM)
 - a. D1557- Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³) (2,700 kN-m/m³)

1.3 SUBMITTALS

- A. Submit the following in with the General Provisions.
 - 1. A schedule of restoration operations. After an accepted schedule has been agreed upon it shall be adhered to unless otherwise revised with the approval of the Engineer.
 - 2. A Deviation Schedule if there is a proposed change from the original schedule.

PART 2 - PRODUCTS

- A. Not used

PART 3 - EXECUTION

3.1 GENERAL

- A. In general, permanent restoration of paved surfaces will not be permitted until one month has elapsed after excavations have been completely backfilled as specified. A greater length of time may be granted before permanent restoration of surfaces is undertaken if additional time is required for shrinkage and settlement of the backfill.
- B. The replacement of surfaces at any time, as scheduled or as directed, shall not relieve the Contractor of responsibility to repair damages by settlement or other failures.

3.2 TEMPORARY PAVEMENT

- A. Immediately upon completion of refilling of the trench or excavation, the Contractor shall place a temporary pavement over all disturbed areas of streets, driveways, sidewalks, and other traveled places where the original surface has been disturbed as a result of

construction operations.

- B. Unless otherwise specified or directed the temporary pavement shall consist of compacted run-of-crusher limestone to such a depth as required to withstand the traffic to which it will be subjected.
- C. Where concrete pavements are removed, the temporary pavement shall be surfaced with asphalt "cold patch". The surface of the temporary pavement shall conform to the slope and grade of the area being restored.
- D. Control of dust shall be the Contractor's responsibility. All surfaces shall be treated as frequently as may be required in the opinion of the Owner's Representative.
- E. Temporary pavement shall be maintained by the Contractor in a safe and satisfactory condition until such time as the permanent pavement is completed. The Contractor shall immediately remove and restore all pavement that is deemed unsatisfactory to the Owner's Representative.

3.3 PERMANENT PAVEMENT REPLACEMENT

- A. The permanent and final repaving of all streets, driveways and surfaces where pavement has been removed, disturbed, settled or damaged by or as a result of performance of the Contract shall be repaired and replaced by the Contractor, with a new and similar pavement.
 - 1. The top surface shall conform with the grade of existing adjacent pavement and the entire replacement shall meet the current specifications of the local government for each type of pavement.
 - 2. Where the local government has no specification for the type of pavement, the work shall be done in conformity with the State Department of Transportation.
 - 3. Transportation Standard which conforms to the closest type of surface requiring replacement, as determined by the Owner's Representative.

3.4 PREPARATION FOR PERMANENT PAVEMENT

- A. When scheduled and within the time specified, the temporary pavement shall be removed and a base prepared, at the depth required by the local government or Highway Permit, to receive the permanent pavement.
 - 1. The base shall be brought to the required grade and cross-section and thoroughly compacted before placing the permanent pavement.
 - 2. Any base material that has become unstable for any reason shall be removed and replaced with compacted base materials.
- B. Prior to placing the permanent pavement, all service boxes, manhole frames, manhole covers, and similar structures within the area shall be adjusted to the established grade and cross-section.
- C. The edges of existing asphalt pavement shall be sawcut to a minimum of 1 foot beyond the excavation or disturbed base, whichever is greater.
 - 1. All cuts shall be parallel or perpendicular to the centerline of the street, unless otherwise shown or directed.

3.5 ASPHALT PAVEMENT

- A. The permanent asphalt pavement replacement shall be replaced with bituminous materials of the same depth and kind as the existing materials unless otherwise specified.
- B. Prior to placing of any bituminous pavement a tack coat sealer shall be applied to the edges of the existing pavement and other features.
- C. The furnishing, handling, and compaction of all bituminous materials shall be in accordance with the State Department of Transportation Standards.

3.6 CONCRETE PAVEMENT AND PAVEMENT BASE

- A. Concrete pavements and concrete bases for asphalt, brick or other pavement surfaces shall be replaced with 4,000 psi concrete, air-entrained.
- B. Paving slabs or concrete bases shall be constructed to extend 1 foot beyond each side of the trench and be supported on undisturbed soil. Where such extension of the pavement will leave less than 2 feet of original pavement slab or base, the repair of the pavement slab or base shall be extended to replace the slab to the original edge of the pavement or base unless otherwise indicated on the Contract Drawings.
- C. Where the edge of the pavement slab or concrete base slab falls within the excavation, the excavation shall be backfilled with Special Backfill compacted to 95% maximum dry density as determined by ASTM D 698 up to the base of the concrete.
- D. The new concrete shall be of the same thickness as the slab being replaced and shall contain reinforcement equal to the old pavement.
 - 1. New concrete shall be placed and cured in accordance with the applicable provisions of the State Department of Transportation Standards.

3.7 STONE OR GRAVEL PAVEMENT

- A. All pavement and other areas surfaced with stone or gravel shall be replaced with material to match the existing surface unless otherwise specified.
 - 1. The depth of the stone or gravel shall be at least equal to the existing.
 - 2. After compaction the surface shall conform to the slope and grade of the area being replaced.

3.8 CONCRETE WALKS, CURBS AND GUTTER REPLACEMENT

- A. Concrete walks, curbs, and gutters removed or damaged in connection with or as a result of the construction operations shall be replaced with new construction.
 - 1. The minimum replacement will be a flag or block of sidewalk.
- B. Walks shall be constructed of 4,000 psi concrete, air-entrained with NYSDOT #1 stone aggregate on a 4-inch base of compacted gravel or stone.
 - 1. The walk shall be no less than 4 inches in thickness. Otherwise, the thickness of the replaced walk where greater than 4 inches shall have construction joints spaced no more than 25 feet apart, shall have expansion joints spaced no more than 50 feet apart, and shall be sloped at right angles to the longitudinal centerline at approximately an inch per foot of width.
- C. One-half (1/2) inch expansion joint material shall be placed around all objects within the sidewalk area as well as objects to which the new concrete will abut, such as valve boxes,

manhole frames, curbs, buildings and others.

- D. Walks shall be hand-floated and broom-finished, edged and grooved at construction joints and at intermediate intervals matching those intervals of the walk being replaced.
 - 1. The intermediate grooves shall be scored a minimum of 1/4 of the depth of the walk.
 - 2. The lengths of blocks formed by the grooving tool, and distances between construction and expansion joints shall be uniform throughout the length of the walk in any one location.
- E. The minimum length of curb or gutter to be left in place or replaced shall be 5 feet. Where a full section is not being replaced, the existing curb or gutter shall be sawcut to provide a true edge.
 - 1. The restored curb or gutter shall be the same shape, thickness and finish as being replaced and shall be built of the same concrete and have construction and expansion joints as stated above for sidewalks.

3.9 LAWNS AND IMPROVED AREAS

- A. The area to receive topsoil shall be graded to a depth of not less than 4 inches or as specified below the proposed finished surface.
 - 1. If the depth of existing topsoil prior to construction was greater than 4 inches, topsoil shall be replaced to that depth.
- B. The furnishing and placing of topsoil, seed and mulch shall be in accordance with the Technical Specification 32 93 13 entitled "Topsoil and Seeding".
- C. When required to obtain germination, the seeded areas shall be watered in such a manner as to prevent washing out of the seed.
- D. Any washout or damage that occurs shall be regraded and reseeded until a good sod is established.
- E. The Contractor shall maintain the newly seeded areas, including regrading, reseeding, watering, and mowing in accordance with Technical Specification 32 93 13 entitled "Topsoil and Seeding".

3.10 CULTIVATED AREA REPLACEMENT

- A. Areas of cultivated lands shall be graded to a depth to receive topsoil of not less than the depth of the topsoil before being disturbed. All debris and inorganic material shall be removed prior to the placing of the topsoil.
- B. The furnishing and placing of topsoil shall be in accordance with Technical Specification 32 93 13 entitled "Topsoil and Seeding".
- C. After the topsoil has been placed and graded, the entire area disturbed during construction shall be cultivated to a minimum depth of 12 inches with typical farm equipment.
 - 1. Any debris or inorganic materials appearing shall be removed.
 - 2. The removal of stones shall be governed by the adjacent undisturbed cultivated area.
- D. Grass areas shall be re-seeded using a mixture equal to that of the area before being disturbed, unless otherwise specified.

3.11 OTHER TYPES OF RESTORATION

- A. Trees, shrubs and landscape items damaged or destroyed as a result of the construction operations shall be replaced in like species and size.
 - 1. All planting and care thereof shall meet the standards of the American Nursery and Landscaper Association.
- B. Swales and other water courses shall be reshaped to the original grade and cross-section and all debris removed. Where required to prevent erosion, the bottom and sides of the water course shall be protected.
- C. Storm sewers and culverts damaged or removed as a result of the construction operations shall be replaced with like size and material and shall be replaced at the original location and grade. When there is minor damage to a pipe, and with the consent of the Owner's Representative, a repair may be undertaken if satisfactory results can be obtained.
- D. Should brick pavements be encountered in the work, the restoration shall be as set forth in the Special Provisions, or as directed.

END OF SECTION

Topsoil and seeding

Part 1 - General

1.1 SUMMARY

- A. This Section includes topsoil, fertilizer, seed, mulch anchorage, and associated work.
- B. Seeding shall be as scheduled below.

1.2 REFERENCES

- A. Comply with the latest revision of the following codes, standards and specifications, except where more stringent requirements have been specified herein:
 - 1. “Standard Specifications, Construction and Materials, New York Department of Transportation, Office of Engineering” (NYS DOT Specification).

1.3 SUBMITTALS

- A. Submit the following in accordance with the General Provisions.
 - 1. The location of source and data for off-site topsoil.
 - 2. Analysis of the seed.
 - 3. Certification that each container complies with the provisions of New York State Agriculture and Markets’ Law.
 - 4. Hydroseeder data including material and application rates, if applicable.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Topsoil

- 1. Topsoil shall be unfrozen, friable clayey loam free from clay lumps, stones, roots, sticks, stumps, brush or foreign objects.
- 2. All topsoil incorporated into the completed contract, whether originating on-site or off-site, shall be screened.
- 3. All stones and rocks larger than 1/4-inch diameter shall be removed from topsoil prior to placement.

B. Fertilizer

- 1. Fertilizer shall be a standard quality commercial carrier of available plant food elements. A complete prepared and packaged material containing a minimum of 10 percent nitrogen, 10 percent phosphoric acid and 10 percent potash.
- 2. Each bag of fertilizer shall bear the manufacturer's guaranteed statement of analysis.

C. Seed Mixtures

- 1. Seed mixtures shall be of commercial stock of the current season's crop and shall be delivered in unopened containers bearing the guaranteed analysis of the mix.
- 2. All seed shall meet the State standards of germination and purity.

Table 1-1 Seed Mixtures		
Specie	Lawn Area	Un-manitained* Areas
Kentucky Bluegrass	50	20
Creeping Red Fescue	30	20
Manhattan Pennfine Ryegrass	20	60
*% by weight		

- D. Mulch shall be stalks of oats, wheat, rye or other approved crops which are free from noxious weeds.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. The area to receive topsoil shall be graded to a depth of not less than 4 inches or as specified, below the proposed finished surface. If the depth of topsoil existing prior to construction was greater than 4 inches, the topsoil shall be replaced not less than the greater depth.
 - 1. All debris and inorganic material shall be removed and the surface loosened for a depth of 2 inches prior to the placing of the topsoil.
 - 2. The topsoil shall not be placed until the subgrade is in suitable condition and shall be free of excessive moisture and frost.
- B. Satisfactory topsoil removed from the excavations shall be placed on the prepared subgrade to the depth required.
 - 1. In the event the topsoil removed during excavation is unsatisfactory or inadequate to obtain the required finish grades, the Contractor shall furnish the required quantity of satisfactory topsoil from approved sources off site.
 - 2. All topsoil shall be screened and be free from stones, roots, sticks and other foreign substances and shall not be placed in a frozen or muddy condition.
 - 3. The finished surface shall conform to the lines and grades of the area before disturbed or as shown on the Contract Drawings. Any irregularities shall be corrected before the placement of fertilizer and seed.
- C. The fertilizer shall be applied uniformly at the rate of 20 pounds per 1000 square feet.
 - 1. Following the application of the fertilizer and prior to application of the seed, the topsoil shall be scarified to a depth of at least 2 inches with a disc or other suitable method traveling across the slope if possible.
- D. When the topsoil surface has been fine graded, the seed mixture shall be uniformly applied upon the prepared surface with a mechanical spreader at a rate of not less than 10 pounds per

1000 square feet.

1. The seed shall be raked lightly into the surface and rolled with a light hand lawn roller.
 2. Seeding and mulching shall not be done during windy weather.
- E. The mulch shall be hand or machine spread to form a continuous blanket over the seed bed, approximately 2 inches uniform thickness at loose measurement. Excessive amounts or bunching of mulch will not be permitted.
1. Mulch shall be anchored by an acceptable method.
 2. Unless otherwise specified, mulch shall be left in place and allowed to decay.
 3. Any anchorage or mulch that has not decayed at time of first mowing, shall be removed. Anchors may be removed or driven flush with ground surface.
- F. Seeded areas shall be watered as often as required to obtain germination and to obtain and maintain a satisfactory sod growth. Watering shall be in such a manner as to prevent washing out of seed.
- G. Hydroseeding may be accepted as an alternative method of applying fertilizer, seed and mulch. The Contractor shall submit all data regarding materials and application rates to the Engineer for review.

3.2 MAINTENANCE

- A. All lawn areas shall be mowed by the Contractor before the new grass reaches a height of 4 inches.
1. Infrastructure (Sewer and Water Line) Projects
 2. Following the establishment of a good stand of grass and the first mowing, the Contractor's obligation shall end except for the repair of settlement or damage.
 3. Site Development, Plants and Similar Projects
 4. The Contractor shall maintain the newly seeded areas in good condition until acceptance, including regular mowing to a height of 2 inches.

END OF SECTION

LEAKAGE TESTS

Part 1 - General

1.1 SUMMARY

- A. This Section includes leakage tests of all hydraulic structures, pressure and non-pressure piping for leakage as shown on the Contract Drawings.
- B. The Contractor shall provide all labor, material, tools, equipment, and incidentals as shown, specified, and required to clean, flush, disinfect, and test piping as required.
- C. The Work also includes all labor and materials required to prepare structure and piping for testing and disinfecting, conveying water to testing location, performing testing, and all labor and materials required to drain and dispose of water used for testing and disinfecting.
- D. All testing shall be witnessed by the Engineer.

1.2 REFERENCES

- A. Comply with the latest revision of the following codes, standards and specifications, except where more stringent requirements have been specified herein:
 - 1. American Society for Testing and Materials (ASTM)

1.3 SUBMITTALS

- A. Testing shall not commence without acceptance of procedure by Engineer.
- B. Test and Evaluation Reports: Reports of test results.

Part 2 - products

1.4 WATER FOR TESTING

- A. Permission shall be obtained from the owner of the water system before the use of water from any existing system. The Contractor shall:
 - 1. Conform to the requirements of the Town.
 - 2. Give notice at least 24 hours before the use of water for any reason.

Part 3 - execution

1.5 LEAKAGE TESTS FOR HYDRAULIC STRUCTURES

- A. Tanks, vaults, wells and other fluid containing structures, (excluding manholes and unless otherwise noted, structures used in storm sewer systems) shall be tested before backfilling by filling the structure with water to overflowing, or other level as may be directed by the Engineer, and observing the water surface level twenty-four hours thereafter.

1. When testing absorbent materials such as concrete, the structure shall be filled with water at least 24 hours before the test is started.
- B. The exterior surface, especially at the construction joint, will be inspected for leakage during and upon completion of the 24-hour test.
 1. Leakage will be considered to be within the allowable limits when there is no visible sign of leakage on the exterior surface and where the water surface does not drop except as associated with evaporation.
 2. A slight dampness on the exterior wall surface during the test period will not be considered as leakage, except in the case of prestressed concrete structures.

1.6 TESTS ON PRESSURE PIPING FOR TRANSPORT OF WATER OR SEWAGE

A. General

1. Pipelines designed to transport water or sewage under pressure shall be tested hydrostatically and for leakage prior to being placed in service.
2. The length of piping and sections included in the tests shall meet the approval of the Engineer.
3. Equipment in or attached to the pipes being tested shall be protected. Any damage to such equipment during the test shall be repaired by the Contractor at his expense.
4. When piping is to be insulated or concealed in a structure, tests shall be made before the pipe is covered.
5. All fittings, hydrants and appurtenances must be properly braced and harnessed before the pressure is applied. Thrust restraining devices which will become a part of the system must also be tested at the test pressure.
6. When testing absorbent pipe materials such as concrete, the pipeline shall be filled with water at least 24 hours before the test is made.
7. If the line fails the test, the Contractor shall explore for the cause of the excessive leakage and after repairs have been made the line shall be retested. This procedure shall be repeated until the pipe complies.

B. Pressure Test

1. Test pressure shall be as scheduled or, where no pressure is scheduled, shall be 150 psi.
2. Test pressure shall be held on the piping for a period of at least 2 hours, unless a longer period is requested by the Engineer.

C. Leakage Test

1. The leakage test shall be conducted concurrently with the pressure test.
2. The rate of leakage shall be determined at 15-minute intervals by means of volumetric measurement of the makeup water added to maintain the test pressure. The test shall proceed until the rate of leakage has stabilized or is decreasing below an allowable value, for three consecutive 15-minute intervals. After this, the test pressure shall be maintained for at least another 15 minutes.
 - a. At the completion of the test the pressure shall be released at the furthest point from the point of application.
3. All exposed piping shall be examined during the test and all leaks, defective material or joints shall be repaired or replaced before repeating the tests.

4. The allowable leakage for pressure pipelines shall not exceed the following in gallons per 24 hours per inch of diameter per mile of pipe:

Type of Pipe	Leakage
Ductile iron	10
Polyvinyl chloride, thermal plastic or fiberglass with rubber joints	10
Polyvinyl chloride, thermal plastic or fiberglass with solvent-cemented joints	0
High Density Polyethylene, with butt fused joints	0
Prestressed Concrete with steel and rubber joints	10
Steel with welded joints	0
Steel with harnessed or push-on joints	10
Wrought Steel	0
Copper	0

All piping inside structures	0
------------------------------	---

5. Regardless of the above allowable leakage, any visible leaks shall be permanently corrected by the Contractor.

1.7 TEST FOR NON-PRESSURE PIPELINES FOR TRANSPORT OF WATER OR SEWAGE

A. General

1. Pipelines designed to carry water or sewage in open channel flow or at minimal pressures shall be tested for leakage prior to being placed in service.
2. The leakage shall be determined by exfiltration, infiltration or low pressure air.
 - a. The testing method directed by the Engineer shall take into consideration the groundwater elevation of the section of pipe being tested.
 - b. The maximum non-pressure pipeline to be tested for leakage shall be the section between manholes or 600 feet as directed by the Engineer.
3. Intermediate leakage tests during construction shall be made at the Contractor's discretion. Upon completion of any pipeline, the entire system including manholes shall be tested for compliance to allowable leakage.
4. When testing absorbent pipe materials such as concrete, the pipeline shall be filled with water at least 24 hours before the test is made.
5. Groundwater level shall be determined by the Contractor prior to any testing by reading the water level at the observation pipe in the manholes.
6. If the line fails the test, the Contractor shall explore for the cause of the excessive leakage and after repairs have been made the line shall be retested. This procedure shall be repeated until the pipe complies.

B. Exfiltration Testing

1. Exfiltration tests shall be made by filling a section of pipeline with water and measuring the quantity of leakage.
2. The head of water at the beginning of the test shall be at least 2 feet above the highest pipe within the section being tested.
 - a. Should groundwater be present within the section being tested, the head of water for the test shall be 2 feet above the hydraulic gradient of the groundwater.
 - b. Should the requirement of 2 feet of water above the highest pipe subject any joint at the lower end of the test section to a differential head of greater than 11.5 feet another method of testing shall be employed.

C. Infiltration Testing

1. Infiltration tests will be allowed only when the water table gauges determine the groundwater level to be 2 feet or more above the highest pipe of the section being tested.
2. Infiltration test shall be made by measuring the quantity of water leaking into a section of pipeline.
3. Measurement of the infiltration shall be by means of a calibrated weir constructed at the outlet of the section being tested.

D. Allowable Leakage for Non-Pressure Pipelines

- The allowable leakage (exfiltration or infiltration) for non- pressure pipelines shall not exceed the following in gallons per 24 hours per inch of diameter per 1000 feet of pipe:

Type of Pipe	Leakage
Ductile iron - mechanical or push-on joints	10
Polyvinyl chloride, thermal plastic or fiberglass with rubber joints	10
Polyvinyl chloride, thermal plastic or fiberglass with solvent-cemented joints	0
Concrete with rubber joints	10
Concrete with steel and rubber joints	10
Corrugated Steel	95
Cast iron soil pipe	
1. drains and vents	0

2. sewer laterals	
All piping inside structures	0

2. Regardless of the above allowable leakage any spurting leaks detected shall be permanently stopped.

END OF SECTION

DUCTILE IRON PIPE

Part 1 - General

SUMMARY

- A. This Section includes centrifugally cast ductile iron pipe, fittings, specials, and all accessories as shown or specified.
- B. Certain features of Ductile Iron Pipe shall be as scheduled herein or on the Contract Drawings.

REFERENCES

- C. Comply with the latest revision of the following codes, standards and specifications, except where more stringent requirements have been specified herein:
 - 1. American National Standards Institute (ANSI)
 - 2. American Water Works Association (AWWA)
 - 3. ASTM International

COORDINATION REQUIREMENTS

- D. Coordinate piping layouts and installations with the work of other contracts.
- E. Where Ductile Iron Piping is installed with structures or buildings, submit specially prepared Coordination Drawings including floor plans and sections, drawn to scale. Include scaled equipment layouts and relationships between equipment and adjacent structural, mechanical, HVAC, and electrical elements in the <insert room or area descriptions>. Show the following:
 - 1. Vertical and horizontal runs, offsets, and transitions.
 - 2. Clearances for access above and to the side.
 - 3. Show dimensions and details, including connections.
 - 4. Support locations, type of support, and weight on each support.
 - 5. Location of adjacent construction elements including light fixtures, HVAC and plumbing equipment, fire sprinklers and piping, signal and control devices, and other equipment.

SUBMITTALS

- F. In addition to those submittals identified in the General Provisions, the following shall be submitted:
 - 1. Product Data:
 - a. “Catalog cuts” and spec sheets marked to specifically indicate materials (including pressure rating and dimensions) proposed for this project. Indicate selections with arrows, and cross out irrelevant data.
 - 2. Shop Drawings:
 - a. Layout drawings for Ductile Iron Pipe are to be installed within structures, showing the location and details of the support system, sleeves, and appurtenances.

3. Certificates:

- a. Manufacturer’s certification that all materials furnished are in compliance with the applicable requirements of the referenced standards and this specification.

QUALITY ASSURANCE

G. Qualifications

- 1. Manufacturer’s Factory Qualifications: Manufacturing facilities shall have accreditation to ISO 9000:2000 or an equivalent quality management system acceptable to the Engineer.

DELIVERY AND HANDLING

- H. Coordinate delivery of all materials to allow movement into designated location.
- I. Handle all materials according to manufacturer's written instructions.

Part 2 - Products

2.1 MANUFACTURERS

- J. The following manufacturers are named to establish a standard of quality necessary for the Project:
 - 1. American Ductile Iron Pipe
 - 2. US Pipe
 - 3. Or equal

2.2 GENERAL

- K. All components of like size and type shall be the product of the same manufacturer for purposes of parts interchangeability.

2.3 MATERIALS AND CONSTRUCTION

- L. Ductile iron pipe and fittings shall comply with the following standards:

ANSI/AWWA	
Ductile Iron Pipe	C151
Fittings	C110
Joints-Mechanical and Push-On	C111
Joints-Flanged	C115
Cement Lining	C104

ANSI/AWWA	
Polyethylene Encasement	C105
Compact Fittings	C153

- M. All shipments of material shall be tested in accordance with the provisions for testing in the applicable standards.
- N. All flange material shall be Ductile Iron.

2.4 ACCESSORIES

- O. Joints
 1. The type of joints for ductile iron pipe and fittings shall be as scheduled in the pipe schedule and/or as shown on the Contract Drawings. Gasket material shall be appropriate for the fluid being transmitted.
 2. To insure electrical conductivity bronze wedges or jumpers shall be installed at each mechanical or push-on joint as called for in the pipe schedule.
 3. Restrained joints shall have positive metal to metal restraint as provided by U.S. Pipe's TR-FLEX joint, American Ductile Iron Pipe's Fast Grip joint or equal for push-on joint restraint; and as provided by EBAA Iron MEGALUG® or equal, for mechanical joint restraint. Rubber gaskets with metal inserts which hold by wedging into the spigot end of the pipe shall not be used as a restrained joint.
 4. Mechanical joints shall be assembled in accordance with the Notes on Method of Installation, AWWA C111, Appendix A. All bolts shall be high strength, low alloy steel and shall be tightened by means of torque wrenches such that the follower shall be brought up evenly. If effective sealing is not obtained at the specified torques, the joint shall be disassembled, cleaned and reassembled.
 5. Push-on joints shall be assembled using lubricant furnished by the manufacturer. The joint shall be made by guiding the plain end into the bell until contact is made with the gasket and exerting sufficient force to drive the pipe home until penetration is made to the depth recommended by the manufacturer.
 6. Flanged joints shall be assembled with through bolts of the size required for the pipe being installed. Stud bolts shall be used only where shown or required. Connecting flanges shall be in proper alignment and no external force shall be required or used to bring them together.
 - a. Flanges for flanged joints shall be drilled to 125 # template unless otherwise specified.
 - b. Flange bolts and nuts shall be steel, ASTM A307, Grade B, and shall be zinc or hot dipped galvanized except where other materials are called for in the pipe schedule.
 - c. Gaskets for flanged joint piping shall be full-faced, 1/8-inch thick rubber gaskets meeting requirements of AWWA C111 for water and sewage application.
 - d. Gaskets for other service(s) shall be as specified.
 7. Grooved and shoulder type joints of the rigid design (above grade) and flexible design (below grade) may be used in lieu of flanged joints with the prior acceptance

of the Engineer and shall be in accordance with AWWA C606 and Table 5 for iron pipe.

- a. Bolts and nuts shall be cadmium plated steel.
- b. Details of supports, anchors and couplings shall be submitted for review.

2.5 COATING, PAINTING AND LINING

- A. Coating, painting and lining shall be as follows unless otherwise specified in the pipe schedule:
 1. Pipe installed in the ground, in exposed exterior locations, in contact with water or inside structures but not scheduled for painting:
 - a. Interior: Standard thickness cement lining with sealcoat unless otherwise specified.
 - b. Exterior: Asphaltic coating.
 2. Pipe installed inside structures or scheduled for painting:
 - a. Interior: Standard thickness cement lining with sealcoat unless otherwise specified.
 - b. Exterior: Pipes with asphaltic coatings shall be coated with Inertol "Tar Stop", or Mobil Anti-Bleeding Sealer Aluminum 13-A-1 or equal, or sandblasted as specified, before additional coats are applied.

2.6 SOURCE QUALITY CONTROL

- B. Factory Quality Certification
 1. Submit copy of factory quality assurance certificate.

Part 3 - Execution

3.1 INSTALLATION

- A. Install ductile iron pipe, fittings, specials, and accessories as shown on the Contract Drawings, in accordance with the manufacturer's installation instructions and applicable provisions of the Sections entitled "Trenching, Backfilling and Compacting" and "Pipeline Installation".
- B. All ductile iron pipe and fittings shall be handled with padded slings or other appropriate equipment. The use of cables, hooks or chains will not be permitted.
- C. All ductile iron pipe shall have marking tape set 12" above pipe per detail.

3.2 FIELD QUALITY CONTROL

- D. Perform tests in accordance with the following standards:
 1. Perform hydrostatic and leakage tests in accordance with the applicable provisions

of the Section entitled "Leakage Tests", at the test pressure specified or scheduled.

2. Disinfect piping and appurtenances in accordance with the Section entitled "Chlorination", where specified or scheduled.

END OF SECTION

PIPELINE INSTALLATION

Part 1 - General

1.1 SUMMARY

- A. This Section includes all metallic and non-metallic pipelines as shown on the Contract Drawings, complete with fittings and specials.
- B. Certain features of pipes shall be as scheduled.

1.2 REFERENCES

- A. Materials and installation shall be in accordance with the latest revisions of the following codes, standards, and specifications, except where more stringent requirements have been specified herein:
 - 1. American Society of Testing and Materials (ASTM)
 - 2. American Water Works Association (AWWA)

1.3 SUBMITTALS

- A. In addition to those submittals identified in the General Provisions, the following items shall be submitted:
 - 1. Manufacturer's certification that all materials furnished is in compliance with the applicable requirements of the referenced standards and this specification.
 - 2. Layout drawings are required for pipelines to be installed within structures, showing the location including the support system, sleeves and appurtenances.

PART 2 PRODUCTS

2.1 MATERIALS AND CONSTRUCTION

- A. Pipe
 - 1. Materials for the piping, joints and fittings shall be as specified in the Section for the type of pipe to be installed, shown in the pipe schedule or on the Contract Drawings.
 - a. Pipe and appurtenances shall comply with the applicable standards for its type of material.

B. Joints

1. Type of joints shall be as scheduled in the pipe schedule or as shown or noted on the Contract Drawings.

C. Inspection

1. Pipe and appurtenances shall be inspected by the Contractor in the presence of the Engineer on delivery and prior to installation for conformance with the standards and specifications.
 - a. Materials not conforming to the standards and specifications shall not be stored on site but removed at once and replaced with material conforming to the specifications.

PART 3 EXECUTION

3.1 INSTALLATION - UNDERGROUND

A. General

1. Install pipelines, fittings, specials, and accessories in accordance with the configuration shown on the Contract Drawings.
2. Excavation and backfilling shall be in accordance with the applicable provisions of the Section entitled "Excavation and Fill".
3. Blocking will not be permitted under pipe, except where the pipe is to be laid with concrete cradle or encasement.
4. No pipe shall be laid upon a foundation in which frost exists; nor at any time when there is danger of the formation of ice or the penetration of frost at the bottom of the excavation.
5. Temporary bulkheads shall be placed in all open ends of pipe whenever pipe laying is not actively in process. The bulkheads shall be designed to prevent the entrance of dirt, debris or water.
6. Precautions shall be taken to prevent the flotation of the pipe in the event of water entering the trench.

B. Location and Grade

1. Pipelines and appurtenances shall be located as shown on the Contract Drawings or as directed and as established from the control survey in accordance with the Special Provisions.

2. The alignment and grades shall be determined and maintained by a method acceptable to the Engineer.

C. Subgrade

1. The subgrade for pipelines shall be earth or special embedment as specified or directed and shall be prepared in accordance with the Section entitled "Excavation and Fill".

D. Joints

1. Joints shall be assembled using gaskets, lubricants and solvents as furnished by the pipe manufacturer and in accordance with the manufacturer's recommendations.

E. Embedment

1. Embedment shall be deposited and compacted in accordance with the Section entitled "Excavation and Fill", and the Section for the type of pipe being installed and shall be one of the embedments shown below unless otherwise specified or directed.

2. Type "A" Embedment

Pipe of: Cast Iron Soil
 Copper
 Corrugated Steel
 Ductile Iron
 Reinforced Concrete
 Prestressed Concrete
 Vitrified Clay
 Wrought Steel

- a. The embedment shall be native material excavated from the trench, which is acceptable to the Engineer, containing no stones larger than 1-1/2 inches in size or debris.
- b. Embedment material shall be deposited and tamped in 6-inch layers to the centerline of the pipe.

- c. Native material placed above the centerline of the pipe to a depth of 12 inches above the pipe shall be deposited in such manner as to not damage the pipe.
- d. When specified or directed, Select Fill material shall be used in lieu of the native material for a or c above.

3. Type "B" Embedment

Pressure pipe of: Fiberglass

 Polyvinyl Chloride

 Steel

 Thermal Plastic, including high density polyethylene

- a. The embedment shall consist of compacted Type F granular material placed from a depth of 4 inches below the pipe to the centerline of the pipe.
 - 1) Embedment material shall be deposited and hand-compacted in 6-inch maximum layers.
- b. From the centerline to the top of the pipe the embedment shall be native material excavated from the trench, which is acceptable to the Engineer, containing no stones larger than 1-1/2 inches in size and shall be lightly compacted.
- c. From the top of the pipe to one foot above the pipe, acceptable native material shall be deposited in such manner as to not damage the pipe.
- d. When the native material under b or c above is not acceptable, to the Engineer, Select Fill materials shall be used.

4. Type "C" Embedment

Non-pressure pipe of: Fiberglass

 Polyvinyl chloride

 Thermal plastic, including smooth interior corrugated polyethylene

- a. The embedment shall consist of compacted Type F granular materials placed from a depth of 4 inches below the pipe to a depth of 12 inches over the pipe.
 - 1) Embedment material shall be deposited and hand-compacted in 6-inch maximum layers.

F. Thrust Restraints

1. Pressure pipelines shall have thrust restraints in the form of thrust blocks, tie rods, or anchors of the size and type specified or as required by the pressure and stability of the supporting surface.
 - a. Thrust restraints shall be installed at all changes in direction, changes in size, dead ends or other locations where shown.
 - b. Thrust restraints shall be in place, and when of concrete (Class C) shall have developed the required strength, prior to testing of the pipeline.
 - c. Tie rods and nuts for thrust restraints shall be of high tensile steel and shall have minimum yield strength of 70,000 psi.
 - 1) Tie rods and nuts installed underground shall be coated with two coats of coal tar pitch preservative coating after installation.

G. Service Connections

1. Connections to in-service pressure pipelines shall be in accordance with the applicable provisions of the Section entitled "Water Service Connections".
2. Connections to sewers shall be saddle, wye or tee branches as specified.
 - a. Saddle and wye branches shall be installed, in general, so that the top of the branch is at the top of the pipe.
 - b. Each saddle, wye and tee branch shall have a concrete cradle as shown on the Contract Drawings.
3. Laterals of the kind and size of pipe as specified shall be installed as shown, specified or directed.
 - a. Bends, as required, shall be used between the connection and the lateral, to obtain the correct slope and to allow the horizontal angle of the lateral to be at 90 degrees to the main line or other angle as specified or directed.

- b. Minimum slope for a lateral shall be 1/4 inch per foot.
 - c. Maximum slope for a lateral shall be 2 feet per foot unless otherwise specified.
 - d. Each lateral having a slope of 1 foot per foot or greater shall have a concrete cradle as shown on the Contract Drawings or as a minimum Class C concrete shall be placed 6" each side of and from a depth of 3 inches below to the centerline of the lateral pipe.
 - e. Laterals specified to exceed the maximum slope shall be supported to prevent excessive load being applied to the main line pipe and shall be encased in a minimum of 6 inches of Class C concrete.
 - f. The end of each connection or lateral shall be sealed by means of a removable watertight plug as shown on the Contract Drawings.
 - g. The end of each connection or lateral shall have a 2-inch by 4-inch marker extending vertically from the stopper to 3 feet above the ground surface. The portion of the 2-inch by 4-inch marker extending above the ground shall be painted green.
4. Connections and ends of laterals shall not be backfilled until a record has been made of the "as-built" location of each.
- H. Connection to Existing Structures or Manholes
- 1. Where a stub has been provided the connection shall be made to the existing pipe.
 - 2. Where no stub has been provided, the Contractor shall make an opening for inserting the connecting pipe.
 - a. When specified, a sleeve shall be installed and a watertight joint formed.
 - 1) The carrier pipe shall be installed in the sleeve and the joint made watertight.
 - b. Where no sleeve is specified, the space between the pipe and the wall of the structure or manhole shall be made watertight.
 - c. A joint shall be in the pipe at or within 5 feet of a structure or manhole.
 - d. A channel shall be built or the existing channel revised, to direct the flow from or into the new pipe.

- e. Care shall be taken to avoid damage to the existing structure or manhole and to prevent debris from entering any existing channel. Any damage shall be repaired and debris removed.

3.2 INSTALLATION - EXPOSED

- A. Exposed pipelines shall be carefully erected and neatly arranged.
 - 1. Pipelines shall run parallel to the nearest wall of structures.
- B. Supports and anchors shall be adequate to support the pipe filled with water with a minimum safety factor of 5 and for the test pressure specified.
- C. Special supports shall be as specified in the Section for the type of pipe being installed.

3.3 FIELD TESTING AND CHLORINATION

- A. Perform leakage tests in accordance with the applicable provisions of the Section entitled "Leakage Tests", at the test pressure specified or scheduled.
- B. Disinfect pipelines and appurtenances designed to convey potable water in accordance with the Section entitled "Disinfecting of Water Utility Distribution".

3.4 CUTTING AND SPECIAL HANDLING

- A. Field cuts of pipes shall be in accordance with the manufacturer's instructions.
- B. Where a pipe requires special handling or installation it shall be in accordance with the Section for that type of pipe.

3.5 FINAL INSPECTION OF SEWERS

- A. Each section of pipe between manholes shall be inspected prior to final acceptance.
 - 1. In larger pipelines the inspection shall be by traversing the inside of the pipe.
 - 2. In smaller pipelines the inspection shall be by observation with illumination.
 - 3. Where specified, the inspection shall be by closed circuit television.
 - a. Shall be monitored by both the Engineer and the Contractor.
- B. The inspection shall determine the pipeline to be true to line and grade, to show no leaks, to have no obstruction to flow, to have no projections or protruding of connecting pipes or joint materials, shall be free from cracks and shall contain no deposits of sand, dirt or other materials.

- C. All deficiencies located during the inspection shall be corrected.

END OF SECTION

Water service connections

Part 1 - General

1.1 SUMMARY

- A. This Section includes tapping and installing of corporation stops and valves on existing or newly installed pipes without interruption of service complete with connections and accessories, as shown on the Contract Drawings.
- B. Installing of curb stops and boxes where specified or directed.
- C. Certain features of Water Service Connections shall be as scheduled on the Contract Drawings.

1.2 REFERENCES

- A. Materials and installation shall comply with the latest revision of the following codes, standards and specifications, except where more stringent requirements have been specified herein:
 - 1. American Water Works Association (AWWA)

1.3 SUBMITTALS

- A. Submit the following in accordance with the General Conditions/General Requirements.
- B. Product Data: "Catalog cuts" and specification sheets marked to specifically indicate the equipment and materials proposed for this project. Indicate selections with arrows, and cross out irrelevant data.
- C. Shop Drawings: Detail drawings for each size corporation stop, curb stop, tapping sleeve and valve, and service box

PART 2 - PRODUCTS

2.1 CORPORATION STOPS

- A. Corporation stops shall be threaded to conform to AWWA C800 with standard corporation stop thread at the inlet. The outlet shall be fitted with coupling nut for flared tube service unless otherwise specified.

2.2 CURB STOPS

- A. Curb stops shall be threaded to conform to AWWA C 800 with coupling nuts for flared tube service.
 - 1. ¾-inch shall be of the inverted new type.
 - 2. 1 inch to 2 inch shall be of the plug-type with "O" ring seals to withstand a minimum working pressure of 175 psi.
 - 3. Curb stops shall be manufactured by Mueller
 - 4. Curb and Corporation stops shall be manufactured by Mueller. Curb boxes shall include stainless steel rod and cotter pin by Mueller.

2.3 SERVICE CLAMPS

- A. Service clamps shall be designed for use on the type of pipe to which the connection is being made.
 - 1. Ductile iron and asbestos-cement service clamps shall be the double strap type with neoprene gaskets.
 - 2. Polyvinyl chloride pipe service clamps shall be of a full circle design with a minimum width of 2 inches.
 - 3. Service clamps shall be manufactured by Mueller.

2.4 SERVICE BOXES

- A. Service boxes shall be constructed of cast iron and sized for the curb stop upon which it is being installed.
 - 1. Stationary shut-off rod shall be provided unless otherwise specified.
 - 2. Boxes shall be telescopic with a minimum of 1-foot adjustment.
 - 3. Service boxes shall be manufactured by Mueller.

2.5 TAPPING SLEEVES AND VALVES

- A. Tapping sleeves and valves shall be used for connections larger than 2 inches.
 - 1. Tapping sleeves shall be designed and sized in accordance with the recommendations of the manufacturer.
 - 2. Working pressure shall be 150 psi unless higher pressures are scheduled.
 - 3. The seal of the tapping sleeve shall be mechanical joint or low lead 2.5% or less. Low lead as conforming to current regulations.
 - 4. Valves for tapping sleeves shall be designed for the in-tended service and shall conform to the requirements of the Section entitled "Gate Valves Three Inches and Larger".
 - 5. Tapping sleeves and valves shall be manufactured by:
 - a. Clow
 - b. Kennedy
 - c. U.S. Pipe
 - d. Or equal

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions for compliance with manufacturer's installation recommendations and requirements.

3.2 INSTALLATION

- A. Install connections and accessories under the direction of personnel who have performed at least ten similar connections as shown on the Contract Drawings, in accordance with the manufacturer's installation instructions and the applicable provisions of the referenced Standards.

- B. Threaded taps shall be made using a machine designed for cutting, threading and inserting the corporation without interruption of service.
- C. Teflon tape may be used on corporation threads.
- D. Tapping sleeve connections shall be made using a machine to cut and remove the segment through the valve without interruption of service.
- E. Service boxes shall be set plumb and shall be independently supported on two bricks so no weight will be transmitted to the curb stop or carrier pipe.
- F. Maximum Size for Taps

Pipe Material	Pipe Size (inches)				
	4	6	8	12	16 & Larger
Ductile Iron					
w/ Service Clamp	2	2	2	2	2
w/o Service Clamp	-	3/4	1	1-1/2	2
Asbestos-Cement Polyvinyl Chloride					
w/ Service Clamp or pre-threaded collar	3/4	1-1/2	2	2	2
w/o Service Clamp	-	3/4	3/4	3/4	3/4
Steel	Pipe wall thickness governs size of tap using appropriate threadolet or reinforcing.				

3.3 FIELD QUALITY CONTROL

- A. Perform tests in accordance with the following standards:
 - 1. Perform hydrostatic and leakage tests in accordance with the applicable provisions of the Section entitled "Leakage Tests", at the test pressure specified or scheduled.

END OF SECTION

Gate valves three inches and larger

Part 1 - General

1.1 SUMMARY

- A. This Section includes gate valves 3 inches and larger for all services specified or shown on the Contract Drawings, exposed or in the ground, complete with accessories.
- B. Certain features of gate valves 3 inches and larger shall be as scheduled on the Contract Drawings.

1.2 REFERENCES

- A. Comply with the latest revision of the following codes, standards and specifications, except where more stringent requirements have been specified herein:
 - 1. American Water Works Association (AWWA)

1.3 SUBMITTALS

- A. Submit the following in accordance with the General Conditions/General Requirements.
- B. Product Data: "Catalog cuts" and specification sheets marked to specifically indicate the equipment and materials proposed for this project. Indicate selections with arrows, and cross out irrelevant data.
- C. Shop Drawings:
- D. Certificates: Manufacturer's certification that all materials furnished are in compliance with the applicable requirements of the referenced standards and this specification.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Gate valves shall be Series 2360 by Mueller.
- B. Double-disc gate valves shall be in accordance with the requirements of AWWA C500.
- C. Resilient seated gate valves shall be in accordance with the requirements of AWWA C509.
- D. Gate valves 12 inches and smaller with specified working pressure of 50 psi to 200 psi and 16 inches and larger with specified working pressure of 50 psi to 150 psi shall conform to the requirements of AWWA Standards. Gate valves of sizes or pressure classes outside of the above ranges shall conform to manufacturer's standards with materials and construction conforming to the AWWA Standards as applicable.
- E. Unless otherwise scheduled or shown on the Contract Drawings, gate valves shall be:
 - 1. Non-rising stem
 - 2. Dual O-ring stem seal
 - 3. Counterclockwise direction of opening
- F. Gate valves larger than 12 inches installed horizontally in a horizontal pipeline shall be equipped with bronze rollers, non-corrodible tracks, and bronze scrapers.
- G. Bronze Grade B or C shall not be used in valve construction.
- H. Valve Joints

1. Where the joint type is not scheduled or shown, joints shall conform to the type of pipe joint at the point of installation.
- I. All hardware (nuts, bolts, and similar) shall be stainless steel.

2.2 ACCESSORIES

A. Gearing

1. Gearing as scheduled shall be installed on all gate valves larger than 12 inches.
2. Gear ratios shall conform to AWWA Standards.
3. Gear cases on valves installed in the ground shall be of the extended type and stem seal shall be protected by a shield to prevent contact of these parts with soil.
4. Exposed non-rising stem valves with gearing shall have position indicators, unless otherwise scheduled.

B. Bypass

1. Gate valves larger than 12 inches shall be equipped with bypass and bypass valve, unless otherwise scheduled, and shall be sized in accordance with AWWA Standards.
2. Bypass valve shall conform to the provisions of this section.

C. Operators

1. Valves installed in the ground shall be fitted with standard wrench nuts.
2. Valves installed exposed shall be fitted with handwheel, floorstand, motor operator, hydraulic, or other operator as scheduled.
3. Valves installed greater than 5 feet above an operating floor, without specified operator, shall have a chainwheel operator with chain extending to 4 feet above the operating level and hook to clips arranged to clear walking aisles.
4. Operators shall be supplied with a cast arrow showing the direction of valve opening.

D. Extension Stems

1. Valves scheduled or shown and valves installed in the ground with the operating nut greater than 4 feet below the finished grade shall have extension stems.
2. Valves in the ground shall have the stems extended to within 3 feet of the finished grade.
 - a. A centering device shall be installed on the extension stem just below the extended operating nut.

E. Valve Boxes

1. Valves installed in the ground shall be equipped with an adjustable type valve box.
2. The valve box shall have a barrel not less than 5 inches in diameter and with a base to fit the valve on which it is to be installed.
3. The valve box cover shall indicate by means of a cast arrow the direction of valve opening.
4. Where applicable, the word "Water" or "Sewer" shall be cast in the valve box cover.

2.3 SHOP FINISHES

- A. Finish: Per Village of Clayton

- B. With the exception of those parts and components customarily furnished unpainted, prepare and coat all metal surfaces with rust inhibitive shop paint. Shop paint shall be fully compatible with the field paint specified.
- C. Protect machined surfaces against damage and corrosion by other means.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install valves as shown on the Contract Drawings and in accordance with the manufacturer's installation instructions.
- B. Support valves independently from equipment and pipelines, on supports acceptable to the Engineer.

3.2 PAINTING

- A. Valves shall be shop coated with asphalt varnish in accordance with AWWA Standards.
- B. Valves to be field painted or coated shall have the same paint or coating as the pipeline in which they are in-stalled.

END OF SECTION

DISINFECTING OF WATER UTILITY DISTRIBUTION

Part 1 - General

1.1 SUMMARY

- A. This Section includes cleaning, chlorinating and flushing of all pipelines or structures which shall carry or hold potable water, as shown on the Contract Drawings, including all chemicals required.
- B. All disinfection of piping and structures shall be coordinated and conducted in conjunction with the required hydrostatic testing, as specified in Section entitled "Leakage Tests". Chlorination shall be scheduled such that sampling and flushing will be performed during normal daylight working hours.
- C. All work under this section shall be performed in the presence of the Engineer and a representative of the public health authority having jurisdiction, as required. The Water Supply Certification Form shall be completed at time of testing and submitted to NYS Department of Health.

1.2 REFERENCES

- A. Comply with the latest revision of the following codes, standards and specifications, except where more stringent requirements have been specified herein:
 - 1. American Water Works Association (AWWA C615)

1.3 QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. Backflow preventers shall be tested by certified backflow prevention technician and certified by the authority having jurisdiction within one year or less of date of backflow preventer's use on the Project
 - 2. Comply with requirements and recommendations of authorities having jurisdiction over the Work, including:
 - a. NYS Health Department
 - b. Village of Clayton Water Department & DANC

1.4 SUBMITTALS

- A. Action Submittals: Provide the following:
 - 1. Product Data:
 - a. Data sheets on chemicals used for disinfection and dechlorination.
 - b. Proof of NSF/ANSI 60 compliance for chemicals used in disinfection and dechlorination
 - c. Results of bacteriological tests.
 - 2. Procedure Submittals (including proposed plans for water conveyance, control, and disposal):
 - a. Cleaning procedures.

- b. Hydrostatic testing procedures and equipment required, by structure to be tested.
- c. Disinfection procedures and equipment required, by structure to be tested.
- d. Contractor shall obtain water certification form from Oswego County DOH for submission to the Oswego office. Tests shall be observed by the Engineer.

1.5 WATER FOR TESTING

- A. Permission shall be obtained from the owner of the water system before the use of water from any existing system. The Contractor shall:
 - 1. Conform to the requirements of the Owner.
 - 2. Give notice at least 24 hours before the use of water for any reason.

PART 2 - PRODUCTS

2.1 MATERIALS AND CONSTRUCTION

- A. Chlorination shall be by the use of a solution of water and liquid chlorine, sodium hypochlorite and the solution shall be contained in the pipe or structure as specified
- B. Chemicals used for disinfection and dechlorination shall conform to NSF/ANSI 60.

PART 3 - EXECUTION

3.1 CLEANING

- A. Piping:
 - 1. Thoroughly clean all piping, including flushing with water, dry air, or inert gas as required, in manner approved by Engineer, prior to placing in service. Flush chlorine solution and sodium hypochlorite piping with water
 - 2. For piping that requires disinfection and has not been kept clean during storage or installation, swab each section individually before installation with five percent sodium hypochlorite solution.

3.2 DISINFECTION / CHLORINATION

- A. Piping:
 - 1. Suggested procedure for accomplishing complete and satisfactory disinfection is specified below. Other procedures may be considered for acceptance by Engineer.
 - a. Prior to disinfection, clean piping as specified and flush thoroughly.
 - b. Conform to procedures described in ANSI/AWWA C651, Section 4.7. Use continuous feed and slug method of disinfecting, unless alternative method is approved by Engineer.

2. The chlorine solution shall be admitted to pipelines through corporation stops placed in the horizontal axis of the pipe, to structures by means of tubing extending directly into the structure or other approved methods.
 3. Chlorine concentration in water entering the piping shall be between 50 and 100 mg/L, such that minimum residual concentration of 25 mg/L remains after 24-hour retention period. Disinfect piping and all related components. Repeat as necessary to provide complete disinfection.
 4. The chlorine treated water shall be retained in the pipe or structure at least 24 hours, unless otherwise directed. During the retention period all valves and hydrants within the treated sections shall be operated.
- B. When making repairs to or when specified, structures and portions of pipelines shall be chlorinated by a concentrated chlorine solution containing not less than 200 mg/L) of free chlorine. The solution shall be applied with a brush or sprayed on the entire inner surface of the empty pipes or structures. The surfaces disinfected shall remain in contact with the strong chlorine solution for at least 30 minutes.

3.3 FLUSHING

- A. Piping:
1. After the required retention of chlorinated water in the pipe shall be thoroughly flushed until the replacement water shall, upon test, both chemically and bacteriologically, be proven equal to the water quality served to the public from the existing water supply system
 2. After final flushing and before the new main is connected to the distribution system, two consecutive sets of acceptable samples, taken at least 24 hours apart, shall be collected from the new main. At least one set of samples shall be collected from every 1,200 ft (366 m) of the new water main, plus one set from the end of the line and at least one set from each branch. Certification forms must include the bacteriological results, the dates of sampling, and detailed information on sampling location.
 3. The disposal of chlorinated water from any pipe or structure shall be such it will not cause damage to any vegetation, fish, or animal life. Dilution, dechlorination and/or holding tanks shall be provided by the Contractor to accomplish disposal of chlorinated water.

3.4 FIELD QUALITY CONTROL

- A. The Contractor shall make all arrangements for the testing of the water quality. In areas where the testing of water quality is not performed by the public health authority, the Contractor shall have the required test made by an approved independent laboratory. The results of all tests shall be forwarded to the Engineer and the public health authority having jurisdiction.
- B. The Contractor shall provide the labor and tools as may be required by the Engineer or the public health authority in the sampling for testing of water quality.

- C. All water quality requirements shall be fulfilled prior to the passage of any water through the new system to a public supply or the use of the new system.

END OF SECTION

POLYVINYL CHLORIDE NON-PRESSURE PIPE

Part 1 - General

1.1 SUMMARY

- A. This Section includes polyvinyl chloride non-pressure pipe fittings, specials, and all accessories as specified.
- B. Certain features of Polyvinyl Chloride Non-Pressure Pipe shall be as scheduled herein or on the Contract Drawings.

1.2 REFERENCES

- A. Comply with the latest revision of the following codes, standards and specifications, except where more stringent requirements have been specified herein:
 - 1. ASTM International
 - 2. American National Standards Institute (ANSI)

1.3 SUBMITTALS

- A. In addition to these submittals identified in the General Provisions the following shall be submitted:
 - 1. Product Data:
 - a. “Catalog cuts” and spec sheets marked to specifically indicate all materials proposed for this project. Indicate selections with arrows and cross out irrelevant data.
 - 2. Certificates:
 - a. Manufacturer’s certification that all materials are in compliance with the applicable requirements of the referenced standards and this specification.

1.4 QUALITY ASSURANCE

- A. Qualifications
 - 1. Manufacturer’s Factory Qualifications:
 - a. Manufacturing facilities shall have accreditation to ISO 9000:2000 or an equivalent quality management system acceptable to the Engineer.

1.5 DELIVERY AND HANDLING

- A. Coordinate delivery of all materials to allow movement into designated locations.
- B. Handle all materials according to manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. The following manufacturers are named to establish a standard of quality necessary for the Project:

1. Ipex
2. National
3. Or equal

2.2 GENERAL

- A. All pipes of like size and type shall be the product of the same manufacturer.

2.3 MATERIALS AND CONSTRUCTION

A. Polyvinyl chloride pipe

1. Polyvinyl chloride pipe shall be made from Class 12454-B materials or better in accordance with ANSI/ASTM D 1784.
2. Polyvinyl chloride pipe and accessories shall conform to the requirements of the following with a minimum pipe stiffness of 46 psi at a maximum deflection of 5%:
 - a. ANSI/ASTM D3034 (4"-15")
 - b. ASTM F679 (18"-27")

2.4 ACCESSORIES

A. Fittings and Couplings

1. Polyvinyl chloride fittings and couplings shall conform to the requirements of the PVC pipe for classification and size.

B. Joints

1. Joints shall be as shown in the pipe schedule and the Contract Drawings.
2. Rubber gaskets for elastomeric joints shall conform to ANSI/ASTM F477.
 - a. Lubricant for the joints shall be furnished by the pipe manufacturer.
 - b. The rubber gaskets shall be factory installed in the bell of the pipe, fittings and couplings.
3. The plain end of the pipe shall be marked by the manufacturer to show the depth of penetration into the bell or coupling.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install polyvinyl chloride non-pressure pipe, fittings, specials, and accessories as shown on the Contract Drawings, in accordance with the manufacturer's installation instructions and the applicable provisions of the Sections entitled "Excavation and Fill" and "Pipeline Installation".
- B. Polyvinyl chloride pipe shall be handled and stored in accordance with the manufacturer's recommendations.

3.2 FIELD QUALITY CONTROL

- A. Perform tests in accordance with the following standards:
 1. Pipe deflection shall be checked by passing a deflection gauge through all completed

pipelines.

- a. Maximum deflection allowed 5%.
- b. The test for deflection shall be made not less than 30 days after the completion of the installation.
- c. Deflection gauge shall be pulled through the pipe by hand.
- d. Any section of pipe found to have a deflection in excess of 5% shall be corrected by the Contractor.

END OF SECTION

SANITARY UTILITY SEWERAGE MANHOLES, FRAMES & COVERS

Part 1 - General

1.1 SUMMARY

- A. This Section includes precast manholes of the type scheduled with construction as shown on the Standard Details for Manholes. All manholes shall consist of the combination of base and barrel sections resulting in the fewest number of joints.

1.2 REFERENCES

1. American Society for Testing and Materials (ASTM International)
2. American Association of State Highway Transportation Officials (AASHTO)
3. Occupational Safety and Health Administration (OSHA)
4. State of NY Department of Transportation

1.3 SUBMITTALS

- A. Submit the following in accordance with the General Conditions/General Requirements.
 1. Product Data: "Catalog cuts" and spec sheets marked to specifically indicate the equipment and materials proposed for this project. Indicate selections with arrows, and cross out irrelevant data.
 2. Shop Drawings including dimensional criteria of each structure.

1.4 QUALITY ASSURANCE

- A. Qualifications
 1. Manufacturer's Factory Qualifications: Manufacturing facilities shall have accreditation to ISO 9000:2000 or an equivalent quality management system acceptable to the Engineer.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Coordinate delivery of all material to allow movement into designated space.
- B. Handle all material components according to manufacturers written instructions. Use factory-installed lifting provisions.

1.6 WARRANTY

- A. Provide parts and labor warranty in accordance with the General Conditions.

1.7 MANUFACTURERS

- A. The following manufacturers are named to establish a standard of quality necessary for the Project:
 1. Neenah Foundry
 2. EJ Castings

3. Or equal

1.8 GENERAL

- A. All manholes, frames and covers shall be supplied as a complete package from the manufacturer, who shall be responsible for proper operation of the coordinated system.
- B. All components of like size and type shall be the product of the same manufacturer for purposes of parts interchangeability.

1.9 MATERIALS AND CONSTRUCTION

A. Manhole Sections

- 1. Precast concrete sections and slabs shall be constructed and reinforced in accordance with ASTM C478, with a minimum wall thickness of 5 inches and with joints having an "O" ring or square Buna N section ring seal.
 - a. Manhole sections shall be waterproofed with bituminous material on the exterior.
- 2. Base sections shall have reinforced flat bottoms protruding 6 inches beyond the outside face of the riser section. The flat bottoms shall be:
 - a. Minimum of 6-inch thickness for risers up to and including 48-inch diameter
 - b. Minimum of 8-inch thickness for risers of larger diameter
- 3. Each opening in the base section for sewers up to and including 20-inch diameter shall contain a flexible rubber connection installed by the manufacturer of the base section.
 - a. Flexible rubber connectors shall be:
 - 1) KOR-N-SEAL
 - 2) Lock Joint Flexible Manhole Sleeve
 - 3) Or equal
- 4. Top sections, tapered or flat, shall be adequate to withstand H-25 wheel loads. All top sections shall have con-centric or eccentric opening as specified or shown for the type of manhole. The edge of eccentric openings for flat top sections shall be a maximum of 2 inches from the inside wall of the barrel section.

B. Manhole Steps

- 1. Steps for manholes shall be manufactured of cast iron in accordance with ASTM A48, Class 30 or others acceptable to the Engineer.
- 2. Steps shall be installed in each manhole in vertical alignment spaced 12 inches on center and shall be placed over the largest benchwall of the manhole.
- 3. Steps shall have a minimum tread width of 14 inches and shall be cast into the manhole sections or other methods of installation with prior acceptance of the Engineer.

C. Frames and Covers

- 1. Manhole frames and covers shall be in accordance with ASTM A48, Class 30, and as listed by the local Municipality.
- 2. Covers shall be provided with a minimum of two watertight pick holes and shall be solid unless otherwise noted. Frames and covers shall be adequate to bear H-25 wheel loads and shall be provided with machined bearing surfaces. Lettering shall be either "Sanitary Sewer" or "Storm Sewer", depending on the use, or other appropriate designation cast

as directed.

3. When required for bolting the frame to the manhole, holes shall be provided in the frames. Contractor shall submit to Engineer a cover and frame that meets this requirement.

D. Mortar and Bricks

1. Masonry cement for mortar shall meet the requirements of ASTM C91, Type II and shall be mixed with a graded quality sand conforming to ASTM C144. Mix shall be one part masonry cement to three parts sand using the minimum amount of clean water required for workability.
2. Brick shall meet the requirements of ASTM C62, Grade SW, and shall be of a hard-burned manufacture.

1.10 DROP MANHOLES - SPECIAL CONSTRUCTION

A. Type D or H manholes shall be constructed in accordance with the Standard Detail as follows:

1. The polyvinyl chloride (PVC) pipe and fittings shall meet the requirements of ASTM D3034. Joints shall be solvent welded except for those installed vertically. The drop section, tee and nipple shall be of the same diameter as the influent sewer up to the maximum of 12 inches in diameter. For influent sewers over 12 inches in diameter, a 12-inch branch tee, nipple and drop section shall be used.
2. The PVC nipple and the influent sewer shall be joined with a flexible coupling which shall be Band Seal Rubber Adapter, or equal. Tee shall be fitted with a removable plug consisting of two conical aluminum discs, a rubber compression gasket and a permanently extended operating handle. The plug shall provide a watertight seal as the gasket is forced against the pipe wall by drawing the aluminum discs together with the operating handle. The operating handle shall be coated to protect against corrosion.
3. The opening in the manhole barrel for the drop inlet does not require a flexible pipe connector. A watertight seal shall be made between the manhole wall and PVC inlet pipe using a universal compression type annular space sealer constructed of hard rubber links, joined together by bolts of corrosion resistant plated carbon steel or other type seal acceptable to the Engineer. The rubber link material shall remain flexible and be resistant to water and chemical action.

1.11 ACCESSORIES

1.12 SOURCE QUALITY CONTROL

A. Factory Quality Certification

1. Submit copy of factory quality assurance certificate.

PART 2 - EXECUTION

2.1 INSTALLATION

- A. Install structures as shown on the Contract Drawings and in accordance with the manufacturer's installation instructions.
- B. Precast manhole bases shall be installed level on a flat stable subgrade. Where an unstable

condition exists, the Contractor shall excavate the unstable material and replace with compacted granular material.

- C. All joints of the manhole shall be filled inside and out with mortar to provide a smooth and continuous surface.
- D. Manhole inverts shall be lined with a half section of pipe of the same type and size as the pipe used for the sewer or shall be constructed of Class C concrete, shaped and troweled to produce a smooth circular cross-section. Manholes having sewer intersections of less than 90 degrees shall have the alignment of a Type "A" benchwall as shown on Standard Detail SD-10. Benchwalls shall have a slope of ½" on 12 inch and the mortar surface shall be given a broom finish.
- E. Mortar beds for brick or manhole frames shall be a maximum thickness of 1- inch.
- F. Manhole frames for Type E and I manholes shall set on a bed of mortar and be bolted to the flat slab top with 4-inch bolts evenly spaced around the frame using concrete expansion anchors. For other types of manholes, the Contractor shall furnish and install up to a maximum of four brick courses as required to adjust the frames to grade. The brick courses shall be plastered with 1/2-inch minimum of cement mortar inside and out.
- G. In drop manholes Type D or H, the space sealer between the manhole wall and PVC inlet pipe shall be assembled with the heads of the bolts on the inside of the manhole.
- H. Markers
 - 1. Unless otherwise specified, two 2 inch by 4-inch markers shall be placed adjacent to each completed manhole except those installed in roadways. The markers shall be buried in the ground a minimum of 6 feet and shall extend above the top of the manhole a minimum of 2 feet.
 - 2. The portion of the marker extending above the ground shall be painted green.

2.2 FIELD QUALITY CONTROL

- A. Perform tests in accordance with the following standards:
 - 1. Perform leakage tests in accordance with the applicable provisions of the Section entitled "Leakage Tests".

END OF SECTION

STORM DRAINAGE STRUCTURES

Part 1 - General

1.1 SUMMARY

- A. This Section includes catch basins, curb inlets, surface water inlets, and similar structures, complete with frames and covers, manhole steps and appurtenances as shown on the Contract Drawings.

1.2 REFERENCES

- A. Comply with the latest revision of the following codes, standards and specifications, except where more stringent requirements have been specified herein:
 - 1. American Society for Testing and Materials (ASTM International)
 - 2. American Association of State Highway Transportation Officials (ASHTO)

1.3 SUBMITTALS

- A. In addition to those submittals identified in the General Provisions, the following shall be submitted:
 - 1. Product Data:
 - a. "Catalog cuts" and spec sheets marked to specifically indicate all materials proposed for this project. Indicate selections with arrows, and cross out irrelevant data.

1.4 QUALITY ASSURANCE

- A. Qualifications
 - 1. Manufacturer's Factory Qualifications: Manufacturing facilities shall have accreditation to ISO 9000:2000 or an equivalent quality management system acceptable to the Engineer.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Coordinate delivery of all materials to allow movement into designated space.
- B. Handle all materials components according to manufacturer's written instructions. Use factory-installed lifting provisions.

PART 2 - PRODUCTS

2.1 GENERAL

- A. All materials and accessories shall be supplied as a complete package from the manufacturer, who shall be responsible for proper operation of the coordinated system.
- B. All components of like size and type shall be the product of the same manufacturer for purposes of parts interchangeability.

2.2 MATERIALS AND CONSTRUCTION

A. Concrete

1. Precast concrete sections shall be constructed to in accordance with ASTM C478 for manhole sections and ASTM C913 for other structures with a minimum wall thickness of 5 inches. Top sections shall withstand H-25 wheel loads and shall be of the type shown.
 - a. Bell and spigot joints of precast sections shall have an appropriate "O" or square Buna-N rubber section ring as supplied by the manufacturer.

B. Masonry Units

1. Brick shall meet the requirements of ASTM C62, Grade SW, and shall be of a hard-burned manufacture.
2. Concrete blocks shall conform to the requirements of ASTM C139 and shall be solid and of the size shown on the Contract Drawings.

C. Mortar

1. Masonry cement for mortar shall meet the requirements of ASTM C 91, Type II and shall be mixed with a graded quality sand conforming to ASTM C144.
2. Mix shall be one part masonry cement to three parts sand using the minimum amount of clean water required for workability.

D. Castings

1. Frames and covers, grates, inlets, and other castings shall be as shown on the Contract Drawings and be in accordance with ASTM A48, Class 30. All castings shall be manufactured to withstand H-25 wheel loads. Lettering shall be "Storm Sewers" or other appropriate designation cast as directed. Frames and covers shall have machined bearing surfaces.
2. Steps shall be manhole steps manufactured of cast iron in accordance with ASTM A48, Class 30 or others acceptable to the Engineer.
 - a. Steps shall have a minimum tread width of 14 inches.

2.3 SOURCE QUALITY CONTROL

A. Factory Quality Certification

1. Submit copy of factory quality assurance certificate.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install precast sections, benchwalls and inverts, frames and castings, steps, plaster, and sumps as shown on the Contract Drawings and in accordance with the manufacturer's installation instructions.

1. Precast Sections

- a. Precast sections shall be installed level on a flat stable subgrade. Where an unstable condition exists, the Contractor shall excavate the unstable material and replace with compacted granular material.
- b. All joints shall be filled inside and out with mortar to provide a smooth and continuous surface.

2. Benchwalls and Inverts

- a. Mortar surfaces of benchwalls and concrete floors shall be given a broom finish. Where inverts are required they shall be lined with a half section of pipe of the same type used for the sewer or shall be constructed of Class "C" concrete, shaped and troweled to produce a smooth circular cross-section.
 3. Frames and Castings
 - a. Frames and castings shall be set in a full bed of mortar a maximum of 1/2" thick. Where required to adjust the frames and castings to grade there shall be installed to a maximum of four brick courses.
 4. Steps
 - a. Steps shall be installed in vertical alignment spaced 12 inches on center.
 - b. In concrete sections the steps shall be cast into the section or secured with cadmium plated bolts to threaded inserts, which are precast into the concrete.
 - c. In masonry construction the steps shall be built into the masonry walls.
- 3.2 FIELD QUALITY CONTROL
- A. Perform tests in accordance with the following standards:
 1. Perform leakage tests in accordance with the applicable provisions of the Section entitled "Leakage Tests".

END OF SECTION