

**CITY OF WARWICK, RHODE ISLAND
HONORABLE FRANK J. PICOZZI, MAYOR**

**WARWICK SEWER AUTHORITY
GARY C. JARVIS, CHAIRMAN**

**THOMAS H. CHADRONET
CARLO E. PISATURO, JR**

**JOHN S. JUSTO
GARY P. MARINO**

BETTY ANNE ROGERS, EXECUTIVE DIRECTOR



April 2021

**SPECIFICATIONS FOR CONSTRUCTION OF
CONTRACT 101
OAKLAND BEACH INTERCEPTOR
REHABILITATION**

SECTION 00010

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DIVISION 00

SECTION 00030
ADVERTISEMENT FOR INVITATION FOR BIDS

Invitation for Bids
Contract No. 101
Oakland Beach Interceptor Rehabilitation

Owner: City of Warwick, Rhode Island
Acting Herein Through Its Warwick Sewer Authority

Engineer: Warwick Sewer Authority, Warwick Rhode Island
125 Arthur Devine Blvd
Warwick, RI 02888
Telephone: (401) 739-4949
Contact: BettyAnne Rogers, Executive Director

Project: Oakland Beach Interceptor Rehabilitation
Contract No. 101

The Warwick Sewer Authority is issuing an Invitation for Bids (IFB) for the above-noted work to be performed in the City of Warwick, RI.

The work to be provided includes the relining of existing concrete sewer pipe and manholes, bypass pumping, excavations and pavement restoration in accordance with the Contract Documents and Plans.

All bid items must be on a unit price or lump sum basis, with a total aggregate price of all unit items. Segregated bids will not be accepted.

The Warwick Sewer Authority will receive Bids until 10:00 a.m. prevailing time on the May 5, 2021 at the office of the Warwick Sewer Authority, 125 Arthur W. Devine Blvd., Warwick, Rhode Island. Bids will be opened and publicly read aloud on the same day and date at 10:00 a.m. prevailing time at the office of the Warwick Sewer Authority. All interested parties are invited to attend.

Electronic copies of the Contract Documents shall be obtained at the City of Warwick Purchasing Department website at <https://www.warwickri.gov/bids>.

Each bidder must deposit with his Bid, security in the amount, form and subject to the conditions provided in the Information for Bidders (10% of Bid).

The bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" by the Authority and to fully complete the project within 120 consecutive calendar days thereafter.

No bidder may withdraw his Bid within 90 days after the actual date of the opening thereof.

Attention of bidders is particularly called to the requirements as to conditions of employment to be observed and wage rates to be paid under the Contract. In conformity with the provisions of Chapters 12 and 13 of Title 37, General Laws, Rhode Island, 1956, as amended, the minimum wages for a day's work paid to craftsman, teamsters and laborers shall not be less than the customary and prevailing rate of wages for a day's work in the locality where the work is undertaken. Such a schedule of wages has been established on a minimum hourly basis, and is on file in the office of the State Department of Labor.

The bidder's attention is also called to the "Equal Opportunity Clause", the "Nondiscrimination in Employment", and the Federal and State MBE/WBE requirements of the Contract as set for in the Contract Documents.

The bidders will be required to meet the established goal of not less than 10 percent of the contract bid price to the contractors, subcontractors, and/or suppliers which qualify as DISADVANTAGED BUSINESS ENTERPRISES, MBE/WBE.

Bidders shall be required to comply with the President's Executive Order No. 11246 and State of Rhode Island Executive Order No. 85-11, including any amendments or supplements relating thereto. The requirements of bidders and contractors under these orders are explained in the Contract Documents.

The Authority, being considered the sole and only judge, reserves the right to waive any informalities in, or to reject, any or all bids, should the Authority deem it to be in the public's best interest to do so.

A pre-bid conference for prospective bidders will be held at the office of:

The Warwick Sewer Authority
125 Arthur W. Devine Blvd.
Warwick, Rhode Island 02886

at 10:00 a.m. on April 21, 2021

END OF SECTION

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SECTION 00120

INFORMATION FOR BIDDERS

ARTICLE 1 - RECEIPT AND OPENING OF BIDS:

A. The Warwick Sewer Authority (herein called the "WSA") invites bids on the forms attached hereto, all blanks of which must be appropriately filled in. Bids will be received by the WSA at its office at 125 Arthur W. Devine Boulevard, Warwick, RI 02886 on or before May 5, 2021 to the attention of Betty Anne Rogers, Executive Director at which time they will be publicly opened and read aloud. The envelopes containing the Bids must be sealed, marked clearly with the BIDDER'S name, and designated as follows: Enclosed, "Bid Contract No. 101 - Oakland Beach Interceptor Rehabilitation."

B. Bids are to include information required within the Bid Price Package of this specification, Sections 00300 through Section 00430 and not the entire Specification book. The following items constitute a complete bid:

<u>Item</u>	<u>Description</u>	<u>Section</u>
1.	Acknowledgement of Addendum	Page 2
2.	Certification & Warrant Form	Page 3
3.	Bid Price Form	00300
4.	Bid Bond	00310
5.	Proposed Subcontractors	00430

C. The WSA may not consider any Bid that is not prepared and submitted in accordance with the provisions hereof and may waive any formalities or reject any and all Bids in the WSA's best interests. Any Bid may be withdrawn prior to the scheduled time and date for the opening of Bids or authorized postponement thereof. Any Bid received after the time and date specified shall not be considered. No BIDDER may withdraw a Bid within 90 days after the date of the opening thereof. The WSA may modify or amend technical specifications for this Project at any time prior to the opening of the Bids.

ARTICLE 2 - PRE-BID CONFERENCE AND QUESTIONS:

BIDDERS shall attend a non-mandatory Pre-Bid Conference at 125 Arthur W. Devine Boulevard, Warwick, RI 02886. The Pre-Bid Conference will be held at WSA'S Administrative Office at 125 Arthur W. Devine Boulevard, Warwick, RI 02886. Items of discussion will include overview of the Project scope and job conditions that may affect the bidding process. In addition, the Pre-Bid Conference will include the following:

- A. A review of submittals required with the Bid.
- B. A brief overview of the Project requirements.
- C. A bidder question and answer session.

Any other questions following the Pre-Bid Conference must be submitted in writing via email, and directed to Betty Anne Rogers BettyAnne.Rogers@warwickri.com of the Warwick Sewer Authority and Todd Ravenelle travenelle@graengs.com of Gordon R. Archibald, Inc. However, the WSA will not be responsible for information that is not received, and it is the BIDDER'S responsibility to confirm the receipt of the questions. NO QUESTIONS WILL BE ACCEPTED AFTER April 23, 2021. Responses to substantive questions either raised at the Pre-Bid Conference or received in writing will be forwarded to all prospective BIDDERS in advance of the posted online with the City of Warwick of Purchasing Department.

ARTICLE 3 - PREPARATION OF BID:

- A. Each Bid must be submitted on the prescribed form, accompanied by a Bid Bond and any other requested information. All blank spaces for Bid prices must be filled in, in ink or typewritten, using numerical figures, unless otherwise requested. Should both written words and numerical figures be given, the written words shall apply in the event of conflict. All Bids shall be prepared in conformity with, and based upon and submitted subject to, all requirements of the Specifications and Drawings, together with all addenda thereto.
- B. Each Bid must be submitted in sealed inner and outer envelopes bearing on the outside of each envelope the name of the BIDDER, its address, and the name of the Project for which the Bid is submitted. Both envelopes shall be clearly labeled "BID DOCUMENTS" so as to guard against opening prior to the time set therefore. No blame shall be attached to any agent of the WSA for the opening of any Bid not so marked.
- C. The BIDDER is advised specifically that any person, firm, or other party to whom BIDDER proposes to award a subcontract under this Agreement must be acceptable to the WSA. Approval of any subcontract award will not be given by the WSA unless and until the proposed Subcontractor has submitted evidence showing that it has fully complied with any requirements to which it is subject.
- D. The BIDDER is advised that all construction work requiring directional drilling / trenchless technologies shall be performed by a pre-qualified Contractors with the Warwick Sewer Authority. The name of the pre-qualified Contractor shall be provided within the Bid.

ARTICLE 4 - FACSIMILE MODIFICATIONS:

Any BIDDER may modify its Bid by facsimile communication at any time prior to the scheduled closing time for receipt of Bids provided that such facsimile communication is received by the WSA prior to the closing time for Bids and, provided further, that the WSA is satisfied that a written confirmation of the facsimile modification over the signature of the BIDDER was mailed and postmarked prior to the closing time. The facsimile communication should not reveal the Bid price but must provide the addition or subtraction, or other modifications to the sealed Bid Price, so that the final prices or items will not be known by the WSA until the sealed Bid is opened. If written confirmation of the facsimile modification is not received within two working days after the closing time, no consideration will be given to the facsimile modification.

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ARTICLE 5 - WITHDRAWAL OF BIDS:

Bids may be withdrawn personally or by written or facsimile request dispatched by the BIDDER in time for delivery to the WSA in the normal course of business prior to the time fixed for Bid submission; provided that written confirmation of any facsimile withdrawal over the signature of the BIDDER was mailed and postmarked prior to the closing time. Negligence on the part of the BIDDER in preparing its Bid confers no right of withdrawal or modification of its Bid after such Bid has been received as noted in Article 1 of this section.

ARTICLE 6 - METHOD OF BIDDING:

The WSA is seeking Unit Bid Prices for the complete construction of the Project, together with all related incidental and appurtenant work as described in these Specifications or as shown on the Drawings. The WSA may at its own discretion limit the scope of the Project.

ARTICLE 7 - QUALIFICATIONS OF BIDDERS:

The WSA may make such investigations as it deems necessary to determine the ability of the BIDDERS to perform the Work, and each BIDDER shall furnish to WSA all such information and data for this purpose as WSA may request. WSA reserves the right to reject any Bid if the evidence submitted by, or its investigation of, such BIDDER fails to satisfy the WSA that such BIDDER is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein within the time stated. A BIDDER will be disqualified if more than one Bid is received from an individual, firm, partnership, corporation or association, under the same or different names and such Bid will not be considered. All BIDDERS and Subcontractors must be licensed and authorized to do business in the State of Rhode Island.

ARTICLE 8 - BID SECURITY:

(To be made payable to the Warwick Sewer Authority)

Each Bid must be accompanied by a certified check, cashier's check, money order, or a Bid Bond prepared on the form of Bid Bond (Section 00310) attached hereto, duly executed by the BIDDER as principal and having as surety thereon a Surety company approved by the WSA and approved to do business in the State of Rhode Island, in the amount of ten (10) percent of the Bid Price. The Bid Price will be taken as the total price to perform all of the Bid Items listed in Section 00300 – Bid Price Forms. Any BIDDER withdrawing its Bid after submittal or failing to enter into a contract with the WSA no later than ninety (90) days after the Bid opening date shall forfeit its Bid Security to the WSA. The Bid Security will be returned to all but the successful BIDDER within a reasonable time following approval of Contract award. The Bid Security of the successful BIDDER will be returned promptly after the WSA and the successful BIDDER have executed the Contract. Failure to provide Bid Security will result in an invalid response. Such response will not be considered for award.

ARTICLE 9 - LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT:

The successful BIDDER, upon its failure or refusal to execute and deliver the Agreement and Performance and Payment Bonds required within 10 days after BIDDER has received notice of the acceptance of its Bid, shall forfeit to the WSA, as liquidated damages for such failure or refusal, the security deposited with the Bid.

ARTICLE 10 - TIME OF COMPLETION AND LIQUIDATED DAMAGES:

BIDDER must agree to commence work on or before a date to be specified in a written Notice to Proceed issued by the WSA, and to fully complete all work associated with this project within 120 days from said date of the "Notice to Proceed". BIDDER also must agree to pay as liquidated damages, and not as a penalty, the sum of \$2,500.00 per day for each consecutive calendar day thereafter that the Project is not completed, as hereinafter provided in the General Conditions. The WSA reserves the right to "subtract or deduct" the liquidated damages against the contract price.

Bidders are alerted that time of completion is of the utmost importance. The successful BIDDER will be permitted to work, and should base its Bid on work hours within the time period of 7:00 A.M. to 5:30 P.M., Monday through Friday. Saturday work will only be allowed with prior consent from the City of Warwick and WSA. No work is to be performed outside of the hours specified without written consent of the City of Warwick and WSA.

ARTICLE 11 - CONDITIONS OF WORK:

BIDDERS are hereby informed of the following:

- A. CONTRACTOR shall be responsible for furnishing all materials that are not furnished by the WSA but are required for the satisfactory completion of the Work.

In addition, each BIDDER must inform itself 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 the successful BIDDER of its obligation to furnish all materials and all labor necessary to carry out the provisions of the Contract Documents and to complete the contemplated Work for the consideration set forth in its Bid. Insofar as possible, CONTRACTOR, in the carrying out of its work, shall employ such methods or means as will not cause any interruption of or interference with: The operation of existing facilities; traffic; use of existing facility and utilities; locations of existing utilities and structures affecting the work or other similar conditions at the site; character of equipment and facilities needed preliminary to and during execution of the Work; requirements of owners and controlling authorities having jurisdiction over the various lands, existing structures, facilities, and utilities; and all other conditions affecting the Work to be done, and the labor and materials needed; and it shall make its Bid in sole reliance thereon, and shall not, at any time after submission of a Bid, assert that there was any misunderstanding in regard to the nature or amount of the Work to be done.

Additional conditions and requirements are presented in the Special Conditions of the Contract Documents.

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ARTICLE 12 - ADDENDA AND INTERPRETATIONS:

No interpretation of the meaning of the Drawings, Specifications, or other pre-bid documents will be made to any BIDDER orally, and no reliance shall be placed on any oral statement that is made on these matters. Every request for an interpretation shall be made in writing via email, and directed to Betty Anne Rogers BettyAnne.Rogers@warwickri.com of the Warwick Sewer Authority and Todd Ravenelle travenelle@graengs.com of Gordon R. Archibald, Inc. To be given consideration, each request must be received by April 23, 2021. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the Specifications, which, if issued, will be emailed to all prospective BIDDERS (at the respective addresses furnished for such purposes), not later than five (5) days prior to the date fixed for the submission of Bids. Failure of any BIDDER to receive any such addenda or interpretations shall not relieve such BIDDER from any obligation under its Bid as submitted. All addenda so issued shall become part of the Contract Documents.

ARTICLE 13 - SECURITY FOR FAITHFUL PERFORMANCE:

Simultaneously with the delivery of the executed contract (the "Contract"), the CONTRACTOR shall furnish Performance and Payment Bond(s), in an amount specified in the General Conditions, as security for the faithful performance of its Contract, and for the payment of all persons performing labor in the Project under this Agreement, and furnishing materials in connection therewith. The Surety on such bonds shall be a duly authorized surety company satisfactory to the WSA, and authorized to do business in the State of Rhode Island. The cost of such Bonds shall be paid by the CONTRACTOR.

ARTICLE 14 - POWER OF ATTORNEY:

Attorneys-in-fact who sign Bid Bonds or Contract Bonds must file with each Bond a certified and effectively dated copy of their power of attorney.

ARTICLE 15 - NOTICE OF SPECIAL REQUIREMENTS:

Attention is called particularly to those parts of the Contract Documents and Specifications that deal with the following:

- Interference with existing utilities and structures (Section 00800 - Supplemental Conditions).
- Inspection and testing.
- Regulatory Permits.
- Insurance requirements.
- Wage rates.
- Interpretation of Drawings and Specifications.
- Work within limits of municipally owned, privately owned, and State-owned property.
- Safety and health regulations.
- Equal Employment Opportunity.
- Minority and Women Business Enterprises - Hiring Requirement.

- Out-of-State Corporations

ARTICLE 16 - LAWS AND REGULATIONS:

The BIDDER'S attention is directed to the fact that all applicable Federal and State laws, municipal ordinances, and rules and regulations of authorities having jurisdiction over construction of the Project, shall apply to the Agreement throughout, and are hereby incorporated in this Agreement by reference and that the Contract shall be governed by the laws of the State of Rhode Island.

ARTICLE 17 - MINORITY AND WOMEN BUSINESS ENTERPRISE REQUIREMENTS:

The CONTRACTOR is required to seek minority and women business enterprise participation in the amounts required by R.I. Gen. Laws § 37-14.1-1 et seq. and applicable regulations.

ARTICLE 18 - OUT-OF-STATE CORPORATIONS:

If the CONTRACTOR is incorporated elsewhere, compliance with R.I. Gen. Laws § 7-1.2-1401 et seq. may be required. If applicable, the CONTRACTOR must obtain and furnish to WSA prior to contract execution a copy of a R.I. Certificate of Authority to Conduct Business and Registered Agent for Service of Process or a current Certificate of Good Standing. This Certificate is to be obtained from the R.I. Secretary of State's Office (401-222-3040).

ARTICLE 19 - NON-DISCRIMINATION IN EMPLOYMENT:

- A. Contracts for work under this Agreement will obligate the CONTRACTOR and subcontractors not to discriminate in employment practices.
- B. The CONTRACTOR will not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, or national origin. The CONTRACTOR also will not discriminate against any employee or applicant for employment because of physical or mental handicap for any position for which the employee or applicant is qualified, and in the event of noncompliance, WSA may declare the CONTRACTOR in breach and take any necessary legal recourse, including termination or cancellation of the Agreement. The CONTRACTOR shall take affirmative action to ensure that applicants are employed and the employees are treated during employment without regard to their race, color, religion, sex, age, handicap, or national origin. Such actions shall include, but not be limited to the following: employment, upgrading, demotions, or transfer; recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; selection for training including apprenticeship; and participation in recreational and educational activities. The CONTRACTOR agrees to post this nondiscrimination clause in conspicuous places available to employees and applicants for employment. 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, age, handicap or national origin. The CONTRACTOR will cause the foregoing provisions to be inserted in all subcontracts for standard commercial supplies or raw materials.

- C. The CONTRACTOR shall keep such records and submit such reports concerning the racial and ethnic origin of applicants for employment and employees as the WSA may require as consistent with Federal and State law.
- D. The CONTRACTOR agrees to comply with such rules, regulations, or guidelines that the United States, the State of Rhode Island, or any other governing authority may issue to implement these requirements. The CONTRACTOR further warrants that it will comply with Title VI and VII of the Civil Rights Act of 1964.
- E. The successful BIDDER will be required to comply with Equal Opportunity Requirements. Prior to execution of the Agreement, the CONTRACTOR must obtain from the Department of Administration and furnish to the WSA a copy of an Equal Opportunity Compliance Certificate. For further information pertaining to this requirement, please contact:

R.I. Equal Opportunity Office
One Capitol Hill
Providence, RI 02908-5865
(Phone – 401-222-3090)

ARTICLE 20 - METHOD OF AWARD – EVALUATION OF BIDDERS:

Bids will be evaluated by WSA based upon the contents of the BIDDER’S package received in accordance with this Invitation for Bid (IFB), with only those clarifications or corrections which may be permitted by the WSA procurement rules. Recommendation for award will be subject to approval by the WSA Board of Directors.

The award shall be made to the lowest responsive and responsible BIDDER satisfying the WSA criteria and shall be made in accordance with the WSA procurement rules. A “responsive BIDDER” is a BIDDER who has submitted a Bid that conforms in all material respects to the IFB. A “responsible BIDDER” shall mean a qualified BIDDER who has the capability in all respects, including financial responsibility, to fully perform the contract requirements, and the integrity and reliability that will assure good faith performance.

It is of utmost importance that BIDDERS exhibit that they possess the capability, background, resources and experience to complete this Project in addition to proposing a competitive price for the Work. To aid in this determination, BIDDERS must: complete the provided form - STATEMENT OF BIDDER'S QUALIFICATIONS; and provide written project description of specific project experience including all of the data requested, and any other additional information required by the WSA during the evaluation of the Bids.

Awards will not be made at the bid opening. Awards will be made within one hundred twenty (120) days of the bid opening unless otherwise provided for in this IFB or extended by the WSA. All BIDDERS will be notified of the award in writing following approval of the recommendation for the award. Bids are considered to be irreversible and may not be withdrawn during this period without the express permission of the WSA.

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All Bids shall become the property of the WSA and will not be returned except as otherwise provided. As the property of the WSA, the Bids will be subject to public review. If any proprietary information is contained in or attached to the Bid, it must be clearly identified for the WSA to ensure protection of such information.

ARTICLE 21 - OBLIGATIONS 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 Drawings, Specifications and Contract Documents (including all addenda). The failure or omission of any BIDDER to examine any form, instrument or document shall in no way relieve any BIDDER from any obligation with respect to its Bid. Reasonable evidence that any BIDDER has an ownership interest (direct or indirect) in more than one BIDDER submitting a Bid for the Work will cause the rejection of all such Bids. Any or all Bids will be rejected if it appears to the WSA that collusion exists among any BIDDERS, and all participants in such collusion will thereafter be barred from submitting future Bids or Bids for all or part of the same work. Each BIDDER shall immediately inform the WSA and ENGINEER of any discrepancies or omissions in the Contract Documents.

ARTICLE 22 - ITEMS NOT LISTED IN THE BID:

The Bid prices listed in the Schedule of Bid Items (Section 00300 – Bid Price Forms) are intended to cover all items of work to be done and materials and work to be furnished to fully complete the Work in accordance with the Contract Documents. Appurtenant items of work shown on the Drawings, specified or required, and parts of the Work, materials, and equipment not shown or specified to complete the Work shall be provided, and shall be considered as included in the Bid Prices. It shall be the responsibility of the BIDDER to verify any missing or incomplete data.

ARTICLE 23 - BALANCED BIDDING:

Bids should be made with reasonable relation to the probable cost of doing the Work included in such items. The WSA reserves the right to reject, in its entirety, at its sole discretion, any Bid on which an item or items thereof are obviously unbalanced in such a way as to affect or to be liable to affect adversely any interests of the WSA. The attention of the BIDDER is called to the fact that unbalancing of Bids may adversely affect the CONTRACTOR if certain portions of the Work are increased or decreased as provided in the Contract Documents.

ARTICLE 24 - PRICES:

A BIDDER shall state the proposed price for the Work by which the Bids will be compared. This price is to cover all expenses incidental to the completion of the Work in full conformity with the Contract, Specifications, and Drawings. No Bid will be accepted which does not contain a unit price or a lump sum as indicated for each of the applicable items enumerated in the Schedule of Bid Items (Section 00300 – Bid Price Forms).

ARTICLE 25 - UNCERTAINTY OF QUANTITIES:

- A. The quantities listed in the Schedule of Bid Items are approximate. The WSA does not expressly or by implication represent that the actual amounts of work will even approximately correspond therewith, and calls particular attention to the uncertainty in the quantities of the Work involved which cannot be predicted in advance. The Work under certain items may be materially greater or less than those given in the Bid, in order in the judgment of the WSA, to complete the Work contemplated in the Contract. Attention is particularly called to the fact that the quantity of work to be done under some Bid items may be largely dependent on subsurface and ground conditions encountered and, therefore, the quantities of work to be done under such items may vary substantially from the estimated quantities or may even be omitted.
- B. Under the Contract, the WSA reserves the right to increase or decrease the approximate quantities for, or to omit entirely, any of the items listed in the Bid.
- C. Only such quantities of the respective items of work actually performed and accepted will be paid for. An increase or decrease in the quantity for any item shall not be regarded as grounds for an increase or decrease in the Bid prices.

ARTICLE 26 - AGREEMENT:

An Agreement in the form set forth hereinafter will be required to be executed by the successful BIDDER and the WSA. The attention of all BIDDERS, therefore, is called to the form of said proposed Contract and the provisions thereof. (See Section 00500 – Agreement.)

ARTICLE 27 - WORK ON STATE, MUNICIPAL, AND PRIVATE PROPERTY:

Particular attention is hereby directed to the fact that portions of the Work included under this Contract may be done within the limits of properties that are State-owned, municipally owned, or privately owned. The CONTRACTOR shall be responsible for coordinating the prosecution of the Work of this Contract with the property owner and for providing the Work in accordance with any additional requirements as specified herein under "SPECIAL CONDITIONS."

ARTICLE 28 - PAYMENT FOR DRAWINGS & DOCUMENTS:

See Section 00030 – Advertisement for Invitation for Bids.

ARTICLE 29 - CORRECTIONS:

Erasures or other changes in the Bid must be explained or noted over the signature of the BIDDER.

ARTICLE 30 - PERSONAL EXAMINATION:

BIDDERS are required to submit their Bids upon the following express conditions which shall apply to and become a part of every Bid received: BIDDERS must satisfy themselves by personal examination of the

site of the proposed Work. This shall be done by a complete review of the data available and by such other means as they may prefer as to the actual condition, requirements, and limits of the proposed Work, and as to the accuracy of information and statements herein contained. The submission of any Bid will be accepted by the WSA as satisfactory proof that the BIDDER has satisfied itself in these respects. The CONTRACTOR shall not, at any time after the submission of a Bid, dispute or complain of any statements and information contained herein, nor assert that there was any misunderstanding in regard to the nature or amount of work to be done.

ARTICLE 31 - PRECONSTRUCTION CONFERENCE:

The CONTRACTOR shall attend a preconstruction conference scheduled by the WSA after award of the Contract, but prior to the actual commencement of the Work.

ARTICLE 32 - WAGES:

Each BIDDER should submit its Bid based upon payment of applicable RI Wage Rates in accordance with Title 37, Chapter 13, of the Rhode Island General Laws, or if the BIDDER does not submit its Bid with applicable RI Wage Rates and is awarded the Contract, then it shall be required to indemnify and hold the WSA harmless from any resulting legal actions. WSA reserves the right to review the CONTRACTOR'S payroll documentation so as to verify compliance with this provision.

The BIDDER shall adhere to the provisions of RIGL § 37-13-6 which reads as follows:

§ 37-13-6 Ascertainment of prevailing rate of wages and other payments – Specification of rate in call for bids and in contracts. – Before awarding any contract for public works to be done, the proper authority shall ascertain from the director of labor and training the general prevailing rate of the regular, holiday, and overtime wages paid and the general prevailing payments on behalf of employees only, to lawful welfare, pension, vacation, apprentice training, and educational funds (payments to the funds must constitute an ordinary business expense deduction for federal income tax purposes by contractors) in the city, town, village, or other appropriate political subdivision of the state in which the work is to be performed, for each craft, mechanic, teamster, laborer, or type of worker needed to execute the contract for the public works. The proper authority shall also specify in the call for bids for the contract and in the contract itself the general prevailing rate of the regular, holiday, and overtime wages paid and the payments on behalf of employees only, to the welfare, pension, vacation, apprentice training, and educational funds existing in the locality for each craft, mechanic, teamster, laborer, or type of worker needed to execute the contract or work.

ARTICLE 33 - RHODE ISLAND SALES TAX:

Pursuant to the Rhode Island Sales and Use Tax Act, the WSA is exempt from the payment of sales tax for purchase of materials and supplies. BIDDERS are requested to submit bids on the basis that no Sales Tax will be imposed on purchases of materials and supplies used in the Work.

An exemption certificate, applying to materials purchased for and actually incorporated in the Work, may be obtained by the successful BIDDER from the WSA.

ARTICLE 34 - BIDDER'S DISCLOSURE:

For the purposes of this Article only, the word BIDDER shall be defined as any person, firm or corporation that has submitted or intends to submit a Bid for the Work. The submission of an actual Bid by any person, firm, or corporation, shall constitute acknowledgment that the BIDDER had formed the intent to submit a Bid at least three calendar days prior to the Bid submission date. A BIDDER (hereinafter called BIDDER A) shall give written notice of its status as BIDDER to any other BIDDER (hereinafter called BIDDER B) if such BIDDER B:

- A. Is known to BIDDER A, or identifies itself to BIDDER A as a BIDDER for the Work; and
- B. Requests or has requested (for the purpose of preparing its Bid) a bid price from BIDDER A for BIDDER A's services as a Subcontractor or as a major supplier.
 1. For the purposes of this Article, BIDDER A would be a major supplier if it proposes to provide for Work, equipment or materials whose cost would be in excess of 20% of its own (BIDDER A's) total Contract Bid. Whenever possible, notice under this Article shall be given concurrently with any bid price submitted. In all cases, this notice shall be given at least three calendar days prior to the actual opening of Bids (or at the time of the initial request for a bid price, if later). If, having received notice under this Article, BIDDER B submits a Bid based in whole or in part on the bid price of that other BIDDER (BIDDER A) who gives such notice, BIDDER B thereby waives any objection to a subsequent contract award that is based on the adequacy of BIDDER A's bid price or on BIDDER A's status as a BIDDER.

ARTICLE 35 – NOT USED

ARTICLE 36 - RELATIONSHIP AS INDEPENDENT CONTRACTOR:

The CONTRACTOR'S relationship with the WSA under the Agreement shall be that of independent contractor. Nothing in the Agreement shall be construed to designate the CONTRACTOR, or any of his employees or Subcontractors, as employees, agents, joint venture or partners of the WSA.

ARTICLE 37 - CONFLICT OF INTEREST:

A CONTRACTOR filing a Bid certifies that: No officer, agent, employee of the WSA has a pecuniary interest in the Bid or has participated in contract negotiations on the part of the CONTRACTOR; the Bid is made in good faith without fraud, collusion, or connection of any kind with any other BIDDER for the same call for IFB; and the CONTRACTOR is competing solely in his/her/its own behalf without connection with, or obligation to, any undisclosed person or firm. Further, no person or firm who is listed as a Subcontractor shall be eligible to become a qualified Bidder in the Bid to which he/she/it is a named Subcontractor.

ARTICLE 38 - STEEL PRODUCTS PROCUREMENT ACT:

The CONTRACTOR shall comply with the provisions of R.I. Gen. Laws § 37-2.1-3 et seq. concerning the purchasing of domestic steel.

ARTICLE 39 – STREAM/STORM CHANNEL FLOW DIVERSION

The CONTRACTOR shall take precautions necessary to control the discharge of soil and sediment. Adequate controls and methods shall be utilized to prevent erosion and sedimentation as approved by the WSA and in accordance with the Soil Erosion and Sediment Control Plan.

ARTICLE 40 - "DIG SAFE" LAW:

The CONTRACTOR shall take precautions against damaging of paving, utilities, or private properties and promptly shall repair, at its own expense, any damage to such paving, utilities or private property to the satisfaction of the WSA or its representative. In this regard, the CONTRACTOR will be required to show written evidence that it has contacted the various utility companies with service in the area in accordance with Title 39 of the General Laws of the State of Rhode Island entitled Public Utilities and Carriers, stating the name of the individual contacted and locations of any potential conflicts with the indicated work program, and DIG SAFE CALL CENTER at 1-888-344-7233 or 811.

ARTICLE 41 - NON-INTERFERENCE WITH ONGOING PROJECTS:

The CONTRACTOR shall be aware of all ongoing WSA projects and shall perform all Work without interference therewith.

ARTICLE 42 – ELECTRICAL WORK:

Bidder must comply with the provisions of RIGL § 5-6-2 with respect to any electrical work to be performed pursuant to the terms of that general law. To the extent the Bidder is not licensed and certified pursuant to RIGL § 5-6-2, the Bidder shall identify as part of its response to either an invitation for bid (IFB) or a request for proposal (RFP), and shall use on the project, a subcontractor licensed and certified pursuant to said general law.

ARTICLE 43 - PROHIBITED CONTACTS:

All Bidders, including persons affiliated with or in any way related to them, are prohibited from contacting WSA Board Members, the WSA staff, consultants or attorneys for the WSA on any matter having to do in any respect with this IFB other than with the consent of the WSA Executive Director or her designee. Failure of any Bidder to adhere to this prohibition may, at the sole discretion of the WSA, result in disqualification and rejection of any Bid. Any and all contacts with such persons associated with the WSA shall be made only through and in coordination with the Executive Director and shall be required to be in writing.

ARTICLE 44 - NOTICE TO BIDDERS:

In any case where there are references or attachments that contain language which is contrary to the language found within this IFB, the language contained in the IFB shall supersede.

ARTICLE 45 - WSA'S RIGHTS:

This IFB does not commit the WSA to contract with any BIDDER nor does it commit the WSA to an exclusive agreement with the selected Contractor for these services. The WSA reserves the following rights:

- To withdraw this IFB at any time;
- To reject any and all Bids or BIDDERS;
- To eliminate any of the tasks in the Scope of Services of this IFB and to issue a contract with a correspondingly reduced Project Work Program;
- To issue subsequent IFBs at the WSA's sole discretion;
- To postpone award of the contract;
- To accept the Bid that the WSA finds to be the most advantageous, cost-effective and/or beneficial to the WSA;
- To split the award or to make multiple awards;
- To negotiate the Bid to further refine, clarify, amend, or expand any and all aspects of the Bid;
- To accept Bids that do not offer the lowest cost;
- To confirm all references and contact further references obtained from other sources as deemed necessary;
- To request BIDDERS to send representatives to Warwick, Rhode Island for interviews at their own cost;
- To waive any informalities or technicalities in any Bid; and
- To apply any additional rights as may be allowed under applicable purchasing laws and rules.

ARTICLE 46 – FEDERAL FUNDING:

To the extent this IFB is funded either partially or completely through the use of federal funds, BIDDER shall comply with any rules and regulations attached to said funding.

END OF SECTION

SECTION 00300

BID FORMS

TO: WARWICK SEWER AUTHORITY
125 Arthur W. Devine Boulevard Warwick, RI 02886
BID FOR: Contract No. 101 – Oakland Beach Interceptor Rehabilitation

The undersigned BIDDER, having read and examined the Specifications and associated Contract Documents for the above-designated Work, does hereby propose to perform the Work and provide the services set forth in this Bid. All prices stated herein are firm and shall not be subject to escalation provided this Bid is accepted within ninety (90) days after the time set for receipt of Bids.

The BIDDER, in compliance with the Invitation for Bid for Contract No. 101 , in the City of Warwick, Rhode Island, having examined the Drawings and Specifications with related documents and the site of the proposed Work and being familiar with all of the conditions surrounding the construction of the proposed Project, including the availability of materials and labor, hereby proposes to furnish all labor, materials, supplies, supervision and anything else required or necessary in order to construct the Project in accordance with the Contract Documents within 120 calendar days from the “Notice to Proceed” and in accordance with the prices stated in the Schedule of Bid Items.

This Bid is accordingly submitted in the sum of

_____ Dollars

(Written in Words)

(\$ _____)

(Numerical)

for the Contract No. 101. These prices cover all costs of performing the Work required under the Contract Documents of which this Bid is a part.

BIDDER hereby agrees to commence work under this Contract on a date to be specified in a written "Notice to Proceed" by the Warwick Sewer Authority, and to fully complete the project within 90 calendar days of said notice, or as otherwise mutually agreed upon by the Warwick Sewer Authority and BIDDER. BIDDER further agrees to pay as liquidated damages, the sum of \$2,500.00 for each consecutive calendar Day thereafter until the Project is completed.

Upon receipt of written notice of the acceptance of this Bid, BIDDER shall execute the formal Contract attached within ten (10) calendar Days, and deliver surety Bonds and insurance certificates as required in the General Conditions. In the event the Contract and Bond are not executed within the time set forth above, the Bid Security attached in the sum of (10% of the Bid Price)

_____ Dollars

(Written in Words)

(\$ _____)

(Numerical)

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shall become the property of the Warwick Sewer Authority as liquidated damages for the delay and additional expense to the Warwick Sewer Authority caused thereby.

BIDDER acknowledges receipt of the following addenda:

No. _____ Dated: _____

No. _____ Dated: _____

The undersigned hereby declares that the following list states any and all variations from and exceptions to the requirements of the Contract Documents and that, otherwise, it is the intent of this bid that the Work will be performed in strict accordance with the Contract Documents. If the BIDDER takes no exceptions, he/she shall write "None" in the space provided.

(Add additional pages as required)

The Owner reserves the right to reject any BID which includes variations from and exceptions to the requirements of the Contract Documents.

A.1 SCHEDULE OF BID ITEMS

The BIDDER agrees to perform the Work described in the Specifications and shown on the Drawings for the following lump sum or unit prices. All prices must be given in numerical figures and must be typewritten or printed legibly. Due to the length and nature of this request, only the Total Bid Price will be read aloud at the Bid Opening. The prices for the individual items will not be read aloud, but following the Bid Opening, a Bid Abstract will be prepared, and it will be made available to all interested parties upon request.

TOTAL BASE BID PRICE (In Figures):

\$ _____

Note: In case of error in the extension of prices, the unit price will govern.

The BIDDER warrants that it has available or under its control, labor, equipment, materials, and resources of the character and in the amount required to complete the proposed Work within the specified time.

A.2 ALTERNATES

The Warwick Sewer Authority reserves the right to include one or more alternates identified herein to/from the scope of the project; provided, however, that said alternates shall only be selected by the Warwick Sewer Authority in the order in which they are listed. Bidders are required to submit a bid price for each and every alternate. Failure to submit a bid price for each and every alternate will result in the entire proposal being deemed to be nonresponsive to the solicitation.

Alternates are listed in numerical sequence in order of Warwick Sewer Authority's priority. In determining the lowest responsive bid the awarding authority shall consider alternates in descending numerical sequence such that no individual alternate shall be considered until every alternate preceding it on the list has been added to the base bid price.

Bidder understands that the Warwick Sewer Authority reserves the right to reject any and all bids, and to waive any irregularities in the bidding and accept the bid, with or without alternates, as deemed to be in the best interest of the Warwick Sewer Authority.

A.3 EXTRA WORK

Payment for extra work, if any performed, shall be in accordance with Section 00700 – General Conditions of the Contract Documents, and shall be computed in one of the following methods:

A. A lump sum agreed upon by the Contractor, the Warwick Sewer Authority, and the Engineer.

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- B. The unit price proposed by the Contractor.
- C. Actual costs as defined by Section 00700 – General Conditions.

A.4 ENGINEER'S ESTIMATE OF QUANTITIES

Quantities are provided for informational purposes only for use by the BIDDERS in developing a total Bid price. BIDDERS are advised to develop their own material takeoff quantities from the Contract Documents.

A.5 DECLARATION AND SIGNATURES

The undersigned hereby declares that, in regard to all conditions affecting the Work to be done and the labor and materials required, this Bid is based on its investigations and findings, and the WARWICK SEWER AUTHORITY, their officers, agents and employees of the WARWICK SEWER AUTHORITY shall not in any manner be held responsible for the accuracy of, or be bound by, any estimates, borings, indications of borings, soils, rock, water, or underground conditions relative to the proposed Work indicated in this or in the other Contract Documents; that no warranty or representation has been made by the WARWICK SEWER AUTHORITY, its officers, agents and employees as to subsurface soil or rock conditions, groundwater conditions, or other underground and similar conditions.

A.6 BIDDER CONTRACTOR QUALIFICATIONS

The Bidder shall meet the minimum qualification requirements provided below.

A.6.1 Required Bidder Qualification Statement

The Bidder shall state below what works of a similar character to that of the proposed contract it has performed, and provide such references as will enable the Owner to judge its experience, skill, and business standing.

All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. If necessary, add separate sheets.

1. Name of Bidder.
2. Permanent Main Office address.
3. When organized?

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4. Where incorporated?
5. Is bidder registered with the Secretary of the State to do business in Rhode Island?
6. For how many years has your firm engaged in the contracting business under its present name? Also state names and dates of previous firm names, if any.
7. Contracts on hand. (Schedule these, showing gross amount of each contract and the approximate anticipated dates of completion.)
8. General character of work performed by your company.
9. Have you ever failed to complete any work awarded you in the scheduled contract time, including approved time extensions? ___(Yes) ___(No).

If so, where and why?
10. Have you ever defaulted on a contract? ___(Yes) ___(No).

If so, where and why?
11. Have you ever had liquidated damages assessed on a contract? ____ (Yes) ____ (No).

If so, where and why?
12. List the more important contracts recently executed by your company, stating approximate cost for each, and the month and year completed.
13. List your major equipment available for this contract.
14. List your key personnel such as Project Superintendent and foreman available for this contract.
15. With what banks do you conduct business?

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Do you grant the Engineer permission to contact this (these) institutions? ___(Yes) ___(No)

NOTE: Bidders may be required to furnish their latest financial statement as part of the award process.

Projects of Similar Size and Complexity Demonstrating BIDDER possess Minimum BIDDER Qualifications

Project 1

Project Name: _____

Project Location: _____

Year Completed: _____

Construction Cost: _____

Owner and Contact Information: _____

Engineer and Contact Information: _____

Reference Contact Information: _____

Scope of Work: _____

Projects of Similar Size and Complexity Demonstrating BIDDER possess Minimum BIDDER Qualifications

Project 2

Project Name: _____

Project Location: _____

Year Completed: _____

Construction Cost: _____

Owner and Contact Information: _____

Engineer and Contact Information: _____

Reference Contact Information: _____

Scope of Work: _____

“BIDDER” shall mean a qualified BIDDER who has the capability in all respects, including financial responsibility, to fully perform the contract requirements, and the integrity and reliability that will assure good faith performance. It is of utmost importance that BIDDERS exhibit that they possess the capability, background, resources and experience to complete this Project in addition to proposing a competitive price for the Work. To aid in this determination, BIDDERS must: complete the provided form - STATEMENT OF BIDDER'S QUALIFICATIONS; and provide written project description of specific project experience including all of the data requested, and any other additional information required by the WSA during the evaluation of the Bids.

BIDDER QUALIFICATIONS

The BIDDER must have previous successful experience relining existing underground pipelines owned by public agencies or municipalities. Minimum experience shall include the following:

- The BIDDER shall have recent prior experience in installing cured-in-place structural liners in pipe at least 36-inch in diameter. The Contractor shall submit a list of a minimum of three (3) projects completed with the last ten (10) years with each project being a minimum of 1,000 feet in length. The list shall include pipe manufacturer, diameter of pipe, length of installation, name and telephone number of pipe Owner and date of installation. All referenced experience shall be for the projects completed within the United States or Canada.
- The Contractor shall submit the name(s) and qualifications for each scheduled superintendent for the project. It is required that the superintendents named are the superintendents assigned to the project. The Contractor is required to have at least one qualified superintendent on the job during all construction activities. The qualified superintendent must have a minimum of five (5) years relining supervisory field experience on at least two (2) successfully completed relining projects of 36-inch and larger diameter. All referenced experience shall be for projects completed within the United States or Canada. References will be checked.

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1. **Project Experience.** The contractor must include a record of experience on 5 projects of similar size, scope and setting completed in the last 10 years. For each project, provide information on:
 - a. Project name and client
 - b. Description of the project
 - c. Scope of services provided
 - d. Pipe diameters, pipe material and lengths
 - e. Cured-in-Place technology used
 - f. Problems encountered and how they were resolved
 - g. Any claims and how they were resolved.
 - h. Original and final contract sum
 - i. Start and completion dates
 - j. Owners name, address, telephone number and contact for project

2. **References.** Provide reference information for the following:
 - a. Project References
 - Provide the following reference information for each project listed under the project experience section.
 - Project Name
 - Name, address, telephone, and email of Owner
 - Name, address, telephone, and email of Owner's representative or Engineer
 - Name of Contact person, title, telephone and email for each

3. **Financial Stability.** The contractor must submit proof of their financial stability. This will include an audited financial statement for the most recent completed year, information demonstrating available bonding and a letter from the firm's banking institution indicating their line of credit available to cover project cash flow. The surety/bonding company must be licensed to do business in the State of Rhode Island. Any and all financial information requested and/or submitted shall be maintained as confidential upon request.

4. **Safety Record.** Provide a 3-year history of the Contractor's worker's compensation experience modifier rating and documentation from their insurance carrier supporting the rating history provided.

5. **Insurance.** The Contractor should demonstrate that they maintain adequate insurance coverage and provide evidence of such coverages.

BIDDER certifies that materials and means and methods used to construct above projects are similar in nature to the Work of this Contract.

Respectfully submitted,

_____ Date _____
Name of Company*

By _____
(Signature) (Printed or Typed)

Title _____

Business Address _____

SEAL

(Seal if Bid is by a Corporation)

*Note: Insert BIDDER'S name. If a corporation, give the state of incorporation, using the phrase "A corporation organized under the laws of _____, composed of officers as follows:

Further, be advised that _____, who serves as _____ of this company, is duly authorized to enter into any resulting contract with the OWNER.

President

Vice President

Secretary

Treasurer

END OF SECTION

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SCHEDULE OF PRICES

Bid

Item No.	Approx. Quantity	Unit Measure	Items w/Unit Bid Prices Written in Words	Unit Bid \$ Price	Amount \$ Bid
The Bidder agrees to perform all the construction work described in the CONTRACT DOCUMENTS, for the following unit and lump sum prices. BIDS shall include applicable fees.					
1	1	L.S.	Site Preparation and Mobilization		
	At _____			Per L.S. _____	_____
2	1,480	L.F.	20" Cured-in-Place Structural Pipe Liner		
	At _____			Per L.F. _____	_____
3	425	L.F.	24" Cured-in-Place Structural Pipe Liner		
	At _____			Per L.F. _____	_____
4	1650	L.F.	36" Cured-in-Place Structural Pipe Liner		
	At _____			Per L.F. _____	_____
5	220	VLF	Manhole Repair		
	At _____			Per VLF _____	_____
6	440	VLF	Manhole Lining Rehabilitation		
	At _____			Per VLF. _____	_____
7	1	L.S.	By-Pass Pumping		
	At _____			Per L.S. _____	_____
8	3	EA	Excavation Pits for Force Main Connections		
	At _____			Per EA _____	_____
9	22	EA	Sewer Frame and Cover		
	At _____			Per EA _____	_____
10	5	EA	Remove and Reset Sewer Frame and Covers		
	At _____			Per EA. _____	_____
11	22	EA	Manhole Invert Repair		
	At _____			Per EA _____	_____
12	5	EA	Core Drill into Sewer Manhole for Bypass		
	At _____			Per EA. _____	_____

SCHEDULE OF PRICES

Bid

Item No.	Approx. Quantity	Unit Measure	Items w/Unit Bid Prices Written in Words	Unit Bid \$ Price	Amount \$ Bid
The Bidder agrees to perform all the construction work described in the CONTRACT DOCUMENTS, for the following unit and lump sum prices. BIDS shall include applicable fees.					
13	1,500	L.F.	Sawcutting Bituminous & Concrete (All Depths)		
	At _____			Per L.F. _____	_____
14	300	S.Y.	Remove and Dispose Flexible Pavement		
	At _____			Per S.Y. _____	_____
15	30	Tons	1-1/2" Temporary Bituminous Concrete Patch		
	At _____			Per TON _____	_____
16	40	Tons	2-1/2" Permanent Bituminous Concrete Base (City/State)		
	At _____			Per TON _____	_____
17	20	Tons	1-1/2" Permanent Bituminous Concrete Top (City)		
	At _____			Per TON _____	_____
18	10	Tons	2" Permanent Bituminous Concrete Top (State)		
	At _____			Per TON _____	_____
19	20	Tons	2-1/2" Bituminous Concrete Sidewalks/Driveways		
	At _____			Per TON _____	_____
20	50	L.F.	Remove and Reset Curbing		
	At _____			Per L.F. _____	_____
21	50	S.Y.	Concrete Sidewalk/Driveway		
	At _____			Per S.Y. _____	_____
22	50	S.Y.	4" Loam and Seed		
	At _____			Per S.Y. _____	_____
23	1	L.S.	Clearing and Grubbing		
	At _____			Per L.S. _____	_____
24	500	L.F.	Compost Filter Sock		
	At _____			Per L.F. _____	_____

SCHEDULE OF PRICES

Bid

Item No.	Approx. Quantity	Unit Measure	Items w/Unit Bid Prices Written in Words	Unit Bid \$ Price	Amount \$ Bid
The Bidder agrees to perform all the construction work described in the CONTRACT DOCUMENTS, for the following unit and lump sum prices. BIDS shall include applicable fees.					
25	25	EA	Catch Basin Inlet Protection (Silt Sack)		
At _____ Per EA.				_____	_____
26	1	L.S.	Maintenance and Protection of Traffic		
At _____ Per L.S.				_____	_____
27	NA	NA	Police Protection		
Paid by the Warwick Sewer Authority				0.00	0.00
28	1	Allowance	Testing		
At Five Thousand Dollars				\$5,000.00	\$5,000.00
29	1	Allowance	Miscellaneous Utility Work		
At Twenty-Five Thousand Dollars				\$25,000.00	\$25,000.00
30	1	Allowance	Tree Trimming		
At Five Thousand Dollars				\$5,000.00	\$5,000.00

TOTAL OF BID (ITEMS 1 THROUGH 30): \$ _____ (Figures)

TOTAL BID WRITTEN IN WORDS:

_____ Dollars
(Written)

SECTION 00310
BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,

_____, as Principal, and,
_____, as Surety, are hereby held and firmly bound unto the Warwick Sewer Authority, as Owner, in the penal sum of _____ Dollars (\$ _____), for the payment of which, will and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

Signed, this _____ day of _____, 20_____.

THE CONDITION OF THE ABOVE OBLIGATION is such that whereas the principal has submitted to the Warwick Sewer Authority a certain Bid attached hereto and hereby made a part hereof to enter into a Contract in writing for Contract No. 101, Oakland Beach Interceptor Rehabilitation in Warwick, Rhode Island.

NOW THEREFORE, if said Bid shall be rejected, or

If said Bid shall be accepted and the Principal shall execute and deliver a Contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a Bond for his faithful performance of said Contract and for the payment of all persons performing labor, furnishing materials in connection therewith, and shall in all other respects perform the Agreement created by the acceptance of said Bid, then this obligation shall be void. Otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated. The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall in no way be impaired or affected by an extension of the time within which the Owner may accept such Bid, and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Principal

By _____
(Surety)

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Rhode Island.

END OF SECTION

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SECTION 00430
PROPOSED SUBCONTRACTORS

The BIDDER shall state the names of all Subcontractors that it proposes to use.

*Description of work _____

Proposed Subcontractor, Name _____

Address _____

*Description of work _____

Proposed Subcontractor, Name _____

Address _____

*Description of work _____

Proposed Subcontractor, Name _____

Address _____

*Insert description of work and Subcontractors' names as may be required.

This is to certify that the names of the above-mentioned Subcontractors are submitted with full knowledge and consent of the respective parties. The BIDDER warrants that none of the proposed Subcontractors have any conflict of interest as respects this Contract.

To the extent that the Contractor uses additional or substitute Subcontractors, the WSA shall be notified within 48 hours of said selection. Any proposed additional or substitute Subcontractors shall possess qualifications and experience that meet or exceed the specified minimum qualifications and experience. Use of additional or substitute Subcontractors shall be subject to the approval of the WSA.

BIDDER _____

(Fill in name)

By: _____

(Signature and Title)

END OF SECTION

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SECTION 00500

AGREEMENT

THIS AGREEMENT, made this _____ day of _____ 20____, is by and between the "Warwick Sewer Authority," hereinafter called "the OWNER," and

(Name of Contractor)

doing business as _____
(an individual) (a partnership) (a corporation)

of the City of _____, County of _____ and State of _____, hereinafter called "Contractor."

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The Contractor acknowledges that it has received, read, and understands the Invitation for Bids, Information for Bidders, the Bid (which shall include any post-Bid documentation submitted prior to the Notice of Award and attached to the Agreement), the Bonds, the Specifications and Drawings, and the General Conditions and any Supplementary Conditions provided by the Owner (those documents and any amendments, modifications, supplements, or Addenda thereto are hereinafter collectively referred to as the "Contract Documents"). The terms and conditions of the Contract Documents, and all attachments thereto, are hereby incorporated in this Agreement by reference, except to the extent such terms and conditions are inconsistent with any terms and conditions of this Agreement. In any case where specific terms and conditions included in this Agreement differ from those terms and conditions set forth in the Contract Documents, the terms of this Agreement shall govern.
2. The Contractor will commence and complete the Contract 101, Project, in Warwick, Rhode Island (The Project).
3. The Contractor will furnish all other material, supplies, tools, equipment, labor and other services necessary for the construction and completion of the Project.
4. The Contractor will commence the work required by the Contract Documents on a date to be specified in a written Notice to Proceed (the "Commencement Date"), and will complete fully the Project within three (3) calendar months of said Commencement Date, unless the period for completion is extended by the OWNER in writing or by the Contract Documents. The Contractor further agrees to pay as liquidated damages the sum of \$2,500.00 for each calendar day that the Project is not completed after the anticipated completion date, as provided in SECTION 00700 - GENERAL CONDITIONS and SECTION 00120 - INFORMATION FOR BIDDERS.

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The Contractor agrees to perform all of the Work described in the Contract Documents, and to comply with the terms therein, for the Bid Price of

\$ _____, as shown in Section 00300 – Bid Price Forms.

5. The Owner will pay the Contractor in the manner and at such times as are set forth in the Contract Documents the amounts set forth in the Contract Documents.
6. Nothing herein or in the Contract Documents shall be construed to create any personal liability on the part of any officer, agent, employee, or director of Owner, nor shall the Contract Documents be construed to give any rights or benefits hereunder to anyone other than the Owner and the Contractor.
7. The Contractor will indemnify and hold the Owner harmless from any and all loss, damages, suits, penalties, costs, liabilities and expenses (including, but not limited to, reasonable investigation and legal expenses) arising out of any claim including claims for loss of or damage to property, including Owner's property, and injuries to or death of persons, including Owner's employees, caused by or resulting from Contractor negligence or willful misconduct or breach of this Agreement. In any instance in which Owner claims indemnity under this paragraph, Contractor shall have the duty to defend the Owner in any litigation arising out of the occurrence from which the Owner claims that Contractor's indemnity obligation exists.
8. The Contractor warrants that neither it nor any of its principals, officers, agents or representatives authorized to make commitments on its behalf have ever been convicted of violating any statute relating to bribery, fraud, or bid-rigging in this state or in any other state in this country. Further, the Contractor agrees to perform all services and provide all goods called for by this Agreement in compliance with all Rhode Island laws.
9. This Agreement and the Contract Documents represent the entire understanding of the Owner and Contractor with respect to the Project. No prior oral or written understanding shall be of any force or effect with respect to any matter covered hereunder. This Agreement may not be modified or altered except in writing signed by both parties.
10. This Agreement shall be governed by and interpreted under the laws of the State of Rhode Island. All claims, disputes, and other matters in question arising out of or relating to this Contract or the performance or interpretation thereof shall be submitted to arbitration pursuant to the terms of Title 37, Chapter 16, of the Rhode Island General Laws, as amended.
11. This Agreement shall be binding upon the parties hereto and their respective heirs, executors, administrators, successors, and assigns. The Contractor shall not be permitted to assign this Agreement except with the written consent of the Owner.

IN WITNESS WHEREOF, the parties hereto have executed or caused to be executed by their duly authorized officials, this Agreement in two (2) copies, each of which shall be deemed an original, on the date first above written.

WARWICK SEWER AUTHORITY (OWNER)

BY: _____

BY: _____

(CONTRACTOR)

BY: _____

(Title)

(Address)

END OF SECTION

SECTION 00600

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, that we _____, as Contractor, of _____ and _____, hereinafter called the "Surety," are held and firmly bound unto the Warwick Sewer Authority, 125 Arthur W. Devine Boulevard, Warwick, Rhode Island, 02886, hereinafter called the "Owner," and to such persons, firms and corporations which may furnish materials for or perform labor on the Work, construction, or improvements, contemplated in the Agreement hereinafter mentioned, or which may have any suits or claims for injury or damage to persons or property resulting from or arising out of the Work done under this Agreement in the penal sum of _____ Dollars (\$ _____) (lawful money of the United States of America) for the payment whereof the Contractor and the Surety or Sureties bind themselves and their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT, WHEREAS THE CONTRACTOR has by means of a written agreement dated on the _____ day of _____, 20____ (the Agreement) entered into a written contract with the Owner for Contract No. 101, Oakland Beach Interceptor Rehabilitation Project, and related work and other incidentals (the Project) for the sum of approximately _____ Dollars (\$ _____).

NOW, THEREFORE, the condition of this obligation is such that if the Contractor shall promptly make payment to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the Work provided for in such Contract, and any authorized extensions or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment, and tools consumed or used in connection with the construction of such Work, and all insurance premiums on said Work, and for all labor performed in such work whether by Subcontractors or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, THAT (except as to the Owner) no suit, action, or proceeding, by reason of any default whatever shall be brought on this Bond after two years from the day on which the final payment under the Agreement falls due.

AND PROVIDED, that any alterations which may be made in the terms of the Agreement or in the Work to be done under it or any assignment, transfer, or subletting of any part of the Work, or the giving by the Owner of any extension of time for the performance of the Agreement or any other forbearance on the part of either the OWNER or the Contractor to the other, shall not in any way release the Contractor and the Surety or Sureties, or either or any of them their heirs, executors, administrators, successors or assigns from their liability hereunder, notice to the Surety or Sureties of any such alterations, assignment, transfer, subletting extension of forbearance being hereby waived.

AND PROVIDED FURTHER, the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Agreement, the Work to be performed thereunder or the Specifications accompanying the same shall in any way affect its obligations on this Bond, and it does hereby waive notice of any such change, extension of time, alternation or addition to the terms of the Agreement, the Work, or to the Specifications.

AND PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, where claim may be unsatisfied.

IN WITNESS WHEREOF, said Contractor and Surety have hereunto set their respective names this _____ day of _____, 20____.

WITNESSES:

(Contractor) (Seal)

Name

By: (Signature and Title)

Address

Surety: (Signature and Title)

Name

By: (Signature and Title)

Address

Attorney-in-fact

POWER OF ATTORNEY

Any attorney-in-fact who signs Contract Bonds must file with each Bond a certified copy of his or her power of attorney to sign said Bonds.

NOTE: The date of the BOND must not be before the date of the Agreement. If Contractor is a Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Rhode Island.

END OF SECTION

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SECTION 00610

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we _____, as Contractor, of _____, and _____, hereinafter called the "Surety," are held and firmly bound unto the Warwick Sewer Authority, 125 Arthur W. Devine Boulevard, Warwick, Rhode Island, 02886, hereinafter called the "Owner," and to such persons, firms and corporations which may furnish materials for or perform labor on the Work, construction, or improvements contemplated in the Agreement hereinafter mentioned, or which may have any suits or claims for injury or damage to persons or property resulting from or arising out of the Work done under this Agreement in the penal sum of

_____ Dollars (\$ _____) (lawful money of the United States of America) for the payment whereof the CONTRACTOR and the Surety or Sureties bind themselves and their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT, WHEREAS THE CONTRACTOR has by means of a written agreement dated on the _____ day of _____, 20____ (the Agreement) entered into a written contract with the Owner for the CONTRACT 101 PROJECT and related work and other incidentals (the Project) for the sum of approximately _____ Dollars (\$ _____).

NOW, THEREFORE, the condition of this obligation is such that if the Contractor shall faithfully perform the Agreement on its part and during the life of any guarantee or warranty, including warranty for defective materials and workmanship required under this Agreement, and satisfy all claims and demands incurred for the same; and shall fully indemnify and save harmless the Owner from all cost and damage which may suffer by reason of failure to do so, and shall fully reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any such fault, and shall promptly make payment to all persons supplying labor or materials for use in the prosecution of the Work provided for in said Agreement; and shall indemnify and save harmless the said Owner, its officers, agents, employees, and directors from any and all suits or claims for injury or damage to persons or property resulting from or arising out of work done under this Agreement, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

PROVIDED, HOWEVER, THAT (except as to the Owner) no suit, action, or proceeding, by reason of any default whatever shall be brought on this Bond after two years from the day on which the final payment under the Agreement falls due.

AND PROVIDED, that any alterations which may be made in the terms of the Agreement or in the Work to be done under it, or any assignment, transfer, or subletting of any part of the Work, or the giving by the Owner of any extension of time for the performance of the Agreement or any other forbearance on the part of either the Owner or the Contractor to the other, shall not in any way release the Contractor and the Surety or Sureties, either or any of them, their heirs, executors, administrators, successors or assigns from their liability hereunder, notice to the Surety or Sureties of any such alterations, assignments, transfer, subletting, extension or forbearance being hereby waived.

AND PROVIDED FURTHER, the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Agreement, the Work to be performed thereunder or the Specifications accompanying the same shall in any way affect its obligations on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Agreement, the Work, or to the Specifications.

AND PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, where claim may be satisfied.

IN WITNESS WHEREOF, said Contractor and Surety have hereunto set their respective names this _____ day of _____, 20____.

WITNESSES:

(CONTRACTOR) (Seal)

Name

By: (Signature and Title)

Address

Surety: (Signature and Title)

Name

By: (Signature and Title)

Address

Attorney-in-fact

POWER OF ATTORNEY

Any attorney-in-fact who signs Contract Bonds must file with each Bond a certified copy of his or her power of attorney to sign said Bonds.

NOTE: The date of the BOND must not be before the date of the Agreement. If Contractor is a Partnership, all partners should execute Bonds.

IMPORTANT: Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Rhode Island.

END OF SECTION

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SECTION 00700

GENERAL CONDITIONS

ARTICLE 1 -DEFINITIONS

Wherever the words hereinafter defined or pronouns used in their stead occur in the Contract Documents, they shall have the following meaning indicated which shall be applicable to both the singular and plural thereof:

ADDENDA - Written or graphic instruments prior to the opening of Bids, which clarify, correct or change the Bidding Requirements or Contract Documents.

AGREEMENT - the written contract between Authority and Contractor covering the Work to be performed.

"AS DIRECTED," "AS ORDERED," "AS REQUESTED," "AS REQUIRED", "AS PERMITTED," or words of like import are used, it shall be understood that the direction, order, request, requirement, or permission of the Engineer is intended.

"APPROVED," "ACCEPTABLE," "SUITABLE," "SATISFACTORY," and words of like import shall mean approved by, acceptable to, suitable to, or satisfactory to the Engineer.

APPLICATION FOR PAYMENT - Form used by Contractor in requesting progress or final payments, format to be acceptable to the Engineer.

BID - The offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

BIDDER - Any person, firm or corporation submitting a bid for the work.

CHANGE ORDER - A document recommended by the Engineer, which is signed by the Contractor and Authority authorizing the addition, deletion or revision in the Work, or adjustment in the Contract Price or Contract Time, issued on or after the effective date of the Agreement.

CONTRACTOR - The person, firm or corporation with whom the Authority has entered into the Agreement.

CONTRACT BONDS - Bid, Performance, and Labor and Materials Bonds and other instruments of security furnished by the Contractor and his surety in accordance with the Contract Documents.

CONTRACT DOCUMENTS - The Agreement, Addenda, Bid, Post Bid documentation submitted prior to the Notice Award, The Notice to Proceed, Bonds, These General Conditions, the Supplemental Conditions, the Miscellaneous Conditions, the Specifications, the Drawings, all written Amendments, Change Orders, Field Orders, and Engineers written interpretations and clarifications

CONTRACT PRICE - The total monies payable to the Contractor under the terms and conditions of the Contract Documents.

CONTRACT TIME - The number of calendar days stated in the Contract Documents for the completion of the Work.

CONSTRUCTION SUPERINTENDENT - That person designated by the Contractor to carry out the provisions of the Contract.

DATUM OR LEVELS - The figures given in the Contract and Specifications or upon the Drawings after the work elevation or abbreviation of it, shall mean the distance in feet above mean sea level, the base of the State of Rhode Island and the United States Geodetic Survey (U.S.G.S.).

DRAWINGS - The part of the Contract Drawings which shows the characteristics and scope of the Work to be performed and which have been prepared or approved by the Engineer.

EARTH - Wherever used as the name of an excavated material or material to be excavated, shall mean all kinds of material other than rock as defined in this section.

ELEVATION - The figures given on the Drawings or in the other Contract Documents after the work "elevation" or abbreviation of it shall mean the distance in feet above the datum adopted by the Engineer.

ENGINEER -The word "Engineer" shall mean the person or persons, partnership or corporation holding the position or acting in the capacity of Engineer for the Authority in respect to this Contract, whether acting directly or through his properly authorized agents, such agents acting only within the scope of the particular duties entrusted to them. (For this Contract, Warwick Sewer Authority)

FIELD ORDER - A written order issued by the Engineer which orders minor changes in the Work which do not involve a change in the Contract Price or an extension of the Contract time.

GENERAL REQUIREMENTS – The first section of the Technical Specifications.

"HEREIN," "HEREINAFTER," "HEREUNDER," and words of like import shall be deemed to refer to the Contract Documents.

NOTICE OF AWARD - The written notice of the acceptance of the Bid from the Authority to the successful Bidder.

NOTICE TO PROCEED - Written communication issued by the Authority to the Contractor authorizing him to proceed with the Work and establishing the date of commencement of the Work.

CITY - The City of Warwick, Rhode Island acting through its Warwick Sewer Authority.

PROJECT OR CONTRACT - The undertaking to be performed in the Contract Documents.

PROJECT REPRESENTATIVE - The authorized representative of the Authority who is assigned to the project site or any part thereof.

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ROCK - wherever used as the name of an excavated material to be excavated, shall mean only boulders and pieces of concrete and masonry exceeding 1 cu. yd. in volume, or igneous, sedimentary, metamorphic, and conglomerate rock which, in the opinion of the Engineer, requires, for its removal, drilling and blasting, wedging, sledging, barring, or breaking up with a power-operated tool. No soft or disintegrated rock which can be removed with a hand pick or power-operated excavator or shovel, no loose, shaken, or previously blasted rock or broken stone in rock fillings, or elsewhere, and no rock exterior to the maximum limits of measurement allowed, which may fall into the excavation, will be measured or allowed as "rock."

SHOP DRAWINGS - All drawings, diagrams, schedules and other data or information prepared for and submitted by the Contractor, to illustrate portions of the Work.

SPECIFICATIONS - The portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto.

SUBCONTRACTOR - An individual, firm or corporation, approved by the Authority and Engineer having a direct contract with the Contractor or with any other Sub-Contractor for the performance of a part of the Work on the Project.

SUBSTANTIAL COMPLETION - Where the Work has progressed to the point where, in the opinion of the Engineer, the Work is sufficiently complete, in accordance with the Contract Documents, so that the Work can be utilized for the purpose intended.

SUPPLEMENTARY CONDITIONS - The part of the Contract Documents which amends or supplements these General Conditions.

SUPPLIER - Any person or organization who supplies materials or equipment for the Work, including that fabricated to a special design, but who does not perform labor at the site.

WRITTEN NOTICE - Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed when posted by certified or registered mail to the said party at his last given address or delivered in person to said party or his authorized representative on the Work.

WORK - The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work includes and is the result of performing or furnishing labor and furnishing and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all as required by the Contract Documents.

ARTICLE 2 -THE CONTRACT DOCUMENTS.

The Agreement, the Information to Bidders, the Contractor's Bid as accepted by the Authority, the Specifications, the Drawings, and all Addenda and amendments to any of the foregoing collectively constitute the Contract Documents, and are sometimes herein referred to as the "Contract".

- 2.1 The Contract Documents are complementary, and what is called for by any one shall be as binding as if called for by all. In the event of any conflict or inconsistency between the provisions of the Agreement and the provisions of any of the other Contract Documents, the provisions of the Agreement shall prevail.
- 2.2 Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the edition of the standard specification, manual, code or laws or regulations identified in the reference. In the event a particular edition is not identified, the reference shall mean the latest amended edition in effect at the time of receipt of the Bid. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall change the duties and responsibilities of the Authority, the Contractor or the Designer, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to the Engineer, or any of the Engineer's consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the work or any duty or authority to undertake responsibility contrary to the provisions of the Agreement.

ARTICLE 3 -OBLIGATIONS AND LIABILITY OF CONTRACTOR.

- 3.1. The Contractor shall do all the work and perform and furnish all the labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies and all other things (except as otherwise expressly provided herein) necessary and as herein specified for the proper performance and completion of the Work in the manner and within the time hereinafter specified, in strict accordance with the Drawings, Specifications and other Contract Documents, in conformity with the directions and to the satisfaction of the Engineer, and at the prices herein agreed upon therefor.
- 3.2. All parts of the Work and all fixtures, equipment, apparatus and other items indicated on the Drawings and not mentioned in the Specifications, or vice versa, and all work and material usual and necessary to make the work complete in all its parts, including all incidental work necessary to make it complete and satisfactory and ready for use and operation, whether or not they are indicated on the Drawings or mentioned in the Specifications, shall be furnished and executed the same as if they were called for both by the Drawings and by the Specifications.
- 3.3. The Contractor shall coordinate his operations with those of any other contractors who may be employed on other work of the Authority, shall avoid interference therewith, and shall cooperate in the arrangements for storage of materials and equipment.
- 3.4. The Contractor shall conduct his work so as to interfere as little as possible with private business and public travel. Wherever and whenever necessary or required, he shall maintain fences, furnish watchmen, maintain lights, and take such other precaution as may be necessary to protect life and property.

- 3.5 The Contractor shall indemnify and save harmless the Authority and the Engineer and their officers, agents, servants and employees, from and against any and all claims, demands, suits, proceedings, liabilities, judgments, awards, losses, damages, costs and expenses, including attorneys' fees, on account of bodily injury, sickness, disease or death sustained by any person or persons or injury or damage to or destruction of any property, directly or indirectly arising out of, relating to or in connection with the Work, whether or not due or claimed to be due in whole or in part to the active, passive or concurrent negligence or fault of the Contractor, his officers, agents, servants or employees, any of his subcontractors, or any of their respective officers, agents, servants or employees and/or any other person or persons, and whether or not such claims, demands, suits or proceedings are just, unjust, groundless, false or fraudulent; and the Contractor shall and does hereby assume and agrees to pay for the defense of all such claims, demands, suits and proceedings, provided, however, that the Contractor shall not be required to indemnify the Engineer, his officers, agents, servants or employees, against any such damages occasioned solely by defects in maps, plans, drawings, designs or specifications prepared, acquired or used by the Engineer and/or solely by the negligence or fault of the Engineer; and provided further, that the Contractor shall not be required to indemnify the Authority, its officers, agents, servants or employees, against any such damages occasioned solely by acts or omissions of the Authority other than supervisory acts or omissions of the Authority in the Work.
- 3.6 The Contractor shall have complete responsibility for the Work and the protection thereof, and for preventing injuries to persons and damage to the Work and property and utilities on or about the Work, until final completion and final acceptance thereof. He shall in no way be relieved of his responsibility by and right of the Engineer to give permission or directions relating to any part of the Work, by any such permission or directions given, or by failure of the Engineer to give such permission or directions. The Contractor shall bear all costs, expenses, losses and damages on account of the quantity or character of the Work or the nature of the land (including but not limited to subsurface conditions) in or under or on which the Work is done being different from that indicated or shown in the Contract Documents or from what was estimated or expected, or on account of the weather, elements, or other causes.
- 3.7 The Contractor shall conduct his operations so as not to damage existing structures or work installed either by him or by other contractors. In case of any such damage resulting from his operations, he shall repair and make good as new the damaged portions at his own expense with the consent of the damaged party. In the event that consent is not given, the Contractor shall continue liable for the damage caused.
- 3.8 The Contractor shall be as fully responsible to the Authority for the acts and omissions of his subcontractors, their officers, agents, servants and employees as he is for his own acts and omissions and those of his own officers, agents, servants and employees.
- 3.9 Should the Contractor sustain any loss, damage or delay through any act or omission of any other contractor or any subcontractor of any such other contractor, the Contractor shall have no claim against the Authority therefor, other than for an extension of time, but shall have recourse solely to such other contractor or subcontractor.
- 3.10. If any other contractor or any subcontractor of any such other contractor shall suffer or claim to have suffered loss, damage or delay by reason of the acts or omissions of the Contractor or of any of his subcontractors, the Contractor agrees to assume the defense against any such claim and to reimburse such other contractor or subcontractor for such loss or damage.

- 3.11 The Contractor agrees to and does hereby indemnify and save harmless the Authority from and against any and all claims by such other contractors or subcontractors alleging such loss, damage or delay from and against any and all claims, demands, suits, proceedings, liabilities, judgments, awards, losses, damages, costs and expenses, including attorneys' fees, arising out of, relating to or resulting from such claims.
- 3.12 The Contractor shall promptly pay all federal, state and local taxes which may be assessed against him in connection with the Work or his operations under the AGREEMENT and/or the other Contract Documents, including, but not limited to, taxes attributable to the purchase of material and equipment, to the performance of services, and the employment of persons in the prosecution of the Work.

ARTICLE 4 - AUTHORITY OF THE ENGINEER.

- 4.1 The Engineer shall be the sole judge of the intent and meaning of the Drawings and Specifications and his decisions thereon and his interpretation thereof shall be final, conclusive and binding on all parties.
- 4.2 The Engineer shall be the Authority's representative during the life of the Contract and he shall observe the Work in progress on behalf of the Authority. He shall have authority (a) to act on behalf of the Authority to the extent expressly provided in the Contract or otherwise in writing; (b) to determine the amount, quality, acceptability and fitness of all work, materials and equipment required by the Contract; and (c) to decide all questions which arise in relation to the Work, the execution thereof, and the fulfillment of the Contract.
- 4.3 The Contractor shall proceed without delay to perform the work as directed, instructed, determined or decided by the Engineer and shall comply promptly with such directions, instructions, determinations or decisions. If the Contractor has any objection thereto he may, within ten (10) days of having received any such direction, instruction, determination or decision, require that any such direction, instruction, determination or decision be put in writing and within ten (10) days after receipt of any such writing he may file a written protest with the Authority stating clearly and in detail his objections, the reasons therefor, and the nature and amount of additional compensation, if any, to which he claims he will be entitled thereby. A copy of such protest shall be filed with the Engineer at the same time it is filed with the Authority. Unless the Contractor requires that any such direction, instruction, determination or decision be put in writing within ten (10) days of having received such direction, instruction, determination or decision and unless the Contractor files such written protest with the Authority and Engineer within such ten (10) day period, he shall be deemed to have waived all grounds for protest of such direction, instruction, determination, or decision and all claims for additional compensation or damages occasioned thereby, and shall further be deemed to have accepted such direction, instruction, determination, or decision as being fair, reasonable, and finally determinative of his obligations and rights under the Contract.

ARTICLE 5 - SUPERVISION OF WORK.

- 5.1 The Contractor shall be solely responsible for supervision of the Work, shall give the work the constant attention necessary to ensure the expeditious and orderly progress thereof, and shall cooperate with the Engineer in every possible way.
- 5.2 At all times, the Contractor shall have his agent on the Work a competent superintendent capable of reading and thoroughly understanding the Drawings and Specifications, with full authority to execute the directions of the Engineer without delay and to supply promptly such labor, services, materials, equipment, plant, apparatus, appliances, tools, supplies and other items as may be required. Such superintendent shall not be removed from the Work without the prior written consent of the Engineer. If, in the opinion of the Engineer, the superintendent or any successor proves incompetent, the Contractor shall replace him with another person approved by the Engineer; such approval, however, shall in no way relieve or diminish the Contractor's responsibility for supervision of the Work.
- 5.3 Whenever the Contractor or his agent or superintendent is not present on any part of the Work where it may be necessary to give directions or instructions with respect to such work, such directions or instructions may be given by the Engineer to and shall be received and obeyed by the designated foreman or any other person in charge of the particular work involved.

ARTICLE 6 - INSURANCE

- 6.1 The Contractor shall assume full responsibility for the safety of his employees, injury to persons other than his employees, and damage to property arising out of work performed by the Contractor.
- 6.2 The Contractor shall indemnify and hold harmless the Authority and the Engineer from and against any liability imposed by law or otherwise upon the Authority and the Engineer, their officers, representatives, agents and employees for injury or death of persons and for loss of damage to property caused by fault or negligence of Contractor and its officers, representatives, subcontractors, and employees in the performance of the services under this Agreement.
- 6.3 Contractor shall defend any claim or suit brought against the Authority or the Engineer based upon such injury, death, loss or damage as described in the previous paragraph, and shall pay all costs and expenses (including legal fees) in connection with such claim or suit, provided the Engineer shall give Contractor prompt notice of such claim or suit, and shall provide such reasonable assistance in connection therewith as Contractor may request.
- 6.4 The Contractor shall carry insurance in the usual form with the following minimum limits:
- a. Comprehensive General Liability - Comprehensive General Liability including personal injury and property damage liability with a combined single limit of \$1,000,000 per occurrence, \$2,000,000 aggregate. Policy to include Owner's and Contractor's Protective Liability, Contractual Liability assumed under this contract, and Broad Form Property Damage Liability.
 - b. Worker's Compensation and Employer's Liability - Worker's Compensation (Coverage A) in accordance with the laws of the State of Rhode Island; and Employer's Liability (Coverage B) with a limit of liability of \$500,000 each accident, \$500,000 disease policy limit, and \$500,000 disease each employee.
 - c. Comprehensive Auto Liability - Comprehensive Auto Liability including bodily injury and

property damage endorsed to include owned, hired and non-owned vehicle liability. A combined single limit of \$1,000,000 per accident for bodily injury and property damage liability shall be required.

- 6.5 Alternately, if the Contractor owns no vehicles, then it should provide a certificate of insurance which evidences that it has in effect a Non-Owned and Hired Vehicle Insurance Policy with bodily injury \$1,000,000 per accident.
- 6.6 The Contractor shall furnish the Engineer with certificates of insurance indicating full coverage for these limits before starting any of its operations under this Agreement. Certificates shall be endorsed with the requirement that cancellation or changes of a policy will not be made until after thirty (30) working days written notice to the Engineer.
- 6.7 By doing the work called for under this Agreement, the Contractor shall become liable for any claim growing out of the fraudulent or negligent submissions of subsurface data by the Contractor, including any professional liability claim which might be brought against the Authority and the Engineer arising out of such fraudulent or negligent submission.
- 6.8 The carrying of any of the insurance required hereunder shall not be interpreted as relieving Contractor of any responsibility to the Authority or the Engineer.

ARTICLE 7 - PATENTS.

- 7.1 The Contractor's attention is directed to the following "Patent Indemnity Clause" illustrating the format and/or required wording therefore which shall be used by all manufacturers and/or suppliers, as deemed necessary by the Authority and Engineer, as an Indemnification and Hold Harmless Agreement.
- 7.2 This Agreement shall be accepted and approved in form by the Authority and Engineer prior to the approval and/or installation of the product.

PATENT INDEMNITY CLAUSE

"In Consideration for their purchase and use of the (Name of product and/or equipment) manufactured by (name of Manufacturer) and for other good and valuable consideration, (Name of Manufacturer) agrees to defend and hold harmless (Name of Contractor), Gordon R. Archibald, Inc., and the Authority of Warwick, Rhode Island, and their employees and agents, from and against any liability, loss, cost, expense or damage including reasonable attorneys' and accountants' fees incurred by these entities in defending or prosecuting any claim for such liability, loss, cost, expense or damage resulting or arising out of a claim that the use of the above mentioned product and/or equipment delivered hereunder directly infringes any United States Patent, provided that (Name of Manufacturer) is given authority, information, and assistance for the defense of such suit, and (Name of Manufacturer) shall pay all damages and costs assessed against the above named entities for the use of such produce and/or equipment provided, however, that this indemnification shall not apply to equipment of (Name of Contractor) design, and provided further that if the use of such product and/or equipment is enjoined in any suit, (Name of Manufacturer) shall at its own expense and its option either procure for (name of Contractor) the right to continue the normal use of such produce and/or equipment, replace said product and/or equipment, modify said equipment or refund the purchase price thereof; and provided further that (Name of Manufacturer) indemnity as to use shall not apply to infringement resulting from the use of the produce and/or equipment

delivered hereunder in combination with other items where use of the product and/or equipment per se does not constitute infringement."

ARTICLE 8 - COMPLIANCE WITH LAWS.

8.1 The Contractor shall keep himself fully informed of all existing and future federal, state, and local laws, ordinances, rules, and regulations affecting those engaged or employed on the Work, the materials and equipment used in the Work or the conduct of the Work, and of all orders, decrees and other requirements of bodies of tribunals having any jurisdiction or authority over the same. If any discrepancy or inconsistency is discovered in the Drawings, Specifications or other Contract Documents in relation to any such law, ordinance, rule, regulation, order, decree or other requirement, the Contractor shall forthwith report the same to the Engineer in writing. The Contractor shall at all times observe and comply with, and cause all his agents, with all such existing and future laws, ordinances, rules, regulations, orders, decrees and other requirements, and he shall protect, indemnify and save harmless the Authority, its officers, agents, servants and employees, from and against any and all claims, demands, suits, proceedings, liabilities, judgments, penalties, losses, damages, costs and expenses, including attorneys' fees, arising from or based upon any violation or claimed violation of any such law, ordinance, rule, regulation, order, decree or other requirement, whether committed by the Contractor or any of his agents, servants, employees or subcontractors.

ARTICLE 9 - PROVISIONS REQUIRED BY LAW DEEMED INSERTED.

9.1 Each and every provision of law and clause required by law to be inserted in the Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though they were included herein. If through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion.

ARTICLE 10 - PERMITS.

10.1 The Contractor shall, at his own expense, take out and maintain all necessary permits from the county, municipal, or other public authorities; shall give the notices required by law; and shall post all bonds and pay all fees and charges incident to the due and lawful prosecution of the Work.

ARTICLE 11 - NOT TO SUBLET OR ASSIGN.

11.1 The Contractor shall constantly give his personal attention to the faithful prosecution of the Work, shall keep the same under his personal control, shall not assign the Contract or sublet the Work or any part thereof without the previous written consent of the Authority, and shall not assign any of the moneys payable under the Contract, or his claim thereto, unless by and with the like written consent of the Authority and the Surety on the Contract Bonds. Any assignment or subletting in violation hereof shall be void and unenforceable.

11.2 The Contractor shall not sublet or assign work to a subcontractor(s), for a total in excess of fifty (50) percent of the Contract Price, without prior written approval of the Authority and Engineer.

11.3 The Contractor shall be fully responsible to the Authority for the acts and omissions of his subcontractors, suppliers, and of persons either directly or indirectly employed by them as he is for the acts and omissions of persons directly employed by him.

- 11.4 The Contractor shall cause appropriate provisions, and applicable State or Federal regulations, to be inserted in all subcontractors relative to the work to bind subcontractors to the Contractor by the terms of the Contract Documents insofar as applicable to the work of subcontractors, and to give the Contractor the same power as regards terminating any subcontract that the Authority may exercise over the Contractor under any provision of the Contract Documents.
- 11.5 The Contractor's attention is directed to the fact that nothing contained in this Contract shall create any contractual relation between any subcontractor and the Authority.

ARTICLE 12 - DELAY BY CITY.

- 12.1 The Authority may delay the beginning of the Work or any part thereof if the necessary lands or rights-of-way for such work shall not have been obtained. The Contractor shall have no claim for additional compensation or damages on account of such delay, but shall be entitled only to any extension of time as hereinafter provided.

ARTICLE 13 - TIME FOR COMPLETION.

- 13.1 Provisions related to delays and time for completion of the work follow: The rate of progress shall be such that the Work shall be performed and completed in accordance with the Contract before the expiration of the time limits within 365 consecutive calendar days after the acceptance of the Notice to Proceed, except as otherwise expressly provided herein.
- 13.2 It is agreed that the rate of progress herein required has been purposely made low enough to allow for the ordinary and foreseeable delays incident to construction work of this character. No extension of time will be given for ordinary or foreseeable delays, inclement weather, or accidents, and the occurrence of such will not relieve the Contractor from the necessity of maintaining this rate of progress and completing the Work within the stipulated time limit.
- 13.3 If delays are caused by acts of God, acts of Government, unavoidable strikes, extra work, or other cause or contingencies clearly beyond the control or responsibility of the Contractor, the Contractor may be entitled to additional time to perform and complete the Work, provided that the Contractor shall, within ten (10) days from the beginning of such delay notify the Authority in writing, with a copy to the Engineer, of the cause and particulars of the delay. Upon receipt of such notification, the Authority shall review and evaluate the cause and extent of the delay. If, under the terms of the AGREEMENT, the delay is properly excusable, the Authority will, in writing, appropriately extend the time for completion of the Work. (This paragraph will be interpreted to include delays in receipt of equipment provided that the Contractor placed his order and submitted shop drawings for such equipment promptly after execution of the Contract, that he has shown due diligence in following the progress of the order, and that the time required for delivery is in accordance with conditions generally prevailing in the industry.) The Contractor agrees that he shall not have or assert any claim for nor shall he be entitled to any additional compensation or damages on account of such delays.
- 13.4 The time in which the Work is to be performed and completed is of the essence of this AGREEMENT.

ARTICLE 14 - LIQUIDATED DAMAGES.

- 14.1 In case the Contractor fails to complete the Work satisfactorily on or before the date of completion or interim milestone fixed herein or as duly extended as hereinbefore provided, the Contractor agrees that the Authority shall deduct from the payments due the Contractor each month the sum of \$2,500.00 for each calendar day of delay, which sum is agreed upon not as a penalty, but as fixed and liquidated damages for each day of such delay. If the payments due the Contractor are less than the amount of such liquidated damages, said damages shall be deducted from any other moneys due or to become due the Contractor, and, in case such damages shall exceed the amount of all moneys due or to become due the Contractor, the Contractor or his Surety shall pay the balance to the Authority.

ARTICLE 15 - NIGHT AND SUNDAY WORK.

- 15.1 Work shall be done at night or on Saturday or Sunday (1) if all of the conditions set forth in the next paragraph below are met or (2) Contract activities specifically specified elsewhere to be conducted at night or on Saturday or Sunday. Work may be allowed on if the work will be to the advantage of the Authority, and the Engineer has given written permission for such work.
- 15.2 No work other than that included in (1) and (2) above shall be done at night except when (a) in the sole judgment of the Authority, the work will be of advantage to the Authority and can be performed satisfactorily at night, (b) the work will be done by a crew organized for regular and continuous night work, and (c) in the sole judgment of the Authority and Engineer, adequate noise prevention measures are incorporated into the Work by the Contractor to minimize any noise impact within the work area and (d) the Engineer has given written permission for such night work. (e) Night work is defined as work between the hours of 4:30 p.m. and 7:00 a.m.

ARTICLE 16 - EMPLOY COMPETENT PERSONS.

- 16.1 The Contractor shall employ only competent persons on the Work and shall not employ persons or means which may cause strikes, work stoppages or any disturbances by persons employed by the Contractor, any subcontractor, the Authority, the Engineer or any other contractor. Whenever the Engineer notifies the Contractor in writing that in his opinion any person on the Work is incompetent, unfaithful, disorderly, or otherwise unsatisfactory, or not employed in accordance with the provisions of the Contract, such person shall be discharged from the Work and shall not again be employed on it, except with the written consent of the Engineer.

ARTICLE 17 - EMPLOY SUFFICIENT LABOR AND EQUIPMENT.

- 17.1 If in the sole judgment of the Engineer the Contractor is not employing sufficient labor, plant, equipment or other means to complete the Work within the time specified, the Engineer may, after giving written notice, require the Contractor to employ such additional labor, plant, equipment and other means as the Engineer deems necessary to enable the Work to progress properly.

ARTICLE 18 - INTOXICATING LIQUORS AND/OR DRUGS.

18.1 The Contractor shall not sell and shall neither permit nor suffer the introduction and/or use of intoxicating liquors and/or drugs upon or about the Work.

ARTICLE 19 - ACCESS TO WORK.

19.1 The Authority, the Engineer, and their officers, agents, servants and employees may at any and all times and for any and all purposes, enter upon the Work and the site thereof and the premises used by the Contractor, and the Contractor shall at all times provide safe and proper facilities therefor.

ARTICLE 20 - EXAMINATION OF WORK.

20.1 The Engineer shall be furnished by the Contractor with every reasonable facility for examining and inspecting the Work and for ascertaining that the Work is being performed in accordance with the requirements and intent of the Contract, even to the extent of requiring the uncovering or taking down portions of furnished work by the Contractor.

20.2 Should the work thus uncovered or taken down prove satisfactory, the cost of uncovering or taking down and the replacement thereof shall be considered as extra work unless the original work was done in violation of the Contract in point of time or in the absence of the Engineer or his inspector and without his written authorization, which case said cost shall be borne by the Contractor. Should the work uncovered or taken down prove unsatisfactory, said cost shall likewise borne by the Contractor.

20.3 Examination of inspection of the Work shall not relieve the Contractor of any of his obligations to perform and complete the Work as required by the Contract.

ARTICLE 21 - DEFECTIVE WORK, ETC.

21.1 Until acceptance and during the applicable guarantee period thereafter, the Contractor shall promptly, without charge, repair, correct or replace work, equipment, materials, apparatus or parts thereof which are defective, damaged or unsuitable or which in any way fail to comply with or be in strict accordance with the provisions and requirements of the Contract or applicable guarantee and shall pay to the Authority all resulting costs, expenses, losses or damages suffered by the Authority.

21.2 If any material, equipment, apparatus or other items brought upon the site for use or incorporation in the Work, or selected for the same, is rejected by the Engineer as unsuitable or not in conformity with the Specifications or any of the other Contract Documents, the Contractor shall forthwith remove such materials, equipment, apparatus and other items from the site of the Work and shall at his own cost and expense make good and replace the same and any material furnished by the Authority which shall be damaged or rendered defective by the handling or improper installation by the Contractor, his agents, servants, employees or subcontractors.

ARTICLE 22 - PROTECTION AGAINST WATER AND STORM.

22.1 The Contractor shall take all precautions necessary to prevent damage to the Work by storms or by water entering the site of the Work directly or through the ground. In case of damage by storm or water, the Contractor shall at his own cost and expense make such repairs or replacements or rebuild such parts of the Work as the Engineer may require in order that the finished Work may be completed as required by the Contract.

ARTICLE 23 - RIGHT TO MATERIALS.

23.1 Nothing in the Contract shall be construed as vesting in the Contractor any right of property in the materials, equipment, apparatus and other items furnished after they have been installed or incorporated in or attached or affixed to the Work or the site, but all such materials, equipment, apparatus and other items shall, upon being so installed, incorporated, attached or affixed, become the property of the Authority. Nothing in this subsection shall relieve the Contractor of his duty to protect and maintain all such materials, equipment, apparatus and other items.

ARTICLE 24 - CHANGES IN THE CONTRACT.

24.1 **Right to Change.** The Engineer reserves the right to make changes in the Contract at any time during the progress of the work as are necessary to satisfactorily complete the Project. Such changes shall not invalidate the Contract nor release the Surety. The Contractor agrees to perform the work as directed by the Engineer. Any costs applicable to such changes will be paid for by the execution of an appropriate Contract Addendum.

24.2 **Causes for Changes.** Changes in the Contract may result from any of the following causes, all of which are defined below by the indicated Subsections of the Rhode Island Standard Specifications for Road and Bridge Construction, 2004 Edition.

- A. Differing site conditions; Subsection 104.03.
- B. Alterations in the Plans or Details; additions to, reductions in, or elimination of an existing item of work contained in the Proposal; Subsection 104.04.
- C. Extra or unforeseen work for which there is no item of work in the Proposal; Subsection 104.05.
- D. Suspension of the work for any reason; Subsection 104.06.
- E. Significant changes in the character of the work; Subsection 104.07.

ARTICLE 25 - DIFFERING SITE CONDITIONS, CHANGES, EXTRA WORK AND FORCE ACCOUNT.

25.1 **Methods of Payment.** Differing site conditions, changes, extra work, and significant changes in the character of the work, all performed in accordance with Section 01010 – Scope of Work, Rhode Island Standard Specifications for Road and Bridge Construction, 2004 Edition, will be paid for in accordance with the following methods as appropriate:

- A. Contract unit prices.
- B. Unit prices agreed upon in the order authorizing the work.
- C. An agreed upon lump sum amount.
- D. If directed by the Authority, on a Force Account Basis to be compensated in the following manner:

- i. Labor. For all labor and foremen in direct charge of the specific operations, the Contractor shall receive the rate of wage actually paid as shown by its certified payroll, which rate shall be at least the prevailing rate of wage (or scale), for each and every hour that said labor and foremen are actually engaged in the work.

No part of the salary or expenses of anyone connected with the Contractor's forces above the grade of foreman, and having general supervision of the work, will be included in the labor item as specified above. The Engineer reserves the right to determine the number and type of labor employed.

The Contractor shall receive the actual costs paid to, or in behalf of, workers by reason of subsistence and travel allowances, health and welfare benefits, pension fund benefits or other benefits, when such amounts are required by collective bargaining agreement or other employment contract generally applicable to the classes of labor employed on the work.

An amount equal to 20 percent of the sum of the above items will also be paid the Contractor.

- ii. Bond, Insurance and Tax. For property damage, liability, worker's compensation insurance premiums, unemployment insurance contributions, and social security taxes incurred on force account work, the Contractor shall receive the actual cost, to which cost a surcharge of 6-percent will be added. The Contractor shall furnish satisfactory evidence of the rate or rates paid for such bonds, insurances and taxes.
- iii. Materials. For materials accepted by the Engineer and used in the work, the Contractor shall receive the actual cost of such materials delivered to the site, including transportation charges paid (exclusive of machinery rentals as hereinafter set forth), to which cost a surcharge of 15 percent will be added. The Contractor will not be reimbursed for any penalty or carrying charge incurred due to late or delayed payment for materials used in the work.
- iv. Equipment. For any machinery or special equipment (other than small tools) including transportation cost, the use of which has been authorized by the Engineer, the Contractor shall receive either the "hourly rental rates" as prescribed herein by the Authority, or the actual documented cost plus an amount equal to 10 percent of said actual documented cost, whichever is less. Under no circumstance shall the payment exceed the replacement cost of the equipment.

All rental rates shall include the estimated operating cost as indicated for that equipment in either the Rental Rate Blue Book or the Rental Rate Blue Book for Older Equipment, including the Rate Adjustment Tables approved for projects wholly or partially funded by the Federal Highway Administration (FHWA). Operators' wages are not included in the estimated operating cost and are paid separately, except for certain specified equipment in which the operator's wages are included. Rental rates shall be submitted to the Authority prior to the start of construction work.

The “hourly rental rate” for an individual piece of equipment shall be determined by dividing the associated monthly rate, modified by the Rate Adjustment Tables, as contained in the Rental Rate Blue Book by one hundred seventy-six (176). There will be no adjustment to the hourly rate for the period of use.

For rented equipment, the cost shall be based on the actual documented cost plus an amount equal to 10 percent of said actual documented cost, subject to the conditions set forth below. The actual documented cost shall consist of the paid invoice for rented equipment plus other documented operating costs (i.e., fuel, maintenance, repairs, etc.).

Actual documented costs plus 10 percent of said costs shall not exceed the cost as calculated from the RENTAL RATE BLUE BOOK or the RENTAL RATE BLUE BOOK FOR OLDER CONSTRUCTION EQUIPMENT. The Contractor shall submit documentation for both the hourly rental rates and actual documented costs to determine that the actual documented costs plus 10 percent of said costs does not exceed the calculated rental rate costs. No percentage surcharges will be added to the “Blue Book” rates as prescribed herein for rented equipment.

For equipment which is already on the project, the rental period shall start when such equipment is ordered to work by the Engineer, and shall continue until ordered to stop work.

For equipment which has to be brought to the project specifically for use on force account work, the Authority will pay all loading and unloading costs, and all transportation costs to and from the project, including assembling and dismantling, provided, however, that the cost of return transportation shall not exceed that of moving the equipment to the project. Loading, unloading and transportation costs will not be paid if the equipment is used for work other than force account work while on the project. The rental period shall start at the time the equipment is ready for operation, and shall extend during the period of time the equipment is actually utilized on force account work. The rental period shall end when the equipment is released by the Engineer.

All equipment, including trucks, shall in the judgment of the Engineer, be in good working condition and suitable for the purpose intended. The Engineer reserves the right to determine the number of units of the various types of equipment to be employed on force account work. The manufacturer’s model identification shall be the basis for identifying the type of equipment for payment purposes. Certification for the model year of the equipment will be required.

- v. Subcontracting. For work performed by a subcontractor, the Contractor shall accept as full payment therefore, an amount equal to the actual cost to the Contractor of such work performed by the subcontractor as determined by the Engineer, plus 10 percent of said cost.
- vi. Miscellaneous. No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.
- vii. Compensation. The Contractor's representative and the Engineer shall daily compare records of work completed on a force account basis. The Engineer will then prepare the daily work sheets and said sheets will be signed by the Contractor's representative no later than noon of the next working day.
- viii. Statements. No payment will be made for work performed on a force account basis until the Contractor has furnished the Engineer with six copies of itemized statements of the cost of such work, incurred on a daily basis, and detailed as follows:
 - 1) Name, classification, date, daily hours, total hours, rate and extension for each laborer and foreman.
 - 2) Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
 - 3) Quantities of materials, prices, and extensions.
 - 4) Transportation of materials.
 - 5) Cost of property damage, liability and worker's compensation insurance premiums, unemployment insurance contributions, and social security taxes.

Statements shall be accompanied and supported by certified payrolls, and receipted invoices for all materials used and transportation charges. However, if materials used on the force account work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the invoices, the Contractor shall furnish an affidavit certifying that such materials were taken from its stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the Contractor.

ARTICLE 26 - EXTENSION OF TIME ON ACCOUNT OF EXTRA WORK**

26.1 When extra work is ordered near the completion of the Contract or at any time during the progress of the Work which unavoidably increases the time for the completion of the Work, and extension of time shall be granted as hereinbefore provided.

ARTICLE 27 - CHANGES NOT TO AFFECT BONDS.

27.1 It is expressly agreed and understood that any changes made in the Work or the Drawings or Specifications therefor (whether such changes increase or decrease the amount thereof or the time required for its performance) or any changes in the manner of time of payments made by the Authority to the Contractor, or any other modifications of the Contract, shall in no way annul, release, diminish or affect the liability of the Surety on the CONTRACT BONDS given by the Contractor, it being the intent hereof that notwithstanding such changes the liability of the Surety on said bonds continue and remain in full force and effect.

ARTICLE 28 - CLAIMS FOR DAMAGES.

- 28.1 If the Contractor makes claim for any damages alleged to have been sustained by breach of contract or otherwise, he shall, within ten (10) days after occurrence of the alleged breach or within ten (10) days after such damages are alleged to have been sustained, whichever date is the earlier, file by Certified Mail with the Engineer and Authority a written, itemized statement in triplicate of the details of the alleged breach and the details and amount of the alleged damages. The Contractor agrees that unless such statement is made and filed as so required, his claim for damages shall be deemed waived, invalid and unenforceable, and that he shall not be entitled to any compensation for any such alleged damages. Within ten (10) days after the timely filing of such statement, the Engineer shall file with the Authority one copy of the statement, together with his recommendations for action by the Authority.
- 28.2 The Contractor shall not be entitled to claim any additional compensation for damages by reason of any direction instruction, determination or decision of the Engineer, nor shall any such claims be considered, unless the Contractor shall have complied in all respects with **Para. 4.a.1.** of this Section entitled "**Authority of the Engineer,**" including, but not limited to the filing of a written protest in the manner and within the time therein provided.

ARTICLE 29. ABANDONMENT OF WORK OR OTHER DEFAULT.

- 29.1 If the Work shall be abandoned, or any part thereof shall be sublet without previous written consent of the Authority, or the Contract or any moneys payable hereunder shall be assigned otherwise than as herein specified, or if at any time the Engineer shall be of the opinion, and shall so certify in writing, that the conditions herein specified as to rate of progress are not being complied with, or that the Work or any part thereof is being unnecessarily or unreasonably delayed, or that the Contractor has violated or is in default under any of the provisions of the Contract, or if the Contractor becomes bankrupt or insolvent or goes or is put into liquidation or dissolution, either voluntarily or involuntarily, or petitions for an arrangement or reorganization under the Bankruptcy Act, or makes a general assignment for the benefit of creditors or otherwise acknowledges insolvency, the happening of any of which shall be and constitute a default under the Contract, the Authority may notify the Contractor in writing, with a copy of such notice mailed to the Surety, to discontinue all Work or any part thereof; thereupon the Contractor shall discontinue such Work or such part thereof as the Authority may designate; and the Authority may, upon giving such notice, by contract or otherwise as it may determine, complete the Work or such part thereof and charge the entire cost and expense of so completing the Work or such part thereof to the Contractor. In addition to the said entire cost and expense of completing the Work, the Authority shall be entitled to reimbursement from the Contractor and the Contractor agrees to pay to the Authority any losses, damages, costs and expenses, including attorney's fees, sustained or incurred by the Authority by reason of any of the foregoing causes. For the purposes of such completion the Authority may for itself or for any Contractors employed by the Authority take possession of and use or cause to be used any and all materials, equipment, plant, machinery, appliances, tools, supplies and such other items of every description that may be found or located at the site of the Work.

29.2 All costs, expenses, losses, damages, attorney's fees and any and all other charges incurred by the Authority under this subsection shall be charged against the Contractor and deducted and/or paid by the Authority out of any moneys due of payable or to become due or payable under the Contract to the Contractor; in computing the amounts chargeable to the Contractor, the Authority shall not be held to a basis of the lowest prices for which the completion of the Work or any part thereof might have been accomplished, but all sums actually paid or obligated therefor to effect its prompt completion shall be charged to and against the account of the Contractor. In case the costs, expenses, losses, damages, attorney's fees and other charges together with all payments theretofore made to or for the account of the Contractor are less than the sum which would have been payable under the Contract if the Work had been properly performed and completed by the Contractor, the Contractor shall be entitled to receive the difference, and, in case such costs, expenses, losses, damages, attorneys' fees and other charges, together with all payments theretofore made to or for the account of the Contractor, shall exceed the said sum, the Contractor shall pay the amount of the excess to the Authority.

ARTICLE 30 - PRICES FOR WORK.

30.1 The Authority shall pay and the Contractor shall receive the prices stipulated in the BID made a part hereof as full compensation for everything performed and furnished and for all risks and obligations undertaken by the Contractor under and as required by the Contract.

ARTICLE 31 - MONEYS MAY BE RETAINED.

31.1 The Authority may at any time retain from any moneys which would otherwise be payable hereunder so much thereof as the Authority may deem necessary to complete the Work hereunder and to reimburse it for all costs, expenses, losses, damage and damages chargeable to the Contractor hereunder.

ARTICLE 32 - FORMAL ACCEPTANCE.

32.1 This Agreement constitutes an entire contract for one whole and complete Work or result. Fixing of the date of completion and acceptance of the Work or a specified part thereof shall only be effective when accomplished by a writing specifically so stating and signed by the Authority.

ARTICLE 33 - PROGRESS ESTIMATES.

33.1 Once a month, except as hereinafter provided, the Engineer shall make an estimate in writing of the total amount and value of the work done to the first of the month by the Contractor. The Authority shall retain 5% of such estimated value as part security for fulfillment of the Contract by the Contractor and shall deduct from the balance all previous payments made to the Contractor, all sums chargeable against the Contractor and all sums to be retained under the provisions of the Contract. The Authority shall pay monthly to the Contractor the balance not deducted an/or retained as aforesaid, except that payment may be withheld at any time if, in the sole judgment of the Engineer, the work is not proceeding in accordance with the Contract. If the Authority deems it expedient to do so, it may cause estimates and payments to be made more frequently than one in each month. No progress estimate or payment need be made when, in the sole judgment of the Engineer, the total value of the work done since the last estimate amounts to less than \$10,000.

33.2 Estimates of lump-sum items shall be based on a schedule dividing each such item into its appropriate component parts together with a quantity and a unit price for each part so that the sum

of the products of prices and quantities will equal the Contract price for the item. This schedule must be submitted by the Contractor for and must have the approval of the Engineer before the first estimate becomes due.

- 33.3 If the Engineer determines that the progress of the Work will be benefited by the delivery to the site of certain materials and equipment, when available, in advance of actual requirement therefor and if such materials and equipment are delivered and properly stored, protected and insured as determined by the Engineer, the cost to the Contractor or subcontractor as established by invoices or other suitable vouchers satisfactory to the Engineer, less the retained percentages as above provided, may be included in the progress estimates; provided always that there be duly executed and delivered by the Contractor to the Engineer at the same time a Bill of Sale in form satisfactory to the Authority, transferring and assigning to the Authority full ownership and title to such materials or equipment.

ARTICLE 34 - PARTIAL ACCEPTANCE.

- 34.1 The Authority may, at any time in a written order to the Contractor (a) declare that he intends to use a specified part of the Work which in his opinion is sufficiently complete, in accordance with the Contract Documents, to permit its use; (b) enclose a tentative list of items remaining to be completed or corrected, and (c) fix the date of acceptance of that specified part of the Work.
- 34.2 Within 45 days after acceptance under this subsection, the Engineer shall make an estimate in writing of the amount and value of the part of the Work so accepted. The Authority shall pay said amount to the Contractor after deducting therefrom all previous payments, all charges against the Contractor as provided for hereunder, and all amounts to be retained under the provisions of the Contract, said payment to be made at the time of the next monthly progress estimate.
- 34.3 Acceptance by the Authority under this subsection shall not relieve the Contractor of any obligations under the Contract Documents except to the extent agreed upon in writing between the Authority and the Contractor.
- 34.4 The Authority shall have the right to exclude the Contractor from any part of the Work which has been accepted, but the Authority will allow the Contractor reasonable access thereto to complete or correct items on the tentative list.

ARTICLE 35 - FINAL ESTIMATE AND PAYMENT.

- 35.1 All quantities shown on progress estimates and all prior payments shall be subject to correction in the final estimate and payment as determined by the Engineer.
- 35.2 The acceptance by the Contractor of final payment shall be and shall operate as a release to the Authority of all claims and all liability to the Contractor under or by virtue of this Agreement; and upon satisfactory completion of the work performed under this Agreement, as a condition before final payment under this Agreement or as a termination settlement under this Agreement the Contractor shall execute and deliver to the Authority a release of all claims against the Authority arising under or by virtue of, this Agreement, except claims which are specifically exempted by the Contractor to be set forth herein. Unless otherwise provided in this Agreement, by State law or otherwise expressly agreed to be the parties to this Agreement, any payment, including final payment under, this Agreement or settlement upon termination of this Agreement shall not

constitute a waiver of the Authority's claims against the Contractor or his sureties under this Agreement or applicable Performance and Labor and Materials Bonds.

ARTICLE 36 - LIENS.

36.1 If at any time any notices of lien are filed and labor performed or materials or equipment manufactured, furnished, or delivered to or for the Work, the Contractor shall, at its own cost and expense, promptly discharge, remove or otherwise dispose of the same, and until such discharge, removal or disposition, the Authority shall have the right to retain from any moneys payable hereunder an amount which, in its sole judgment, it deems necessary to satisfy such liens and pay the costs and expenses, including attorneys' fees, of defending any actions brought to enforce the same, or incurred in connection therewith or by reason thereof.

ARTICLE 37 - CLAIMS.

37.1 If at any time there be any evidence of any claims for which the Contractor is or may be liable or responsible hereunder, the Contractor shall promptly settle or otherwise dispose of the same, and until such claims are settled or disposed of, the Authority may retain from any moneys which would otherwise be payable hereunder so much thereof as, in its sole judgment, it may deem necessary to settle or otherwise dispose of such claims and to pay the costs and expenses, including attorney's fees, of defending any actions brought to enforce such claims, or incurred in connection therewith or by reason thereof.

ARTICLE 38 - APPLICATION OF MONEYS RETAINED.

38.1 The Authority may apply any moneys retained hereunder to reimburse itself for any and all costs, expenses, losses, damage and damages, liabilities, suits, judgments and awards incurred, suffered or sustained by the Authority and chargeable to the Contractor hereunder or as determined hereunder.

ARTICLE 39 - NO WAIVER.

39.1 Neither the inspection by the Authority or the Engineer, nor any order, measurement, approval, determination, decision or certificate by the Engineer, nor any order by the Authority for the payment of money, nor any payment for or use, occupancy, possession or acceptance of the whole or any part of the Work by the Authority, nor any extension of time, nor any other act or omission of the Authority or of the Engineer shall constitute or be deemed to be an acceptance of any defective or improper work, materials, or equipment nor operate as a waiver of any requirement or provision of the Contract, nor of any remedy, power or right of or herein reserved to the Authority, nor of any right to damages for breach of contract. Any and all rights and/or remedies provided for in the Contract are intended and shall be construed to be cumulative; and, in addition to each and every other right and remedy provided for herein or by law, the Authority shall be entitled as of right to a writ of injunction against any breach or threatened breach of the Contract by the Contractor, by his subcontractors or by any other person or persons.

ARTICLE 40 - LIABILITY OF AUTHORITY.

40.1 No person, firm or corporation, other than the Contractor who signed this Contract as such, shall have any interest herein or right hereunder. No claim shall be made or be valid either against the Authority or any agent of the Authority and neither the Authority nor any agent of the Authority shall be liable for or be held to pay any money, except as herein provided. The acceptance by the Contractor of the payment as fixed in the final estimate shall operate as and shall be a full and complete release of the Authority and of every agent of the Authority of and from any and all claims, demands, damages and liabilities of, by or to the Contractor for anything done or furnished for or arising out of or relating to or by reason of the Work or for or on account of any act or neglect of the Authority or of an agent of the Authority or of any other person, arising out of, relating to or by reason of the Work, except the claim against the Authority for the unpaid balance, if any there be, of the amounts retained as herein provided.

ARTICLE 41 - GUARANTEE.

41.1 The Contractor guarantees that the Work and services to be performed under the Contract, and all workmanship, materials and equipment performed, furnished, used or installed in the construction of the same, shall be free from defects and flaws, and shall be performed and furnished in strict accordance with the Drawings, Specifications, and other Contract Documents, that the strength of all parts of all manufactured equipment shall be adequate and as specified and that the performance test requirements of the Contract shall be fulfilled. This guarantee shall be for a period of one year from and after the date of completion and acceptance of the Work as stated in the final estimate. If part of the Work is accepted the guarantee for that part of the Work shall be for a period of one year from the date fixed for such acceptance.

41.2 Furthermore, if at any time within the said period of guarantee any part of the Work requires repairing, correction or replacement, the Authority may notify the Contractor in writing to make the required repairs, correction, or replacements. If the Contractor neglects to commence making such repairs, correction, or replacements to the satisfaction of the Authority within three (3) days from the date of receipt of such notice, or having commenced fails to prosecute such Work with diligence, the Authority may employ other persons to make the same, and all direct and indirect costs of making said repairs, correction or replacements, including compensation for additional professional services, shall be paid by the Contractor.

ARTICLE 42 - RETAIN MONEY FOR REPAIRS.

42.1 The Authority may retain out of the moneys otherwise payable to the Contractor hereunder 1% of the amount thereof, and may expend the same, in the manner hereinafter provided, in making such repairs, corrections and replacements in the Work as the Authority, in its sole judgment, may deem necessary.

42.2 Furthermore, if at any time within the said period of guarantee any part of the Work requires repairing, correction or replacement, the Authority may notify the Contractor in writing to make the required repairs, correction or replacements. If the Contractor neglects to commence making such repairs, correction, or replacements to the satisfaction of the Authority within three (3) days from the date of receipt of such notice, or having commenced fails to prosecute such work with diligence, the Authority may employ other persons to make the same. The Authority shall pay the cost and expense of the same out of the amounts retained for that purpose. Upon the expiration of the said period of guarantee, provided that the Work at that time is in good order, the Contractor

will be entitled to receive the whole or such part of the sum last aforesaid, if any, as may remain after the cost and expense of making said repairs, correction or replacements, in the manner aforesaid, have been paid therefrom.

ARTICLE 43 - RETURN OF DRAWINGS.

43.1 All Drawings furnished by the Authority or the Engineer to the Contractor may be used only in connection with the prosecution of the Work and shall be returned by the Contractor upon completion of the Work.

ARTICLE 44 - CLEANING UP.

44.1 The Contractor at all times shall keep the site of the Work free from rubbish and debris caused by his operations under the Contract. When the Work has been completed, the Contractor shall remove from the site of the Work all of his plant, machinery, tools, construction equipment, temporary work, and surplus materials so as to leave the Work and the site clean and ready for use.

ARTICLE 45 - LEGAL ADDRESS OF CONTRACTOR.

45.1 The Contractor's business address and his office at or near the site of the Work are both hereby designated as places to which communications shall be delivered. The depositing of any letter, notice, or other communication in a postpaid wrapper directed to the Contractor's business address in a post office box regularly maintained by the Post Office Department or the delivery at either designated address of any letter, notice, or other communication by mail or otherwise shall be deemed sufficient service thereof upon the Contractor, and the date of such service shall be the date of receipt. The first-named address may be changed at any time by an instrument in writing, executed and acknowledged by the Contractor delivered to the Engineer. Service of any notice, letter, or other communication upon the Contractor personally shall likewise be deemed sufficient service.

ARTICLE 46 - HEADINGS.

46.1 The headings or titles of any section, subsection, paragraph, provision, or part of the Contract Documents shall not be deemed to limit or restrict the content, meaning or effect of such section, subsection, paragraph, provision or part.

ARTICLE 47 - MODIFICATION OR TERMINATION.

47.1 Except as otherwise expressly provided herein, the Contract may not be modified or terminated except in writing signed by the parties hereto.

ARTICLE 48 - REMEDIES AND ARBITRATION.

48.1 The Contractor's attention is directed to the fact that this Contract is subject to the Public Works Arbitration Act of R.I. General Laws Section 37-16-1 et., seq.

A. Unless otherwise provided in this agreement, all claims, counterclaims, disputes and other matters in question between the Authority and the Contractor arising out of, or relating to, this Agreement or in performance interpretation or breach of it will be decided by arbitration

at the election of either party, or in a court of competent jurisdiction within the State in which the Authority is located.

- B. Any dispute to be arbitrated shall be done so in accordance with the Construction Industry Arbitration Rules and Regulations of the American Arbitration Association, and judgment upon the award rendered by the Arbitrator(s) may be entered in any court having jurisdiction thereof.
- C. However, to the extent allowed by law, if neither party wishes to elect arbitration, and if both parties agree, such claim or controversy may be litigated in a court of competent jurisdiction, as provided in this Agreement. Furthermore, if either party elects to bring such claim or controversy to arbitration, it shall first notify the other party and allow that other party ten (10) calendar days (before filing) within which to have the claim mediated, and shall negotiate in good faith during any such mediation effort.
- D. In addition, the method of the appointment of an arbitrator shall vary from the method set forth in Article 13 (Appointment from Panel) of the American Arbitration Association (AAA) Construction Industry Arbitration Rules only so far as that: the AAA shall submit a second, but no further, set of lists should the parties fail to agree upon any of the persons names, or if acceptable arbitrators are unable to act, or if for any other reason the appointment cannot be made from the original submitted lists. If for any reason an appointment cannot be made from the second set of lists, the AAA shall have the power to make the appointment from other members of the Panel without the submission of any additional lists.

ARTICLE 49 - RIGHTS-OF-WAY and SUSPENSION OF WORK

- 49.1 Land and rights-of-way for the purposes of this Contract will be furnished by the Owner. The Owner will use due diligence in acquiring said land and rights-of-way as speedily as possible. However, it is possible that all lands and rights-of-way may not be obtained as herein contemplated before construction begins, in which event the Contractor shall begin his work upon such land and rights-of-way as the Owner may have previously acquired.
- 49.2 No claim for damages whatsoever will be allowed by reason of the delay in obtaining the remaining lands and rights-of-way. Should the Owner be prevented or enjoined from proceeding with the work or from authorizing its prosecution, either before or after the commencement by reason of any litigation, or by reason of its inability to procure any lands or rights-of-way for the said work, the Contractor shall not be entitled either to make or assert claim for damage by reason of said delay, or to withdraw from the Contract except by consent of the Owner. Time for completion of the work will be extended to such time as the Owner determines will compensate for the time lost by such delay; such determination to be set forth in writing.

INSURANCE CERTIFICATE

SHEET 1 OF 2

Issued to

The City of Warwick, Rhode Island

This is to certify that this Company, _____,
(Name of Insurance Company) has enforced the following policies covering all work and operations
of _____
(Name of Contractor), as the designated Contractor under a Contract with the City of Warwick, Rhode
Island, as the designated Owner, dated _____,
said Contract entitled CONTRACT NO. 101, OAKLAND BEACH INTERCEPTOR REHABILITATION.

POLICY NUMBER

EFFECTIVE AND

KINDS OF INSURANCE

LIMITS

EXPIRATION DATE

Worker's Compensation
and Employers Liability and
Harbor Workers Coverage *

Number: _____
Effective: _____
Expires: _____

Public Liability including
Contractor's Protective
Personal Injury, Completed
Operations, and Contractual
Liability**

Bodily \$ _____ each occurrence
Injury
\$ _____ aggregate
Property
Damage \$ _____ each occurrence
including
C.U.
Coverage***\$ _____ aggregate

Number: _____
Effective: _____
Expires: _____

***Note:
Explosion Collapse
and underground coverage
is provided

Personal
Injury \$ _____ aggregate

* Longshoremen's and Harbor Workers' Coverage may be deleted if not required by contract.

** Contractual Liability covers the liability assumed by the Contractor under the subsection entitled "Obligations and Liability of Contractor" of the agreement, as required by subsection entitled "Insurance" of the agreement.

*** Blasting coverage is not required.

It is agreed that ten (10) days' notice of cancellation or restrictive amendment of said policies shall be mailed to the Authority.

INSURANCE COMPANY

INSURANCE AGENCY

By: _____
AUTHORIZED AGENT OR OFFICER

DATE: _____

SECTION 00800

SUPPLEMENTAL CONDITIONS

ARTICLE 1 – WORK TO BE ACCOMPLISHED IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS

- 1.1 The Work, during its progress and at its completion, shall conform to: the Contract Documents and to the directions given by the Owner from time to time, subject to such modifications or additions as it shall determine to be necessary during the execution of the Work; and in no case will any Work be paid for in excess of such requirements.

ARTICLE 2 – CONTRACTOR TO CHECK DIMENSIONS AND SCHEDULES

- 2.1 The Contractor will be required to check all dimensions and quantities shown in the Contract Documents or schedules given to him by the Owner, and shall notify the Engineer and the Owner of all errors therein which it may discover by examining and checking the same. The Contractor shall not take advantage of any error or omission in the Contract Documents. The Owner will furnish all instructions should such error or omission be discovered, and the Contractor shall carry out such instructions as if originally specified.

ARTICLE 3 – HURRICANE PROTECTION

- 3.1 Should hurricane warnings be issued, the Contractor shall take every practicable precaution to minimize danger to persons, to the Work, and to adjacent property. These precautions shall include enclosing all openings, removing all loose materials, tools and/or equipment from exposed locations; removing or securing all floating equipment and materials; and removing or securing scaffolding and other temporary work.

ARTICLE 4 – FIRST AID TO INJURED

- 4.1 The Contractor shall keep in its office on site ready for immediate use, all articles necessary for giving first aid to injured persons. It shall also make arrangements for the immediate removal and hospital treatment of any persons injured on the Project who may require the same.

ARTICLE 5 – CONFORMANCE WITH DIRECTIONS

- 5.1 The Engineer may make alterations in the lines, grade, plan, form dimensions or materials of the Work, or any part thereof, either before or after the commencement of construction by means of a Change Order. If such alterations diminish the quantity of work to be done, the deduction in the Contract Price will be determined by the Unit Price proposed by the Contractor, and the Contractor shall have no claim for damages or for anticipated profits on the Work that thus may be dispensed with. If the alterations increase the quantity, such increase shall be paid for at the stipulated Unit Price.

ARTICLE 6 -PROTECTION AGAINST HIGH WATER AND STORM

- 6.1 The Contractor shall take all precautions to prevent damage to the Work or equipment by high waters or by storms. The Engineer, with the approval of the Owner, may prohibit the carrying out of any Work at any time when in its judgment, high waters or storm conditions are unfavorable or not suitable, or at any time, regardless of the weather, when proper precautions are not being taken to safeguard previously constructed work or work in progress.
- 6.2 In case of damage caused by the failure of the Contractor to take adequate precautions, the Contractor shall repair or replace equipment damaged and shall make such repairs or - rebuild such parts of the damaged Work, as the Owner may require, at no additional expense to the Owner.

ARTICLE 7 – COMPETENT HELP TO BE EMPLOYED

- 7.1 The Contractor shall employ experienced foremen, craftsmen and other workmen competent in the Work in which they are to be engaged. All Work shall be accomplished by able, skilled and competent personnel. If any person employed on the Work by the Contractor shall appear to be incompetent or unreliable in any way, he/she shall be discharged immediately upon the request of the Owner and shall not again be employed on the Work.

ARTICLE 8 – STREETS TO BE KEPT OPEN

- 8.1 The Contractor shall at all times keep the public streets, driveways in which it may be at work open for pedestrian and vehicular traffic. Under no circumstances shall traffic on this route be blocked, unless approved by the City of Warwick.

ARTICLE 9 – LIGHTS, BARRIERS, FENCES, WATCHMEN AND INDEMNITY

- 9.1 The Contractor shall put up and maintain such barriers, fences, lighting and warning lights, danger warning signals and signs as will prevent accidents during the construction work, and protect the Work and insure the safety of personnel and the public at all times and places; and the Contractor shall defend, indemnify and save harmless the Engineer, the Owner and its agents, in every respect from any injury or damage whatsoever caused by an act, omission or neglect of the Contractor or its agents, including any claims arising out of failure to erect and maintain sufficient railing or fencing. The fact that the Owner may retain control of the premises, or that it or its agent may take action to erect or maintain railings or fences, shall not relieve the Contractor's obligations hereunder.
- 9.2 The Contractor shall furnish, maintain and use all necessary safety devices and safe practices in prosecution of the Work and to adopt, follow and maintain such additional safety measures as in the opinion of the Engineer with the approval of the Owner are conducive to safe operation by the Contractor. The Owner shall have the right to order any or all work suspended where, in the Engineer's opinion, such work is not being carried on in a safe and proper manner, or where persons and property are not being properly protected or safeguarded and such work shall not be resumed until the Owner's requirements have been met and the Owner has directed that the Work be resumed. The Work required by the preceding paragraph shall be totally at the Contractor's expense.

- 9.3 In addition to the above, when and as necessary, or when required by the Engineer, with the approval of the Owner, the Contractor shall post signs and employ watchmen, flagmen, or police officers for the direction of traffic at the site and for excluding at all times unauthorized persons from the Work, for which the Contractor will not be paid additional compensation.

ARTICLE 10 – WORK OUTSIDE REGULAR HOURS

- 10.1 The Contractor will be permitted to work Monday through Friday 7:00 A.M. through 5:30 P.M., Monday through Friday. Work on weekends or holidays, and extended weekday hours will be permitted without the approval of the Owner and the City of Warwick. The lighting, safety, and other facilities which are deemed necessary by the Owner for performing such night work shall be provided by the Contractor. For night work, work on Saturdays and Sundays or legal holidays, the Contractor will receive no extra payment, but compensation shall be considered as having been included in the prices stipulated for appropriate items of Work as listed in the Proposal.

ARTICLE 11 – WORK IN COLD AND INCLEMENT WEATHER

- 11.1 The Owner will determine when site conditions are unfavorable for work, and may order the Work or any portion of it suspended whenever, in its opinion, the conditions are not such as will insure first class work. In general, work shall be prosecuted throughout the Contract period; and the Contractor will be expected to keep going, and employ labor, as continuously as possible.
- 11.2 All methods and materials used in the performance and for the protection of the Work in cold and inclement weather, shall be subject to the approval of OWNER. CONTRACTOR shall take necessary precautions for protecting the Work from damage. The materials necessary to comply with the above requirements shall be considered to be included in the prices stipulated for the appropriate items of work, as listed in the Bid.
- 11.3 Should OWNER stop the Work due to unfavorable conditions at the site, an appropriate adjustment in the Contract Time will be made. No adjustment in Contract Price will be made as a result of any temporary suspension of the Work due to unfavorable weather conditions at the site.

ARTICLE 12 – BLASTING AND EXPLOSIVES

- 12.1 All rock excavation requiring blasting must be performed with the consent of the Owner, City of Warwick, utility companies present in the area of the Work, and the State Fire Marshall.

ARTICLE 13 – TUNNELING NOT PERMITTED

- 13.1 Tunneling will not be permitted without the consent of the Owner and the City of Warwick.

ARTICLE 14 – RESERVED MATERIALS

- 14.1 Materials found in the Work site suitable for any special use shall be reserved for that purpose. Where specifically permitted by the Owner, the Contractor may use in the various parts of the Work, without charge therefore, any materials taken from the excavation.

ARTICLE 15 – LENGTH OF TRENCH TO BE OPENED, MAINTAINING PREMISES FREE FROM OBSTRUCTIONS, CROSSOVERS, DIRECTIONAL SIGNS AND LIGHTS

- 15.1 The length of trench opened at any time, from the point where ground is being broken to completed backfill, and also the amount of space in streets or public and private lands occupied by equipment, trench, and supplies, shall not exceed the length or space considered reasonably necessary and expedient by the Engineer. As to the length of open trench or spaces for equipment, materials, supplies and other necessities, the Engineer will consider: the nature of the lands or streets where work is being done; types and methods of construction and equipment being used; inconvenience to the public or to private parties; possible dangers; and other proper matters. All work must be constructed with a minimum of inconvenience and danger to the public and all other parties concerned.
- 15.2 Whenever any trench obstructs pedestrian and vehicular traffic in or to any public street, private driveway or property entrance, or on private property, the Contractor shall take such means as may be necessary to maintain pedestrian and vehicular traffic and access. Until such times as the Work may have attained sufficient strength to support backfill, or if for any other reason, it is not expedient to backfill the trench immediately, the Contractor shall construct and maintain suitable plank crossings and bridges to carry essential traffic in or to the street, driveway or property in question, as specified or directed.
- 15.3 Suitable signs, lights, and such items required by police authorities to direct traffic, shall be furnished and maintained by the Contractor.
- 15.4 The Contractor must keep streets and premises free from unnecessary obstructions, debris, and all other materials. The Engineer may, at any time, order all equipment, materials, surplus from excavations, debris and all other materials lying outside that length of working space, promptly removed. Should the Contractor fail to remove such material within 24 hours after notice to remove the same, the Owner may cause any part or all of such materials to be removed by such persons as it may employ, at the Contractor's expense, and may deduct the costs thereof from payments which may be, or may become, due to the Contractor under the Agreement. In special cases, where public safety urgently demands it, the Owner may cause such materials to be removed without prior notice, at the Contractor's expense.

ARTICLE 16 – EXISTING UTILITIES OR CONNECTIONS

- 16.1 The location of existing underground pipes, conduits, and structures, as shown, has been collected from the best available sources. The Owner, together with its agents, does not guarantee the completeness of the data and information showing underground pipes, conduits, structures and such other parts, nor their locations as indicated. The Contractor shall assume that there are existing water connections to each and every building enroute, whether they appear on the Drawings or not. Any expense and/or delay occasioned by utilities and structures, or damage thereto, including those items not shown, shall be the responsibility of the Contractor, at no additional expense to the Owner.
- 16.2 Before proceeding with construction operations, the Contractor shall notify the State of Rhode Island Utilities Underground Plant Damage Prevention Systems (DIG SAFE at 811 or 1-888-344-7233), and shall make such supplemental investigations, including exploratory excavations, by hand digging, as it deems necessary to uncover and determine the exact locations of utilities and

structures, and it shall have no claims for damages due to encountering subsurface structures or utilities in locations other than shown on the Drawings, or which are made known to the Contractor prior to construction operations. The Contractor shall be responsible and liable for all damages to the existing utilities and structures.

ARTICLE 17 – INTERFERENCE WITH EXISTING UTILITIES AND STRUCTURES

- 17.1 Whenever it may be necessary to cross or interfere with existing culverts, drains, sewers, water pipes, overhead lines or fixtures, guardrails, fences, gas pipes or fixtures, or other structures and service connections needing special care, due notice shall be given to the Engineer and any affected utility or authority, and the Work shall be done according to the utility or authority's directions. Whenever required, all objects shall be strengthened to meet any additional stress that the Work herein specified may impose upon them, and any damage caused shall be thoroughly repaired. The entire Work shall be the responsibility of the Contractor, and the Work shall be performed at no additional expense to the Owner.
- 17.2 The Contractor shall be responsible for all broken mains or utilities encountered during the progress of the Work, and shall cause to be repaired and be responsible for correcting all damages to existing utilities and structures at no additional expense to the Owner. The Contractor shall contact the proper utility or authority to correct or make any changes due to utility or other obstructions during the Work, but the entire responsibility and expense shall be with the Contractor.
- 17.3 All damaged items of Work, or items required to be removed and replaced due to construction, shall be replaced or repaired by the Contractor to the complete satisfaction of the property owners, and/or the Engineer and the Owner, at no additional expense to the Owner.

ARTICLE 18 – RECORD DRAWINGS

- 18.1 The Contractor will be furnished with a complete set of prints of all Contract Drawings, which shall be used exclusively for incorporating thereon, the as-built record of all Contract Work as the construction progresses. The Contractor will be required to furnish, at no additional expense to WSA, the services of a Rhode Island registered surveyor and/or engineer under whose direction shall be obtained and recorded all surveys, measurements and such other data required for the determination of the as-built records of the construction of all Contract Work.
- 18.2 The complete set of prints shall be maintained at the site at all times, and the Contractor shall be responsible for having clearly, neatly, accurately and promptly recorded thereon, as the Work is performed, the as-built record of the Contract Work. Principal dimensions, elevations, and other data as required shall be recorded on all Work.
- 18.3 At the completion of the Project, the entire set of prints shall be submitted to the Engineer for final inspection and comment; the Contractor shall correct, amplify and do all other work as may be required by the Engineer to complete the as-built drawings in a manner satisfactory of WSA. As-built drawings shall be provided by the Contractor to the Owner not later than forty-five (45) Days after the deadline for completion of Work as delineated in Section 00300 - Price Bid Form and Section 00500 - Agreement. As-built drawings shall also be provided to the Engineer in digital file format.

ARTICLE 19 – MATERIALS

19.1 All materials furnished and used in the complete Work, shall be new, of best quality workmanship and design, and recognized as standard in good construction practices. Whenever a specification number of reference is given, the subsequent amendments (if any) shall be included. The standards set forth in the selection of materials and supplies are intended to conform with those standards adopted by the Owner. Preference in manufacture shall be given to adopted standards, and the Contractor shall further familiarize itself with the requirements of OWNER when the occasion or choice of materials or supplies so demands.

ARTICLE 20 – DEFECTIVE MATERIALS, INSPECTION AND TESTING OF MATERIALS FURNISHED, SAMPLES AND ORDERING LISTS

20.1 No materials shall be laid or used which are known or may be found to be in any way Defective or unfit. Notice shall be given to the Owner and the Engineer of any Defective or imperfect material. Defective or unfit material found to have been laid, shall be removed and replaced by the Contractor with sound and unobjectionable materials, without additional expense to the Owner.

20.2 All materials furnished by the Contractor are subject to thorough inspections and tests by the Owner and the Engineer.

20.3 The Contractor shall submit samples, as required by the Engineer, of the various materials used on the Project for testing purposes.

20.4 All ordering lists shall be submitted by the Contractor to the Owner and Engineer for approval, and shall be approved before the ordering of materials.

ARTICLE 21 – SANITARY REGULATIONS

21.1 Adequate sanitary conveniences for use by workmen on the premises, properly secluded from public observation, shall be provided and maintained by the Contractor in accordance with the requirements of local and State Health authorities. Under no circumstances shall sanitary wastes be allowed to flow on the surface of the ground or be discharged directly or indirectly into any body of water.

21.2 The Contractor shall rigorously prohibit the committing of nuisances upon the lanes or rights-of-way of the Owner, about the Work or upon adjacent public or private property.

21.3 The cost of the sanitary conveniences and maintaining same will not be paid for separately, but compensation will be considered to be included in the prices stipulated for the appropriate items of work as listed in the Bid.

ARTICLE 22 – SPIRITUOUS LIQUORS

22.1 Under the work embraced in this Contract, the Contractor shall neither permit, nor suffer the introduction or use of, spirituous liquors, or controlled substances of any kind or description, unless the use of same is ordered by a physician, and the use will not jeopardize the safety of personnel, property or equipment.

ARTICLE 23 – FINISHING AND CLEANING UP

23.1 The Contractor shall replace all surface material to the satisfaction of the Owner, and shall then immediately remove surplus materials, and all tools and other property, leaving the site free and clean and in good order, at no additional expense to the Owner. The removal of materials shall follow closely upon the completion of the Work. The Contractor shall exercise special care in keeping right-of-way and private and public lands upon which the Work is to be performed, clean and free of debris at all times, and to remove tools and other property belonging to the Contractor when they are not being used. Before the Work will be considered complete, the Contractor shall thoroughly clean all structures and their appurtenances.

ARTICLE 24 – CLEAN-UP AT CONTRACTOR'S EXPENSE

24.1 In case the Contractor shall fail or neglect to promptly remove all surplus materials, tools and other incidentals, OWNER may, after 24 hours' notice, cause the work to be done, and the cost thereof shall be deducted from any monies then or thereafter due to the Contractor.

ARTICLE 25 – RIGHTS OF ACCESS

25.1 Nothing herein contained or provided in the Contract Documents shall be construed as giving the Contractor exclusive occupancy of the Work areas involved. The Owner or any other the Contractor employed by it, the various utility companies, contractors or subcontractors employed by federal, state or local governmental agencies, or other utility firms or agencies involved in the general Project or upon public rights-of-way, may enter upon, or cross the area of Work, or occupy portions of it, as directed or permitted. When the territory of one contract is the convenient means of access to the other, each contractor shall arrange its work in such manner as to permit such access to the other, and prevent unnecessary delay to the Work as a whole.

ARTICLE 26 – LOADING

26.1 No part of the structures involved in this Contract shall be loaded during construction with a load greater than that it can carry with safety. Should any accidents or damage occur through any violation of this requirement, the Contractor will be held responsible under its Contract and Bond.

ARTICLE 27 – CONTRACTOR TO LAY OUT HIS/HER OWN WORK

27.1 The Owner will establish such general reference points as in its judgment will enable the Contractor to proceed with the Work. The Contractor, at its own expense, shall provide all materials and equipment and such qualified helpers as the Owner may require for setting the general reference points, and shall protect and preserve all stakes, benches and other markers used to identify the reference points. The Contractor shall lay out all the Contract Work from the above, and shall be responsible for the accuracy of all lines, grades and measurements. The Contractor will be required to employ, at no additional expense to the Owner, a Rhode Island Registered Land Surveyor or Registered Professional Engineer who shall perform all layout work for the construction of this Contract Work, including all lines, grades and measurements.

27.2 The Contractor shall engage a Land Surveyor or Professional Engineer licensed in the State of Rhode Island, to perform those services specified within. At a minimum, a licensed surveyor will be required to furnish all surveys, measurements, and other data used to compute quantities and prepare final as-built drawings as specified in the Contract Documents.

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- 27.3 Survey Procedures: Before proceeding with the layout of actual work, verify the established control information shown on the Drawings. As the Work proceeds, locate and place all cut, range, line, final grade, or other stakes and points, as may be directed by the Engineer for the proper progress of the Work. Maintain a surveyor's log or record book of such checks; make this log or record book available for the Engineer's reference. Record deviations from required lines and levels, and advise the Engineer promptly upon detection of deviations that exceed indicated or recognized tolerances. Record deviations which are accepted, and not corrected, on as-built drawings.
- 27.4 The Engineer may check all or any portion of the stakeout survey work or notes made by the Contractor and have the Contractor make any necessary corrections to the Work immediately. Such checking by the Engineer will not relieve the Contractor of any responsibility for the accuracy or completeness of his/her work.

ARTICLE 28 – COMPLETENESS OF WORK

- 28.1 In addition to the specified or described portions, all other work, materials, equipment, and labor of whatever description which are necessary or required to complete the Work or carry out the full intent of the Contract Documents, as interpreted by the Owner, shall be provided by the Contractor. Payment therefore, shall be considered as having been included in the prices stipulated for the appropriate items of Work as listed in the Bid.

ARTICLE 29 – CLEANING FINISHED WORK

- 29.1 After the Work is completed, the site shall be carefully cleaned and left in first class condition, and ready for use by the Owner. All temporary or excess material shall be disposed of to the satisfaction of the Engineer and the Owner.

ARTICLE 30 – DUST CONTROL

- 30.1 The Contractor shall exercise every precaution and means to prevent and control dust arising out of his/her construction operations from becoming a nuisance to abutting property owners or surrounding neighborhoods. Continuous dust control using water shall be provided for all earth stockpiles, and surfaces of refilled trenches. No extra payment will be made for providing the control measures and conforming to the requirements specified above, but compensation therefor, shall be considered to be included in the prices stipulated for the appropriate items of work.

ARTICLE 31 – CARE OF THE WORK

- 31.1 The Contractor shall be responsible for all damages to persons or property that occur as a result of its fault or negligence in connection with the prosecution of the Work, and it shall be responsible for the proper care and protection of all materials delivered, and work performed, until completion and final acceptance, whether or not the same has been covered by partial payments made by the Owner.

ARTICLE 32 – WORK BY OTHERS

32.1 The Owner reserves the right to do any other work which may connect with, become a part of, or be adjacent to, the Work embraced by the Agreement, at any time, by contract or otherwise. The Contractor shall not interfere with or obstruct in any way the work of such other persons as the Owner may employ, and shall execute its own work in such a manner as to aid in the executing of work by others, as may be required.

ARTICLE 33 – FIRE PREVENTION AND PROTECTION

33.1 Federal laws (including but not limited to Occupational Safety and Health Act) and all state and municipal rules and regulations with respect to fire prevention, fire-resistant construction, and fire protection, shall be strictly adhered to, and all Work and facilities necessary therefore, shall be provided and maintained by the Contractor in an approved manner.

33.2 All fire protection equipment, such as water tanks, hoses, pumps, extinguisher and other materials and apparatus, shall be provided for the protection of the Contract Work.

33.3 Open fires will not be permitted.

ARTICLE 34 – NOT USED

ARTICLE 35 – DAILY REPORTS

35.1 The Contractor shall submit to the Engineer and/or Owner, on an approved form, daily activity reports for the duration of the Project. The reports shall indicate: all personnel currently employed on the Work, including each trade and every Subcontractor; all equipment and whether such equipment was idle for the particular Day; a general description of all work accomplished; and any authorized extra work (time and materials reports shall be submitted on separate forms).

ARTICLE 36 – CERTIFICATES OF CONFORMANCE

36.1 In addition to other requirements specified herein, the Contractor shall furnish to the Owner, in the manner as directed, notarized certificates of conformance for all materials to be furnished under this Contract. The notarized certificates of conformance shall state that the materials to be furnished under this Contract meet the requirements of the Contract Documents. When directed, each shipment of materials shall be accompanied by the manufacturer's notarized certificates of conformance, certifying that the materials meet the requirements or Specifications. Unless otherwise specifically stated, all testing of materials shall be provided by the Contractor at no additional expense to the Owner.

ARTICLE 37 – TEMPORARY POWER AND LIGHT

37.1 The Contractor shall provide, where required and at no additional cost to the Owner, an electrical distribution system with sufficient circuits and receptacle outlets suitable for temporary power and lights during construction. The Contractor shall maintain the services until completion of the Project, at which time it shall remove the same.

- 37.2 The Contractor shall provide all temporary wiring, extension cords, lighting, appurtenances and accessories for lights or power tools required in addition to outlets mentioned above. All equipment shall be in good condition and shall be of sufficient quality to meet all applicable codes and regulations.
- 37.3 The cost of electrical energy used for temporary power and lighting shall be borne by the Contractor, which shall make all necessary applications and arrangements and pay all fees and charges necessary for the proper completion of the Work.

ARTICLE 38 – ARCHAEOLOGICAL FINDS

- 38.1 During the life of this Contract, the Contractor is herewith required to immediately notify the following organizations in the event that any articles, such as "charcoal," "bone," "shell," "cultural objects," "fired-cracked stones," or "stone flaking materials," or any other such related items of historical significance are discovered:
- A. OWNER.
 - B. ENGINEER.
 - C. Local Historical Society.
 - D. Rhode Island Historical Preservation Society.

ARTICLE 39 – CONSTRUCTION SCHEDULE

- 39.1 The requirements of Section 00700 – General Conditions hereby supplemented as follows:
- A. The construction schedule shall be based on the specified Contract Time, using adequate labor forces working extended hours, only as specified in the Contract Documents.
 - B. The construction schedule shall show the order of work including all significant tasks.
 - C. The construction schedule shall be submitted for the Owner's approval within 10 days after receipt of the Notice to Proceed and updated as required by the Engineer.

ARTICLE 40 – TERMINATION FOR DEFAULT; DAMAGES FOR DELAY; TIME EXTENSIONS

- 40.1 If the Contractor refuses or fails to prosecute the Work (other than for those reasons enumerated in Section 00700 - General Conditions) or any separable part thereof, with such diligence as will insure (in the Owner's belief) its completion within the time frame specified in the Agreement, or any extensions thereof, or fails to complete said Work within such time, the Owner may, by written notice to the Contractor, terminate its right to proceed with the Work or such part of the Work as to which there has been a delay. Such termination shall be treated as a termination for default as described in Section 00700 - General Conditions. Additionally, in the event that the Owner takes over the Work and prosecutes the same to completion, by contract or otherwise, it may take possession of and utilize in completing the Work such materials, appliances and plant as may be on the site of Work and necessary therefor. Whether or not the Contractor's right to proceed with the Work has been terminated, it and its Sureties shall be liable for any damage to the Owner resulting from the Contractor's refusal or failure to complete the Work within the Contract Time.
- 40.2 If the Owner terminates the Contractor's right to proceed, the resulting damage will consist of liquidated damages for the period from the completion date provided in the Agreement until such

reasonable time as is required for final completion of the Work, together with any increased costs occasioned by having the Owner complete the Work.

- 40.3 If the Owner does not terminate the Contractor's right to proceed, the resulting damage will consist of liquidated damages for the period until the Work is completed or accepted.
- 40.4 If, after a notice of termination of the Contractor's right to proceed under the provisions of this clause is provided, it is determined for any reason that the Contractor was not in default under the provisions of this Article, or that the delay was excusable under the provisions of this Article, the rights and obligations of the parties shall be the same as if the notice of termination had been issued for the convenience of the Owner, as otherwise provided herein.
- 40.5 The rights and remedies of the Owner provided in this Article are in addition to any other rights and remedies provided by law or under this Agreement.

ARTICLE 41 – CONTRACTOR QUALITY CONTROL

- 1.1 The Contractor shall provide and maintain an effective quality control program.
 - 1.1.1 The Contractor shall establish a quality control system to perform sufficient inspection and tests of all items of work, including that of any Subcontractors, to ensure conformance to the Contract Documents with respect to the materials, workmanship, construction, finish, functional performance and identification.
 - 1.1.2 The Contractor's quality control system shall be the means by which he/she assures himself/herself that his/her construction complies with the requirements of the Contract Documents. The controls shall be adequate to cover all construction operations and should be keyed to the proposed construction sequence.
 - 1.1.3 The Contractor's job supervisory staff may be used for quality control, supplemented as necessary by additional personnel for surveillance, special technicians, or testing facilities to provide capability for the controls required by the technical provisions of the Specifications.
 - 1.1.4 The Contractor shall furnish to the Engineer within fourteen (14) Days after receipt of the Notice to Proceed a quality control plan which shall include the procedures, instructions, and reports to be used. This document shall include as a minimum:
 - A. The quality control organization.
 - B. Number and qualifications of personnel to be used for this purpose.
 - C. Authority and responsibilities of quality control personnel.
 - D. Methods of quality control including that for the Subcontractor's work.
 - E. Method of documenting quality control operations, inspection, and testing.
 - F. Safety inspection procedures.
 - G. A copy of a letter of direction to the Contractor's representative responsible for quality control, outlining his/her duties and responsibilities, and signed by a responsible officer of the firm.
 - 1.1.5 After the Contract is awarded and before construction operations are started, the Contractor shall meet with the Engineer and discuss quality control requirements. The meeting shall develop mutual understanding relative to details of the system, including the forms to be used for recording the

quality control operations, inspections, administration of the system, and the interrelationship of the Contractor, Owner and the Engineer.

- 1.1.6 Unless specifically authorized by the Owner, no construction will be started until the Contractor's quality control plan is approved in writing.
- 1.1.7 Failure of the Contractor to comply with the requirements of this paragraph shall be grounds for determination by the Engineer that the Contractor is not prosecuting the Work as required by the Specifications. Approval or progress payment estimates will be withheld until such time as the Contractor complies with the provisions of this paragraph, and an amount will be deducted from the Contract Price equal to the value of the services not furnished.

END OF SECTION

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SECTION 00810

SPECIAL CONDITIONS

The Contractor is alerted to the following special conditions and requirements of the Contract Work. Additional conditions and requirements are presented in the Contract Documents:

1. It shall be the responsibility of the Contractor to inspect, as needed, the site prior to submitting a Bid for this project. Failure of Contractor to visually inspect the Project site, or conduct such testing as it may deem necessary prior to submitting its Bid, shall not relieve the Contractor of completing the Project in accordance with the Contract Documents at the cost figures submitted by the Contractor.
2. The Contractor shall limit its activities on-site to the approximate limits of construction as shown on the plans, except where activities outside of the limits are expressly authorized in the Contract Documents.
3. It is the responsibility of the Contractor to confirm that all required local and state permits have been secured. It is the Contractor responsibility to secure and pay for all outstanding permits.
4. All work performed under this contract is subject to, and governed by, the Warwick Sewer Authority (WSA), The United States Environmental Protection Agency (U.S. EPA), the Rhode Island Department of Environmental Management (RIDEM), Rhode Island Department of Transportation (RIDOT), the Rhode Island Department of Environmental Management (RIDEM), Rhode Island Coastal Resource Management Council (RICRMC) and the City of Warwick. The Contractor shall conform to RIDEM regulations on behalf of the WSA, and take all required action to protect and assure WSA compliance with applicable regulations.
5. Reference is made to the Rhode Island Department of Transportation "Standard Specifications for Road and Bridge Construction" throughout the specifications. All references to measurement and payment are excluded from this contract. Also, the provisions of Part 100-General Requirements and Covenants are not to be considered a part of this contract.
6. The Contractor bidding this project is made aware that the actual conditions at the time of construction may somewhat vary from that presented in the Contract Documents.
7. The Contractor shall make best effort to coordinate work under this contract with other ongoing site activities including those projects described in Section 00120 – Information for Bidders.
8. **Health and Safety Plan.** A Health and Safety Plan shall be prepared by the Contractor. The Contractor shall meet all applicable State and OSHA Health and Safety regulations required for this project. The Contractor shall visit site to verify existing conditions prior to bidding this project.
9. **Datum of Levels.** All of elevations shown on the Plans are referred to NAVD 88. Benchmarks are provided on construction drawings.
10. **Subsurface Borings.** have been made along the sewer route under the direction of the Engineer. All information obtained thereby regarding the character of the material to be encountered has been recorded in good faith on log sheets. These sheets are not Contract Drawings. There is no expressed

or implied agreement that the depths or the character of the material or any other information or data regarding the materials to be encountered in carrying out the work to be performed under this Contract as shown on the Contract Drawings have been indicated correctly; and it is understood that conditions affecting the cost or quantity of the work to be performed may differ from the conditions which may be indicated by the data obtained from the borings. It is agreed that the Contractor shall make for his own information all additional borings and tests necessary to enable him to fairly and accurately estimate the figures which he records in the Schedule of Prices. It is the intent of this Contract that the Contractor assume all risks re-grading the character of material to be encountered.

11. **Site Inspection.** The Contractor shall allow the Authority or its agent, and other contractors and public service corporations, or their agents, to enter upon the work for the purpose of inspecting ongoing work, constructing, maintaining, repairing, removing, altering, or replacing such pipes, sewers, conduits, manholes, wires, poles, or other structures as may be required or permitted at, or on, the work by the Engineer. The Contractor shall cooperate with all aforesaid parties and shall allow reasonable facilities for the prosecution of any other work of the City, or of public service corporations, to be done in connection with this work. Care shall be taken at all times to inconvenience abutters as little as possible.
12. **Traffic Control.** The Contractor shall conduct his work so as to interfere with traffic as little as possible, and shall safeguard all highways and traffic thereon. The construction equipment and materials shall be so placed as not to endanger the work or to obstruct traffic, except as permitted by the Engineer. Safe and reasonable means of ingress to and egress from abutting property, private ways and alleys shall be provided for the usual and ordinary traffic in and out of all such premises by the Contractor at his own expense and as directed by the Engineer. The use of private property shall not be interfered with, except in so far as necessary, and as determined by the Engineer, provided that practical construction methods are being used and reasonable precautions against unnecessary interference are being taken. Every reasonable effort shall be made to reduce to a minimum interference with and inconvenience to business concerns on account of the construction work. Excavated material shall be trucked away and returned if the Engineer deems it necessary and practicable as a means for avoiding serious interference with and inconvenience to a business concern, traffic operations or private residences. It is the intent of this Contract to maintain through traffic along local streets and state highways wherever possible. If, in certain instances, it is necessary that certain streets must be of necessity closed to through traffic, such closing must be worked out in advance with the Engineer. This is necessary to allow the Engineer ample time to consult with local departments having jurisdiction over or the need to travel through these roads. During non-working hours, the Contractor will be required to maintain a minimum of two 10-foot travel lanes, one in each direction, with proper traffic control including barricades, drums, traffic cones, signing, etc. The Contractor shall coordinate, as necessary, all traffic control with the Warwick Department of Public Works.
13. **Traffic Police.** The Contractor shall furnish traffic police if and when required by the Chief of Police or the Engineer. Traffic police shall be assigned to the project by the Warwick Police Department. The duty of traffic police shall be solely to direct traffic. Payment for Traffic Police shall be paid directly by the Warwick Sewer Authority (WSA). The Warwick Police Department shall invoice the WSA directly without charge to the Contractor. The Engineer shall review all related police invoices for approval.
14. **Erection of Shanties.** Shanties or other structures for housing or storage of materials, or storage of materials, or of an office, shall be built only if permission in writing is given by the Engineer, and will then be permitted only at such places as the Engineer shall approve. The sanitary conditions on the

grounds in or about such shanties or other structures must at all times be maintained in a manner satisfactory to the Engineer.

15. **National Grid Gas Company Conditions.** Contractor's Responsibility for Utility Property and Services. At points where the Contractor's operations are adjacent to properties of National Grid, and where damage at such point results in considerable expense, loss or inconvenience to the Gas Company, work on this Contract shall not commence until all arrangements necessary for the protection thereof have been made.

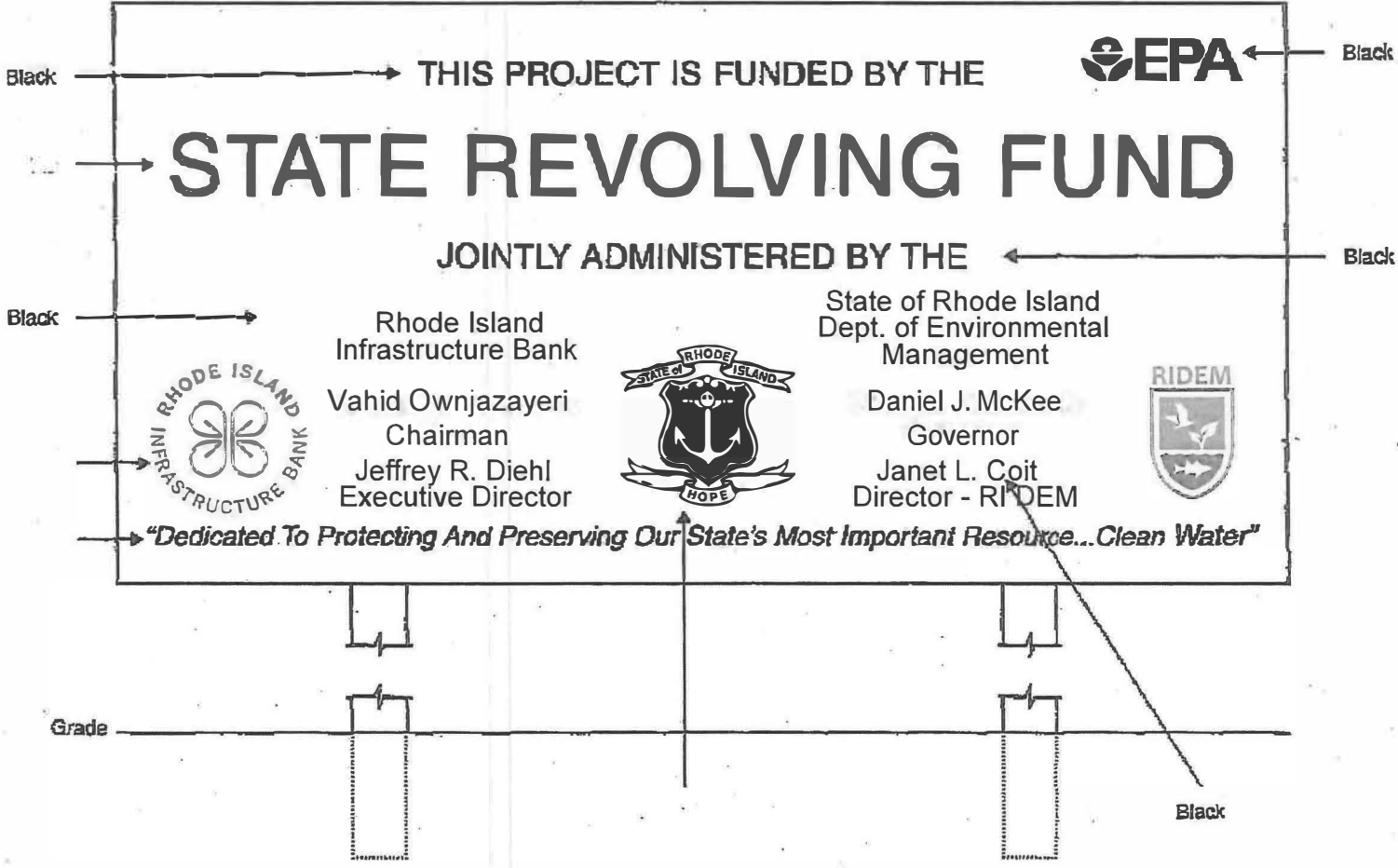
- The Contractor shall cooperate with the Gas Company in their removal and rearrangement operations in order that these operations may progress in a reasonable manner, that duplication of rearrangement work may be reduced to a minimum, and that services rendered by those parties will not be unnecessarily interrupted.
- In the event of contact with, or damage to, any gas facilities or its protective coating, or the interruption to gas service as a result of being exposed or unsupported, the Contractor shall promptly notify National Grid and shall cooperate fully with that Company in the restoration of service.
- Upon receipt of said notice, National Grid shall immediately dispatch personnel to the subject location to effect temporary or permanent repair of the damage. Under no circumstance shall the excavator back-fill or conceal the damage area until National Grid arrives at the subject location. Upon the occurrence of the escape of gas from a broken line, the person or public agency responsible for the operations causing the damage shall evacuate the immediate area while awaiting the arrival of National Grid personnel.
- The location and depth of existing gas lines as shown on the Plans are approximate and should not be relied upon by the Contractor. The Contractor shall check and verify the location of all underground gas lines before proceeding to commence work or to order materials. Excavation shall be in accordance with all statutes, ordinances, rules and regulations of any city, state or Federal Agency that may be applicable. Any damage to the existing utilities as marked by Dig Safe or as shown on the Plans arising out of said excavation, or by reason thereof, shall be the Contractor's sole responsibility.
- It is understood and agreed that the Contractor has considered all of the permanent and temporary utility appurtenances in their approximate or relocated positions as shown on the Plans. It is also understood that no additional compensation will be allowed for any delays, inconvenience, or damage sustained by the Contractor due to any interference from said utility appurtenances or the operation of moving them.
- Construction Methods. Backfilling around a gas main shall consist of suitable materials (gravel or padding sand) placed in layers of not more than 8 inches after compaction. Compaction shall be achieved by mechanical tampers, vibrators or rammers. Backfill under gas facilities shall be compacted to not less than 95% of maximum density. Unless otherwise directed, the backfill shall be brought to the surface of the surrounding ground and neatly graded.
- Training. Prior to start of construction it is highly recommended that the Contractor's field personnel receive training on subjects relating to natural gas pipelines. This training will be provided by National Grid.

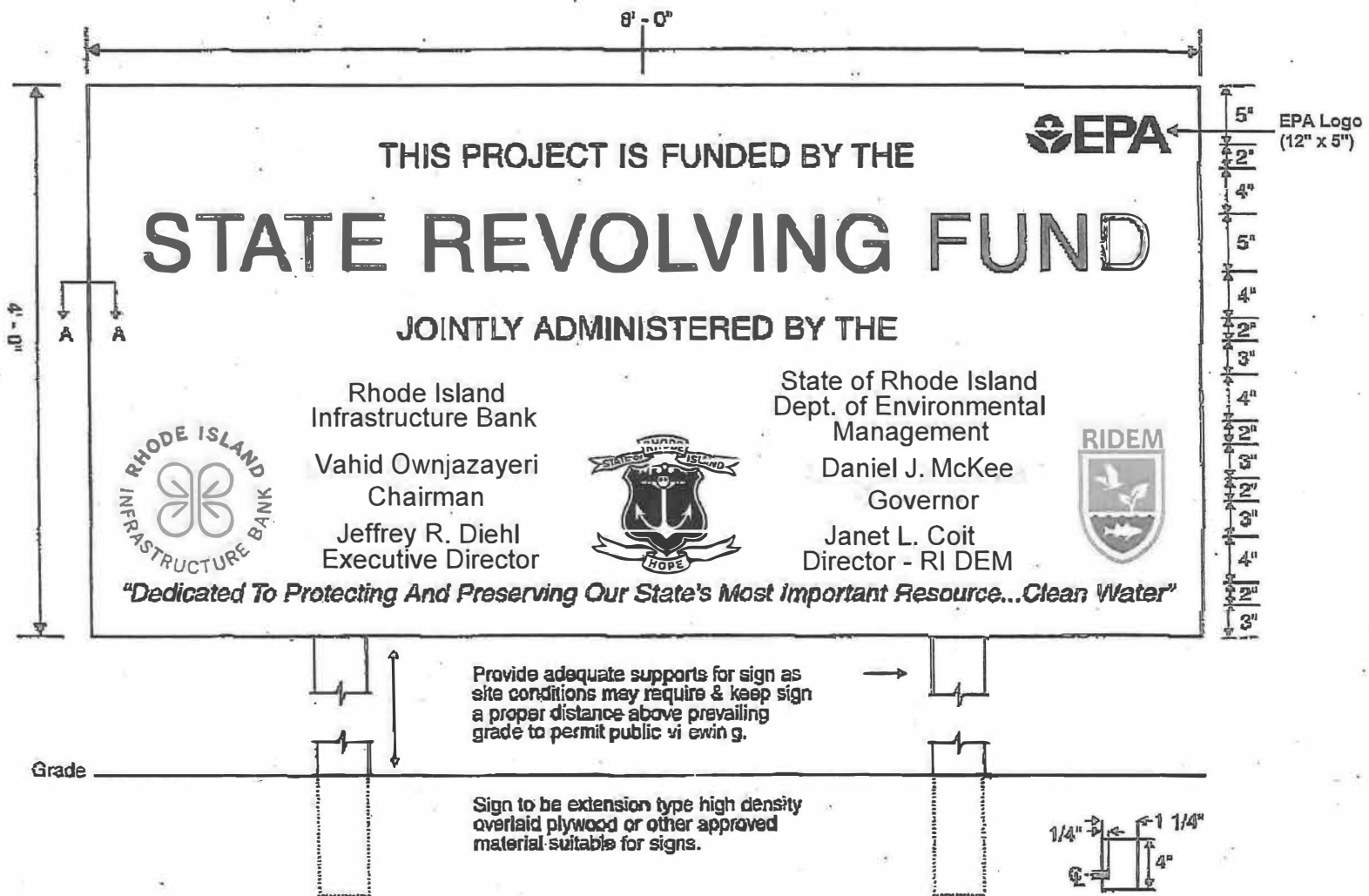
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16. **Project Identification Signs and Details.** The Contractor shall provide, erect, and maintain in good condition two (2) project identification signs at locations on the project site designated by the Authority. The signs shall be erected within twenty-one (21) days after the construction Contract is awarded and, in any event, prior to the start of construction operations. The design and construction standards of both signs are presented on the pages following these Special Conditions. The cost of providing the signs shall not be paid for separately but shall be included in the lump sum price for Item No. 1, Site Preparation, in the Schedule of Prices.
17. **Price Adjustment – Liquid Asphalt and Diesel Fuel.** The intent of this provision is to insure adequate and fair compensation for unpredictable and fluctuating costs which, from time to time, occur in the prices of Liquid Asphalt and Diesel Fuel. The price adjustment provisions are made part of the Contract to assure more realistic bidding and encourage competition. The base price is the unit price of the material (FOB Terminal), as determined by the WSA through the RIDOT, just prior to the project bid date. The period price is the unit price of the material (FOB Terminal), as determined by the WSA through the RIDOT, for any one-month period following the bid date during which the price varies from the base price. Price adjustment will be determined by the difference between the Period Price and the Base Price. Price adjustments will only be made at the end of each month during which; a), work was accomplished on the project; and b), prices increase by 15% or more. Price adjustments will not be allowed beyond the completion date of the Contract or an approved extension thereof.
- Liquid Asphalt Cement. The asphalt content will be the optimum amount used in every ton of bituminous concrete mixture, as determined by the RIDOT Standard Specifications. The Price Adjustment will be determined by multiplying the total weight of liquid asphalt, in tons, by the difference between the base price and period price.
 - Diesel Fuel. The fuel for operating the plant, and for hauling and placing bituminous concrete, will equal the total number of tons of bituminous concrete placed during the month in question times a fuel adjustment factor of 2.5 gallons of fuel per ton of bituminous concrete. Tonnage of bituminous concrete placed during the month in question will equal the sum of the weights indicated on the Daily Automated Recordation printout slips provided at the plant. The price adjustment will be determined by multiplying the total volume of fuel, in gallons, by the difference between the base price and the period price.
 - No price adjustment will be made for liquid asphalt or diesel fuel unless the amount of the adjustment exceeds \$500.00 and deviates more than 15% from the bid price for the month.
18. **Tree Trimming.** This work consists of removing tree limbs to facilitate sewer installation specifically for work not included in other bid items. Prior to the start of construction, the Contractor shall identify to the Authority locations throughout the entire project which require trimming to facilitate sewer installation. The Authority shall review the request and shall ultimately determine the extent of work to be performed. Tree trimming shall be authorized by the WSA and paid through the contract allowance.

END OF SECTION

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SECTION 00870

CONSTRUCTION MANAGEMENT FORMS

PART 1 - CONSTRUCTION MANAGEMENT FORMS

1.1 DESCRIPTION

The following forms shall be utilized during the duration of the Work as required to meet procedures as established in the Contract Documents. Forms should be completed to fulfill the requirements of the Contract as stated herein and submitted in a timely fashion so as to allow sufficient time for required action to be completed without unnecessary delays in the Work.

1.2 Forms included in this Section

- A. CERTIFICATE OF SUBSTANTIAL COMPLETION
- B. WAIVER OF LIENS - PRIME CONTRACTOR/SUBCONTRACTOR
- C. CERTIFICATE OF FINAL PAYMENT AND COMPLETION OF WORK
- D. APPLICATION FOR PAYMENT FORM
- E. CHANGE ORDER FORM

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

(Forms attached)

CERTIFICATE OF SUBSTANTIAL COMPLETION

OWNER'S Project No. _____ ENGINEER'S Project No. _____

Project: _____

CONTRACTOR: _____

Contract for: _____ Contract Date: _____

This certificate of Substantial Completion applies to all Work under the Contract Documents or to the following specified parts thereof:

To: Warwick Sewer Authority

And To: _____
(CONTRACTOR)

The Work to which this Certificate applies has been inspected by authorized representatives of the Owner, Contractor, and Engineer, and that Work is hereby declared to be substantially complete in accordance with the Contract Documents on

Date of Substantial Completion

A tentative list of items to be completed or corrected is attached hereto. This list may not be all inclusive, and the failure to include an item in it does not alter the responsibility of the Contractor to complete all the Work in accordance with the Contract Documents. The items in the tentative list shall be completed or corrected by the Contractor within _____ days of the above date of Substantial Completion.

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The responsibilities between the Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties shall be as follows:

RESPONSIBILITIES:

OWNER: _____

CONTRACTOR: _____

The following documents are attached to and made a part of this Certificate:

This Certificate does not constitute an acceptance of work not in accordance with the Contract Documents nor is it a release of the Contractor's obligation to complete the Work in accordance with the Contract Documents.

Executed by Engineer on _____, 20__

(ENGINEER)
By: _____

Contractor accepts this Certificate of Substantial Completion on _____, 20__

(CONTRACTOR)
By: _____

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Owner accepts this Certificate of Substantial Completion on _____, 20__

(OWNER)

By: _____

WAIVER OF LIENS
PRIME CONTRACTOR

Project: _____

OWNER: _____

Contract No.: _____ Contract Date: _____

The undersigned Contractor hereby swears under penalty of perjury that (1) all previous progress payments received from the Owner on account of work performed under the Contract referred to above have been applied by the undersigned to discharge, in full, all obligations of the undersigned incurred in connection with work covered by prior Estimates for Partial Payment under said contract, being Estimates number 1 through ____ inclusive; and (2) all labor, materials and equipment incorporated in said Project or otherwise listed in or covered by these Estimates for Partial Payment are free and clear of all liens claims, security interests and encumbrances, except those listed below by obligee, nature and amount of obligation and covered by appropriate bond or bonds, as listed beside each obligation and attached to and made a part of this certification.

Obligation

Bond

Dated: _____

(CONTRACTOR)

(Name)

(Title)

COUNTY OF _____

STATE OF _____

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Before me on this _____ day of _____ personally appeared
_____ known to me, who being duly sworn, did depose and save that he/she is
the _____ of the Contractor above mentioned;
(Officer)

that he/she executed the above statement on behalf of said Contractor and that all of the statements contained therein are true, correct and complete.

NOTARY PUBLIC

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**PARTIAL RELEASE AND WAIVER OF LIEN
SUBCONTRACTOR**

OWNER: _____

PROJECT NAME: _____

PROJECT LOCATION: _____

SUBCONTRACT NUMBER: _____

Requisition Number: _____

Requisition Date: _____

SUBCONTRACT AMOUNTS

– **payments to date:** _____

– **current payment:** _____

– **contract:** _____

– **check date:** _____

The undersigned represents that it has submitted to _____ (the “Contractor”) the requisition described above for labor performed and/or materials supplied in connection with the above-captioned Project. In consideration of payment of the requisition, the undersigned hereby releases the Contractor and the Owner from all claims of lien which the undersigned has regarding the Project as of the date of the requisition.

In order to induce the Contractor to pay the requisition, the undersigned hereby represents and warrants that it has paid, or will pay, from the proceeds of the requisition all sums due to those parties who have performed work or provided materials to the undersigned in connection with the Project, that it has made payment of all sums due to those parties who have performed work or who have provided materials to the undersigned in connection with all previous requisitions related to the Project, and that it will on request of the Contractor provide written evidence of the discharge by such parties of any claims of lien against the Project and that the total amount due to the Subcontractor under the subcontract, including all approved amendments through the date hereof, is shown above.

(Name of Subcontractor)

Witness

(Officer of the Company)

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**FINAL RELEASE AND WAIVER OF LIEN
SUBCONTRACTOR**

OWNER: _____

PROJECT NAME: _____

PROJECT LOCATION: _____

SUBCONTRACT NUMBER: _____

SUBCONTRACT AMOUNTS

– **payments to date:** _____

– **final payment:** _____

– **final contract amount:** _____

REQUISITION NUMBER: FINAL _____

DATE: _____

The undersigned represents that it has submitted to _____ (the “Contractor”) the Final requisition for labor performed and/or materials supplied in connection with the above-captioned Project. In consideration of payment of the Final requisition, the undersigned hereby releases the Contractor and the Owner from all claims of lien which the undersigned has regarding the Project.

In order to induce the Contractor to pay the Final requisition, the undersigned hereby represents and warrants that it has paid, or will pay, from the proceeds of the Final requisition all sums due to those parties who have performed work or provided materials to the undersigned in connection with the Project, that it has made payment of all sums due to those parties who have performed work or who have provided materials to the undersigned in connection with all previous requisitions related to the Project, and that it will on request of the Contractor provide written evidence of the discharge by such parties of any claims of lien against the Project and that the total amount due to the Subcontractor under the subcontract, including all approved amendments, is shown above.

(Name of Subcontractor)

Witness (Officer of the Company)

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**CERTIFICATE OF FINAL PAYMENT
AND COMPLETION OF WORK**

Contract No.: _____ Agreement Date: _____

Contract Description: _____

Completion Date per Agreement and Change Orders: _____

FINAL CERTIFICATION OF CONTRACTOR

(Insert Name and Complete Address of CONTRACTOR)

agrees to accept \$ _____ (Dollar Amount) as full and final payment for all Work completed under this Contract dated _____ (Date) with the Warwick Sewer Authority.

I certify that all construction has been carried out in substantial compliance with the Contract Documents, and that all labor, equipment, materials and Subcontractors have been or will be paid in accordance with the requirements of the General Laws of the State of Rhode Island.

Date

CONTRACTOR

Signed by Officer of Corporation

Title

END OF SECTION

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APPLICATION FOR PAYMENT NO. _____

To: _____ (OWNER)

From: _____ (CONTRACTOR)

Contract: _____

Project: _____

OWNER's Contract No. 101 ENGINEER's Project No. xxx

For Work accomplished through the date of: _____.

1.	Original Contract Price:	\$	_____
2.	Net change by Change Orders and Written Amendments (+ or -):	\$	_____
3.	Current Contract Price (1 plus 2):	\$	_____
4.	Total completed and stored to date:	\$	_____
5.	Retainage (per Agreement):		
	_____ % of completed Work:	\$	_____
	_____ % of stored material:	\$	_____
	Total Retainage:	\$	_____
6.	Total completed and stored to date less retainage (4 minus 5):	\$	_____
7.	Less previous Application for Payments:	\$	_____
8.	DUE THIS APPLICATION (6 MINUS 7):	\$	_____

Accompanying Documentation:

CONTRACTOR'S Certification:

The undersigned CONTRACTOR certifies that (1) all previous progress payments received from OWNER on account of Work done under the Contract referred to above have been applied on account to discharge CONTRACTOR's legitimate obligations incurred in connection with Work covered by prior Applications for Payment numbered 1 through _____ inclusive; (2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to OWNER at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to OWNER indemnifying OWNER against any such Lien, security interest or encumbrance); and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and not defective.

Dated _____
CONTRACTOR

State of _____
County of _____
Subscribed and sworn to before me this _____
day of _____, _____

Notary Public
My Commission expires: _____

Payment of the above AMOUNT DUE THIS APPLICATION is recommended.

Dated _____
ENGINEER

APPLICATION FOR PAYMENT

INSTRUCTIONS

A. GENERAL INFORMATION

The sample form of Schedule of Values is intended as a guide only. Many projects require a more extensive form with space for numerous items, descriptions of Change Orders, identification of variable quantity adjustments, summary of materials and equipment stored at the site and other information. It is expected that a separate form will be developed by Engineer and Contractor at the time Contractor's Schedule of Values is finalized. Note also that the format for retainage must be changed if the Contract permits (or the law provides), and Contractor elects to deposit securities in lieu of retainage. Refer to the General Conditions for provisions concerning payments to Contractor.

B. COMPLETING THE FORM

The Schedule of Values, submitted and approved as provided in the General Conditions, should be reproduced as appropriate in the space indicated on the Application for Payment form. Note that the cost of materials and equipment is often listed separately from the cost of installation. Also, note that each Unit Price is deemed to include Contractor's overhead and profit.

All Change Orders affecting the Contract Price should be identified and included in the Schedule of Values as required for progress payments.

The form is suitable for use in the Final Application for Payment as well as for Progress Payments; however, the required accompanying documentation is usually more extensive for final payment. All accompanying documentation should be identified in the space provided on the form.

C. LEGAL REVIEW

All accompanying documentation of a legal nature, such as Lien waivers, should be reviewed by an attorney, and Engineer should so advise Owner.

Application No. _____ Date: _____

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	BID AMOUNT	PREVIOUS QUANTITY	PREVIOUS COST	PERIOD QUANTITY	PERIOD COST	QUANTITY TO DATE	TOTAL COST TO DATE	PERCENT COMPLETE
1				\$	\$		\$		\$		\$	
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
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23												
24												
25												
26												
27												
28												
29												

Note: Total Schedule of Values should equal the Current Contract Price.

**CHANGE
ORDER**

Distribution To:
Owner []
Engineer []
Contractor []
Consultant []
Field []
Other []

Owner: Warwick Sewer Authority Change Order Number:

Project: Oakland Beach Interceptor Initiation Date:
Rehabilitation

To: Owner's Contract Number:
Contract Date:

You are directed to make the following changes in this Contract:
Furnish and install all necessary labor and materials to modify the Contract Requirements as follows:

Not valid until signed by Owner. Signature of the Contractor indicates his agreement herewith,
including any adjustment in the Contract sum or Contract Time.

The original (Contract Sum) was
Net change by previously authorized Change Orders
The (Contract Sum) prior to this Change Order was
The (Contract Sum) will be (increased) (decreased) (unchanged) by this
Change Order The new (Contract Sum) including this Change Order will be

The Contract Time will be (increased) (decreased) (unchanged) by (0) Calendar Days.
The Date of Substantial Completion as of the date of this Change Order therefore _____.

Authorized:

CONTRACTOR	Warwick Sewer Authority OWNER	Gordon R. Archibald, Inc. ENGINEER
By: _____ President	By: _____ Executive Director	By: _____ Project Manager
Date: _____	Date: _____	Date: _____

SECTION 00900

**RHODE ISLAND DEPARTMENT OF LABOR AND TRAINING
PREVAILING WAGE REQUIREMENTS**

Reference (www.dlt.ri.gov/pw/)

00900- 1

DIVISION 01
GENERAL REQUIREMENTS

SECTION 01010
SUMMARY OF WORK

PART 1 - GENERAL

1.01 PROJECT/WORK IDENTIFICATION

- A. General: The Project name issued by the Owner (Warwick Sewer Authority), is the “Contract 101 Oakland Beach Interceptor”. The Contract Documents are dated April 2021.
- B. Contract Documents: Related requirements and conditions that have an impact on the Project and that are indicated in the Contract Documents include, but are not necessarily limited to, the following:
 - a. Install 3,600 linear feet of sanitary sewer Structural CIPP liner,
 - b. Rehabilitation, repair, and lining of related manholes in projects.
 - c. All related site work including excavation, pavement, flow bypass, site restoration.
- C. The Project is being implemented to rehabilitation of sanitary sewer pipes located within the City of Warwick. Streets are West Shore Rd, Albert St., Hurley Ave., Armory Dr. DPW City Yard.
- D. Additional details of the construction are provided in this document as well as the Contract Drawings.
- E. There are several types of materials necessary for the construction of this project, which are included in the itemized pricing. The intent of the project is that required materials are supplied and placed by the Contractor as part of the respective lump sum or unit price bid items as indicated in Section 00300 – Bid Form and Section 01025 – Measurement and Payment.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01014

WORK SEQUENCE

PART 1 - GENERAL

1.1 VERIFICATION OF EXISTING UTILITIES PRIOR TO ANY WORK

1.2 SEQUENCE OF CONSTRUCTION

A. GENERAL:

1. The construction of sewer shall be performed in a manner to minimize by-pass pumping and traffic disruption.
2. The Contractor shall fully cooperate with the Owner, coordinate the construction schedule with the Owner and Engineer, and provide the labor, equipment and materials to prevent interruption of influent to the wastewater treatment facility. The Owner and Engineer reserve the right to modify or expand the schedule during construction to meet prevailing conditions.
3. In order that Work may be conducted with minimum inconvenience to the public and, work under this Contract may be coordinated with other work which may be under construction or contemplated, and that work under the Contract may conform to conditions which it has been undertaken or conditions attached to a right-of-way or particular location for this work, the Engineer may determine the point or points and time or times when portions of work will commence or be carried on and may issue orders pertaining to the work sequence, relative to the rate of progress on several portions of the work.

B. SUBMITTAL:

1. The Contractor shall submit a detailed plan and time schedule for operations. The detailed plan shall describe the length of time required to complete operation and address all submittal requirements in these sections.

END OF SECTION

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SECTION 01015

CONTRACTOR'S USE OF PREMISES

PART 1 - GENERAL

- A. The Contractor shall be responsible for securing material and equipment storage areas. Proposed storage areas shall be submitted to the WSA for approval.
- B. City right-of-way shall not be used for long-term storage of materials or equipment.
- C. Material and equipment storage areas shall be secured after hours.
- D. All work shall be performed during WSA regular work hours, unless approved in writing by the Engineer.
- E. All roadways and access drives shall remain accessible to emergency vehicles at all times.
- F. The Contractor shall not occupy private property without permission.

END OF SECTION

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 – GENERAL

1.1 MEASUREMENT AND PAYMENT

- A. All Work performed as described in these Contract Documents will be paid for under one or more of the items listed in the Schedule of Bid Items. All other activities required in connection with performance of the Work, including all Work required under Division 1 – General Requirements, whether described in the Contract Documents or mandated by applicable codes, permits and laws, will not be separately paid for unless specifically provided for in the form of general bid, but will be considered incidental to performance of the overall Project and deemed to be included in the various bid items listed in the Schedule of Bid Items.
- B. Each unit or lump sum price stated in the Schedule of Bid Items shall constitute full compensation as herein specified for each item of Work completed in accordance with the Drawings and Specifications.
- C. Contractor shall make its own estimate of the quantities necessary to complete the Work.
- D. The payment items listed herein and in the Schedule of Bid Items are intended to provide full payment for the Work shown on the Drawings and specified herein. Any Work called for or inferred in the documents but not listed as a payment item shall be considered incidental to the overall Project.
- E. It is the intent of these Specifications to provide all labor, equipment, materials, supplies, temporary facilities, incidentals, and appurtenances to satisfactorily complete the Work of this Contract.
- F. Partial payment for lump sum items will be made based upon the percentage of Work complete in accordance with the schedule of values as estimated by Contractor and verified and approved by Engineer under each individual item to date. Partial payment for unit price items will be made based upon the Contractor's estimated quantity completed to date, and verified by Engineer, for items listed in the schedule of values.
- G. Contractor shall coordinate all quantity surveys with the Engineer, so that Engineer may conduct its own quantity survey for verification purposes. Discrepancies in the quantities estimated by Contractor and Engineer shall be resolved prior to modifying the site surface.
- H. Allowances have been included on the Bid Price Form for work that cannot be sufficiently quantified and must be completed by a specific third party, the services of which are arranged and provided by the Contractor. Measurement for these services will be the invoice amounts paid by the Contractor for work authorized and directed by the Engineer. No Contractor markup will be

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applied to these costs. Payment will constitute full compensation for work and costs associated with reimbursable payments to third parties.

1.2 METHOD OF MEASUREMENT AND BASIS OF PAYMENT

- A. The methods of measurement and basis of payment for each item listed in the schedule of prices are as follows.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
1	Site Preparation and Mobilization	Lump Sum

Site Preparation and Mobilization will be paid for by the lump sum price as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, equipment and other incidentals. The work includes the performance of actions that are required to clear and prepare the site for subsequent construction operations, mobilization and demobilization of personnel and equipment, administration, project management, schedules, final site restoration, and other incidentals not paid elsewhere in the contract.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
2	20-inch Cured-in-place Structural Pipe Liner	Linear Feet (LF)
3	24-inch Cured-in-place Structural Pipe Liner	Linear Feet (LF)
4	36-inch Cured-in-place Structural Pipe Liner	Linear Feet (LF)

Cured-in-Place Pipe (CIPP) liner will be paid for by the linear feet as listed in the proposal of liner installed from centerline to centerline of manholes. The lengths of manhole inverts as measured between the inside walls of the manholes will not be deducted. The price so-stated constitutes full and complete compensation for all labor, materials, equipment and all other incidentals. The work includes installing a resin-impregnated structural flexible felt tube, curing, cutting protruding service connections flush with the main pipe, root removal, sealing and plugging leaks, full coordination with bypass pumping, reconnecting and sealing of service laterals, cutting of liner, traffic control, resident notification, procuring and handling of liner samples, site and laboratory testing, restoration of work areas, and all other incidental work. Water for operations will be the responsibility of the Contractor. The Contractor must obtain the proper permits with the City of Warwick Water Department.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
5	Manhole Repair	Vertical Linear Foot (VLF)

Manhole repair will be paid for by the vertical linear foot of manhole repair performed. The price so-stated constitutes full and compensation for all labor, materials, equipment and all other incidental. The work includes surface cleaning and preparation in accordance with the manufacturer requirements, removal and legal disposal of debris and materials, active leak control, concrete repair, rebar treatment, and all other incidentals. Water for operations will be the responsibility of the Contractor. The Contractor must obtain the proper permits with the City of Warwick Water Department.

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<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
6	Manhole Lining Rehabilitation	Vertical Linear Foot (VLF)

Manhole lining rehabilitation will be paid for by the vertical linear foot of manhole repair performed. The price so-stated constitutes full and compensation for all labor, materials, equipment and all other incidental. The work includes surface cleaning and preparation in accordance with the manufacturer requirements, removal and legal disposal of debris and materials, placement of liner, and all other incidentals. Water for operations will be the responsibility of the Contractor. The Contractor must obtain the proper permits with the City of Warwick Water Department.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
7	By-Pass Pumping	Lump Sum (LS)

By-Pass Pumping will be paid by the lump sum listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, equipment and all other incidentals. The work includes preparing by-pass plan, pipe and pump setup, testing of equipment, confirming pump rates, maintenance and operation (24 hour), roadway excavations, sand backfill, temporary ramps for driveways/traffic crossings, removal and cleanup of by-pass pipe and pumps, and all other incidentals to perform pipe and manhole lining and repairs.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
8	Excavation Pits for Force Main Connections	Each (EA)

Excavation Pits for Force Main Connections will be paid for by the number per each as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, equipment and all other incidentals. The work includes making temporary connections and extensions of existing force mains for bypass pumping, excavation, dewatering operations, earth supports systems, fittings, adapters, supports, bedding materials, backfill, compaction, leakage tests, traffic control, removal and reconnection of force main and all other incidentals.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
9	Sewer Frame and Cover	Each (EA)

Sewer Frames and Covers will be paid for by the number per as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, equipment and all other incidentals. The work includes removal and legal disposal of sewer frames, covers, bricks and debris; excavation, grout, bricks, concrete, gravel borrow, compaction, and all other incidentals.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
10	Remove and Reset Sewer Frame and Cover	Each (EA)

Remove and Reset Sewer Frame and Cover will be paid for by the number per each as listed in the proposal. The price so-stated constitutes full and complete compensation for all labor, materials equipment, and all other incidentals. The work includes removal, reset, disposal of brick and debris, excavation, grout, bricks, concrete, gravel borrow, compaction, and all other incidentals.

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<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
11	Manhole Invert Repair	Each (EA)

Manhole Invert Repair will be paid for by the number per each as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, equipment and all other incidentals. The work includes removal and legal disposal of brick and debris; grout, bricks, concrete, gravel borrow, compaction, and all other incidentals.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
12	Core Drill Sewer Manholes for By-Pass	Each (EA)

Core Drill Sewer Manholes for By-Pass will be paid for by the number per each as listed in the proposal. The price so-stated constitutes full and complete compensation for all labor, materials equipment, and all other incidentals. The work includes making temporarily connections to existing manholes to support bypass pumping (all sizes), excavation, dewatering operations, earth supports systems, backfill, compaction, traffic control, removal and plugging of temporary core holes and all other incidentals.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
13	Sawcut Bituminous and Concrete	Linear Foot (LF)

Sawcut Bituminous and Concrete will be paid for by the linear feet as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, equipment and all other incidentals. The work includes full depth saw-cut of bituminous pavement and concrete sidewalks to facilitate subsurface pipe installation, manhole repair, frame and cover repair or replacement, coring of manholes, and temporary force main connections and extensions.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
14	Remove and Dispose Flexible Pavement	Square Yard (SY)

Remove and Dispose Flexible Pavement will be paid for by the square yard as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, equipment and all other incidentals. The work includes removing full depth of bituminous pavement and concrete sidewalks to facilitate subsurface pipe installation, manhole repair, frame and cover repair or replacement, coring of manholes, and temporary force main connections and extensions.

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<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
15	1-1/2" Temporary Bituminous Concrete Patch	Tons (TON)

Temporary Bituminous Concrete Patch will be paid for by the ton as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, equipment and all other incidentals. The work includes installing temporary pavement to restore surfaces impacted by subsurface pipe installation, coring of manholes, and temporary force main connections and extensions. Placement of the temporary bituminous concrete patch will include installing excavation, 12-inches of compacted gravel borrow base, 1-1/2-inch of bituminous pavement (HMA CL 9.5), tack coating pavement edges, temporary stripping, sweeping and cleaning, tack coat, removal and disposal of broken or loose pavement, hauling, spreading, shaping, rolling and compaction of gravel borrow and bituminous pavement.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
16	2-1/2" Permanent Bituminous Concrete Base(City/State Roads)	Tons (TON)
17	1-1/2" Permanent Bituminous Concrete Top(City Roads)	Tons (TON)
18	2" Permanent Bituminous Concrete Top(State Roads)	Tons (TON)
19	2-1/2" Bituminous Concrete Sidewalks/Driveways	Tons (TON)

Permanent bituminous concrete pavements will be paid for by the ton as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, equipment and all other incidentals. The work includes installing permanent pavement to restore surfaces impacted by subsurface pipe installation, coring of manholes, and temporary force main connections and extensions. Placement of the temporary bituminous concrete patch will include excavation, 12-inches of gravel borrow base, bituminous pavement, tack coat, pavement markings, sweeping and cleaning, removal and disposal of broken or loose pavement, hauling, spreading, shaping, rolling and compaction of gravel borrow and bituminous pavement.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
20	Remove and Reset Curbing	Linear Foot (LF)

Remove and Reset Curb will be paid for by the linear feet as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, equipment and all other incidentals. The work includes excavating, removing, storing, handling, and resetting curb including excavation, gravel borrow, concrete, and compaction.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
21	Concrete Sidewalks and Driveways	Square Yards (SY)

Concrete Sidewalks and Driveways will be paid for by the square yard as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, equipment and all other incidentals. The work includes installing concrete sidewalks and driveways to restore surfaces impacted by subsurface pipe installation, coring of manholes, and temporary force main connections and extensions. Placement of the sidewalk will include excavation, removal of concrete, disposal, hauling, gravel borrow, concrete, mesh, grading, and compaction.

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<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
22	4-Inch Loam and Seed	Square Yard (SY)

Loam and seed will be paid for by the square yard as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, equipment and all other incidentals. The work includes excavation and cultivating of subsoil, loam, seed, and fertilizer, and water. Payment will not be made for areas disturbed by the Contractor within the limit of work approved by the Owner.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
23	Clearing and Grubbing	Lump Sum (LS)

Clearing and Grubbing will be paid for by the lump sum price as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, equipment and other incidentals. The work includes cutting and removing vegetation, stumps, brush, shrubs, hedges, roots, debris which occur within the right-of-way and interfere with bypass pumping operations and pipe routes. All clearing and grubbing operation limits shall be approved by the Warwick Sewer Authority. Tree trimming will be paid under the Tree Trimming Allowance. All tree trimming shall be approved by the Warwick Sewer Authority.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
24	8" Compost Filter Sock	Linear Foot (LF)

Compost Filter Sock will be paid for by the linear feet as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, equipment and all other incidentals. The work includes placement, staking, cleaning and maintenance through construction, removal, and disposal.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
25	Silt Sack Inlet Protection	Each (EA)

Silt Sack Inlet Protection will be paid for per each as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, equipment and all other incidentals. The work includes placement, cleaning and maintenance throughout construction, removal, and legal disposal of debris and sediment.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
26	Maintenance and Protection of Traffic	Lump Sum (LS)

Maintenance and Protection of Traffic will be paid by the lump sum listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, equipment and all other incidentals. The work includes providing traffic protection for all project work including construction road signs, traffic barrels w/Type A or Type C lights, traffic barricades, maintenance,

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moving and resetting detours and all traffic control equipment and devices. Payment for Police Protection will be performed by the Warwick Sewer Authority.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
27	Police Protection	Allowance

Payment: Payment for police protection will be paid directly by the Warwick Sewer Authority. The Contractor will be responsible for coordinating police protection with the Police Department and the Owner. The Warwick Police Department will invoice the WSA directly without charge to the Contractor. The Owner's representative will review and approve all related police invoices.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
28	Testing	Allowance

The Contractor shall include in the Contract Sum all allowances stated as listed in the Proposal. The items covered by allowances shall be for providing testing as directed by the owner. supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
29	Miscellaneous Utility Work	Allowance

The Contractor shall include in the Contract Sum all allowances stated as listed in the Proposal. The items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

<u>BID ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
30	Tree Trimming	Allowance

The Contractor shall include in the Contract Sum all allowances stated as listed in the Proposal. The items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

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PRICE ADJUSTMENTS FOR DIESEL FUEL, GASOLINE, AND CONCRETE

DIESEL FUEL

This amount will be based on fuel usage factors for various items of work developed by the Highway Research Board in Circular 158, dated July 1974. These factors will be multiplied by the quantities of work done in each item during each monthly period and further multiplied by the variance in price from the Base Price to the Period Price.

1. The Base Price of Diesel Fuel will be the price set by the Rhode Island Department of Transportation at the time of bid. The Period Price will be the average of prices charged to the State, including State Tax for the bulk purchases made during each month, as published on the Rhode Island Department of Transportation's (RIDOT) website.
2. This allowance will be applicable to excavation eligible for payment, material items furnished through excavation related Items, all measurements as determined by the Engineer and based on a fuel factor of 0.29 gallons per cubic yard.
3. This allowance will be affected only if the variance from the Base Price is 5% or more for a monthly period. The complete allowance will be paid in all cases with no deduction of the 5% from either upward or downward allowances.
4. No allowance will be paid for work done beyond the extended completion date of the Contract.
5. Any adjustment (increase or decrease) to estimated quantities made to each item at the time of final payment will have the fuel price adjustment figured at the average period price for the entire term of the project for the difference of quantity.

LIQUID ASPHALT

This amount will be based on fuel usage factors for various items of work developed by the Highway Research Board in Circular 158, dated July 1974. These factors will be multiplied by the quantities of work done in each Item during each monthly period and further multiplied by the variance in price from the Base Price to the Period Price.

1. The Base Price of Gasoline will be the price set by the Rhode Island Department of Transportation at the time of bid. The Period Price will be the average of prices charged to the State, including State Tax for the bulk purchases made during each month, as published on the Rhode Island Department of Transportation's (RI DOT) website.
2. This allowance will be applicable to excavation eligible for payment, material items furnished through excavation related Items, all measurements as determined by the Engineer and based on a fuel factor of 0.15 gallons per cubic yard.

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3. This allowance will be affected only if the variance from the Base Price is 5% or more for a monthly period. The complete allowance will be paid in all cases with no deduction of the 5% from either upward or downward allowances.
4. No allowance will be paid for work done beyond the extended completion date of the Contract.
5. Any allowance (increase or decrease) to estimated quantities made to each item at the time of final payment will have the fuel price adjustment figured at the average period price for the entire term of the project for the difference of quantity.

END OF SECTION

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SECTION 01090

REFERENCE STANDARDS

PART 1 - GENERAL

1.1 GENERAL

- A. Wherever reference is made to any published standards, codes, or standard specifications, it shall mean the latest standards code, specification, or tentative specification of the technical society, organization, or body referred to which is in effect at the date of this Invitation for Bids.
- B. The following is a partial list of typical abbreviations which may be used in the specifications and the organizations to which they refer:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute
ASCE	American Society of Civil Engineers
ASTM	American Society for Testing and Materials
AWWA	American Waterworks Association
CORPS	Army Corps of Engineers
NASSCO	National Association of Sewer Service Companies
OSHA	Occupational Safety and Health Act
PACP	Pipeline Assessment and Certification Program
RIDOT	Rhode Island Department of Transportation
RIDEM	Rhode Island Department of Environmental Management
UBC	Uniform Building Code
UL	Underwriters' Laboratory
USCG	United States Coast Guard
USEPA	United States Environmental Protection Agency

- C. Contractor shall, when required, furnish evidence satisfactory to Engineer that materials and methods are in accordance with such standards where so specified.
- D. In the event any questions arise as to the application of these standards or codes, copies shall be supplied on site by Contractor.

END OF SECTION

SECTION 01200

PROJECT MEETINGS

PART 1 - GENERAL

1.1 PRECONSTRUCTION CONFERENCE

- A. The Engineer will schedule and conduct one preconstruction conference prior to the commencement of any work at the site, to which all interested agencies and utility companies will be invited to discuss their interests and requirements relating to the project. Contractor and all subcontractor representatives shall attend.

1.02 CONSTRUCTION PERIOD MEETINGS

- A. Construction period meetings will be conducted at biweekly intervals or at some other frequency if approved by the Engineer. These meetings shall be attended by the Engineer and the Contractor's Project Manager and any others that are invited by these people.
- B. Engineer will prepare the agenda of these project meetings, which will include reports on construction progress, the status of submittal reviews, the status of information requests, and any general business. The meetings will be conducted by the Engineer. Engineer shall keep minutes of the proceedings. The minutes shall be typed and distributed to all attendees prior within 72 hours of each meeting to the extent possible, but in no event later than the date of the next scheduled meeting.

END OF SECTION

SECTION 01310

CONSTRUCTION SCHEDULE

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies reports and schedules for planning and monitoring the progress of the project work.

1.2 DESCRIPTION

- A. The Contractor shall prepare his proposed schedule based on a breakdown of work tasks that he has developed. The schedule will take into account the time of completion and the specific dates as specified in the Contract Documents.

1. Each schedule shall be prefaced with the following summary data:
 - a. Contract name and number
 - b. Contractor's Name
 - c. Contract duration
 - d. The effective or starting date of the schedule
 - e. Revision date of the latest schedule.
2. The schedule shall be sequenced by early start date and shall include the following minimum items:
 - a. Activity Name
 - b. Estimated duration
 - c. Activity description
 - d. Start date (calendar date)
 - e. Finish date (calendar date)
 - f. Major milestones

1.3 SUBMITTAL PROCEDURES

- A. Within 10 days after the Bid Opening, the Contractor shall submit in accordance with Section 01340, a construction schedule conforming to this specification. The submittal shall consist of a reproducible original and two copies.
- B. Within 7 calendar days after receipt of the submittal, the Engineer shall review the submitted schedule and return one copy of the marked up original to the Contractor. If the Engineer finds that the submitted schedule does not comply with specified requirements, the corrective revisions will be noted on the submittal copy returned to the Contractor.

1.4 SCHEDULE REVISIONS

- A. Revisions to the accepted construction schedule may be made only with the written approval of the Contractor and Owner. A change affecting the contract value of any activity, the completion time, and specific dates and sequencing may be made only in accordance with applicable provisions of Special Conditions.

1.5 PROJECT STATUS UPDATE

- A. Project status review narrative and updated CPM schedule shall be provided monthly with each payment requisition.

END OF SECTION

SECTION 01340

SHOP DRAWINGS

PART 1 - GENERAL

1.1 GENERAL

- A. Contractor shall submit for review, shop drawings and descriptions of methods and equipment to be utilized and of all materials and equipment to furnish in accordance with the applicable Sections of the Contract Documents.
- B. Contractor is required to submit details of all materials and equipment, even though a particular item is the one specified.
- C. Contractor, on review from Engineer, may submit manufacturer's literature as a substitute for, or supplement to, the shop drawings. The minimum size for any submission shall be 8 1/2 inches by 11 inches, and the maximum size shall not exceed 36 inches by 24 inches. All shop drawings and printed matter submitted shall clearly indicate the Section of the Contract Documents to which they correspond (e.g. Section 03200).
- D. Shop drawings or printed matter shall give all dimensions and sizes to enable Engineer to pass on the suitability of the material or layout for the purpose intended. The shop drawings shall, where needed for clarity, include outline and Sectional views, and detailed shop dimensions and designations of the kind of materials and kinds of machine work and finishes required. Shop drawings for submission shall be coordinated by Contractor with shop drawings previously submitted, with shop drawings being prepared, and with the design and function of any equipment or structure.
- E. If the shop drawings show variances from the requirements of the Contract because of standard shop practice or other reason, Contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action to be taken for proper adjustment; otherwise Contractor will not be relieved of the responsibility for executing the Work in accordance with the Contract even though such shop drawings have been "Reviewed" by Engineer.
- F. Material shall not be purchased or fabricated for equipment or structures until Engineer has reviewed and "Approved" the shop drawings, which shall represent all materials and work involved in the construction. No materials or equipment for which a submittal of a shop drawing is required shall be delivered to the site unless they are in conformance with the shop drawings which have been "Approved".
- G. Work shall not be done upon any part of a structure, the design or construction of which acceptance is required, until such acceptance has been received from which is dependent upon the design of equipment or other features, for Engineer.

1.2 PROCEDURE FOR REVIEW

- A. Contractor shall submit all shop drawings electronically in a pdf format. Contractor shall represent that they have determined and verified all field measurements, field construction criteria, materials, made log numbers and similar data or will do so, and that he/she has checked and coordinated each shop drawing with the requirements of the Work and of the Contract Documents.
- B. Contractor shall review all drawings or literature submitted to him by Subcontractors and Suppliers for correctness and adequacy of data, and shall stamp the drawings or literature "Approved for Submission" and sign them prior to submitting such shop drawings, and literature to Engineer for review. Contractor shall be responsible for the prompt submission of all shop drawings, so that there shall be no delay to the Work due to the absence of such drawings.
- C. Engineer will review the shop drawing, but only for conformance with the design concept of the Project and with the information given in the Contract Documents.
- D. Engineer will returned electronic (pdf) to Contractor marked in one of the following ways, all subject to Contract requirements:

NO EXCEPTION TAKEN - The content of this submittal was reviewed by the Engineer and was found to be in general compliance with the Contract Documents. No further submission of this submittal is required and the information contained in the submittal may be built into the Work in accordance with the terms and conditions of the Contract Documents.

MAKE CORRECTIONS NOTED - The content of this submittal was reviewed by Engineer and was found in general to be in compliance with the Contract Documents. The notations made on the submittal, by Engineer, shall be incorporated into the Work in accordance with the terms and conditions of the Contract Documents. Resubmission may be required.

SUBMIT SPECIFIED ITEM - The content of this submittal was reviewed by Engineer and was found in general to be in compliance with the Contract Documents but incomplete. Contractor shall address the items specified in the Engineer's comments and resubmit these items for review. In general, if the specified item is an omission, the Contractor may submit that item for review. However, the Engineer may require the resubmittal to contain all elements found to be in compliance with the Contract Documents in addition to the items specified in Engineer's review comments to produce a complete resubmittal.

REVISE and RESUBMIT - The content of this submittal was reviewed by Engineer and this review has indicated that additional data and/or modifications to the submitted data or other changes are required to bring the work represented in this submittal into compliance with the Contract Documents. This submittal shall be reviewed and remarked in accordance with Engineer's comments, by Contractor, and resubmitted to Engineer for another review. The information contained on the resubmittal shall not be incorporated into the Work until it is returned to Contractor with an "Approved" or "Approved as Noted" stamp.

REJECTED - The content of this submittal was reviewed by Engineer and this review has indicated that the work displayed in the submittal is not in compliance with the Contract Documents.

Contractor shall forward another submittal for this portion of the Work, which complies with the Contract Documents.

- E. Prior to the end of the Contract Work, Contractor shall furnish Engineer with approved field changes shown. Contractor shall also furnish accepted Supplier printed literature. Only drawings which were checked and corrected shall be submitted. Contractor shall review all drawings or literature submitted to him/her by Subcontractors and Suppliers for correctness and adequacy of data prior to submitting such drawings and literature to Engineer.
- F. Any action by Engineer shall not be construed in any way as relieving Contractor from his full responsibilities under the terms of the Contract requirements. Review of a separate item shall not indicate approval of an assembly in which the item functions. Review is for general conformance with the design concept of the Project and compliance with the information given in the Contract Documents. Contractor is responsible for all dimensions, quantities, and performance requirements for all confirmation and correlation at the job site; for all information that pertains solely to the fabrication processes or to the techniques of construction; and for all coordination of the Work of all trades; and for assuring consistency with the Contract Documents.

1.3 CERTIFIED SHOP TEST REPORTS

- A. Each piece of equipment for which pressure, duty, capacity, rating, efficiency, performance, function, or special requirements are specified shall be tested in the shop of the manufacturer in a manner that shall conclusively prove that its characteristics comply fully with the requirements of the Contract Documents. Tests shall be conducted in accordance with the test codes of the ASME, NEMA, and other applicable standards.
- B. Equipment shall not be shipped to the site until Engineer notifies Contractor in writing that the results of the shop tests are acceptable.
- C. When the Specifications require witness shop tests at the point of manufacture, the only tests that will be accepted are those made in the presence of Engineer or his representative. Contractor shall give Engineer written notice ten (10) days in advance of the time when the equipment will be ready for the witness shop test, or as required by the Specifications. This notification shall include a diagram of the testing setup and a list of the instruments the manufacturer proposes to use for the tests. All instruments shall have ranges suitable for the quantities to be measured, with approved laboratory calibration. Five (5) copies of the witness shop test data and interpreted results thereof, accompanied by a certificate of authenticity sworn to by a responsible official of the manufacturing company, shall be forwarded to Engineer.

1.4 SAMPLES

- A. Contractor shall furnish for review all samples as required by the Contract Documents or requested by Engineer.
- B. Samples shall be of sufficient size or quantity to clearly illustrate the quality, type, range of color, finish, or texture and shall be properly labeled to show the nature of the material, trade name of manufacturer, and location of the work where the material represented by the sample will be used.

- C. Samples shall be checked by Contractor for conformance to the Contract Documents before being submitted to Engineer, and shall bear Contractor's stamp of approval certifying that they have been so checked. Transportation charges on samples submitted to Engineer shall be prepaid by Contractor.
- D. Engineer's review will be for compliance with the Contract Documents and his/her comments will be transmitted to Contractor with reasonable promptness.
- E. Accepted samples will establish the standards by which the completed Work will be judged.

PART 2 - PRODUCTS

2.1 GENERAL

Contractor shall submit for review the following shop drawings.

- A. Detailed description of the construction means and methods to be utilized to perform Structural CIPP liner.
- B. Materials and equipment to be utilized to perform structural CIPP liner.
- C. Materials for repair, coating, and lining of manholes.
- D. Manhole frame and covers
- E. Pump by-pass methods and computations
- F. Bituminous pavement
- G. Health and safety plan

END OF SECTION

SECTION 01370

HEALTH AND SAFETY PROVISIONS

PART 1 - GENERAL

1.1 REQUIREMENTS

- A. Contractor's attention is directed to the fact that the project's objective is to connect residences to the municipal sewer system, owned by the WSA and work will be conducted in area's utilized for wastewater/septage collection, and that unsafe conditions may occur. Contractor is advised that methane, hydrogen sulfide, and other toxic gases may be encountered in the execution of this Project. Low levels of oxygen and other hazards may occur.
- B. Contractor is responsible to monitor working conditions at all times during construction and to provide appropriate OSHA protective clothing, equipment, and facilities for its personnel, and to establish work place procedures to ensure their safety, and to enforce the use of these procedures, equipment, and facilities in accordance with the following guidelines:
 - 1. Safety and Health Regulations Promulgated by the U.S. Department of Labor, OSHA, 29 CFR 1910 - Occupational Safety and Health Standards, and 29 CFR 1920 Safety and Health Regulations for Construction.
 - 2. U.S. Environmental Protection Agency, Interim Standard Operating Safety Guides, Office of Emergency and Remedial Response, Hazardous Response Support Division, Rev. September 1982.
 - 3. U.S. Environmental Protection Agency, Medical Monitoring Program Guidelines.
- C. Contractor shall implement a Health and Safety protection program. The program procedures shall include provisions for stations allowing workers to wash and to put on and remove protective clothing, and stations for vehicles to be cleaned, if necessary, before leaving the site. It shall also include a plan for maintaining proper ventilation of Work areas, provision of required breathing apparatus for workers, and contingency plans for emergencies, at a minimum.
- D. Contractor shall engage an independent, qualified Health and Safety expert having experience on similar projects, to prepare the program, to monitor site conditions, and to recommend all necessary Health and Safety protection. The Contractor shall follow such recommendations and shall provide such protection to his personnel, and personnel of Owner and Engineer, as may be affected.
- E. Contractor shall comply with all federal, State, and local safety requirements related to the presence of combustible and nausea inducing gases.
- F. If, at any time, the Owner or Engineer is apprised of a safety hazard which demands immediate attention because of its high potential for harm to public travel, persons on or about the Work, or public or private property, the Owner or Engineer shall have the right to order such safeguards to be erected and such precautions to be taken as necessary and Contractor shall comply with such orders. If, under such circumstances, Contractor does not or cannot immediately put the Work into proper condition, or if Contractor or his representative is not upon the site so that he can be notified immediately of the insufficiency of safety precautions, then the Owner may put the Work into such

a condition that it shall be, in his opinion, in all respects safe, and Contractor shall pay all expenses of such labor and materials as may have been used for this purpose by him or by the Owner. The fact that the Owner or Engineer does not observe a safety hazard or does not order the Contractor to take remedial measures shall in no way relieve Contractor of the entire responsibility for any costs, loss, or damage by any party sustained on account of the insufficiency of the safety precautions taken by him or by the Owner acting under authority of this Section.

- G. Contractor is alerted to the fact that conditions of high hazard are present or can be present at the site during performance of the Work. It is the responsibility of Contractor to take appropriate safety precautions to meet whatever conditions of hazard may be present during the performance of the Work, whether reasonably foreseeable or not. The safety conditions enumerated within the Specifications are the minimum permissible and neither the Owner nor Engineer make any representation that the safety standards provided herein will be adequate to meet all eventualities. Contractor is therefore alerted to the fact that it shall be Contractor's responsibility to anticipate and provide such additional facilities, personnel, and equipment as shall be necessary to protect life and property from whatsoever conditions of hazard are present or may be present.
- H. Contractor shall supply and erect highly visible safety fencing a minimum of three feet in height around all construction areas that pose a threat to safety. Contractor shall erect safety fencing at his own discretion or as directed by the Owner or Engineer and shall maintain such fencing until such a time that the potential safety hazard has been rectified. Upon final completion of construction, all safety fencing shall be removed off site by Contractor. Safety fencing requirement of OSHA shall be enforced by Contractor.

END OF SECTION

SECTION 01380

ENVIRONMENTAL PROTECTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Contractor shall furnish all labor, equipment, and materials required for environmental protection during and as the result of construction operations under this Contract except for those measures set forth in other provisions of these Specifications. Environmental protection requires consideration of air, water and land, and involves noise and solid waste management as well as other pollutants. Contractor shall implement environmental protection measures to ensure all requirements or regulations set forth in site-wide or project-specific permits are met.
- B. Related Sections:
 - 1. Section 03149 – Maintaining Existing Flow
 - 2. Section 03763 – Pipeline Cleaning
 - 3. Section 03764 – Television Inspection
 - 4. Section 03750 – Cured in Place Pipe (CIPP) Installation
 - 5. Section 03769 – Disposal of Materials
- C. Applicable Regulations
 - 1. In order to prevent environmental pollution and to provide for environmental protection arising from construction activities related to the performance of this Contract, Contractor and all Subcontractors shall comply with all applicable Federal, State and local Laws and Regulations concerning environmental protection, as well as the specific requirements stated in this Section and elsewhere in the Specifications.
- D. Submittals:
 - a. Implementation Plan. Prior to commencement of the Work, Contractor shall meet with Engineer to develop a mutual understanding relative to compliance with the provisions of this Section and administration of the environmental protection program.

PART 2 - PRODUCTS

(Not used)

PART 3 - EXECUTION

3.1 GENERAL

- A. It is intended that the resources within the Project boundaries and outside the limits of permanent Work performed under this Contract be preserved in their present condition, or be restored to a condition after completion of construction, that will appear to be natural and not detract from the appearance of the Project. Contractor shall confine his construction activities to areas defined on the Drawings or in the Specifications except with written approval of the Owner and/or Engineer.

1. Prevention of Landscape Defacement. Limits of working areas include areas for storage of construction material, and shall be cleared in a manner which will enable satisfactory restoration and which will not affect the environment during or after the construction period. Contractor shall not enter beyond the working limits of the working area except with written approval of Engineer and the Owner.
2. Location of Storage. The location of areas for storage of Contractor's materials required temporarily in the performance of the Work, shall be within the limits of the working area as provided for by OWNER and shall require written approval of Engineer prior to use. The preservation of the landscape shall be an imperative consideration in the selection of the sites.
3. Post Construction Cleanup or Obliteration. Contractor shall obliterate all signs of temporary construction facilities such as work areas, stockpiles of excess or waste materials, temporary erosion and sediment controls, or any other vestiges of construction. The disturbed areas shall be graded and repaired in accordance with the Drawings and to a condition equal or better than prior to construction as required.

3.2 PROTECTION OF WATER RESOURCES

- A. Contractor shall not pollute streams, lakes or reservoirs with fuels, oils, bitumens, calcium chloride, acids or harmful materials. It is the responsibility of Contractor to investigate and comply with all applicable federal, state, county and municipal laws concerning pollution of rivers, streams and impounded water. All Work under this Contract shall be performed in such a manner that objectionable conditions will not be created in streams, lakes, reservoirs, or bodies of water adjacent to, or within, the Project area.
- B. Erosion. Temporary erosion and sediment control measures shall be provided and maintained until permanent vegetation is established.
- C. Spillage. At all times of the year, special measures shall be taken to prevent chemicals, fuels, oils, greases, bituminous materials, waste washing, herbicides and insecticides, and cement and surface drainage from entering public or private waters.
- D. Disposal. Disposal of any materials, wastes, effluent, trash, garbage, oil, grease, chemicals, etc., in or adjacent to reservoirs, streams or other waterways shall be disposed by the Contractor as specified in these Contract Documents. If any waste material is dumped in unauthorized area, Contractor shall remove the material and restore the area to the condition of the adjacent undisturbed area. If necessary, contaminated soil shall be excavated, disposed of as specified herein before, and replaced with suitable fill material, compacted and finished with topsoil, all at the expense of Contractor.
- E. Disturbed Area. Contractor shall limit disturbed area to less than 1 acre at any given time. Obtain, pay all permit fees and comply with all provisions of the General Permit – Rhode Island Pollutant Discharge Elimination System – Storm Water Discharge Associated with Construction Activity if required at no additional cost to the Owner. Comply with all provisions of the Soil Erosion and Sediment Control Plan maintained by Contractor a no additional cost to the Owner.

3.3 MAINTENANCE

- A. Contractor shall dispose of all discarded debris and waste materials in a manner approved by Engineer. Toilet facilities shall be kept clean and sanitary at all times. Services shall be performed at such a time and in such a manner to least interfere with the operations. Services shall be accomplished to the satisfaction of Engineer.
- B. Contractor shall frequently remove materials no longer required on the site so that, at all times the site, access routes to the site and any other areas disturbed by his operations shall present a neat, orderly, workmanlike appearance.
- C. Before final payment, Contractor shall remove all surplus material, false work, and debris of every nature resulting from his operations, and put the site in a neat, orderly condition; and restore all areas which have been used for or disturbed by his operations, to their original condition or to a condition satisfactory to and approved by Engineer.

3.4 NOISE CONTROL

- A. Contractor shall use every effort and means possible to minimize or eliminate noise caused by his operation that Engineer may consider objectionable. Contractor shall provide working machinery, designed to operate with the least possible noise, pumps and compressors to be operated at times other than between 7:00 A.M. to 3:30 PM, Mondays through Fridays, should they be required. The air intakes of compressors shall be equipped with silencers; engine driven machinery, where permitted, shall be equipped with mufflers; and sound insulating enclosures and baffles shall be provided where directed.

3.5 PESTICIDES AND HERBICIDES

- A. Pesticides and herbicides shall be utilized only when specifically approved by the Owner and Engineer. Where pesticides or herbicides are to be used in construction operations, data relative to restrictions on the type or types of material available and approved for application to control or eradicate vegetation, insects or organisms shall be obtained from the Department of Environmental Management. The amount of pesticide applied shall be limited to the recommended dosage. Application equipment shall provide an even distribution of the materials in accordance with the approved rate in terms of pounds per acre. Materials delivered to the site shall be covered and protected from the elements. Contents of the containers shall not be exposed. Application equipment or empty containers shall not be rinsed. Empty containers shall be disposed of legally, off-site, in a manner that would not cause pollution of surface or groundwater.

3.6 PROHIBITED CONSTRUCTION PROCEDURES

- A. Contractor is advised that the disposal of excess material in wetlands, stream corridors, and floodplain is strictly prohibited. Any violation of this restriction by Contractor or any person employed by him will be brought to the immediate attention of the responsible regulatory agencies, with a request that appropriate action be taken against the offending parties. Therefore, the Contractor will be required to remove the material at his own expense and restore the area impacted.

1. At a minimum, Contractor shall comply with the following requirements regarding prohibited construction procedures as follows:
 - a. Dumping or discharge of spoil material or excessively turbid water into any stream corridor, any wetlands, any surface waters, or at unspecified locations.
 - b. Indiscriminate, arbitrary or capricious operations of equipment in any stream corridors, any wetlands or surface waters.
 - c. Disposal of trees, brush and other debris in any stream corridors, any wetlands, any surface waters, or at unspecified location.
 - d. Disposal of excess or unsuitable excavation material in wetlands or floodplain even with permission of the property owner.
 - e. Open burning of project debris.
 - f. Location of storage stockpile areas in environmentally sensitive areas.

END OF SECTION

SECTION 01400

QUALITY CONTROL

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Quality Assurance and Control of Installation
 - 2. References
 - 3. Field samples
 - 4. Inspection and testing laboratory services
 - 5. Manufacturers' field services and reports

- B. Related Documents: The Contract Documents, as defined in Section 01010 – Summary of Work, apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other Documents.

- C. Submittals:
 - 1. Contractor shall submit a Quality Control Plan to Engineer for review and approval a minimum 10 days prior to initiating work.

- D. Quality Assurance and Control of Installation
 - 1. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship to produce work of specified quality.
 - 2. Comply fully with manufacturers' instructions, including each step-in sequence.
 - 3. Should manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
 - 4. Comply with specified standards as a minimum quality for the work except when more stringent tolerances, codes or specified requirements indicate higher standards or more precise workmanship.
 - 5. Perform work by persons qualified to produce workmanship of specified quality.
 - 6. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

1.2 REFERENCES

- A. Conform to reference standard by date of issue current on date of Contract Documents.

- B. Obtain copies of standards when required by Contract Documents.

- C. Should specified reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.

- D. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention of inference otherwise in any reference document.

1.3 FIELD SAMPLES

- A. Install field samples at the site for review, as required by individual specification Sections.
- B. Acceptable samples represent a quality level for the work.
- C. Where field sample is specified in individual Sections to be removed, clear area after field sample has been accepted by Engineer.

1.4 MANUFACTURER'S FIELD SERVICES AND REPORTS

- A. Submit qualifications of observer to Engineer 30 days in advance of required observations. Observer subject to approval of Engineer.
- B. When specified in individual specification Sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, testing, adjusting and balance of equipment as applicable, and to initiate instructions when necessary.
- C. Individuals to report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- D. Submit report in duplicate to Engineer for review, within 30 days of observation.

END OF SECTION

SECTION 01410

TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.1 SUMMARY:

- A. This Section specifies Quality Control testing and reporting performed by a Testing Laboratory. The Contractor shall retain the services of a qualified Testing Laboratory and contract for the services specified herein. The Testing Laboratory shall be approved by the Engineer and/or the Owner.

1.2 REFERENCES:

- A. This Section contains references to the following documents. They are a part of this Section as specified and modified. Where a referenced document contains references to other standards, those documents are included as references under this Section as if referenced directly. In the event of conflict between the requirements of this Section and those of the listed documents, the requirements of this Section shall prevail.
- B. Unless otherwise specified, references to documents shall mean the documents in effect at the time of Advertisement for Bids or Invitation to Bid. If referenced documents have been discontinued by the issuing organization, references to those documents shall mean the replacement documents issued or otherwise identified by that organization or, if there are no replacement documents, the last version of the document before it was discontinued. Where document dates are given in the following listing, references to those documents shall mean the specific document version associated with that date, regardless of whether the document has been superseded by a version with a later date, discontinued or replaced.

ASTM A880	Criteria for Use in Evaluation of Testing Laboratories and Organizations for Examination and Inspection of Steel, Stainless Steel, and Related Alloys
ASTM C802	Conducting an Inter-laboratory Test Program to Determine the Precision of Test Methods for Construction Materials
ASTM C1021	Laboratories Engaged in the Testing of Building Sealants
ASTM C1077	Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation
ASTM C1093	Accreditation of Testing Agencies for Unit Masonry
ASTM D3666	Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials
ASTM D3740	Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
ASTM D4561	Quality Control Systems for Organizations Producing and Applying Bituminous Paving Materials

ASTM E4	Force Verification of Testing Machines
ASTM E329	Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction
ASTM E543	Agencies Performing Nondestructive Testing
ASTM E994	Calibration and Testing Laboratory Accreditation Systems General Requirements for Operation and Recognition.
IBC	International Building Code
ICC	International Code Council

1.3 TESTING LABORATORY QUALIFICATIONS:

- A. Testing Laboratory shall satisfy the following qualifications:
1. Recommended Requirements for Independent Laboratory Qualification, published by American Council of Independent Laboratories.
 2. Conform to the requirements of ASTM E329 in particular, and other reference standards as generally pertain to this project.
 3. Authorized to operate in the Rhode Island with personnel and equipment based sufficiently close to the project to allow short-notice site access for sampling and testing.
 4. Acceptable to Owner and local building authorities.

1.4 TESTING LABORATORY RESPONSIBILITIES:

- A. Testing Laboratory shall provide qualified personnel at the site and cooperate with Engineer and Contractor in performance of the following services:
1. Perform specified independent inspection, sampling, and testing of products in accordance with specified standards, to determine compliance with requirements of Contract Documents.
 2. Provide sampling equipment and personnel, deliver samples to the testing laboratory, record field measurements, and cure samples as required by Contract Documents.
 3. Timely prepare and deliver reports summarizing results of tests and inspections.
 4. Attend pre-construction conferences and, if requested, a limited number of progress meetings where Quality Control, testing, and inspection issues require discussion.
 5. When directed by the Engineer or Owner or requested by the Contractor, provide special and additional tests and inspections to verify material compliance with requirements of Contract Documents.
 - a. Owner shall pay for special tests and inspections where work conforms to the Contract Document requirements.
 - b. Contractor shall pay for additional tests and inspections where work fails to comply with Contract Document requirements (re-inspection) and for costs associated with cancelled or short-notice re-scheduling of requested sampling, testing, and inspection. Testing Laboratory work requested by Contractor to fulfill submittal requirements shall also be considered additional tests and costs shall be paid by the Contractor, at no additional expenses to the Owner.

1.5 CONTRACTOR RESPONSIBILITIES:

- A. Contractor shall deliver adequate samples of materials proposed to be used and which require testing to the Testing Laboratory. Contractor shall cooperate with Testing Laboratory personnel, and provide access to the work and to manufacturer's facilities. Contractor shall provide incidental labor and facilities to provide access to work to be tested, to obtain and handle samples at the site or at source of products to be tested, to facilitate tests and inspections, storage and curing of test samples.
- B. Contractor shall notify Testing Laboratory and Engineer 72 hours prior to expected time for operations requiring inspection, sampling and testing services.

1.6 TEST AND INSPECTION REPORTS:

- A. Report Contents:
 - 1. At a minimum, Test and Inspection Reports shall include the following:
 - a. Project name and date of report.
 - b. Testing Laboratory name, address, telephone number, name of laboratory field sampling personnel, lab testing personnel, or QCS Inspector as applicable.
 - c. Date, time, and location of sampling, testing, and inspecting.
 - d. Ambient temperature and weather conditions at the site or shop and curing conditions of samples.
 - e. Product identification and referenced specification Section number.
 - f. Type of sample, test, and inspection and industry standard for sampling and testing.
 - g. Results of sample, test, and inspection.
 - h. Evaluation of compliance with requirements in Contract Documents.
 - i. Certified Inspection Reports shall specifically indicate the qualification of the inspector to render judgment and certify said inspection.
 - j. When requested by Owner or Engineer, interpretation of test results.
 - 2. Distribution of Test and Inspection Reports:
 - a. Test and Inspection reports shall be submitted to the Engineer for distribution as Product Data described in Section 01340 – Shop Drawings. Test reports shall be submitted not more than two days after completion of required tests. Inspection reports shall be submitted immediately if deficiencies or significant irregularities are noted, and in no case less than two working days after said inspection. Provide six (6) copies of all reports.

1.7 SUBMITTALS:

- A. The following information shall be provided in accordance with Section 01340 – Shop Drawings:
 - 1. A copy of this specification Section, with addendum updates included, and all referenced and applicable Sections, with addendum updates included, with each Paragraph check-marked to indicate specification compliance or marked to indicate requested deviations from specification requirements. Check marks (✓) shall denote full compliance with a Paragraph as a whole. If deviations from the specifications are indicated, and therefore requested by the Contractor, each deviation shall be underlined and denoted by a number in the margin to the right of the identified Paragraph, referenced to a detailed written explanation of the reasons

for requesting the deviation. The Engineer shall be the final authority for determining acceptability of requested deviations. The remaining portions of the Paragraph not underlined will signify compliance on the part of the Contractor with the specifications. Failure to include a copy of the marked-up specification Sections, along with justification(s) for any requested deviations to the specification requirements, with the submittal shall be sufficient cause for rejection of the entire submittal with no further consideration.

2. Documentation of conformance with Testing Laboratory Qualifications as specified.
3. Form completed by both the Testing Laboratory and the Contractor, as described in the Contract Documents.

1.8 LIMITS ON TESTING LABORATORY AUTHORITY:

- A. Testing Laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents. Testing Laboratory may not approve or accept any portion of the work, nor assume any duties of Contractor. Testing Laboratory has no authority to stop the work

PART 2 - PRODUCTS

2.1 SOURCE QUALITY CONTROL

A. General:

1. Source quality control is defined in Section 01400 – Quality Control. This Section provides general guidelines as to the sampling, tests, and inspections required of products and manufactures prior to delivery to the project site, and should be considered a minimum. Additional information and requirements are provided in each technical specification Section and those requirements shall control over this Section when in conflict. Absence of a test, inspection or requirement listed herein from a subsequent specification Section does not relieve the Testing Laboratory or the Contractor from their respective responsibilities specified in this Section.

B. Reference Standards in Other Sections:

1. Codes, standards, and other references called out below, but which are not listed are described in other specification Sections and not repeated herein.

C. Fill Materials:

1. Imported Fill Materials: Testing Laboratory may conduct additional testing on behalf of Contractor to prepare required submittals specified in Section 03200 – Earth Excavation.
2. On-Site Fill Material: Testing Laboratory shall conduct required testing to verify on-site materials proposed for fill conforms to specification Section 03200 – Earth Excavation. Contractor shall pay Testing Laboratory for such sampling and testing. Sampling and testing shall determine Liquid Limit, Plasticity Index, optimum moisture content and density relationship, and other data as required for proper use of this material.

D. Imported Loam and On-Site Loam:

1. Provide sampling and testing as specified in the Contract Documents.

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- E. Paving Materials:
 - 1. Provide sampling and testing requested by Engineer or additional testing as requested by Contractor to verify materials proposed for use conform to specification Section 04010 – Bituminous Concrete Pavement.

- F. Concrete Reinforcing:
 - 1. Provide sampling and testing requested by Engineer or additional testing as requested by Contractor to verify materials proposed for use conform to specification Section 03300 and 03400.

- G. Cast-In-Place Concrete:
 - 1. Provide sampling and testing requested by Engineer or additional testing as requested by Contractor to verify materials proposed for use conform to specification Section 03300. At Contractor's expense, Testing Laboratory may assist Contractor in formulating concrete mix designs, testing and reporting same, and providing the services of a Professional Engineer to review and seal the mix design.

- H. Precast Concrete:
 - 1. Precast Yard Inspection: Source quality inspection is not required for PCI Certified facilities unless otherwise directed by the Building Official.
 - 2. Non-PCI Certified Facilities: Provide Special Inspection conforming to PCI recommendations for all facets of operation including reinforcing, prestressing, concrete placing, finishing, and curing, form release and handling.
 - 3. Vaults, Manholes, And Non-Structural Precast Concrete Items: Precast yard inspection is not required unless so directed by the Owner or Engineer due to quality concerns. Such inspection and testing shall be paid for by the Contractor.

PART 3 - EXECUTION

3.01 FIELD QUALITY CONTROL

- A. General: Field quality control is defined in Section 01400. This Section provides general guidelines as to the sampling, tests, and inspections required of work in progress or completed in the field, and should be considered a minimum. Additional information and requirements are provided in each technical specification

3.02 SCHEDULE OF INSPECTIONS AND TESTS:

- A. Form 01410-1 below shall be used to coordinate sampling and testing provided by Testing Laboratory, Engineer, Contractor, and other parties, if any. Testing Laboratory shall fill out Form 01410-1 with anticipated inspections, sampling, and testing, submit for review by Engineer and for information to Contractor, and revise as directed. After receipt of Testing Laboratory's Form 01410-1 submittal, Contractor shall submit Form 01410-1 to identify sampling and testing requested for submittal preparation, and with an allowance for additional inspections. Such allowance shall not be less than five percent (5%) of the anticipated Field Quality Control budget for the Testing Laboratory, but shall not contractually commit Contractor to such expenditure, unless additional inspections are requested and then only to their extent.

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FORM 01410-1

ANTICIPATED SAMPLING, TESTING, AND INSPECTIONS BY TESTING
LABORATORY AND CONTRACTOR

Prepared by : _____ Testing Laboratory _____ Contractor (check one).

Electronic version available upon request. Expand each cell as necessary to provide a complete scope description.

Specification Section	Source Quality Control	Field Quality Control
02510 – Bituminous Concrete Paving		
02938 – Loam and Seed and Sodding		
03300 – Cast-in-Place Concrete		
03400 – Precast Concrete		
03600 – Grout		

END OF SECTION

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SECTION 01500

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 DESCRIPTION OF REQUIREMENTS

- A. Temporary facilities for construction and field office are not required.
- B. Contractor shall provide temporary sanitary facilities on-site.

END OF SECTION

SECTION 01570

TRAFFIC CONTROL

PART 1 - GENERAL

1.1 SUMMARY

- A. Work specified in this section includes providing for the safe and expeditious movement of vehicular and pedestrian traffic on the project site, internal roadways, and external roads and highways affected by the Contractor's construction operation.
- B. Coordinate work specified in this section with requirements specified in Section 01014 – Work Sequence.
- C. Comply with City Ordinances and Police and Fire Department requirements for vehicular access and traffic control.

1.2 REFERENCES

- A. This section contains references to the following documents. They are a part of this section insofar as specified and modified herein. In case of conflict between the requirements of this section and the listed documents, the requirements of this section shall prevail.
- B. Unless otherwise specified, references to documents shall mean the documents in effect at the time of Advertisements for Bids or Invitation to Bid (or on the effective date of the Agreement if there were no Bids). If referenced documents have been discontinued by the issuing organization, references to those documents shall mean the replacement documents issued or otherwise identified by that organization or, if there are no replacement documents, the last version of the document before it was discontinued. Where document dates are given in the following listing, references to those documents shall mean the specific document version associated with that date, whether or not the document has been superseded by a version with a later date, discontinued, or replaced.
- C. The following standards and specification are considered to be part of the Traffic Control Plan:
 - 1. Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), 2003 Edition, with all current updates and official interpretations.

1.3 SUBMITTALS

- A. GENERAL:
 - 1. Submittals shall be in accordance with Section 01340 – Shop Drawings.
 - 2. Traffic Control Plans shall be updated and submitted to the Engineer whenever significant changes in traffic control measures are necessary.

B. TRAFFIC CONTROL PLAN:

1. Submit a Vehicular Traffic Control Plan, as described herein. No vehicular traffic disruptions or revisions shall be made before receiving approval of the Vehicular Traffic Control Plan from the Engineer, in accordance with Section 01340 – Shop Drawings.
2. The Vehicular Traffic Control Plan shall consist of drawings and narrative sufficient to describe the methods to be used for control of vehicular traffic on all roads on or adjacent to the construction site. The plan shall include:
 - a. Drawings showing vehicular routing during each phase of the work, including permanent and temporary routing of all roadways.
 - b. Drawings showing the location of barricades, lighting, signing, and any other vehicular traffic control devices anticipated to be used during each phase of the work.
 - c. Arrangements for vehicular access to buildings on the site and vehicular access to various plant gates.
 - d. Arrangements for emergency access to buildings on the site.
 - e. Arrangements for winter storm response and provisions for access.
 - f. Anticipated traffic blockages resulting from construction activities.
 - g. Anticipated locations where temporary pipes, cables, or hoses will be placed across or parallel to roadways. Drawing details of ramps over utilities or shallow burial placement and protection cover.
 - h. Areas within Contractor's staging area designated for parking shall be identified on submitted drawings.
 - i. Include pedestrian detour and safety controls to ensure safe passage around and through work zones including along city streets.
3. The plan drawings in the Vehicular Traffic Control Plan shall be drawn to a scale of 1-inch equals 50 feet, with details at a larger scale as necessary for clear understanding.

1.4 GENERAL MAINTENANCE OF TRAFFIC REQUIREMENTS

- A. Maintain vehicular traffic within public rights-of-way in accordance with the current edition of the Manual of Uniform Traffic Control Devices and as supplemented by these specifications.
- B. Maintain emergency access to and from buildings within the construction site.
- C. Maintain vehicular traffic access for school buses and trash removal at all times.
- D. Maintain vehicular traffic at all locations to the greatest extent possible and reduce and reroute traffic only for the shortest time possible, consistent with effective construction operations. Material deliveries and other related trucking activities shall occur in the Contractor's protected work area.
- E. Provide signs and other devices, and erect and maintain barricades, standard construction signs, warning signs, and detour signs necessary to alert and forewarn the public at all times. Do no work on or adjacent to roads or trails until all necessary signs and traffic control devices are in place. Standard roadway warning construction signage used on this project shall be a minimum 30 inches by 30 inches.

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- F. The legal speed limits in the vicinity of the project site are posted. The maximum allowable speed limit is 10 miles per hour. The Contractor shall inform its subcontractors of these limits and the importance of strict adherence to all traffic regulations and shall repeat this information at regular safety and subcontractor coordination meetings throughout the life of the Contract.

1.5 REGULATION OF TRUCK TRAFFIC

- A. For the purposes of this section, a truck shall be a motor vehicle used for transporting materials, equipment, or other property, and having a gross vehicle weight of 10,000 pounds or more.
- B. The Contractor shall restrict truck traffic to and from the construction site to the hours between 7:00 a.m. and 5:30 p.m. on weekdays. No truck traffic shall be allowed at other times or during weekends or holidays, except with the written authorization of the Engineer. In the event that construction activities require truck traffic outside the hours listed in this Paragraph, the Contractor shall request approval from the Engineer at least seven (7) calendar days prior to the date of such construction activities. This request shall include the anticipated time and duration of the activities and the reasons why the activities cannot be undertaken within the hours listed in this Paragraph.

END OF SECTION

SECTION 01605

SHIPMENT, PROTECTION AND STORAGE

PART 1 – GENERAL

1.01 GENERAL

- A. Equipment, products and materials shall be shipped, handled, stored, and installed in ways which will prevent damage to the items. Damaged items will not be permitted as part of the work except in cases of minor damage can be satisfactorily repaired, at no additional expense to Owner, and is acceptable to the Owner.

1.02 PIPE, VALVE, PRECAST CONCRETE

- A. Pipe, valves, and precast concrete units and appurtenances shall be handled, stored, and installed as recommended by the manufacturer. Materials shall be stored to protect the coating or lining from physical damage or other deterioration. Materials shipped with interior bracing shall have the bracing removed only when recommended by the manufacturer.

1.03 EQUIPMENT

A. PACKAGE AND MARKING:

- 1. All equipment shall be protected against damage from moisture, dust, handling, or other cause during transport from manufacturer's premises to site. Each item or package shall be marked with the number unique to the specification reference covering the item.
- 2. Stiffeners shall be used where necessary to maintain shapes and to give rigidity. Parts of equipment shall be delivered in assembled or sub assembled units where possible.

- B. IDENTIFICATION: Each item of equipment, product and material shall be labelled or tagged to identify it or its contents.

- C. SHIPPING: Damage shall be corrected to conform to the requirements of the contract before the material is incorporated into the work. The Contractor shall bear the costs arising out of dismantling, inspection, repair and reassembly.

- D. STORAGE: During the interval between the delivery of equipment to the site and installation, all materials, unless otherwise specified, shall be stored in a manner to prevent against deterioration. Manufacturer's recommendations shall be adhered to in addition to these requirements.

END OF SECTION

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SECTION 01710

FINAL CLEANUP

PART 1- GENERAL

1.01 GENERAL

- A. For all roadway work, the Contractor shall conform the work to acceptable line and grade, as determined by the Engineer. In addition, the Contractor shall have the sidewalks and streets affected by the work swept by a street or sidewalk cleaner as determined by the Engineer. Other surfaces of the grounds shall be rake cleaned. The Owner will not authorize final payment until the Contractor has removed all rubble and debris from the street and adjoining work areas, including all temporary storage and parking areas used by the Contractor.
- B. For pipelines, storm sewers, catch basins, and manholes, prior to their activation or at the conclusion of the project, the Contractor shall thoroughly clean all of the new pipes by flushing with water for fluid lines, or compressed air for gas lines. Debris cleaned from the lines shall be removed from the lowest access point.
- C. All temporary utility drops, fencing, and water supply outlets shall be removed.
- D. All signs, barricades, tools, rubbish collection receptacles and other such items shall be removed by the Contractor.
- E. All remaining earthen stockpiles of excess excavated material shall be graded to provide gentle slopes to prevent erosion as directed by the Engineer.

END OF SECTION

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SECTION 01780

AS-BUILT DRAWINGS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. The work under this Section shall include the transmittal to the Owner and Engineer of all applicable data relative to as-built conditions as may be required in the Contract Documents.
- B. The specific required items listed within this Section are not inclusive of all the as-built requirements that the Contractor must provide as specified throughout the technical specifications and the drawings.

PART 2 - PRODUCTS

2.01 As-Built information as specified.

PART 3 - EXECUTION

3.01 MARKED-UP PRINTS

- A. The Contractor will be provided with an extra copy of the drawings to be used for indicating the locations, elevations, and other conditions of installed pipes, structures, and appurtenances.
- B. The Contractor shall also indicate on the prints the locations and elevations of all existing utilities, structures, and appurtenances encountered during the work which are different from those specified on the drawings, or in these specifications.
- C. The marked-up prints shall be kept up to date on a daily basis and shall be available for inspection by Engineer at all times.
- D. Marked-up prints shall, as a rule, be kept in a safe location by the Contractor.
- E. All markings on the prints shall be done neatly with a sharp red pencil.
- F. The marked-up prints shall become the property of the Owner upon completion of the Work.

3.02 AS-BUILT DRAWINGS

- A. Contractor will be required to transfer all as-built information to a set of drawings supplied to the Contractor by the Engineer. The Contractor shall provide additional sheets as necessary of increased scale in order to provide the as-built information with clarity.

END OF SECTION

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DIVISION 02
FEDERAL AND STATE
REQUIREMENTS



Rhode Island Department of Environmental Management
Office of Water Resources

Clean Water State Revolving Fund Program
Contract Specifications Package

A. Federal

- 1) Equal Employment Opportunity and Affirmative Action (Executive Order 11246)
 - i) OFCCP fact sheet.
 - ii) Equal Opportunity Clause and the Standard Federal Equal Employment Specifications.
 - iii) Notice of Non-Discrimination in Employment.
- 2) Non-discrimination in employment notice.
- 3) Assurance of compliance with Title VI of the Civil Rights Act of 1964 and Section 13 of the FWPCA Amendments of 1972 (EPA form 4700-1).
- 4) Affirmative steps for soliciting MBE/WBE (40 CFR 31.36(e))
- 5) Preservation of Open Competition and Government Neutrality Towards Government Contractors' Labor Relations on Federal and Federally Funded Construction Projects (Executive Order 13202)

Applicable cross-cutting Federal authorities for projects funded through SRF programs are made available at http://water.epa.gov/grants_funding/dwsrf/xcuts.cfm. Additional information is provided in the United States Environmental Protection Agency's cross-cutting handbook available at <http://www.epa.gov/owm/cwfinance/cwsrf/enhance/DocFiles/Other%20Docs/CrosscutterHandbook.pdf>.

B. State of Rhode Island

- 1) RIGL 37-2.1, Domestic Steel
- 2) RIGL 37-12, Contractors Bonds
- 3) RIGL 37-12.1, Substitution of Security for Retained Earnings of Architects and Engineers.
- 4) RIGL 37-13, Labor and Payment of Debts by Contractors
 - i) Prevailing Wage Rates
- 5) RIGL 37-14.1, Minority Business Enterprise
 - i) Regulations Governing Participation by Minority Business Enterprises in State Funded and Directed Public Construction Projects, Construction Contracts and Procurement Contracts Goods and Services.
- 6) RIGL 37-16, Public Works Arbitration
- 7) RIGL 45-55, Award of Municipal Contracts

NOTE: This package is prepared by RIDEM as a service of the CWSRF program. While every attempt at accuracy has been made, these are not certified true copies of the laws presented. **The responsibility for compliance with all applicable provisions of Federal and State laws and regulations relating to the bidding, award, and performance of contracts is the applicant's and the bidder's.** Certified true and complete copies of any Rhode Island laws and regulations may be obtained from the Office of the Secretary of State.

Employment Standards Administration Office of Federal Contract Compliance Programs

Fact Sheet EXECUTIVE ORDER 11246

EEO and Affirmative Action Guidelines for Federal Contractors Regarding Race, Color, Gender, Religion, and National Origin.

BASIC PROVISIONS

Since 1965, the U.S. Department of Labor's Office of Federal Contract Compliance Programs (OFCCP) has been committed to ensuring that Government contractors comply with the equal employment opportunity (EEO) and the affirmative action provisions of their contracts.

OFCCP administers and enforces Executive Order 11246, as amended, which prohibits federal contractors and federally-assisted construction contractors and subcontractors, who do over \$10,000 in Government business in one year from discriminating in employment decisions on the basis of race, color, religion, sex, or national origin.

The Executive Order also requires Government contractors to take affirmative action to insure that equal opportunity is provided in all aspects of their employment.

AFFIRMATIVE ACTION REQUIREMENTS

Each Government contractor with 50 or more employees and \$50,000 or more in government contracts is required to develop a written affirmative action program (AAP) for each of its establishments.

A written affirmative action program helps the contractor identify and analyze potential problems in the participation and utilization of women and minorities in the contractor's workforce.

If there are problems, the contractor will specify in its AAP the specific procedures it will follow and the good faith efforts it will make to provide equal employment opportunity.

Expanded efforts in outreach, recruitment, training and other areas are some of the affirmative steps contractors can take to help members of the protected groups compete for jobs on equal footing with other applicants and employees.

Affirmative action is not preferential treatment. It does not mean that unqualified persons should be hired or promoted over other people. What affirmative action does mean is that positive steps must be taken to ensure equal employment opportunity for traditionally disadvantaged groups.

ENFORCEMENT AND COMPLIANCE

Compliance Reviews

OFCCP conducts compliance reviews to investigate the employment practices of Government contractors. During a compliance review, a compliance officer examines the contractor's affirmative action program; checks personnel, payroll, and other employment records; interviews employees and company officials; and investigates virtually all aspects of employment in the company.

The investigator also checks to see whether the contractor is making special efforts to achieve equal opportunity through affirmative action. If problems are discovered, OFCCP will recommend corrective action and suggest ways to achieve equal employment opportunity.

Complaint Investigations

Individuals may file complaints if they believe they have been discriminated against by federal contractors or subcontractors. Complaints also may be filed by organizations on behalf of the person or persons affected.

Complaints must be filed within 180 days from the date of the alleged discrimination, although filing time can be extended for a good reason.

If a complaint filed under Executive Order 11246 involves discrimination against only one person, OFCCP will normally refer it to the EEOC. Cases involving groups of people or indicating patterns of discrimination are generally investigated and resolved by OFCCP. Complaints may be filed directly with any of OFCCP's regional or district offices throughout the country, or with OFCCP in Washington, D.C.

Compliance Assistance

To help contractors understand their contractual obligations for EEO and affirmative action, OFCCP provides technical assistance. District office staff offers guidance to contractors on how to develop an affirmative program through company seminars, training programs held in conjunction with industry liaison groups, and one-on-one consultations on affirmative action practices and procedures.

Enforcing Contract Compliance

When a compliance review discloses problems, OFCCP attempts to work with the contractor, often entering into a conciliation agreement. A conciliation agreement may include back pay, job offers, seniority credit, promotions or other forms of relief for victims of discrimination. It may also involve new training programs, special recruitment efforts, or other affirmative action measures.

When conciliation efforts are unsuccessful, OFCCP refers the case to the Office of the Solicitor for enforcement through administrative enforcement proceedings. A contractor cited for violating EEO and affirmative action requirements may have a formal hearing before an administrative law judge.

If conciliation is not reached before or after the hearing, sanctions may be imposed. For example, a contractor could lose its government contracts or subcontracts or be debarred, i.e., declared ineligible for any future government contracts.

Further Information

For more information about contract compliance, filing complaints, or compliance assistance, contact any of OFCCP's regional or district offices. All offices are listed in telephone directories under U.S. Department of Labor, Employment Standards Administration, Office of Federal Contract Compliance Programs.

EQUAL EMPLOYMENT OPPORTUNITY AND AFFIRMATIVE ACTION

Executive Order 11246

(Excerpts from 41 CFR 60 Parts 1 and 4)

41 CFR 60-1.4 - Equal opportunity clause

(b) Federally assisted construction contracts. Except as otherwise provided, each administering agency shall require the inclusion of the following language as a condition of any grant, contract, loan, insurance, or guarantee involving federally assisted construction which is not exempt from the requirements of the equal opportunity clause:

The applicant hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, the following *equal opportunity clause*:

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

- (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 or 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 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 considerations 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 advising the said labor union or workers' representatives of the contractor's commitments under this section, 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 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 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering 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 nondiscrimination clauses of this contract or with any of the said 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 or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 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 portion of the sentence immediately preceding paragraph (1) and 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 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 administering agency may direct as a means of enforcing

such provisions, including sanctions for noncompliance: Provided, however, That in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

(c) Subcontracts. Each nonexempt prime contractor or subcontractor shall include the equal opportunity clause in each of its nonexempt subcontracts.

(d) Incorporation by reference. The equal opportunity clause may be incorporated by reference in all Government contracts and subcontracts, including Government bills of lading, transportation requests, contracts for deposit of Government funds, and contracts for issuing and paying U.S. savings bonds and notes, and such other contracts and subcontracts as the Director may designate.

(e) Incorporation by operation of the order. By operation of the order, the equal opportunity clause shall be considered to be a part of every contract and subcontract required by the order and the regulations in this part to include such a clause whether or not it is physically incorporated in such contracts and whether or not the contract between the agency and the contractor is written.

(f) Adaptation of language. Such necessary changes in language may be made in the equal opportunity clause as shall be appropriate to identify properly the parties and their undertakings.

41 CFR 60-4.3 - Equal opportunity clauses

(a) The equal opportunity clause published at 41 CFR 60-1.4(a) of this chapter is required to be included in, and is part of, all nonexempt Federal contracts and subcontracts, including construction contracts and subcontracts. The equal opportunity clause published at 41 CFR 60-1.4(b) is required to be included in, and is a part of, all nonexempt federally assisted construction contracts and subcontracts. In addition to the clauses described above, all Federal contracting officers, all applicants and all non-construction contractors, as applicable, shall include the specifications set forth in this section in all Federal and federally assisted construction contracts in excess of \$10,000 to be performed in geographical areas designated by the Director pursuant to 60-4.6 of this part and in construction subcontracts in excess of \$10,000 necessary in whole or in part to the performance of non-construction Federal contracts and subcontracts covered under the Executive order.

Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246)

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
 - c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
 - d. "Minority" includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
 - f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
 - g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
 - h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

- i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
 - j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.
 - k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
 - l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
 - m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance
9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to

achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

(b) The notice set forth in 41 CFR 60-4.2 and the specifications set forth in 41 CFR 60-4.3 replace the New Form for Federal Equal Employment Opportunity Bid Conditions for Federal and Federally Assisted Construction published at 41 FR 32482 and commonly known as the Model Federal EEO Bid Conditions, and the New Form shall not be used after the regulations in 41 CFR Part 60-4 become effective.

[43 FR 49254, Oct. 20, 1978; 43 FR 51401, Nov. 3, 1978, as amended at 45 FR 65978, Oct. 3, 1980]

NOTICE TO LABOR UNIONS OR OTHER ORGANIZATIONS OF WORKERS

NON-DISCRIMINATION IN EMPLOYMENT

TO: _____
(Name of Union or Organization of Workers)

The undersigned currently holds contract(s) with _____
(Name of Applicant)

involving funds or credit of the U.S. Government of (a) subcontract(s) with a prime contractor holding such contract(s).

You are advised that under the provisions of the above contract(s) or subcontract(s) and in accordance with Executive Order 11246, dated September 24, 1965, the undersigned is obliged not to discriminate against any employee or applicant for employment because of race, age, handicap, veteran status, color, creed, or national origin. This obligation not to discriminate in employment includes, but is not limited to, the following:

**HIRING, PLACEMENT, UPGRADING, TRANSFER, OR DEMOTION,
RECRUITMENT, ADVERTISING, OR SOLICITATION FOR
EMPLOYMENT TRAINING DURING EMPLOYMENT, RATES OF PAY
OR OTHER FORMS OF COMPENSATION, SELECTION FOR TRAINING
INCLUDING APPRENTICESHIP, LAYOFF, OR TERMINATION.**

This notice is furnished you pursuant to the provisions of the above contract(s) or subcontract(s) and Executive Order 11246.

COPIES OF THIS NOTICE WILL BE POSTED BY THE UNDERSIGNED IN CONSPICUOUS PLACES AVAILABLE TO EMPLOYEES OR APPLICANTS FOR EMPLOYMENT.

(Contractor or Subcontractor)

(Date)

**UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY**

**ASSURANCE OF COMPLIANCE
FOR
TITLE VI OF THE CIVIL RIGHTS ACT OF 1964
AND
SECTION 13 OF THE FWPCA AMENDMENTS OF 1972**

NAME AND ADDRESS OF APPLICANT/RECIPIENT (<i>Hereinafter called ASSUROR</i>)	GRANT IDENTIFICATION NUMBER (<i>To be completed by EPA</i>)	GRANT AMOUNT REQUESTED \$
	TYPE OF GRANT <input type="checkbox"/> DEMONSTRATION <input type="checkbox"/> RESEARCH <input type="checkbox"/> TRAINING <input type="checkbox"/> OTHER (<i>Specify</i>):	
	CHECK ONE: <input type="checkbox"/> NEW <input type="checkbox"/> CONTINUATION	

HEREBY AGREES THAT IT will comply with Title VI of the Civil Rights Act of 1964 (P.L. 88-352) and all requirements of the U.S. Environmental Protection Agency (*hereinafter called "EPA"*) issued pursuant to that title, to the end that in accordance with Title VI of that Act, no person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Assuror receives financial assistance from EPA and hereby gives assurance that it will now and hereafter take all necessary measures to effectuate this agreement.

HEREBY AGREES THAT IT will comply with all applicable requirements of Section 13 of the Federal Water Pollution Control Act Amendments of 1972 (P.L. 92-500) and all requirements of EPA issued pursuant to that section, to the end that in accordance with that section of that Act, no person in the United States shall, on the ground of sex be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity under the said Federal Water Pollution Control Act Amendments for which the Assuror receives assistance from EPA and hereby gives assurance that it will now and hereafter take all necessary measures to effectuate this agreement.

If any real property or structure thereon is provided or improved with the aid of financial assistance extended to the Assuror by EPA, this Assurance obligates the Assuror, or, in the case of any transfer of such property, any transferee for the period during which the real property or structure is used for a purpose involving the provisions of similar services or benefits. If any personal property is so provided, this Assurance obligates the Assuror for the period during which it retains ownership or possession of the property. In all other cases, this Assurance obligates the Assuror for the period during which the financial assistance is extended to it by EPA.

THE ASSURANCE is given in consideration of and for the purpose of obtained any and all Federal grants, loans, contracts, property discounts or other financial assistance extended after the date hereof to the Assuror by EPA including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date. The Assuror recognizes and agrees that such Federal financial assistance will be extended in reliance on the representations and agreements made in this Assurance and that the United States shall reserve the right to seek judicial enforcement of this Assurance. The Assurance is binding on the Assuror, its successors, transferees, and assignees, and the person or persons whose signature appear below are authorized to sign this Assurance on behalf of the Assuror.

The obligations assumed by the Assuror hereunder are in addition to any obligations which may be imposed to the Assuror by any applicable regulation now outstanding or which may hereafter be adopted by EPA to effectuate any provision or goal of the said Title VI and all applicable requirements of the said Section 13, and no part of this Assurance shall be read so as to in any way detract from or modify any obligation which may be imposed on the Assuror by any such regulation standing alone.

SIGNATURE OF ASSUROR BY PRESIDENT, CHAIRMAN OF BOARD OR COMPARABLE AUTHORIZED OFFICIAL	DATE
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CONTRACTING WITH SMALL AND MINORITY FIRMS, WOMEN'S BUSINESS ENTERPRISE

40 CFR 31.36(e)

40 CFR 31.36(e) – Contracting with small and minority firms, women's business enterprise and labor surplus area firms.

(1) The grantee and sub-grantee will take all necessary affirmative steps to assure that minority firms, women's business enterprises, and labor surplus area firms are used when possible.

(2) Affirmative steps shall include:

- (i) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
- (ii) Assuring that small and minority businesses and women's business enterprises are solicited whenever they are potential sources;
- (iii) Dividing the total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
- (iv) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;
- (v) Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce; and
- (vi) Requiring the prime contractor, if subcontracts are to be let, to take affirmative steps listed in paragraphs (e)(2)(i) through (v) of this section.

EXECUTIVE ORDER

PRESERVATION OF OPEN COMPETITION AND GOVERNMENT NEUTRALITY TOWARDS GOVERNMENT CONTRACTORS' LABOR RELATIONS ON FEDERAL AND FEDERALLY FUNDED CONSTRUCTION PROJECTS

By the authority vested in me as President by the Constitution and laws of the United States of America, including the Federal Property and Administrative Services Act, 40 U.S.C. 471 et seq., and in order to (1) promote and ensure open competition on Federal and federally funded or assisted construction projects; (2) maintain Government neutrality towards Government contractors' labor relations on Federal and federally funded or assisted construction projects; (3) reduce construction costs to the Federal Government and to the taxpayers; (4) expand job opportunities, especially for small and disadvantaged businesses; and (5) prevent discrimination against Government contractors or their employees based upon labor affiliation or lack thereof; thereby promoting the economical, nondiscriminatory, and efficient administration and completion of Federal and federally funded or assisted construction projects, it is hereby ordered that:

Section 1. To the extent permitted by law, any executive agency awarding any construction contract after the date of this order, or obligating funds pursuant to such a contract, shall ensure that neither the awarding Government authority nor any construction manager acting on behalf of the Government shall, in its bid specifications, project agreements, or other controlling documents:

- (a) Require or prohibit bidders, offerors, contractors, or subcontractors to enter into or adhere to agreements with one or more labor organizations, on the same or other related construction project(s); or
- (b) Otherwise discriminate against bidders, offerors, contractors, or subcontractors for becoming or refusing to become or remain signatories or otherwise to adhere to agreements with one or more labor organizations, on the same or other related construction project(s).
- (c) Nothing in this section shall prohibit contractors or subcontractors from voluntarily entering into agreements described in subsection (a).

Sec. 2. Contracts awarded before the date of this order, and subcontracts awarded pursuant to such contracts, whenever awarded, shall not be governed by this order.

Sec. 3. To the extent permitted by law, any executive agency issuing grants, providing financial assistance, or entering into cooperative agreements for construction projects, shall ensure that neither the bid specifications, project agreements, nor other controlling documents for construction contracts awarded after the date of this order by recipients of grants or financial assistance or by parties to cooperative agreements, nor those of any construction manager acting on their behalf, shall contain any of the requirements or prohibitions set forth in section 1(a) or (b) of this order.

Sec. 4. In the event that an awarding authority, a recipient of grants or financial assistance, a party to a cooperative agreement, or a construction manager acting on behalf of the foregoing, performs in a manner contrary to the provisions of sections 1 or 3 of this order, the executive agency awarding the contract, grant, or assistance shall take such action, consistent with law and regulation, as the agency determines may be appropriate.

Sec. 5. (a) The head of an executive agency may exempt a particular project, contract, subcontract, grant, or cooperative agreement from the requirements of any or all of the provisions of sections 1 and 3 of this order, if the agency head finds that special circumstances require an exemption in order to avert an imminent threat to public health or safety or to serve the national security.

(b) A finding of "special circumstances" under section 5(a) may not be based on the possibility or presence of a labor dispute concerning the use of contractors or subcontractors who are nonsignatories to, or otherwise do not adhere to, agreements with one or more labor organizations, or concerning employees on the project who are not members of or affiliated with a labor organization.

Sec. 6. (a) The term "construction contract" as used in this order means any contract for the construction, rehabilitation, alteration, conversion, extension, or repair of buildings, highways, or other improvements to real property.

(b) The term "executive agency" as used in this order shall have the same meaning it has in 5 U.S.C. 105, excluding the General Accounting Office.

(c) The term "labor organization" as used in this order shall have the same meaning it has in 42 U.S.C. 2000e(d).

Sec. 7. With respect to Federal contracts, within 60 days of the issuance of this order, the Federal Acquisition Regulatory Council shall take whatever action is required to amend the Federal Acquisition Regulation in order to implement the provisions of this order.

Sec. 8. As it relates to project agreements, Executive Order 12836 of February 1, 1993, which, among other things, revoked Executive Order 12818 of October 23, 1992, is revoked.

Sec. 9. The Presidential Memorandum of June 5, 1997, entitled "Use of Project Labor Agreements for Federal Construction Projects" (the "Memorandum"), is also revoked.

Sec. 10. The heads of executive departments and agencies shall revoke expeditiously any orders, rules, regulations, guidelines, or policies implementing or enforcing the Memorandum or Executive Order 12836 of February 1, 1993, as it relates to project agreements, to the extent consistent with law.

Sec. 11. This order is intended only to improve the internal management of the executive branch and is not intended to, nor does it, create any right to administrative or judicial review, or any right, whether substantive or procedural, enforce-able by any party against the United States, its agencies or instrumentalities, its officers or employees, or any other person.

GEORGE W. BUSH

THE WHITE HOUSE, February 17, 2001.

TITLE 37

CHAPTER 2.1 DOMESTIC STEEL

Section

37-2.1-1.	Short Title
37-2.1-2.	Purpose
37-2.1-3.	Purchase of steel and steel products
37-2.1-4.	Payment
37-2.1-5.	Definitions

37-2.1-1. Short title.

This chapter shall be known and may be cited as the "Steel Products Procurement Act".

37-2.1-2. Purpose.

- (a) This chapter shall be deemed to be an exercise of the police powers of the state for the protection of the health, safety, and general welfare of the people of the state.
- (b) It is hereby determined by the general assembly of Rhode Island and declared as a matter of legislative findings that:
 - (1) The United States is one of the leading countries in the production and use of steel and its allied products;
 - (2) The use of steel products constitutes a major industry of the United States and, as such, provides the jobs and family incomes of millions of persons in the United States;
 - (3) The taxes paid to Rhode Island and the United States by employers and employees engaged in the production and sale of steel products are one of the largest single sources of public revenues in this country;
 - (4) It has, for many years, been the policy of the state to aid and support the development and expansion of industry in the United States in order to foster the economic well-being of the state and its people; and
 - (5) The economy, general welfare, and national security of the United States, are inseparably related to the preservation and development of the steel industry in the United States.
- (c) The general assembly therefore declares it to be the policy of the state that all public officers and agencies should, at all times, aid and promote the development of the steel industry of the United States in order to stimulate and improve the economic well-being of the state and its people.

37-2.1-3. Purchase of steel and steel products.

- (a) Every public agency shall require that every contract document for the construction, reconstruction, alteration, repair, improvement, or maintenance of public works contain a provision that, if any steel products are to be used or supplied in the performance of the contract, only steel products as herein defined shall be used or supplied in the performance of the contract or any subcontracts thereunder.
- (b) This section shall not apply in any case where the head of the public agency, in writing, determines that steel products as herein defined are not produced in, or readily available in the United States or that such steel products shall not exceed fifteen percent (15%) of the costs of any other steel products obtainable nationally or internationally.

37-2.1-4. Payment.

No public agency shall authorize, provide for, or make any payments to any person under any contract containing the provision required by 37-2.1-3 unless the public agency is satisfied that such person has fully complied with that provision. Any such payments made to any person by any public agency which should not have been made, as a result of this section, shall be recoverable directly from the contractor or subcontractor who did not comply with 37-2.1-3 by either such public agency or the attorney general upon suit filed in the court of any county.

37-2.1-5. Definitions.

The following words and phrases when used in this chapter shall have, unless the context clearly indicates otherwise, the meanings given to them in this section:

- (a) "Person" means natural persons as well as corporations, partnerships, business units, and associations;
- (b) "Public agency" means (1) the state and its departments, boards, commissions and agencies, (2) cities, towns, school districts, and any other governmental unit or district, (3) any and all other public bodies, authorities, officers, agencies, or instrumentalities, whether exercising a governmental or proprietary function;
- (c) "Public works" means steel to construct, frame or reinforce any public structure, building, highway, waterway, street, bridge, transit system, airport, or other betterment, work or improvement, whether of a permanent or temporary nature, and whether for governmental or proprietary use;
- (d) "Steel products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated, or otherwise similarly processed, or processed by a combination of two or more of such operations, from steel made in the United States by the open hearth, basic oxygen, electric furnace, Bessemer, or other steel making process;
- (e) "United States" means the United States of America and includes all territory, continental or insular, subject to the jurisdiction of the United States.

TITLE 37

CHAPTER 12 CONTRACTORS' BONDS

Sections

- 37-12-1. Contractors required to give bond – Terms and conditions.
- 37-12-2. Rights of persons furnishing labor and materials.
- 37-12-3. Remedies of creditors and state – Priority of claims.
- 37-12-4. Intervention by creditor in suit brought by state.
- 37-12-5. Time limitation on creditors' actions.
- 37-12-6. Intervention in suit brought by creditor – Consolidation of suits.
- 37-12-7. Notice of Pendency of Suit
- 37-12-8. Certified copies of documents.
- 37-12-9. Payment into court by surety – Discharge.
- 37-12-10. Retainers relating to contracts for public works or sewer or water main construction.
- 37-12-11. Substitution of securities for retained earnings.

§ 37-12-1 Contractors required to give bond – Terms and conditions. – Every person (which word for the purposes of this chapter shall include a copartnership, a number of persons engaged in a joint enterprise, or a corporation), before being awarded a contract by the department of transportation or by the department of administration, as the case may be, and every person awarded such a contract as a general contractor or construction or project manager for the construction, improvement, completion, or repair of any public road or portion thereof or of any bridge in which the contract price shall be in excess of fifty thousand dollars (\$ 50,000), or for a contract for the construction, improvement, completion, or repair of any public building, or portion thereof, shall be required to furnish to the respective department a bond of that person to the state, with good and sufficient surety or sureties (hereafter in this chapter referred to as surety), acceptable to the respective department, in a sum not less than fifty percent (50%) and not more than one hundred percent (100%) of the contract price, conditioned that the contractor, principal in the bond, the person's executors, administrators, or successors, shall in all things, well and truly keep and perform the covenants, conditions, and agreements in the contract, and in any alterations thereof made as therein provided, on the person's part to be kept and performed, at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the state, the respective department, and all of its officers, agents, and employees, as therein stipulated, and shall also promptly pay for all such labor performed or furnished and for all such materials and equipment furnished, (which as to equipment shall mean payment of the reasonable rental value, as determined by the respective department, of its use during the period of its use), as shall be used in the carrying on of the work covered by the contract, or shall see that they are promptly paid for, whether or not the labor is directly performed for or furnished to the contractor or is even directly performed upon the work covered by the contract, and whether or not the materials are furnished to the contractor or become component parts of the work, and whether or not the equipment is furnished to the contractor or even directly used upon the work. The bond shall contain the provisions that it is subject to all such rights and powers of the respective department and such other provisions as are set forth in the contract and the plans, specifications, and proposal incorporated by reference in the contract, and that no extension of the time of performance of the contract or delay in the completion of the work thereunder or any alterations thereof, made as therein provided, shall invalidate the bond or release the liability of the surety thereunder. Waiver of the bonding requirements of this section is expressly prohibited.

37-12-2. Rights of persons furnishing labor and materials.

Every person who shall have performed labor and every person who shall have furnished or supplied labor, material, or equipment in the prosecution of the work provided for in the contract, in respect of which a payment bond is furnished under § 37-12-1, and who has not been paid in full therefor before the expiration of a period of ninety (90) days after the day on which the last of the labor was performed or furnished by him or her, or material or equipment furnished or supplied by him or her for which a claim is made, shall have the right to sue on the payment bond for the amount, or the balance thereof, unpaid at the time of institution of the suit and to prosecute the action to final execution and judgment for the sum or sums justly due him or her; provided, however, that any person having direct contractual relationship with a subcontractor but no contractual relationship express or implied with the contractor

furnishing the payment bond shall have a right of action upon the payment bond upon giving written notice to the contractor within ninety (90) days from the date on which the person furnished or performed the last of the labor, or furnished or supplied the last of the material or equipment for which the claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the labor was furnished or performed or the material or equipment was furnished or supplied. The notice shall be served by mailing the same by certified mail, postage prepaid, in an envelope addressed to the contractor at any place he or she maintains an office, conducts his or her business, or his or her residence.

37-12-3. Remedies of creditors and state - Priority of claims.

The remedy on the bond shall be by a civil action brought in the superior court for the counties of Providence and Bristol and in any suit brought on the bond the rights of the state shall be prior to those of all creditors. The rights of persons who shall have performed labor as aforesaid shall be prior to the rights of all other creditors, and there shall be no priorities among laborers or among other creditors under the bond. The state, either after having recovered a judgment against the contractor on the contract or without having recovered a judgment, may bring a suit on the bond against the contractor and surety on the bond, and may join as parties defendant in the suit any persons claiming to have rights under the bond as creditors; and, if it has not brought such a suit, it may at any time before a final and conclusive decree, intervene and become a party in any suit brought, as hereafter provided in this chapter, by any person claiming to be a creditor under the bond.

37-12-4. Intervention by creditor in suit brought by state.

Any person claiming to be a creditor under the bond may at any time intervene and become a party in any pending suit brought as aforesaid by the state on the bond, and by so intervening may have the rights to the person adjudicated in the suit.

37-12-5. Time limitation on creditors' actions.

No suit instituted under § 37-12-2 shall be commenced after the expiration of two (2) years, or under the maximum time limit as contained within any labor or material payment bond required under § 37-12-1, whichever period is longer, after the day on which the last of the labor was furnished or performed or material or equipment was furnished or supplied by any person claiming under the section.

37-12-6. Intervention in suit brought by creditor - Consolidation of suits.

When a suit has been so brought on the bond by a person claiming to be a creditor under the bond and is pending, any other person claiming to be a creditor under the bond may intervene and become a party in the first suit thus brought and pending and by so intervening may have the rights of the other person adjudicated in the suit. If two (2) or more of the suits be filed in the court on the same day, the one in which the larger sum shall be claimed shall be regarded as the earlier suit. All suits brought upon the bond as provided in this chapter shall be consolidated together by the court and heard as one suit.

37-12-7. Notice of pendency of suit.

In any suit brought under the provisions of this chapter such personal notice of the pendency of the suit as the court may order shall be given to all such known creditors and persons claiming to be creditors under the bond as shall not have entered their appearances in the suit and, in addition to the notice, notice of the pendency of the suit shall be given by publication in some newspaper published in this state of general circulation in the city or town or every city or town in which the work covered by the contract was carried on, once a week for three (3) successive weeks, in such form as the court may order. The court, however, may dispense with the notices if satisfied that sufficient notices shall have been given in some other suit brought under the provisions of this chapter.

37-12-8. Certified copies of documents.

Any person claiming to be a creditor under the bond and having filed a claim with the respective department, in accordance with the requirements of § 37-12-2, shall have the right, at any time when the person could under this chapter file a suit or intervene in a pending suit, to require the respective department to furnish to the person certified copies of the contract, proposal, plans specifications, and bond.

37-12-9. Payment into court by surety - Discharge.

The surety on the bond may pay into the registry of the court, for distribution among those who may be or become entitled thereto under the decree of the court, the penal sum named in the bond less any amount which the surety

may have paid to the state in satisfaction of the liability of the surety to the state under the bond, and then shall be entitled to be discharged from all further liability under the bond.

37-12-10. Retainers relating to contracts for public works or sewer or water main construction.

(a) Upon substantial completion of the work required by a contract aggregating in amount less than five hundred thousand dollars (\$ 500,000) with any municipality, or any agency or political subdivision thereof, for the construction, reconstruction, alteration, remodeling, repair, or improvement of sewers and water mains, or any public works project defined in § 37-13-1, the awarding authority may deduct from its payment a retention to secure satisfactory performance of the contractual work not exceeding five percent (5%) of the contract price unless otherwise agreed to by the parties. Upon substantial completion of the work required by a contract aggregating in an amount of five hundred thousand dollars (\$ 500,000) or greater with any municipality, or any agency or political subdivision thereof, for the construction, reconstruction, alteration, remodeling, repair, or improvement of sewers and water mains, or any public works project defined in § 37-13-1, the awarding authority may deduct from its payment a retention to secure satisfactory performance of the contractual work not exceeding five percent (5%) of the contract price. In the case of periodic payments with respect to contracts less than the aggregate amount of five hundred thousand dollars (\$ 500,000), the awarding authority may deduct from its payment a retention to secure satisfactory performance of the contractual work not exceeding five percent (5%) of the approved amount of any periodic payment unless otherwise agreed to by the parties. In the case of periodic payments with respect to contracts in the aggregate amount of five hundred thousand dollars (\$ 500,000) or greater, the awarding authority may deduct from its payment a retention to secure satisfactory performance of the contractual work not exceeding five percent (5%) of the approved amount of any periodic payment.

(b) The retainage shall be paid to any contractor or subcontractor within ninety (90) days of the date the work is accepted by the awarding authority unless a dispute exists with respect to the work. If payment is not made within ninety (90) days for any reason other than a dispute, which, if resolved and it is not the fault of the contractor, interest shall be assessed at the rate of ten percent (10%) per annum on all money which is to be paid to the contractor or subcontractor.

(c) The retainage shall be paid to any contractor or subcontractor within ninety (90) days of the date his or her work is completed and accepted by the awarding authority. If payment is not made, interest shall be assessed at the rate of ten percent (10%) per annum.

(d) There shall also be deducted and retained from the contract price an additional sum sufficient to pay the estimated cost of municipal police traffic control on any public works project. Municipalities shall directly pay the officers working traffic details and shall bill and be reimbursed by the withholding authority for which the contract is being performed every thirty (30) days until the project is complete.

(e) Notwithstanding the foregoing, with respect to projects located within the town of Warren, the withholding authority shall hold an amount from the contract price which shall be reasonably sufficient to pay the estimated cost of municipal police traffic control. The withholding authority shall pay to the town of Warren within seventy-two (72) hours of written demand the actual costs of police traffic control associated with said project on an ongoing basis.

37-12-11. Substitution of securities for retained earnings.

(a) Where any public works contract as defined by § 37-13-1 provides for the retention of earned estimates by the state of Rhode Island, the contractor may, from time to time, withdraw the whole or any portion of the amount retained for payments to the contractor pursuant to the terms of the contract, upon depositing with the general treasurer either; (1) United States treasury bonds, United States treasury notes, United States treasury certificates of indebtedness, or United States treasury bills; (2) Bonds or notes of the state of Rhode Island ; or (3) Bonds of any political subdivision in the state of Rhode Island.

(b) No amount shall be withdrawn in excess of the market value of the securities at the time of deposit or of the par value of the securities, whichever is lower. The general treasurer shall, on a regular basis, collect all interest or income on the obligations so deposited and shall pay the interest or income, when and as collected, to the contractor who deposited the obligations. If the deposit is in the form of coupon bonds, the general treasurer shall deliver each coupon as it matures to the contractor. Any amount deducted by the state, or by any public department or official thereof, pursuant to the terms of the contract, from the retained payments otherwise due the contractor, shall be

deducted, first from that portion of the retained payments for which no security has been substituted, then from the proceeds of any deposited security. In the latter case, the contractor shall be entitled to receive interest, coupons, or income only from those securities which remain after the amount has been deducted. The securities so deposited shall be properly endorsed by the contractor in such manner so as to enable the general treasurer to carry out the provisions of this section.

TITLE 37

CHAPTER 12.1 SUBSTITUTION OF SECURITY FOR RETAINED EARNINGS OF ARCHITECTS AND ENGINEERS

Sections

- 37-12.1-1. Definition of Terms.
- 37-12.1-2. Substitution of security for retained earnings by designers.
- 37-12.1-3. Deduction from retained earnings.
- 37-12.1-4. Endorsement on securities.
- 37-12.1-5. Applicability.

37-12.1-1. Definition of terms.

Terms used in this chapter shall be construed as follows:

- (a) "Designers", means any person, firm or corporation duly authorized pursuant to the laws of this state to engage in the practice of architecture and/or engineering within this state.
- (b) "Public works contract" means a contract to perform design or planning services by a designer with the state or any agency or governmental subdivisions thereof.
- (c) "Retained earnings" means any moneys or earned estimates withheld from a designer pursuant to the terms of a public works contract.

37-12.1-2. Substitution of security for retained earnings by designers.

(a) Where any public works contract provides for the holding of retained earnings from a designer, the designer may from time to time withdraw the whole or any portion of the amount retained upon either depositing with the general treasurer:

- (1) United States treasury bonds, United States treasury notes, United States treasury certificates of indebtedness, or United States treasury bills;
- (2) Bonds or notes of the state of Rhode Island; or
- (3) Bonds of any political subdivision of the state of Rhode Island.

(b) With respect to the deposit of securities, the general treasurer shall, on a regular basis, collect all interest or income on the securities so deposited and shall pay the interest or income when and as collected to the designer depositing the securities. If the security is in the form of coupon bonds, the general treasurer shall deliver each coupon as it matures to the designer.

37-12.1-3. Deduction from retained earnings.

In the event that pursuant to the terms of the public works contract it is necessary to deduct any sum from retained earnings, the state or governmental unit or agency thereof shall first apply such deduction against sums not withdrawn and thereafter from the proceeds of the sale of any securities deposited or from the income earned on such securities, whichever is applicable.

37-12.1-4. Endorsement on securities.

All securities deposited with the general treasurer pursuant to this chapter shall be properly endorsed by the designer in such manner as to enable the general treasurer to carry out the provisions of this chapter.

37-12.1-5. Applicability.

This chapter shall apply to all retained earnings held pursuant to any public works contract as of [June 16, 1991].

TITLE 37

CHAPTER 13 LABOR AND PAYMENT OF DEBTS BY CONTRACTORS

Sections

- 37-13-1. "Public Works" defined
- 37-13-2. "Contractor" defined – information required.
- 37-13-3. Contractors subject to provisions – Weekly payment of employees.
 - 37-13-3.1 State public works contract apprenticeship requirements
- 37-13-4. Provisions applicable to public works contracts – List of Subcontractors.
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- 37-12-6. Ascertainment of prevailing rate of wages and other payments – Specification of rate in call for bids and in contract.
- 37-13-7. Specification in contract of amount and frequency of payment and wages.
- 37-13-8. Investigation and determination of prevailing wages – Filing of schedule.
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- 37-13-17. Private right of action to collect wages or benefits

37-13-1. "Public works" defined.

"Public works" as used in this chapter shall mean any public work consisting of grading, clearing, demolition, improvement, completion, repair, alteration, or construction of any public road or any bridge, or portion thereof, or any public building or portion thereof, or any heavy construction, or any public works projects of any nature or kind whatsoever.

37-13-2. "Contractor" defined - Information required.

The term "contractor" as used in this chapter shall mean the bidder whose bid has been accepted by an authorized agency or awarding authority as the bidder possessing the skills, ability, and integrity necessary to the faithful performance of the contract or work, and who shall certify that he or she is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the contract or work. Essential information in regard to qualifications shall be submitted in such form to the awarding authority and the director of labor and training as the director of labor and training shall require. The authorized agency or awarding authority shall reserve the right to reject all bids, if it be in the public interest to do so.

37-13-3. Contractors subject to provisions - Weekly payment of employees.

All contractors, who have been awarded contracts for public works by an awarding agency or authority of the state or of any city, town, committee, or by any person or persons therein, in which state or municipal funds are used and of which the contract price shall be in excess of one thousand dollars (\$1,000) whether payable at the time of the signing of the contract or at a later date, and their subcontractors, on such public works shall pay their employees at weekly intervals and shall comply with the provisions set forth in 37-13-4 - 37-13-14, inclusive, and 37-13-16.

37-13-3.1. State public works contract apprenticeship requirements.

Notwithstanding any laws to the contrary, all general contractors and subcontractors who perform work on any public works contract awarded by the state after passage of this act and valued at one million dollars (\$ 1,000,000) or more shall employ apprentices required for the performance of the awarded contract. The number of apprentices shall comply with the apprentice to journeyman ratio for each trade approved by the apprenticeship council of the department of labor and training.

37-13-4. Provisions applicable to public works contracts - Lists of subcontractors.

All public works shall be done by contract, subject to the same provisions of law relating thereto and to the letting thereof, which are applicable to similar contracts of the awarding authority or authorized agency, hereinafter called the "proper authority," in the general location where the work is to be performed and which are not contrary to the provisions of 37-13-1 - 37-13-14, and 37-13-16. Each contractor after the award of a contract for public works shall submit to the proper authority a list of his or her subcontractors of any part or all of the work. The list shall be submitted in such manner or form as the proper authority shall uniformly require from contractors in all public works.

37-13-5. Payment for trucking or materials furnished - Withholding of sums due.

A contractor or subcontractor on public works authorized by a proper authority shall pay any obligation or charge for trucking and material which have been furnished for the use of the contractor or subcontractor, in connection with the public works being performed by him or her, within ninety (90) days after the obligation or charge is incurred or the trucking service has been performed or the material has been delivered to the site of the work, whichever is later. When it is brought to the notice of the proper authority in a city or town, or the proper authority in the state having supervision of the contract, that the obligation or charge has not been paid by the contractor or subcontractor, the proper authority may deduct and hold for a period not exceeding sixty (60) days, from sums of money due to the contractor or subcontractor, the equivalent amount of such sums certified by a trucker or material man creditor as due him or her, as provided in this section, and which the proper authority determines is reasonable for trucking performed or materials furnished for the public works.

37-13-6. Ascertainment of prevailing rate of wages and other payments - Specification of rate in call for bids and in contract.

Before awarding any contract for public works to be done, the proper authority shall ascertain from the director of labor and training the general prevailing rate of the regular, holiday, and overtime wages paid and the general prevailing payments on behalf of employees only, to lawful welfare, pension, vacation, apprentice training, and educational funds (payments to the funds must constitute an ordinary business expense deduction for federal income tax purposes by contractors) in the city, town, village, or other appropriate political subdivision of the state in which the work is to be performed, for each craft, mechanic, teamster, laborer, or type of worker needed to execute the contract for the public works. The proper authority shall, also, specify in the call for bids for the contract and in the contract itself the general prevailing rate of the regular, holiday, and overtime wages paid and the payments on behalf of employees only, to the welfare, pension, vacation, apprentice training, and education funds existing in the locality for each craft, mechanic, teamster, laborer, or type of worker needed to execute the contract or work.

37-13-7. Specification in contract of amount and frequency of payment of wages.

(a) Every call for bids for every contract in excess of one thousand dollars (\$ 1,000), to which the state of Rhode Island or any political subdivision thereof or any public agency or quasi-public agency is a party, for construction, alteration, and/or repair, including painting and decorating, of public buildings or public works of the state of Rhode Island or any political subdivision thereof, or any public agency or quasi-public agency and which requires or involves the employment of employees, shall contain a provision stating the minimum wages to be paid various types of employees which shall be based upon the wages that will be determined by the director of labor and training to be prevailing for the corresponding types of employees employed on projects of a character similar to the contract work in the city, town, village, or other appropriate political subdivision of the state of Rhode Island in which the work is to be performed. Every contract shall contain a stipulation that the contractor or his or her subcontractor shall pay all the employees employed directly upon the site of the work, unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment computed at wage rates not less than those stated in the call for bids, regardless of any contractual relationships which may be alleged to exist between the contractor or subcontractor and the employees, and that the scale of wages to be paid shall be posted by the contractor in a prominent and easily accessible place at the site of the work; and the further stipulation that there may be withheld from the contractor so much of the accrued payments as may be considered necessary to pay to the employees employed by the contractor, or any subcontractor on the work, the difference between the rates of wages required by the contract to be paid the employees on the work and the rates of wages received by the employees and not refunded to the contractor, subcontractors, or their agents.

(b) The terms "wages" , "scale of wages" , "wage rates" , "minimum wages" , and "prevailing wages" shall include:

(1) The basic hourly rate of pay; and

(2) The amount of:

(A) The rate of contribution made by a contractor or subcontractor to a trustee or to a third person pursuant to a fund, plan, or program; and

(B) The rate of costs to the contractor or subcontractor which may be reasonably anticipated in providing benefits to employees pursuant to an enforceable commitment to carry out a financially responsible plan or program which was communicated in writing to the employees affected, for medical or hospital care, pensions on retirement or death, compensation for injuries or illness resulting from occupational activity, or insurance to provide any of the foregoing, for unemployment benefits, life insurance, disability and sickness insurance, or accident insurance, for vacation and holiday pay, for defraying costs of apprenticeship or other similar programs, or for other bona fide fringe benefits, but only where the contractor or subcontractor is not required by other federal, state, or local law to provide any of the benefits ; provided, that the obligation of a contractor or subcontractor to make payment in accordance with the prevailing wage determinations of the director of labor and training insofar as this chapter of this title and other acts incorporating this chapter of this title by reference are concerned may be discharged by the making of payments in cash, by the making of contributions of a type referred to in subsection (b)(2), or by the assumption of an enforceable commitment to bear the costs of a plan or program of a type referred to in this subdivision, or any combination thereof, where the aggregate of any payments, contributions, and costs is not less than the rate of pay described in subsection (b)(1) plus the amount referred to in subsection (b)(2).

(c) The term "employees" , as used in this section, shall include employees of contractors or subcontractors performing jobs on various types of public works including mechanics, apprentices, teamsters, chauffeurs, and laborers engaged in the transportation of gravel or fill to the site of public works, the removal and/or delivery of gravel or fill or ready-mix concrete, sand, bituminous stone, or asphalt flowable fill from the site of public works, or the transportation or removal of gravel or fill from one location to another on the site of public works, and the employment of the employees shall be subject to the provisions of subsections (a) and (b) .

(d) The terms "public agency" and "quasi-public agency" shall include, but not be limited to, the Rhode Island industrial recreational building authority, the Rhode Island economic development corporation, the Rhode Island airport corporation, the Rhode Island industrial facilities corporation, the Rhode Island refunding bond authority, the Rhode Island housing and mortgage finance corporation, the Rhode Island resource recovery corporation, the Rhode Island public transit authority, the Rhode Island student loan authority, the water resources board corporate, the Rhode Island health and education building corporation, the Rhode Island higher education assistance authority, the Rhode Island turnpike and bridge authority, the Narragansett Bay water quality management district commission,

Rhode Island telecommunications authority, the convention center authority, the board of governors for higher education, the board of regents for elementary and secondary education, the capital center commission, the housing resources commission, the Quonset Point-Davisville management corporation, the Rhode Island children's crusade for higher education, the Rhode Island depositors economic protection corporation, the Rhode Island lottery commission, the Rhode Island partnership for science and technology, the Rhode Island public building authority, and the Rhode Island underground storage tank board.

37-13-8. Investigation and determination of prevailing wages - Filing of schedule.

The director of labor and training shall investigate and determine the prevailing wages and payments made to or on behalf of employees, as set forth in § 37-13-7, paid in the trade or occupation in the city, town, village, or other appropriate political subdivision of the state and keep a schedule on file in his or her office of the customary prevailing rate of wages and payments made to or on behalf of the employees which shall be open to public inspection. In making a determination, the director of labor may adopt and use such appropriate and applicable prevailing wage rate determinations as have been made by the secretary of labor of the United States of America in accordance with the Davis-Bacon Act, as amended, 40 U.S.C. § 276a; provided, however, that each contractor awarded a public works contract after July 1, 2007 shall contact the department of labor and training on or before July first of each year, for the duration of such contract to ascertain the prevailing wage rate of wages on a hourly basis and the amount of payment or contributions paid or payable on behalf of each mechanic, laborer or worker employed upon the work contracted to be done each year and shall make any necessary adjustments to such prevailing rate of wages and such payment or contributions paid or payable on behalf of each such employee every July first.

37-13-9. Statutory provisions included in contracts.

A copy of 37-13-5, 37-13-6, and 37-13-7 shall be inserted in all contracts for public works awarded by the state or any city or town, committee, an authorized agency or awarding authority thereof, or any person or persons in their behalf in which state or municipal funds are used if the contract price be in excess of one thousand dollars (\$1,000).

37-13-10. Overtime compensation.

Labor performed under the provisions of 37-13-1 - 37-13-16, inclusive, during the period of forty (40) hours in any one week and during the period of eight (8) hours in any one day, shall be considered a legal week's work or a legal day's work, as the case may be, and any number of hours of employment in any one week greater than the number of forty (40) hours or in any one day greater than the number of eight (8) hours shall be compensated at the prevailing rate of wages for overtime employment; provided, however, when the director of labor and training has determined in the investigation provided for in 37-13-7 and 37-13-8 that there is a prevailing practice in a city, town, or other appropriate political subdivision to pay an overtime rate of wages for work of any craft, mechanic, teamster, laborer, or type of worker needed to execute the work other than hours worked in any one week greater than the number of forty (40) or in hours worked in any one day greater than the number of eight (8), then the prevailing practice shall determine the legal workday and the legal workweek in the city or town for the work and the prevailing rate of overtime wages shall be paid for such work in excess of that legal workday or week, as the case may be.

37-13-11. Posting of prevailing wage rates.

Each contractor awarded a contract for public works with a contract price in excess of one thousand dollars (\$ 1,000), and each subcontractor who performs work on those public works, shall post in conspicuous places on the project, where covered workers are employed, posters which contain the current, prevailing rate of wages and the current, prevailing rate of payments to the funds required to be paid for each craft or type of worker employed to execute the contract as set forth in §§ 37-13-6 and 37-13- 7, and the rights and remedies of any employee described in § 37-13-17 for nonpayment of any wages earned pursuant to this chapter. Posters shall be furnished to contractors and subcontractors by the director of labor and training, who shall determine the size and context thereof from time to time, at the time a contract is awarded. A contractor or subcontractor who fails to comply with the provisions of this section shall be deemed guilty of a misdemeanor and shall pay to the director of labor and training one hundred dollars (\$ 100) for each calendar day of noncompliance as determined by him or her. Contracts set forth in this section shall not be awarded by the state, any city, town, or any agency thereof until the director of labor and training has prepared and delivered the posters to the division of purchases, if the state or any agency thereof is the proper authority, or to the city, town, or an agency thereof, if it is the proper authority, and the contractor to whom the contract is to be awarded.

37-13-12. Wage records of contractors.

Each contractor awarded a contract with a contract price in excess of one thousand dollars (\$1,000) for public works, and each subcontractor who performs work on those public works, shall keep an accurate record showing the name, occupation, and actual wages paid to each worker employed by him or her and the payments to all the employee funds specified in sections 37-13-6 and 37-13-7 by him or her in connection with the contract or work. The director and his or her authorized representatives shall have the right to enter any place of employment at all reasonable hours for the purpose of inspecting the wage records and seeing that all provisions of this chapter are complied with.

37-13-12.1. Obstruction of enforcement.

Any effort of any employer to obstruct the director and his or her authorized representatives in the performance of their duties shall be deemed a violation of this chapter and punishable as such.

37-13-12.2. Subpoena powers.

The director and his or her authorized representatives shall have power to administer oaths and examine witnesses under oath, issue subpoenas, subpoenas duces tecum, compel the attendance of witnesses, and the production of papers, books, accounts, records, payrolls, documents, and testimony, and to take depositions and affidavits in any proceeding before the director.

37-13-12.3. Compelling obedience to subpoenas.

In case of failure of any person to comply with any subpoena lawfully issued, or subpoena duces tecum, or on the refusal of any witness to testify to any matter regarding which he may be lawfully interrogated, it shall be the duty of the superior court, or any judge thereof, on application by the director, to compel obedience by proceedings in the nature of those for contempt.

37-13-12.4. Penalty for violations.

Except as otherwise provided in this chapter, any employer who shall violate or fail to comply with any of the provisions of this chapter shall be guilty of a misdemeanor and shall be punished by a fine of not less than five hundred dollars (\$ 500) nor more than one thousand dollars (\$ 1,000) for each separate offense, or by imprisonment for not less than ten (10) nor more than ninety (90) days, or by both fine and imprisonment. Each day of failure to pay wages due an employee at the time specified in this chapter shall constitute a separate and distinct violation.

37-13-13. Furnishing payroll record to director of labor.

(a) Every contractor and subcontractor awarded a contract for public works as defined by this chapter shall furnish a certified copy of his or her payroll records of his or her employees employed upon the project to the director of labor and training on a monthly basis for the preceding month's work.

(b)The director of labor and training may promulgate reasonable rules and regulations to enforce the provisions of this section.

(c) Any contractor or subcontractor who fails to comply with the provisions of this section shall be deemed guilty of a misdemeanor and shall pay to the director of labor and training five hundred dollars (\$ 500) for each calendar day of noncompliance as determined by the director of labor and training. Any of those revenues shall be deposited as general revenues. Any person, firm, or corporation found to have willfully made a false or fraudulent representation in connection with reporting their certified payroll records shall be required to pay a civil penalty to the department of labor and training in an amount of no less than one thousand dollars (\$ 1,000) and not greater than three thousand dollars (\$ 3,000) per representation. For purposes of this subsection "willfully" shall mean representations that are known to be false, or representations made with deliberate ignorance or reckless disregard for their truth or falsity.

37-13-13.1. Audits of wage records of out of state contractors and subcontractors.

Out of state contractors or subcontractors who perform work on public works in this state authorize the director of labor and training to conduct wage and hour audits of their payroll records pursuant to the provisions of chapter 14 of title 28.

37-13-14. Contractor's bond.

The state or any city, town, agency, or committee therein awarding contracts for public works shall require the contractor awarded a contract with a contract price in excess of fifty thousand dollars (\$ 50,000) for public works to file with the proper authority good and sufficient bond with surety furnished by any surety company authorized to do business in the state, conditioned upon the faithful performance of the contract and upon the payment for labor performed and material furnished in connection therewith, a bond to contain the terms and conditions set forth in chapter 12 of this title, and to be subject to the provisions of that chapter. Waiver of the bonding requirements of this section is expressly prohibited.

37-13-14.1. Enforcement - Hearings.

(a) Before issuing an order or determination, the director of labor and training shall order a hearing thereon at a time and place to be specified, and shall give notice thereof, together with a copy of the complaint or the purpose thereof, or a statement of the facts disclosed upon investigation, which notice shall be served personally or by mail on any person, firm, or corporation affected thereby. The person, firm, or corporation shall have an opportunity to be heard in respect to the matters complained of at the time and place specified in the notice, which time shall be not less than five (5) days from the service of the notice personally or by mail. The hearing shall be held within ten (10) days from the order of hearing. The hearing shall be conducted by the director of labor and training or his or her designee. The hearing officer in the hearing shall be deemed to be acting in a judicial capacity, and shall have the right to issue subpoenas, administer oaths, and examine witnesses. The enforcement of a subpoena issued under this section shall be regulated by Rhode Island civil practice law and rules. The hearing shall be expeditiously conducted and upon such hearing the hearing officer shall determine the issues raised thereon and shall make a determination and enter an order within ten (10) days of the close of the hearing, and forthwith serve a copy of the order, with a notice of the filing thereof, upon the parties to the proceeding, personally or by mail. The order shall dismiss the charges or direct payment of wages or supplements found to be due, including interest at the rate of twelve percentum (12%) per annum from the date of the underpayment to the date of payment, and may direct payment of reasonable attorney's fees and costs to the complaining party.

(b) In addition to directing payment of wages or supplements including interest found to be due, the order shall also require payment of a further sum as a civil penalty in an amount up to three times the total amount found to be due. Further, if the amount of salary owed to an employee pursuant to this chapter but not paid to the employee in violation of thereof exceeds five thousand dollars (\$ 5,000), it shall constitute a misdemeanor and shall be referred to the office of the attorney general. The misdemeanor shall be punishable for a period of not more than one year in prison and/or fined not more than one thousand dollars (\$ 1,000). In assessing the amount of the penalty, due consideration shall be given to the size of the employer's business, the good faith of the employer, the gravity of the violation, the history of previous violations and the failure to comply with recordkeeping or other nonwage requirements. The surety of the person, firm, or corporation found to be in violation of the provisions of this chapter shall be bound to pay any penalties assessed on such person, firm, or corporation. The penalty shall be paid to the department of labor and training for deposit in the state treasury; provided, however, it is hereby provided that the general treasurer shall establish a dedicated "prevailing wages enforcement fund" for the purpose of depositing the penalties paid as provided herein. There is hereby appropriated to the annual budget of the department of labor and training the amount of the fund collected annually under this section, to be used at the direction of the director of labor and training for the sole purpose of enforcing prevailing wage rates as provided in this chapter.

(c) For the purposes of this chapter, each day or part thereof of violation of any provision of this chapter by a person, firm, or corporation, whether the violation is continuous or intermittent, shall constitute a separate and succeeding violation.

(d) In addition to the above, any person, firm, or corporation found in violation of any of the provisions of this chapter by the director of labor and training, an awarding authority, or the hearing officer, shall be ineligible to bid on or be awarded work by an awarding authority or perform any such work for a period of no less than eighteen (18) months and no more than thirty-six (36) months from the date of the order entered by the hearing officer. Once a person, firm, or corporation is found to be in violation of this chapter, all pending bids with any awarding authority shall be revoked, and any bid awarded by an awarding authority prior to the commencement of the work shall also be revoked.

(e) In addition to the above, any person, firm, or corporation found to have committed two (2) or more willful violations in any period of eighteen (18) months of any of the provisions of this chapter by the hearing officer, which violations are not arising from the same incident, shall be ineligible to bid on or be awarded work by an

awarding authority or perform any work for a period of sixty (60) months from the date of the second violation.

(f) The order of the hearing officer shall remain in full force and effect unless stayed by order of the superior court.

(g) The director of labor and training, awarding authority, or hearing officer shall notify the bonding company of any person, firm, or corporation suspected of violating any section of this chapter. The notice shall be mailed certified mail, and shall enumerate the alleged violations being investigated.

(h) In addition to the above, any person, firm, or corporation found to have willfully made a false or fraudulent representation on certified payroll records shall be referred to the office of the attorney general. The false or fraudulent representation shall be considered a misdemeanor and shall be punishable for a period of not more than one year in prison and/or fined one thousand dollars (\$ 1,000). Further, any person, firm, or corporation found to have willfully made a false or fraudulent representation on certified payroll records shall be required to pay a civil penalty to the department of labor and training in an amount of no less than two thousand dollars (\$ 2,000) and not greater than fifteen thousand dollars (\$ 15,000) per representation.

37-13-15. Review.

(a) There is hereby created an appeals board which shall be comprised of three (3) members who shall be appointed by the governor; provided, however, that each member of the appeals board shall have at least five (5) years experience with prevailing wage rates as they apply to the construction industry. The members of such appeals board shall serve without compensation. The members of the appeals board shall be appointed for terms of three (3) years except that of the three (3) members originally appointed by each of the appointing authorities; one (1) shall be appointed for a term of one (1) year, one (1) shall be appointed for a term of two (2) years and one (1) for a term of three (3) years.

(b) Any person aggrieved by any action taken by the director of labor and training or his or her designated hearing officer under the authority of this chapter, or by the failure or refusal of the director of labor and training to take any action authorized by this chapter, may obtain a review thereof for the purpose of obtaining relief from the action or lack of action by filing a petition for administrative review and relief, to the appeals board as provided herein. The petition for administrative review shall be filed within twenty (20) days of the action taken by the director of labor and training or designated hearing officer: The petition for administrative review shall be heard within ten (10) days of the date of filing. An aggrieved person under this section shall include:

- (1) Any person who is required to pay wages to his or her employees or make payments to a fund on behalf of his or her employees, as provided in this chapter;
- (2) Any person who is required to be paid wages for his or her labor or on whose behalf payments are required to be paid to funds, as provided by this chapter;
- (3) The lawful collective bargaining representative of a person defined in subdivision (2) above;
- (4) A trade association of which a person defined in subdivision (1) above is a member;
- (5) A proper authority as defined in this chapter;
- (6) A contractor who submitted a bid for work to be or which has been awarded under the provisions of this chapter or a trade association of which he or her is a member, and
- (7) A labor organization which has one or more written collective bargaining agreements with one or more employers or a trade association which sets forth the hours, wages, and working conditions of a craft, mechanic, teamster, or type of worker needed to execute the work, as provided in this chapter to the extent that it would be affected by the action or the failure to act of the director of labor and training or the hearing officer.

(c) Any aggrieved person as defined herein may obtain a review of a decision of the appeals board by filing a petition in the superior court in Providence county pursuant to the provisions of the administrative procedures act, praying for review and relief and the petition shall follow the course of and be subject to the procedures for causes filed in the court.

(d) The director is hereby empowered to enforce his or her decision and/or the decision of the appeals board in the superior court for the county of Providence.

37-13-16. Termination of work on failure to pay agreed wages - Completion of work.

Every contract within the scope of this chapter shall contain the further provision that in the event it is found by the director of labor and training that any employee employed by the contractor or any subcontractor directly on the site of the work covered by the contract has been or is being paid a rate of wages less than the rate of wages required by the contract to be paid as aforesaid, the awarding party may, by written notice to the contractor or subcontractor, terminate his or her right as the case may be, to proceed with the work, or such part of the work as to which there has been a failure to pay the required wages, and shall prosecute the work to completion by contract or otherwise, and the contractor and his or her sureties shall be liable to the awarding party for any excess costs occasioned the awarding authority thereby.

37-13-17. Private right of action to collect wages or benefits

(a) An employee or former employee, or any organization representing such an employee or former employee, of a contractor or subcontractor may bring a civil action for a violation of § 37-13-7 for appropriate injunctive relief, or actual damages, or both within three (3) years after the occurrence of the alleged violation. An action commenced pursuant to this section, may be brought in the superior court for the county where the alleged violation occurred, the county where the complainant resides, or the county where the person against whom in the civil complaint is filed resides or has their principal place of business. Any contractor or subcontractor who violates the provisions of § 37-13-7 shall be liable to the affected employee or employees in the amount of unpaid wages or benefits, plus interest. A civil action filed in court under this section may be instituted instead of, but not in addition to the director of labor and training enforcement procedures authorized by § 37-13-14.1, provided the civil action is filed prior to the date the director of labor and training issues notice of an administrative hearing.

(b) An employer's responsibility and liability is solely for its own employees.

(c) An action instituted pursuant to this section may be brought by one or more employees or former employees on behalf of himself/herself or themselves and other employees similarly situated, except that no employee shall be a party plaintiff to any such action unless he/she gives his/her consent in writing to become such a party and such consent is filed in the court in which such action is brought.

(d) In an action filed under this section in which the plaintiff prevails, the court shall, in addition to any judgment awarded to the plaintiff, require reasonable attorneys' fees and the costs of the action to be paid by the defendant.

(e) The court in an action filed under this section shall award affected employees or former employees liquidated damages in an amount equal to two (2) times the amount of unpaid wages or benefits owed. Unpaid fringe benefit contributions owed pursuant to this section in any form shall be paid to the appropriate benefit fund, however, in the absence of an appropriate fund the benefit shall be paid directly to the individual.

(f) The filing of a civil action under this section shall not preclude the director of labor and training from referring a matter to the attorney general as provided in § 37-13-14.1(b), from prohibiting a contractor or subcontractor from bidding on or otherwise participating in contracts as provided in § 37-13-14.1(d), (e) and (h), or from prohibiting termination of work on failure to pay agreed wages pursuant to § 37-13-16.

(g) Any person, firm, or corporation found to have willfully made a false or fraudulent representation in connection with wage obligations owed on a contract shall be required to pay a civil penalty to the department of labor and training in an amount of no less than one thousand dollars (\$ 1,000) and not greater than three thousand dollars (\$ 3,000) per representation. Such penalties shall be recoverable in civil actions filed pursuant to this section. For purposes of this subsection "willfully" shall mean representations that are known to be false, or representations made with deliberate ignorance or reckless disregard for their truth or falsity.

(h) An employer shall not discharge, threaten, or otherwise discriminate against an employee, or former employee, regarding compensation terms, conditions, locations or privileges of employment because the employee or former employee, or a person or organization acting on his or her behalf: (1) Reports or makes a complaint under this section; or otherwise asserts his or her rights under this section; and/or (2) Participates in any investigation, hearing or inquiry held by the director of labor and training under § 37-13-14.1. In the event a contractor or subcontractor retaliates or discriminates against an employee in violation of this section, the affected employee may file an action in any court of competent jurisdiction and the court shall order reinstatement and/or restitution of the affected employee, as appropriate, with back pay to the date of the violation, and an additional amount in liquidated damages equal to two (2) times the amount of back pay and reasonable attorneys' fees and costs.

(i) If any one or more subsections of this section shall for any reason be adjudged unconstitutional or otherwise invalid, the judgment shall not affect, impair, or invalidate the remaining subsections.

PREVAILING WAGE RATES

(Appropriate wage rate to be inserted by bidder in specifications)

For a copy of the appropriate wage rate, contact:

**R.I. Department of Labor
Division of Labor Standards
610 Manton Avenue
Providence, RI 02909**

TITLE 37

CHAPTER 14.1 MINORITY BUSINESS ENTERPRISE

Sections

37-14.1-1.	Purpose.
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37-14.1-1. Purpose.

The purpose of this chapter is to carry out the state's policy of supporting the fullest possible participation of firms owned and controlled by minorities and women (MBE's), in state funded and state directed public construction programs and projects and in state purchases of goods and services. This includes assisting MBE's throughout the life of contracts in which they participate.

37-14.1-2. Applicability.

This chapter shall apply to any and all state purchasing, including, but not limited to the procurement of goods and services and construction projects or contracts funded in whole or in part by state funds, or funds which, in accordance with a federal grant or otherwise, the state expends or administers or in which the state is a signatory to the construction contract.

37-14.1-3. Definitions.

- (a) "Affirmative action" means taking specific steps to eliminate discrimination and its effects, to ensure nondiscriminatory results and practices in the future, and to involve minority business enterprises fully in contracts and programs funded by the state.
- (b) "Compliance" means the condition existing when a contractor has met and implemented the requirements of this chapter.
- (c) "Contract" means a mutually binding legal relationship or any modification thereof obligating the seller to furnish supplies or services, including construction, and the buyer to pay for them. For purposes of this chapter, a lease is a contract.
- (d) "Contractor" means one who participates, through a contract or subcontract, in any procurement or program covered by this chapter, and includes lessees and material suppliers.
- (e) "Minority" means a person who is a citizen or lawful permanent resident of the United States and who is:
 - (1) Black (a person having origins in any of the black racial groups of Africa);
 - (2) Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race);
 - (3) Portuguese (a person of Portuguese, Brazilian, or other Portuguese culture or origin, regardless of race);
 - (4) Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands);
 - (5) American Indian and Alaskan Native (a person having origins in any of the original peoples of North America.); or
 - (6) Members of other groups, or other individuals, found to be economically and socially disadvantaged by the Small Business Administration under section 8(a) of the Small Business Act, as amended [15 U.S.C. 637(a)].
- (f) "Minority business enterprise" or "MBE" means a small business concern, as defined pursuant to section 3 of the federal Small Business Act [15 U.S.C. 632] and implementing regulations, which is owned and controlled by one or more minorities or women. For the purposes of this chapter, owned and controlled means a business.

- (1) Which is at least fifty-one percent (51%) owned by one or more minorities or women or, in the case of a publicly owned business, at least fifty-one percent (51%) of the stock of which is owned by one or more minorities or women; and
- (2) Whose management and daily business operations are controlled by one or more such individuals.

(g) "MBE coordinator" means the official designated to have overall responsibility for promotion of minority business enterprise in his or her departmental element.

(h) "Noncompliance" means the condition existing when a recipient or contractor has failed to implement the requirements of this chapter.

37-14.1-4. Policy.

It is the policy of the state of Rhode Island that minority business enterprises (MBE's) shall have the maximum opportunity to participate in the performance of procurements and projects outlined in 37-14.1-2.

37-14.1-5. Discrimination prohibited.

No person shall be excluded from participation in, denied the benefits of, or otherwise discriminated against in connection with the award and performance of any project covered by this chapter, on the grounds of race, color, national origin, or sex.

37-14.1-6. Minority business enterprise participation.

Minority business enterprises shall be included in all procurements and construction projects under this chapter and shall be awarded a minimum of ten percent (10%) of the dollar value of the entire procurement or project. The director of the department of administration is further authorized to establish by rules and regulation formulas for giving minority business enterprises a preference in contract and subcontract awards.

37-14.1-7. Establishment of criteria and guidelines.

The director of the department of administration shall establish, by rule and regulations adopted in accordance with chapter 35 of title 42, standards which shall determine whether a construction project is covered by this chapter, compliance formulas, procedures for implementation, and procedures for enforcement which are not inconsistent with 49 CFR 23 of the federal regulations. As to Rhode Island department of transportation contracts, the director of administration may delegate this authority to the director of transportation.

37-14.1-8. Sanctions.

(a) The director of the department of administration shall have the power to impose sanctions upon contractors not in compliance with this chapter and shall include but not be limited to:

- (1) Suspension of payments;
- (2) Termination of the contract;
- (3) Recovery by the state of ten percent (10%) of the contract award price as liquidated damages; and
- (4) Denial of right to participate in future projects for up to three (3) years.

(b) As to Rhode Island department of transportation contracts, the director of the department of administration may delegate this authority to the director of transportation.

**REGULATIONS GOVERNING PARTICIPATION BY MINORITY BUSINESS ENTERPRISES IN STATE
FUNDED AND DIRECTED PUBLIC CONSTRUCTION PROJECTS, CONSTRUCTION CONTRACTS
AND PROCUREMENT CONTRACTS FOR GOODS AND SERVICES**

I. GENERAL

1. Purpose

(a) The purpose of these regulations is to carry out the state's policy of supporting the fullest possible participation of firms owned and controlled by minorities and women (MBEs) in state-funded and directed public construction programs and projects and in state purchases of goods and services. This includes assisting MBEs throughout the life of contracts in which they participate.

(b) These regulations implement, in part, R. I. Gen. Laws, Chapter 37-14.1. These regulations are effective immediately and supersede all Department of Administration regulations issued previously under these authorities insofar as such regulations affect minority business enterprise matters in the State.

2. Applicability

These regulations apply to any construction project, construction contract or procurement contract for goods and services funded in whole or in part by state funds, or funds which, in accordance with federal grant or otherwise, the state expends or administers or in which the state is a signatory. Quasi-independent state agencies, such as the Rhode Island Public Buildings Authority, the Narragansett Bay Commission and the Rhode Island Port Authority, are subject to the requirements outlined under these regulations. With respect to Department of Transportation contracts, The Director of Transportation may promulgate regulations consistent with R. I. Gen. Laws Sections 37-14.1-8 and 37-14.1-9, thereby exempting Department of Transportation contracts from the requirements of these regulations.

3. Definition

The terms "building" or "work" means construction activity as distinguished from manufacturing, furnishing of materials, or servicing and maintenance work. The terms include, without limitation, buildings, structures, and improvement of all types, such as bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, power lines, pumping stations, railways, airports, terminals, docks, piers, wharves, ways lighthouses, buoys, jetties, breakwaters, levees, and canals; dredging, shoring, scaffolding, drilling, blasting, excavating, clearing and landscaping. Unless conducted in connection with and at the site of such a building or work as described in the foregoing sentence, the manufacture or furnishing of materials, articles, supplies, or equipment (whether or not a Federal or State agency acquires title to such materials, articles, supplies, or equipment during the course of the manufacture or furnishing, or owns the materials from which they are manufactured or furnished) is not a "building" or "work" within the meaning of these regulations.

"Compliance" means the conditions existing when a prime contractor has met and implemented the requirements of these regulations.

"Construction" means all types of on-site work done on a particular building or work, including, without limitation, altering, remodeling, painting and decorating, the transporting of materials and supplies to or from the building or work by the employees of the construction contractor or construction subcontractor, and the manufacturing or furnishing of materials, articles, supplies, or equipment on the site of the building or work, by persons employed at the site by the contractor or subcontractor.

"Construction Project" means a contract or group of contracts for construction work that a prime contractor has agreed to perform, whether directly or through the use of subcontractors.

"Contract" means a mutually binding legal relationship or any modification thereof obligating the seller to furnish supplies or services, including construction, and the buyer to pay for them. For purposes of these regulations, a lease is a contract.

"Contractor" means one who participates, through a contract or subcontract, in any program covered by these regulations and includes lessees.

"Director" means the Director of the Department of Administration or any person whom he/she has designated to act for him/her.

"Goods" means materials or supplies of any kind provided by a vendor, his agents or employees.

"Services" means professional or non-professional activities requiring mental or physical labor to be performed by the contractor, vendor, his agents or employees.

"Minority" means a person who is a citizen or lawful permanent resident of the United States and who is:

- (a) Black (a person having origins in any of the black racial groups of Africa);
- (b) Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race);
- (c) Portuguese (a person of Portuguese, Brazilian or other Portuguese culture or origin, regardless of race);
- (d) Asian American (a person having origins in any of the original peoples of the Far East, South East Asia, the Indian Subcontinent, or the Pacific Islands);
- (e) American Indian and Alaskan Native (a person having origins in any of the original peoples of North America); or
- (f) Members of other groups or other individuals found to be economically and socially disadvantaged by the Small Business Administration under Section 8(a) of the Small Business Act, as amended (15 U.S.C. 637 (a)).

"Minority Business Enterprise" or "MBE" means a small business concern as defined pursuant to Section 3 of the Federal Small Business Act and implementing regulations, which is owned and controlled by one (1) or more minorities or women and which has been certified as a Minority Business Enterprise under these regulations by the Rhode Island Department of Administration. For the purposes of these regulations, an owned and controlled business means one:

- (a) which is at least 51% owned by one (1) or more minorities or women or, in the case of a publicly owned business, at least fifty-one percent (51%) of the stock of which is owned by one (1) or more minorities or women; and
- (b) whose management and daily business operations are controlled by one (1) or more such individuals.

"MBE Coordinator" means the official designated to have overall responsibility for promotion of minority business enterprises within each department and agency for each contract covered by these regulations. He or she shall be appointed not later than the time the Request for Proposal for each contract is submitted.

"Non-compliance" means the condition existing when a contractor has failed to implement the requirements of these regulations.

"Prime Contractor" means the contractor that is charged with total construction on a contract or group of contracts, portions of which are, or will be subcontracted to their parties.

"Specialty Contractor" means a contractor charged with total construction on a contract or group of contracts, portions of which will not be subcontracted to third parties.

"Vendor" means the party with which the State contracts to provide goods or services.

4. Policy

These regulations shall be construed in accordance with the policy of the State of Rhode Island that minority business enterprises (MBEs) shall have the maximum opportunity to participate in the performance of projects or provision of goods or services outlined hereunder.

5. Construction Contracts

(a) MBE Liaison Officer

The chief executive officer of each prime contractor shall designate an MBE Liaison Officer who will coordinate with the MBE Coordinator from the Department of Administration or other state department or agency responsible for monitoring the contract.

(b) Ten Percent (10%) Requirement

(i) Each Department shall structure its procedures for procuring construction contracts to attempt to achieve the result that a minimum of ten (10%) percent of the total dollar value of these procurements is made directly or indirectly from MBEs. This result shall be achieved through one of the two methods described in paragraphs 5(b) (ii) or 5 (b) (iii) below.

(ii) Prime Contractor Method. Each prime contractor shall ensure that a minimum of ten percent (10%) of the dollar value of work to be performed on a construction project will be performed by MBEs. The prime contractor must meet or exceed this requirement or demonstrate that it could not meet this requirement despite its good-faith efforts. A prime contractor that is an MBE will satisfy the ten percent (10%) requirement by ensuring that a least ten percent (10%) of the dollar volume of work performed under the contract is performed by its employees.

(iii) Construction Contracts not involving the use of prime contractors. In lieu of using the prime contractor method described in paragraph 5(b) (ii) above, a Department may meet the ten percent (10%) requirement under these regulations by ensuring that ten percent (10%) of the dollar value of construction contracts in the aggregate for each fiscal year is awarded to MBEs. MBEs may be solicited directly to accomplish this requirement.

(iv) The ten percent (10%) requirements set forth under these regulations can be satisfied concurrently with similar requirements mandated under federal law.

(v) Nothing in these regulations shall be construed to require the award of a contract to an MBE whose bid exceeds the lowest bid by five percent (5%). Nothing in these Regulations shall be construed to require the acceptance of non-conforming goods or services.

(c) Solicitation of Bids

All departments and agencies soliciting requests for proposals for construction projects identified as having subcontracting opportunities must include in the advertisements for the project the following language: "This project is subject to Chapter 37-14.1 of the Rhode Island General Laws, and regulations promulgated thereunder, which require that ten percent of the dollar value of work performed on the project be performed by minority business enterprises."

(ii) MBE Compliance Plan

A prospective prime contractor shall include in its bid on any construction project covered by these regulations, a simple statement acknowledging its obligation to meet the ten percent (10%) requirement under these regulations. After it has been identified as the apparent low bidder, the prime contractor shall, within ten (10) working days, prepare an MBE Compliance Plan and submit it to the Director or his designee for approval. The Plan shall identify by MBE name, subcontract dollar amount and type, each subcontract that the prime contractor projects will be awarded to MBEs over the period of the project.

(d) Approval or Disapproval of MBE Plan

(i) The Director or his designee will review and approve plans that reasonably ensure compliance with the ten percent (10%) requirement.

(ii) Where the prime contractor has proved that for reasons beyond the prime contractor's control, compliance with the ten percent (10%) requirement is impossible, the Director or his designee may approve a plan that ensures compliance with an MBE utilization rate of less than ten percent (10%). To prove impossibility of compliance, there shall be a hearing, which interested parties will be notified of and permitted to attend, during which the contractor shall demonstrate the following:

(1) The prime contractor is making all appropriate efforts, including those listed in paragraph 5 (e) of these regulations, to increase MBE participation in its construction project to the ten percent (10%) level.

(2) Despite the prime contractor's efforts, the prime contractor's plan represents a reasonable expectation for the participation of MBEs in state contracts given the availability of MBEs to work on the contract.

(iii) If the Director or his designee does not approve the plan the prime contractor has submitted, the prime contractor, after consulting with the Director or his designee, shall present a revised plan.

(iv) The Director may condition the approval or establishment of any adjusted requirement on any reasonable future action by the prime contractor.

(v) Each prime contract covered under these regulations shall include the following: "The contractor agrees to ensure that minority business enterprises as defined in R.I. Gen. Laws Section 37-14.1-3, shall have the maximum opportunity to participate in the performance of subcontracts performed under this agreement. The contractor will take all reasonable steps in accordance with regulations promulgated under Chapter 37-14.1 of the Rhode Island General Laws to ensure that minority business enterprises have the maximum opportunity to compete for and perform subcontracts under this agreement."

e. Compliance

(i) Each MBE coordinator will periodically conduct on-site inspections to determine compliance with the provisions of these regulations. The Division of Purchasing, the Director or the MBE Coordinator may require a prime contractor to furnish copies of purchase orders, subcontracts, cancelled checks, and other records that may indicate the number, names, dollar value of MBE subcontracts, dates, and schedule time for performance of work by an MBE subcontractor.

(ii) A prime contractor's failure to have an approved MBE Compliance Plan as required by these regulations constitutes non-compliance with these regulations.

(iii) If a prime contractor fails to meet the requirements outlined in its approved MBE Compliance Plan, it shall explain to the Director, in writing, why the requirements could not be met and why meeting the requirements was beyond the prime contractor's control.

(iv) To determine whether a prime contractor has a good faith reason for failing to meet its requirements, the Director may consider, among other factors:

(1) Whether the prime contractor attended any pre-solicitation or pre-bid meetings that were scheduled by the state contracting authority to inform MBEs of contracting or subcontracting opportunities;

(2) Whether the prime contractor advertised in general circulation, trade association, and minority focus media concerning the subcontracting opportunities;

(3) Whether the prime contractor provided written notice to a reasonable number of specific MBEs that their interest in a contract was being solicited, in sufficient time to allow the MBEs to participate effectively;

- (4) Whether the prime contractor followed up initial solicitations of interest by contacting MBEs to determine with certainty whether the MBEs were interested;
 - (5) Whether the prime contractor selected portions of work to be performed by MBEs in order to increase the likelihood of meeting MBE participation requirements (including, where appropriate, breaking down contracts into economically feasible units to facilitate MBE participation);
 - (6) Whether the prime contractor provided interested MBEs with adequate information about the plans, specifications and requirements of the contract;
 - (7) Whether the prime contractor negotiated in good faith with interested MBEs;
 - (8) Whether the prime contractor made suggestions to interested MBEs to assist them in obtaining bonding, lines of credit, or insurance required by the prime contractor;
 - (9) Whether the prime contractor effectively used the services of available minority community organizations, minority contractors' groups, local, state and Federal minority business assistance offices; and other organizations that provide assistance in the recruitment and placement of MBEs.
- (v) If the prime contractor does not make such an explanation, or if the Director determines that the prime contractor's explanation does not justify its failure to meet the requirements in its approved MBE Plan, the Director may direct the prime contractor to take appropriate remedial action. Failure to take remedial action directed by the Director is noncompliance with these regulations.
- (vi) In the event of non-compliance with these regulations, the Director may take appropriate enforcement action. Such action may include suspension of payments, termination of the contract, recovery by the state of 10% of the contract price as liquidated damages and/or denial of the right to participate in future projects for up to three (3) years.

TITLE 37

CHAPTER 16 PUBLIC WORKS ARBITRATION

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37-16-1. Short title.

This chapter shall be known as the "Public Works Arbitration Act".

37-16-2. Contract provision for arbitration.

(a) A provision in a written contract executed on or after January 1, 1962, for the construction, alteration, repair, or painting of any public building, sewer, highway, bridge, water treatment or disposal projects one party to which is the state, a city, a town, or an authority, a board, a public corporation, or any similar body created by statute or ordinance or any committee, agency, or subdivision of any of them, to settle by arbitration any dispute or claim arising out of or concerning the performance or interpretation of the contract shall be valid, irrevocable, and enforceable, save upon grounds existing in law or equity for the revocation of the contract.

(b) (1) Every contract for the construction, alteration, repair, painting, or demolition of any public building, sewer, water treatment or disposal project, highway, or bridge one party to which is the state, a city, a town, or an authority, a board, a public corporation, or any similar body created by statute or ordinance or any committee, agency, or subdivision of any of them which has a contract price of ten thousand dollars (\$ 10,000) or more and which is executed on or after July 1, 1967, shall contain a provision for arbitration of disputes and claims arising out of or concerning the performance or interpretation of the contract as follows:

(2) "All claims, disputes, and other matters in question arising out of or relating to this contract or the performance or interpretation thereof shall be submitted to arbitration. Arbitration shall be commenced by a demand in writing made by one party to the contract upon the other within a reasonable time after the dispute, claim, or other matter in question arose but in no event after payment in full of the contract price has been made and accepted. The written demand shall contain a statement of the question to be arbitrated and a detailed statement of each item or matter in

dispute and the name of the arbitrator appointed by that party. The other party to the contract within ten (10) days of the receipt of the written demand shall appoint an arbitrator and give notice in writing thereof to the party who commenced arbitration. The two (2) arbitrators appointed by the parties shall within ten (10) days of the date of the appointment of the second arbitrator select a third arbitrator who shall be designated as chairperson and who immediately shall give written notice to the parties of his or her appointment. The third arbitrator shall select a time, date, and place for hearing and give each party five (5) days notice in writing thereof. The date for hearing shall not be more than fifteen (15) days after the date of appointment of the third arbitrator. The award shall be made promptly by the arbitrators and, unless otherwise agreed by the parties or specified by law, no later than thirty (30) days from the date of closing the hearing, or, if oral hearings have been waived, from the date of the transmittal of the final statements and proofs to the arbitrators. The award shall be in writing and shall be signed by a majority of the arbitrators. It shall be executed in the manner required by law. The arbitrator shall provide a written explanation of the reasoning for the award. In the event the party of whom arbitration is demanded shall fail to appoint his or her arbitrator within the time specified or the two (2) arbitrators appointed by the parties are unable to agree on an appointment of the third arbitrator within the time specified, either party may petition the presiding justice of the superior court to appoint a single arbitrator who shall hear the parties and make an award as provided herein. The petitioner shall give five (5) days notice in writing to the other party before filing his or her petition."

(c) Any dispute involving claims less than one hundred thousand dollars (\$ 100,000) and associated with construction of a highway or bridge as referred to in subsection (b) shall be submitted to arbitration. Any dispute involving claims of one hundred thousand dollars (\$ 100,000) or more and associated with construction of a highway or bridge as referred to in subsection (b) shall only be arbitrated with the consent of the parties. If the parties fail to consent to arbitration and the state of Rhode Island is a party to the dispute, then the claim will proceed in accordance with § 37-13.1-1.

(d) For the purposes of this section, the term "claims" shall not mean the aggregate amount sought under the contract or in the arbitration, but shall refer specifically to each item or matter in dispute for which additional compensation is sought or for each item for which a credit is sought.

(e) Notwithstanding subsection (a) or (b) of this section, if any contract except for highway and bridge contracts provides for an arbitration procedure, and a method of appointment of an arbitrator or arbitrators, that method shall be followed instead of the method provided in subsection (b) of this section.

(f) This section shall apply to all written contracts executed on or after January 1, 1986.

37-16-3. Application to subcontracts.

When a contract described in 37-16-2 is in effect and any party thereto has entered into a subcontract to perform part of the work and/or furnish any materials in connection with the work described in the contract and the terms of the subcontract provide for arbitration of a dispute or claim concerning the performance or interpretation thereof, or the subcontract, expressly or by reference to the terms of the contract, provides that the parties to the subcontract shall comply with the arbitration provisions of the contract, the following shall apply when a request is made or an order of court is entered for arbitration either under the terms of the contract or subcontract.

(a) When arbitration under the contract may adversely affect the interest of a party thereto because of the effect of an award of the arbitrator or arbitrators upon the performance or interpretation of the terms of a subcontract to which he or she is also a party, he or she may require any other party or all other parties to the subcontract to become a party or parties to the arbitration.

(b) When a party to a subcontract makes a demand or an order of court is entered for arbitration under the terms of the subcontract which comply with the provision of this chapter, any party thereto who is also a party to the contract and whose rights under the contract may be adversely affected by the effect of an award of the arbitrator or arbitrators upon the performance or interpretation of the contract, may require any other party to the contract to become a party to the arbitration.

(c) When a party to a contract or to a subcontract is made a party to arbitration by virtue of the provisions of this section, he or she shall have all the rights of a party to arbitration as provided in this chapter except the appointment of an arbitrator. Provided, however, he or she may object to the arbitrators appointed by the parties in which event a single arbitrator shall be appointed as provided in 37-16-2 in the petition of either of the original parties to arbitration. The award of the arbitrator or arbitrators shall be valid and shall be binding on him or her to

the extent that it affects the performance or interpretation of the contract and/or subcontract to which he or she is a party. The award of the arbitrator or arbitrators may be enforced, modified, or vacated as this chapter provides an award made in an arbitration of a contract described in 37-16-2 may be enforced, modified, or vacated.

37-16-4. Stay of legal proceedings pending arbitration.

If any suit or proceedings be brought upon any issue referable to arbitration under contract in writing providing for arbitration, the court in which the suit is pending upon being satisfied that the issue involved in the suit or proceedings is referable to arbitration under the contract, shall on application of one of the parties, stay the trial of the action until arbitration has been held.

37-16-5. Jurisdiction of superior court to enforce arbitration provision and awards.

The entering into a contract in writing providing for arbitration shall be deemed a consent of all parties, including those enumerated in 37-16-2, thereto to the jurisdiction of the superior court of this state to enforce the arbitration provision and any award made pursuant to that provision. A party aggrieved by the failure, neglect, or refusal of another to perform under a contract providing for arbitration, may petition the superior court, or a judge thereof, for an order directing that arbitration proceed in the manner provided for in the contract. Five (5) days' notice in writing of the application shall be served upon the party in default. Service thereof shall be made in the manner specified in the contract, and if no manner specified therein, then in the manner provided by law for personal service of a summons, within or without the state, or substituted service of a summons, or upon satisfactory proof that the party aggrieved has been or will be unable with due diligence to make service in any of the foregoing manners, then notice shall be served in such manner as the court or judge may direct. A judge of the superior court shall hear the parties and upon being satisfied that there is no substantial issue as to the making of the contract or the failure to comply therewith, the court, or the judge thereof, hearing the application, shall make an order directing the parties to proceed to arbitration in accordance with the terms of the contract.

37-16-6. Trial upon evidence of substantial issue.

If evidentiary facts are set forth raising a substantial issue as to the making of the contract or the failure to comply therewith, the court, or the judge thereof, shall proceed immediately to the trial of the issues. Whenever an immediate trial is ordered, the order therefor shall provide that, if the court finds that a written contract providing for arbitration was made, and that there was a failure to comply therewith, the parties shall proceed with the arbitration in accordance with the terms of the contract and the order shall provide that if the court finds that there was no contract or failure to comply with the contract, then the proceeding shall be dismissed.

37-16-7. Method of appointing arbitrators or umpire.

If in the contract providing for arbitration, provision is made for a method of naming or appointing an arbitrator or arbitrators or an umpire, that method shall be followed, but if no method be provided therein, then the parties to the contract shall agree to the method of naming or appointing an arbitrator or arbitrators or an umpire and if the parties shall fail to agree, then the court or the judge thereof upon application of either of the parties after due notice to the other party shall appoint an arbitrator to hear the dispute.

37-16-8. Scheduling and notice of arbitration hearing - Adjournment.

Subject to the terms of the contract, if any are specified therein, the arbitrators selected as prescribed in this chapter must appoint a time and place for the hearing of the matters submitted to them, and must cause notice thereof to be given to each of the parties. They, or a majority of them, may adjourn the hearing from time to time upon the application of either party for good cause shown or upon their own motion, but not beyond the day fixed if a date in the contract, if any, for rendering their award, unless the time so fixed is extended by the written consent of the parties to the contract or their attorney, or the parties have continued with the arbitration without objection to such adjournment.

37-16-9. Power of court to direct prompt hearing.

The court shall have power to direct the arbitrators to proceed promptly with the hearing and determination of the dispute, claim, or matter in question.

37-16-10. Arbitrator's oath - Waiver.

Before hearing any testimony, arbitrators selected as prescribed in this chapter must be sworn, by an officer authorized by law to administer an oath, faithfully and fairly to hear and examine the claim, dispute, or matter in question and to make a just award according to the best of their understanding, unless the oath is waived by the written consent of the parties to the contract or their attorneys or the parties have continued with the arbitration without objection to the failure of the arbitrators to take the oath.

37-16-11. Powers of arbitrators.

The arbitrator or arbitrators selected as prescribed in this chapter, may require any person to attend before them as a witness; and he or she and they have, and each of them has, the same powers with respect to all the proceedings before them which are conferred upon a board or a member of a board authorized by law to hear testimony. All the arbitrators selected as prescribed in this chapter must meet together and hear all the allegations and proofs of the parties; but an award by a majority of them is valid.

37-16-12. Fees.

In any proceeding under this chapter, unless the parties agree as to the arbitrator's or arbitrators' fees, such fees shall be fixed by the court or the judges thereof who shall require the payment equally by both parties of the arbitrators' fees.

37-16-13. Validity of awards.

An award shall be valid and enforceable according to its terms and under the provisions of this chapter, without previous adjudication of the existence of a contract to arbitrate, subject, nevertheless, to the provisions of this section:

- (a) A party who has participated in any of the proceedings before the arbitrator or arbitrators may object to the confirmation of the award only on one or more of the grounds hereinafter specified (provided that he did not continue with the arbitration with notice of the facts or defects upon which his objection is based) because of a failure to comply with 37-16-8 or with 37-16-10 or because of the improper manner of the selection of the arbitrators.
- (b) A party who has not participated in any of the proceedings had before the arbitrator or arbitrators and who has not made or been served with an application to compel arbitration under 37-16-5 may also put in issue the making of the contract or the failure to comply therewith, either by a motion for a stay of the arbitration or in opposition to the confirmation of the award. If a notice shall have been personally served upon such party of an intention to conduct the arbitration pursuant to the provisions of a contract specified in the notice, then the issues specified in this subdivision may be raised only by a motion for a stay of the arbitration, notice of which motion must be served within ten (10) days after the service of the notice of intention to arbitrate. The notice must state in substance that unless within ten (10) days after its service, the party served therewith shall serve a notice of motion to stay the arbitration, he or she shall thereafter be barred from putting in issue the making of the contract or the failure to comply therewith. The arbitration hearing shall be adjourned upon service of the notice pending the determination of the motion. Where the opposing party, either on a motion for a stay or in opposition to the confirmation of an award, sets forth evidentiary facts raising a substantial issue as to the making of the contract or the failure to comply therewith, an immediate trial of the same shall be had. In the event that the party is unsuccessful he or she may, nevertheless, participate in the arbitration if the same is still being carried on.

37-16-14. Arbitration under chapter deemed special proceeding - Jurisdiction of superior court.

Arbitration of a claim, dispute, or matter in question under a contract described in this chapter shall be deemed a special proceeding, of which the superior court for Providence County shall have jurisdiction.

37-16-15. Procedure for hearing of application to court.

Any application to the court, or a judge thereof, hereunder shall be made and heard in the manner provided by law for the making and hearing of motions, except as otherwise herein expressly provided.

37-16-16. Form of award.

To entitle the award to be enforced, as prescribed in this chapter, it must be in writing; and, within the time limited in the contract, if any, subscribed by the arbitrator or arbitrators making it and either filed in the office of the clerk of the court having jurisdiction as provided in 37-16-14 or delivered to one of the parties or his or her attorney.

37-16-17. Court order confirming award.

At any time within one year after the award is made, as prescribed in 37-16-16, any party to the contract by the terms of which arbitration was had, may apply to the court having jurisdiction as provided in 37-16-14 for an order confirming the award. Thereupon the court must grant the order unless the award is vacated, modified, or corrected, as prescribed in 37-16-18 and 37-16-19 or unless the award is unenforceable under the provisions of 37-16-13. Notice of the motion must be served upon the adverse party or parties or his or her or their attorneys, as prescribed by law for service of notice of a motion upon an attorney in an action in the same court.

37-16-18. Court order vacating award.

In any of the following cases, the court must make an order vacating the award, upon the application of any party to the controversy which was arbitrated

- (a) When the award was procured by fraud.
- (b) Where the arbitrator or arbitrators exceeded their powers, or so imperfectly executed them, that a mutual, final, and definite award upon the subject matter submitted was not made.
- (c) If there was no valid contract, and the objection has been raised under the conditions set forth in 37-16-13.

37-16-19. Rehearing after vacation of award.

Where an award is vacated, the court, in its discretion may direct a rehearing either before the same arbitrator or arbitrators or before a new arbitrator or arbitrators to be chosen in the manner provided in the contract for the selection of the original arbitrator or arbitrators or as provided for in 37-16-7 and any provision limiting the time in which the arbitrator or arbitrators may make a decision shall be deemed applicable to the new arbitration and to commence from the date of the court's order.

37-16-20. Court order modifying or correcting award.

In any of the following cases, the court must make an order modifying or correcting the award, upon the application of any party to the contract by the terms of which the arbitration was held.

- (a) Where there was an evident miscalculation of figures or an evident mistake in the description of any persons, thing, or property referred to in the award.
- (b) Where the arbitrator or arbitrators have awarded upon a matter not submitted to them, not affecting the merits of the decision upon the matter submitted.
- (c) Where the award is imperfect in a matter of form not affecting the merits of the controversy, and, if it had been a master's report the defect could have been amended or disregarded by the court.

37-16-21. Notice of motion to vacate, modify, or correct an award.

Notice of a motion to vacate, modify, or correct an award must be served upon all adverse parties, or their attorneys, within sixty (60) days after the award is filed or delivered, as prescribed by law for service of notice of a motion upon an attorney in an action; except that in opposition to a motion to confirm an award, any of the grounds specified in 37-16-18 may be set up. For the purpose of the motion, any judge who might make an order, to stay the proceedings in an action brought in the same court may make an order, to be served with the notice of motion, staying the proceedings of an adverse party or parties to enforce the award.

37-16-22. Entry of judgment - Costs.

Upon the granting of an order confirming, modifying, or correcting an award, judgment may be entered in conformity therewith, except as is otherwise prescribed in this chapter. Costs of the application and of the proceedings subsequent thereto, not exceeding twenty-five dollars (\$25.00) and disbursements, may be awarded by the court in its discretion. If awarded, the amount thereof must be included in the judgment.

37-16-23. Filing of papers after judgment.

(a) Immediately after entering judgment, the clerk must attach together and file the following papers:

- (1) The contract, and each written extension of the time, if any, within which to make the award.
- (2) The award.
- (3) Each notice, affidavit or other paper used upon an application to confirm, modify, or correct the award, and a copy of each order of the court upon the application.
- (4) A copy of the judgment.

(b) The judgment may be docketed as if it was rendered in an action.

37-16-24. Effect of judgment.

The judgment so entered has the same force and effect, in all respects as, and is subject to all the provisions of law relating to a judgment in an action. The judgment may be enforced as if it had been rendered in an action in the court in which it is entered.

37-16-25. Appeals.

An appeal may be taken from an order made in a proceeding under this chapter, or from a judgment entered upon an award. The proceedings upon the appeal, including the judgment thereupon and the enforcement of the judgment, are governed by the provisions of statute and rule regulating appeal in actions as far as they are applicable.

37-16-26. Satisfaction of award.

- (a) An award which requires the payment of a sum of money by a city, town, or the state or any body described in 37-16-2 created or organized by or through the authority of any of them, shall be satisfied to the extent of payment of that sum by payment thereof to the party to whom the award was made by the treasurer or officer exercising the duties of a treasurer thereof from its general funds.
- (b) An award which requires the payment of a sum of money to a city, a town, or the state or any body described in 37-16-2 created or organized by or through the authority of any of them shall be satisfied to the extent of payment of that sum by payment thereof to its treasurer or officer exercising the duties of a treasurer thereof who shall deposit the same in its general funds.

37-16-27. Application to sureties.

- (a) If a contractor principal on a bond furnished to guarantee performance or payment on a construction contract and the claimant are parties to a written contract with a provision to submit to arbitration any controversy thereafter arising under the contract, or subject to arbitration as provided in 37-16-2(b), the arbitration provisions shall apply to the surety for all disputes involving questions of the claimant's right of recovery against the surety. Either the claimant, the contractor principal, or surety may demand arbitration in accordance with the written contract or as provided in 37-16-2(b) if applicable in one arbitration proceeding, provided that the provisions of 37-16-3 shall be applicable to any such demand for arbitration. The arbitration award shall decide all controversies subject to arbitration between the claimant, on the one hand, and the contractor principal and surety on the other hand, including all questions involving liability of the contractor principal and surety on the bond, but a claimant must file suit for recovery against the surety within the time limits set forth in 37-12-2 and 37-12-5. The arbitration shall be in accordance with this chapter and the court shall enter judgment thereon as provided therein.
- (b) The arbitrator or arbitrators, if more than one, shall make findings of fact as to the compliance with the requirements for recovery against the surety, and those findings of fact shall be a part of the award binding on all parties to the arbitration.

TITLE 45

CHAPTER 55 AWARD OF MUNICIPAL CONTRACTS

SECTIONS

- 45-55-1 Legislative findings
- 45-55-2. Method of source selection
- 45-55-3. Purchasing agent - Appointment - Duties.
- 45-55-4. Definitions.
- 45-55-5. Competitive sealed bidding.
- 45-55-5.1. Business exempt.
- 45-55-5.2. Town of North Smithfield - Exemption.
- 45-55-6. Competitive negotiation.
- 45-55-7. Negotiations after unsuccessful competitive sealed bidding
- 45-55-8. Sole source procurement and emergency procurements.
- 45-55-8.1 Qualification based selection of architects and engineers.
- 45-55-9. Small purchases.
- 45-55-10. Cancellation of invitation for bids and requests for proposals.
- 45-55-11. Responsibilities of bidders and offerors
- 45-55-12. Prequalification of contractors - General.
- 45-55-13. Exclusion of state mandated costs.
- 45-55-13.1. Exclusion of multi-cities or towns insurance corporations and cooperative risk management programs.
- 45-55-13.2. Exclusion of multi-cities or towns energy aggregation programs.
- 45-55-13.3. [Exclusion of multi-school district combined purchasing consortia](#)
- 45-55-14. Staff consultants.
- 45-55-15. Severability.
- 45-55-16 Prohibition against the use of lead based paints.

45-55-1. Legislative findings.

It is hereby declared that a need exists to establish a uniform system for the award of contracts by municipalities, utilizing open cooperative bids.

45-55-2. Method of source selection.

Except as otherwise authorized by law, all municipal contracts shall be awarded by:

- (1) Competitive sealed bidding, pursuant to 45-55-5;
- (2) Competitive negotiations, pursuant to 45-55-6;
- (3) Non-competitive negotiations, pursuant to 45-55-7 and 45-55-8;
- (4) Small purchase procedures, pursuant to 45-55-9.
- (5) Qualification based selection (QBS) process for architects/engineers pursuant to 45-55-8.1

45-55-3. Purchasing agent - Appointment - Duties.

Within each city or town or quasi public agency there shall be designated a person or persons to act as purchasing officer to exercise the powers and duties as set forth in this chapter.

45-55-4. Definitions.

The words defined in this section have the following meanings whenever they appear in this chapter, unless the context in which they are used clearly requires a different meaning or a different definition is prescribed for a particular section, group of sections or provision.

(1) "Business" means any corporation, partnership, individual, sole proprietorship, joint stock company, joint venture, or any other legal entity through which business is conducted.

(2) "Change order" means a written order signed by the purchasing agent, or contractor directing or allowing the contractor to make changes which the changes clause of the contract authorizes the purchasing agent or contractor to order without the consent of the contractor or purchasing agent.

(3) "Construction" means the process of building, altering, repairing, improving, or demolishing any public structures or building, or other public improvements of any kind to any public real property. It does not include the routine maintenance or repair of existing structures, buildings, or real property performed by salaried employees of the municipality in the usual course of their job.

(4) "Contract" means all types of agreements, including grants and orders, for the purchase or disposal of supplies, services, construction, or any other item. It includes awards; contracts of a fixed-price, cost, cost-plus-a-fixed-fee, or incentive type; contracts providing for the issuance of job or task orders; leases; letter contracts, purchase orders, and construction management contracts. It also includes supplemental agreements with respect to any of the preceding. "Contract" does not include labor contracts with employees of the municipality.

(5) "Contract modification" means any written alteration in the specifications, delivery point, rate of delivery, contract period, price, quantity, or other contract provisions of any existing contract, whether accomplished by unilateral action in accordance with a contract provision, or by mutual action of the parties to the contract. It includes bilateral actions, as supplemental agreements, and unilateral actions, as change orders, administrative changes, notices of termination, and notices of the exercise of a contract option.

(6) "Contractor" means any person having a contract with a municipality.

(8) "Data" means recorded information, regardless of form or characteristic.

(8) "Designee" means a duly authorized representative of a person holding a superior position.

(9) "Employee" means an individual drawing a salary from a municipality, whether elected or not, and any nonsalaried individual performing personal services for any municipality.

(10) "May" means permissive.

(11) "Municipality" means the individual cities and towns of the state of Rhode Island.

(12) "Negotiation" means contracting by either of the methods described in §§ 45-55-6, 45-55-7, and 45-55-8.

(13) "Person" means any business, individual, organization, or group of individuals.

(14) "Procurement" means the purchasing, buying, renting, leasing, or otherwise obtaining of any supplies, services, or construction. It also includes all functions that pertain to the obtaining of any supply, service, or construction item, including description of requirements, selection and solicitation of sources, preparation and award of contract, and all phases of contract administration.

(15) "Purchasing officer" means the person designated in each municipality or quasi public agency pursuant to section 45-55-3.

(16) "Regulations" means rules and regulations adopted by the individual cities or towns, concerning the implementation of the provisions of this chapter.

(17) "Services" means the rendering, by a contractor, of its time and effort rather than the furnishing of a specific end product, other than reports which are merely incidental to the required performance of services. "Services" does not include labor contracts with employees of governmental agencies.

(18) "Shall" means imperative.

(19) "Supplemental agreement" means any contract modification which is accomplished by the mutual action of the parties.

(20) "Supplies" means all property, including, but not limited to, leases of real property, printing and insurance, except land or permanent interest in land.

45-55-5. Competitive sealed bidding.

(a) Contracts exceeding the amount provided by 45-55-9 shall be awarded by competitive bidding unless they are professional engineering/architectural services pursuant to 45-55-8.1 and it is determined in writing that this method is not practicable. Factors to be considered in determining whether competitive sealed bidding is practicable shall include whether:

- (1) Specifications can be prepared that permit award on the basis of either the lowest qualified bid price or the lowest qualified evaluated bid price; and
 - (2) The available sources, the time and place of performance, and other relevant circumstances as are appropriate for the use of competitive sealed bidding.
- (b) The invitation for bids shall state whether award shall be made on the basis of the lowest bid price or the lowest evaluated or responsive bid price. If the latter basis is used, the objective measurable criteria to be utilized shall be stated in the invitation for bids, if available.
- (c) Adequate public notice of the invitation for bids shall be given a sufficient time prior to the date stated in the notice for the opening of bids. Notice may include publication in a newspaper of general circulation in the state as determined by the purchasing officer for the municipality not less than seven (7) days nor more than twenty-one (21) days before the date set for opening of the bids. The purchasing officer may make a written determination that the twenty-one (21) day limitation needs to be waived. The written determination shall state the reason why the twenty-one (21) day limitation is being waived and shall state the number of days, giving a minimum and maximum, before the date set for the opening of bids when public notice is to be given.
- (4) Bids shall be opened publicly in full view of the public at the time and place designated in the invitation for bids. Each bid, together with the name of the bidder, shall be recorded and an abstract made available for public inspection. Subsequent to the awarding of the bid, all documents pertinent to the awarding of the bid shall be made available and open to public inspection and retained in the bid file.
- (5) The contract shall be awarded with reasonable promptness by written notice to the responsive and responsible bidder whose bid is either the lowest bid price, or lowest evaluated or responsive bid price.
- (6) Correction or withdrawal of bids may be allowed only to the extent permitted by regulations issued by the purchasing officer.

45-55-5.1. Business exempt.

The North Kingstown Bus Contractors Association and the Scituate School Bus Owners Club shall be exempt from the provisions of this chapter.

45-55-5.2. Town of North Smithfield - Exemption.

The town of North Smithfield is exempt from the provisions of this chapter with regard to the contracting for fire and rescue services with the Primrose Volunteer Fire Department and/or North Smithfield Fire Department and/or their respective successors and assigns.

45-55-6. Competitive negotiation.

- (a) When, under regulations adopted by the city or town council, the purchasing agent determines in writing that the use of competitive sealed bidding is not practicable, and except as provided in 45-55-8, 45-55-9, and 45-55-10 a contract may be awarded by competitive negotiation.
- (b) Adequate public notice of the request for proposals shall be given in the same manner as provided in 45-55-5(c).
- (c) Contracts may be competitively negotiated when it is determined, in writing, by the purchasing agent that the bid prices received by competitive sealed bidding either are unreasonable as to all or part of the requirements, or were not independently reached in open competition, and for which:
 - (1) Each competitive bidder has been notified of the intention to negotiate and is given reasonable opportunity to negotiate; and
 - (2) The negotiated price is lower than the lowest rejected bid by any competitive bidder; and
 - (3) The negotiated price is the lowest negotiated price offered by a competitive offeror.
- (d) The request for proposals shall indicate the relative importance of price and other evaluation factors.
- (e) Award shall be made to the responsible offeror whose proposal is determined in writing to be the most advantageous to the municipality taking into consideration price and the evaluation factors set forth in the request for proposals.
- (f) Written or oral discussions shall be conducted with all responsible offerors who submit proposals determined, in writing, to be reasonably susceptible of being selected for award. Discussions shall not disclose any information derived from proposals submitted by competing offerors. Discussions need not be conducted:
 - (1) With respect to prices, where such prices are fixed by law or regulation, except that consideration shall be given to competitive terms and conditions; or
 - (2) Where time of delivery or performance will not permit discussions; or
 - (3) Where it can be clearly demonstrated and documented from the existence of adequate competition or accurate prior cost experience with the particular supply, service, or construction item, that acceptance of an initial offer without discussion would result in fair and reasonable prices, and the request for proposals notifies all offerors of the possibility that award may be made on the basis of the initial offers.

45-55-7. Negotiations after unsuccessful competitive sealed bidding.

- (a) In the event that all bids submitted pursuant to competitive sealed bidding under 45-55-5 result in bid prices in excess of the funds available for the purchase, and the purchasing officer determines in writing:
 - (1) That there are no additional funds available from any source so as to permit an award to the lowest responsive and responsible bidder, and
 - (2) The best interest of the municipality will not permit the delay attendant to a resolicitation under revised specifications, or for revised quantities, under competitive sealed bidding as provided in 45-55-5, then a negotiated award may be made as stated in subsection (b) or (c) of this section.
- (b) Where there is more than one bidder, competitive negotiations pursuant to 45-55-6, shall be conducted with the three (3) (two (2) if there are only two (2)) bidders determined in writing, to be the lowest responsive and responsible bidders to the competitive sealed bid invitation. Competitive negotiations shall be conducted under the following restrictions:
 - (1) If discussions pertaining to the revision of the specifications or quantities are held with any potential offeror, all other potential offerors shall be afforded an opportunity to take part in the discussions; or

(2) A request for proposals, based upon revised specifications or quantities, shall be issued as promptly as possible, shall provide for an expeditious response to the revised requirements, and shall be awarded upon the basis of the lowest bid price, or lowest evaluated bid price submitted by any responsive and responsible offeror.

(c) When after competitive sealed bidding, it is determined in writing, that there is only one responsive and responsible bidder, a noncompetitive negotiated award may be made with such bidder in accordance with 45-55-8.

45-55-8. Sole source procurement and emergency procurements.

(a) A contract may be awarded for a supply, service, or construction item without competition when, under published regulations, the purchasing officer determines, in writing, that there is only one source for the required supply, service, or construction item.

(b) Notwithstanding any other provision of this chapter, the purchasing agent may make or authorize others to make emergency procurements when there exists a threat to public health, welfare, or safety under emergency conditions as defined in regulations or where the procurement will be in the best interest of the city as established by properly promulgated rules and regulations; provided, that such emergency procurements shall be made with such competition as is practicable under the circumstances. A written determination of the basis for the emergency, and for the selection of the particular contractor, shall be included in the contract file.

45-55-8.1. Qualification based selection of architects and engineers.

When the purchasing agent determines that the city or town needs the services of a professional architect or engineer, the purchasing agent shall follow the qualification based selection process for the procurement of architectural and engineering consulting services.

45-55-9. Small purchases.

Procurements, not to exceed an aggregate amount of ten thousand dollars (\$10,000) for construction and five thousand dollars (\$5,000) for all other purchases may be made in accordance with small purchase regulations promulgated by the municipality. These amounts shall be increased or decreased annually hereafter at the same rate as the Boston Regional Consumer Price Index. Procurement requirements shall not be artificially divided so as to constitute a small purchase under this section. A municipality may further reduce the aggregate purchase amount, as provided for in this section by ordinance.

45-55-10. Cancellation of invitation for bids and requests for proposals.

An invitation for bids, a request for proposals, or other solicitation may be canceled, or all bids or proposals rejected, if it is determined, in writing, that such action if taken is not in the best interest of the municipality and approved by the chief purchasing officer.

45-55-11. Responsibilities of bidders and offerors.

(1) A written determination of responsibility of a bidder or offeror shall be made and it shall be made in accordance with regulations issued by the municipality.

A reasonable inquiry to determine the responsibility of a bidder or offeror may be conducted. The failure of a bidder or offeror to promptly supply information in connection with a reasonable inquiry may be grounds for a determination of nonresponsibility with respect to a bidder or offeror.

(2) Except as otherwise provided, by law, information furnished by a bidder or offeror pursuant to this section may not be disclosed outside of the purchasing department administering the contract without prior written consent of the bidder or offeror.

45-55-12. Prequalification of contractors - General.

The municipality may provide for prequalification of suppliers as responsible prospective contractors for particular types of supplies, services, and construction. Municipalities which choose to provide for prequalification of suppliers shall adopt regulations for prequalification in the same manner provided for in the adoption of ordinances in the manner provided for in the legislative or home rule charter of the municipality. Solicitation

mailing lists of potential contractors of supplies, services, and construction shall include but need not be limited to prequalified contractors. Prequalification shall not foreclose a written determination:

- (1) Between the time of the bid opening or receipt of offers and the making of an award, that a prequalified supplier is not responsible; or
- (2) That a supplier who is not prequalified at the time of bid opening or receipt of offers is responsible.

45-55-13. Exclusion of state mandated costs.

The provisions of 45-13-7 through 45-13-10 do not apply to this section.

45-55-13.1. Exclusion of multi-cities or towns insurance corporations and cooperative risk management programs.

The provisions of this chapter shall not apply to entities organized pursuant to section 45-5-20.1. Those entities are exempt from all of the provisions of this chapter .

45-55-13.2. Exclusion of multi-cities or towns energy aggregation programs.

The provisions of this chapter do not apply to entities organized for the purpose of negotiating the purchase of electric power pursuant to § 39-3-1.1, or energy or energy related services. Those entities are exempt from all provisions of this chapter.

45-55-13.3. Exclusion of multi-school district combined purchasing consortia

The provisions of this chapter do not apply to purchases and contracts entered into by those consortia established pursuant to § 16-2-9.2, and such entities shall be exempt from all provisions of this chapter.

45-55-14. Staff consultants.

The procurement of the service of an attorney, physician or dentist by a municipality, is exempt from the provisions of this chapter.

45-55-15. Severability.

If any one or more sections, clauses, sentences or parts of this chapter are for any reason be adjudged unconstitutional or otherwise invalid in any court, that judgment shall not affect, impair or invalidate the remaining provisions of this chapter but shall be confined in its operation to the specific provisions so held unconstitutional or invalid and the inapplicability or invalidity of any section, clause or provisions of this chapter in any one or more instances or circumstances shall not be taken to affect or prejudice in any way its applicability or validity in any other instance.

45-55-16. Prohibition against the use of lead based paints.

When purchasing paint products or contracting or subcontracting for painting, construction, improvement, completion, or repair of any public buildings, public road, public bridge, or public construction, all municipalities, as defined by 45-55-4(11), shall be prohibited from the use of lead based paint.

STATE CONTRACT ADDENDUM
RHODE ISLAND DEPARTMENT OF LABOR AND TRAINING
PREVAILING WAGE REQUIREMENTS
(37-13-1 ET SEQ.)

The prevailing wage requirements are generally set forth in RIGL 37-13-1 et seq. These requirements refer to the prevailing rate of pay for regular, holiday, and overtime wages to be paid to each craftsmen, mechanic, teamster, laborer, or other type of worker performing work on public works projects when state or municipal funds exceed one thousand dollars (\$1,000).

All Prevailing Wage Contractors and Subcontractors are required to:

1. Submit to the Awarding Authority a list of the contractor's subcontractors for any part or all of the prevailing wage work in accordance with RIGL § 37-13-4;
2. Pay all prevailing wage employees at least once per week and in accordance with RIGL §37-13-7 (see Appendix B attached);
3. Post the prevailing wage rate scale and the Department of Labor and Training's prevailing wage poster in a prominent and easily accessible place on the work site in accordance with RIGL §37-13-11; posters may be downloaded at www.dlt.ri.gov/pw/Posters.htm or obtained from the Department of Labor and Training, Center General Complex, 1511 Pontiac Avenue, Cranston, Rhode Island;
4. Access the Department of Labor and Training website, at www.dlt.ri.gov on or before July 1st of each year, until such time as the contract is completed, to ascertain the current prevailing wage rates and the amount of payment or contributions for each covered prevailing wage employee and make any necessary adjustments to the covered employee's prevailing wage rates effective July 1st of each year in compliance with RIGL §37-13-8;
5. Attach a copy of this CONTRACT ADDENDUM and its attachments as a binding obligation to any and all contracts between the contractor and any subcontractors and their assignees for prevailing wage work performed pursuant to this contract;
6. Provide for the payment of overtime for prevailing wage employees who work in excess of eight (8) hours in any one day or forty (40) hours in any one week as provided by RIGL §37-13-10;

7. Maintain accurate prevailing wage employee payroll records on a Rhode Island Certified Weekly Payroll form available for download at www.dlt.ri.gov/pw.forms/htm, as required by RIGL §37-13-13, and make those records available to the Department of Labor and Training upon request;
8. Furnish the fully executed RI Certified Weekly Payroll Form to the awarding authority on a monthly basis for all work completed in the preceding month.
9. For general or primary contracts one million dollars (\$1,000,000) or more, shall maintain on the work site a fully executed RI Certified Prevailing Wage Daily Log listing the contractor's employees employed each day on the public works site; the RI Certified Prevailing Wage Daily Log shall be available for inspection on the public works site at all times; this rule shall not apply to road, highway, or bridge public works projects. Where applicable, furnish both the Rhode Island Certified Prevailing Wage Daily Log together with the Rhode Island Weekly Certified Payroll to the awarding authority.
10. Assure that all covered prevailing wage employees on construction projects with a total project cost of one hundred thousand dollars (\$100,000) or more has a OSHA ten (10) hour construction safety certification in compliance with RIGL § 37-23-1;
11. Employ apprentices for the performance of the awarded contract when the contract is valued at one million dollars (\$1,000,000) or more, and comply with the apprentice to journeyperson ratio for each trade approved by the apprenticeship council of the Department of Labor and Training in compliance with RIGL §37-13-3.1;
12. Assure that all prevailing wage employees who perform work which requires a Rhode Island trade license possess the appropriate Rhode Island trade license in compliance with Rhode Island law; and
13. Comply with all applicable provisions of RIGL §37-13-1, et. seq;

Any questions or concerns regarding this CONTRACT ADDENDUM should be addressed to the contractor or subcontractor's attorney. Additional Prevailing Wage information may be obtained from the Department of Labor and Training at www.dlt.ri.gov/pw.

CERTIFICATION

I hereby certify that I have reviewed this CONTRACT ADDENDUM and understand my obligations as stated above.

By: _____

Title: _____

Subscribed and sworn before me this ____ day of _____, 20__.

Notary Public
My commission expires: _____

DAVIS-BACON PREVAILING WAGE REQUIREMENTS

(a) GENERAL CONTRACT AND SUBCONTRACT PROVISIONS

For any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment work under the CWSRF or a construction project under the DWSRF financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in §5.1 or the FY 2010 appropriation, the following clauses shall be inserted in full:

(1) Minimum Wages

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in §5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

Wage determinations may be obtained from the U.S. Department of Labor's website, www.dol.gov.

(ii)(A) The Owner, on behalf of the EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The State award official shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Owner agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the Owner to the State award official. The State award official will transmit the request to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210 and to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the Owner do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the award official shall refer the questions, including the views of all interested parties and the recommendation of the State award official, to the Administrator for determination. The request shall be sent to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding

The Owner, shall upon written request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this

contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and Basic Records

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Owner, that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the Owner shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly payrolls. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the owner for transmission to the State or EPA if requested by EPA, the State, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of

compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the Owner.

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and Trainees

(i) *Apprentices.* Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of

Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) *Trainees*. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) *Equal employment opportunity*. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) Compliance with Copeland Act Requirements

The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts

The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the (write in the name of the Federal agency) may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract Termination: Debarment

A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act Requirements

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes Concerning Labor Standards

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the Owner, the State, EPA, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of Eligibility

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(b) CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

For any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act, the following clauses set forth in paragraphs (b) (1), (2), (3) and (4) of this section shall be inserted in full. These clauses shall be inserted in addition to the clauses required in Section (a), above or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) Overtime Requirements

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; Liability for Unpaid Wages; Liquidated Damages

In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

(3) Withholding for Unpaid Wages and Liquidated Damages

The Owner, upon written request of the EPA Award Official or an authorized representative of the Department of Labor shall withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) Subcontracts

The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

(c) MAINTENANCE OF RECORDS

In addition to the clauses contained in Section (a), above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in §5.1 the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. The records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Owner, the State, EPA and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

(d) COMPLIANCE VERIFICATION

(1) The Owner shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(6), all interviews must be conducted in confidence. The Owner must use Standard Form 1445 (SF 1445) or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.

(2) The Owner shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, the Owner should conduct interviews with a representative group of covered employees within two weeks of each contractor or subcontractor's submission of its initial weekly payroll data and two weeks prior to the estimated completion date for the contract or subcontract. Owners must conduct more frequent interviews if the initial interviews or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB . Owners shall immediately conduct necessary interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.

(3) The Owner shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The Owner shall establish and follow a spot check schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable, the Owner should spot check payroll data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract . Owners must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. In addition, during the examinations the Owner shall verify evidence of fringe benefit plans and payments thereunder by contractors and subcontractors who claim credit for fringe benefit contributions.

(4) The Owner shall periodically review contractors and subcontractors use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees

and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.

(5) Owners must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office listed at <http://www.dol.gov/esa/contacts/whd/america2.htm>.

APPENDIX A

TITLE 37
Public Property and Works

CHAPTER 37-13
Labor and Payment of Debts by Contractors

SECTION 37-13-5

§ 37-13-5 Payment for trucking or materials furnished – Withholding of sums due. – A contractor or subcontractor on public works authorized by a proper authority shall pay any obligation or charge for trucking and material which have been furnished for the use of the contractor or subcontractor, in connection with the public works being performed by him or her, within ninety (90) days after the obligation or charge is incurred or the trucking service has been performed or the material has been delivered to the site of the work, whichever is later. When it is brought to the notice of the proper authority in a city or town, or the proper authority in the state having supervision of the contract, that the obligation or charge has not been paid by the contractor or subcontractor, the proper authority may deduct and hold for a period not exceeding sixty (60) days, from sums of money due to the contractor or subcontractor, the equivalent amount of such sums certified by a trucker or materialman creditor as due him or her, as provided in this section, and which the proper authority determines is reasonable for trucking performed or materials furnished for the public works.

APPENDIX B

TITLE 37

Public Property and Works

CHAPTER 37-13

Labor and Payment of Debts by Contractors

SECTION 37-13-7

§ 37-13-7 Specification in contract of amount and frequency of payment of wages.

– (a) Every call for bids for every contract in excess of one thousand dollars (\$1,000), to which the state of Rhode Island or any political subdivision thereof or any public agency or quasi-public agency is a party, for construction, alteration, and/or repair, including painting and decorating, of public buildings or public works of the state of Rhode Island or any political subdivision thereof, or any public agency or quasi-public agency and which requires or involves the employment of employees, shall contain a provision stating the minimum wages to be paid various types of employees which shall be based upon the wages that will be determined by the director of labor and training to be prevailing for the corresponding types of employees employed on projects of a character similar to the contract work in the city, town, village, or other appropriate political subdivision of the state of Rhode Island in which the work is to be performed. Every contract shall contain a stipulation that the contractor or his or her subcontractor shall pay all the employees employed directly upon the site of the work, unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment computed at wage rates not less than those stated in the call for bids, regardless of any contractual relationships which may be alleged to exist between the contractor or subcontractor and the employees, and that the scale of wages to be paid shall be posted by the contractor in a prominent and easily accessible place at the site of the work; and the further stipulation that there may be withheld from the contractor so much of the accrued payments as may be considered necessary to pay to the employees employed by the contractor, or any subcontractor on the work, the difference between the rates of wages required by the contract to be paid the employees on the work and the rates of wages received by the employees and not refunded to the contractor, subcontractors, or their agents.

(b) The terms "wages", "scale of wages", "wage rates", "minimum wages", and "prevailing wages" shall include:

- (1) The basic hourly rate of pay; and
- (2) The amount of:

(A) The rate of contribution made by a contractor or subcontractor to a trustee or to a third person pursuant to a fund, plan, or program; and

(B) The rate of costs to the contractor or subcontractor which may be reasonably anticipated in providing benefits to employees pursuant to an enforceable commitment to carry out a financially responsible plan or program which was communicated in writing to the employees affected, for medical or hospital care, pensions on retirement or death, compensation for injuries or illness resulting from occupational activity, or insurance to provide any of the foregoing, for unemployment benefits, life insurance, disability and sickness insurance, or accident insurance, for vacation and holiday pay, for defraying costs of apprenticeship or other similar programs, or for other bona fide fringe benefits, but only where the contractor or subcontractor is not required by other federal, state, or local law to provide any of the benefits; provided, that the obligation of a contractor or subcontractor to make payment in accordance with the prevailing wage determinations of the director of labor and training insofar as this chapter of this title and other acts incorporating this chapter of this title by reference are concerned may be discharged by the making of payments in cash, by the making of contributions of a type referred to in subsection (b)(2), or by the assumption of an enforceable commitment to bear the costs of a plan or program of a type referred to in this subdivision, or any combination thereof, where the aggregate of any payments, contributions, and costs is not less than the rate of pay described in subsection (b)(1) plus the amount referred to in subsection (b)(2).

(c) The term "employees", as used in this section, shall include employees of contractors or subcontractors performing jobs on various types of public works including mechanics, apprentices, teamsters, chauffeurs, and laborers engaged in the transportation of gravel or fill to the site of public works, the removal and/or delivery of gravel or fill or ready-mix concrete, sand, bituminous stone, or asphalt flowable fill from the site of public works, or the transportation or removal of gravel or fill from one location to another on the site of public works, and the employment of the employees shall be subject to the provisions of subsections (a) and (b).

(d) The terms "public agency" and "quasi-public agency" shall include, but not be limited to, the Rhode Island industrial recreational building authority, the Rhode Island economic development corporation, the Rhode Island airport corporation, the Rhode Island industrial facilities corporation, the Rhode Island refunding bond authority, the Rhode Island housing and mortgage finance corporation, the Rhode Island resource recovery corporation, the Rhode Island public transit authority, the Rhode Island student loan authority, the water resources board corporate, the Rhode Island health and education building corporation, the Rhode Island higher education assistance authority, the Rhode Island turnpike and bridge authority, the Narragansett Bay water quality management district commission, Rhode Island telecommunications authority, the convention center authority, the board of governors for higher education, the board of regents for elementary and secondary education, the capital center commission, the housing resources commission, the Quonset Point-Davisville management corporation, the Rhode Island children's crusade for higher education, the Rhode Island depositors economic protection corporation, the Rhode Island lottery commission, the Rhode Island

partnership for science and technology, the Rhode Island public building authority, and the Rhode Island underground storage tank board.

DEBARMENT & SUSPENSION

Executive Order 12549--Debarment and Suspension

Source: The provisions of Executive Order 12549 of Feb. 18, 1986, appear at 51 FR 6370, 3 CFR, 1986 Comp., p. 189, unless otherwise noted.

By the authority vested in me as President by the Constitution and laws of the United States of America, and in order to curb fraud, waste, and abuse in Federal programs, increase agency accountability, and ensure consistency among agency regulations concerning debarment and suspension of participants in Federal programs, it is hereby ordered that:

Section 1. (a) To the extent permitted by law and subject to the limitations in Section 1(c), Executive departments and agencies shall participate in a system for debarment and suspension from programs and activities involving Federal financial and nonfinancial assistance and benefits. Debarment or suspension of a participant in a program by one agency shall have government-wide effect.

(b) Activities covered by this Order include but are not limited to: grants, cooperative agreements, contracts of assistance, loans, and loan guarantees.

(c) This Order does not cover procurement programs and activities, direct Federal statutory entitlements or mandatory awards, direct awards to foreign governments or public international organizations, benefits to an individual as a personal entitlement, or Federal employment.

Sec. 2. To the extent permitted by law, Executive departments and agencies shall:

(a) Follow government-wide criteria and government-wide minimum due process procedures when they act to debar or suspend participants in affected programs.

(b) Send to the agency designated pursuant to Section 5 identifying information concerning debarred and suspended participants in affected programs, participants who have agreed to exclusion from participation, and participants declared ineligible under applicable law, including Executive Orders. This information shall be included in the list to be maintained pursuant to Section 5.

(c) Not allow a party to participate in any affected program if any Executive department or agency has debarred, suspended, or otherwise excluded (to the extent specified in the exclusion agreement) that party from participation in an affected program. An agency may grant an exception permitting a debarred, suspended, or excluded party to participate in a particular transaction upon a written determination by the agency head or authorized designee stating the reason(s) for deviating from this Presidential policy. However, I intend that exceptions to this policy should be granted only infrequently.

Sec. 3. Executive departments and agencies shall issue regulations governing their implementation of this Order that shall be consistent with the guidelines issued under Section 6. Proposed regulations shall be submitted to the Office of Management and Budget for review within four months of the date of the guidelines issued under Section 6. The Director of the Office of Management and Budget may return for reconsideration proposed regulations that the Director believes are inconsistent with the guidelines. Final regulations shall be published within twelve months of the date of the guidelines.

Sec. 4. There is hereby constituted the Interagency Committee on Debarment and Suspension, which shall monitor implementation of this Order. The Committee shall consist of representatives of agencies designated by the Director of the Office of Management and Budget.

Sec. 5. The Director of the Office of Management and Budget shall designate a Federal agency to perform the following functions: maintain a current list of all individuals and organizations excluded from program participation under this Order, periodically distribute the list to Federal agencies, and study the feasibility of automating the list; coordinate with the lead agency responsible for government-wide debarment and suspension of contractors; chair the Interagency Committee established by Section 4; and report periodically to the Director on implementation of this Order, with the first report due within two years of the date of the Order.

Sec. 6. The Director of the Office of Management and Budget is authorized to issue guidelines to Executive departments and agencies that govern which programs and activities are covered by this Order, prescribe government-wide criteria and government-wide minimum due process procedures, and set forth other related details for the effective administration of the guidelines.

Sec. 7. The Director of the Office of Management and Budget shall report to the President within three years of the date of this Order on Federal agency compliance with the Order, including the number of exceptions made under Section 2(c), and shall make recommendations as are appropriate further to curb fraud, waste, and abuse.

Implementation in the SRF Programs

A company or individual who is debarred or suspended cannot participate in primary and lower-tiered covered transactions. These transactions include SRF loans and contracts and subcontracts awarded with SRF loan funds.

Under 40 C.F.R. 32.510, the SRF agency must submit a certification stating that it shall not knowingly enter into any transaction with a person who is proposed for debarment, suspended, declared ineligible, or voluntarily excluded from participation in the SRF program. This certification is reviewed by the EPA regional office before the capitalization grant is awarded.

A recipient of SRF assistance directly made available by capitalization grants must provide a certification that it will not knowingly enter into a contract with anyone who is ineligible under the regulations to participate in the project. Contractors on the project have to provide a similar certification prior to the award of a contract and subcontractors on the project have to provide the general contractor with the certification prior to the award of any subcontract.

In addition to actions taken under 40 C.F.R. Part 32, there are a wide range of other sanctions that can render a party ineligible to participate in the SRF program. Lists of debarred, suspended and otherwise ineligible parties are maintained by the General Services Administration and should be checked by the SRF agency and all recipients of funds directly made available by capitalization grants to ensure the accuracy of certifications.

Additional References

C 40 C.F.R. Part 32: EPA Regulations on Debarment and Suspension.

**CERTIFICATION REGARDING DEBARMENT & SUSPENSION
AND OTHER RESPONSIBILITY MATTERS**

In accordance with the Executive Order 12549, the prospective primary participant certifies to the best of his / her knowledge and belief, that its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offence in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification.
- d. Have not within a three-year period preceding this application / proposal had one or more public transactions (federal, state, or local) terminated for cause of default.
- e. Acknowledge that all sub-contractors selected for this project must be in compliance with paragraphs (1) (a – d) of this certification.

Name and Title of Authorized Agent

Date

Signature of Authorized Agent

_____ I am unable to certify to the above statements. My explanation is attached.

Good Faith Efforts

What is the Purpose of the Good Faith Efforts?

The Good Faith Efforts are methods employed by all EPA financial assistance agreement recipients to ensure that disadvantaged business enterprises (DBEs) have the opportunity to compete for procurements funded by EPA financial assistance funds.

What Are the Good Faith Efforts?

- ❖ Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and local government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
- ❖ Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
- ❖ Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and local Government recipients, this will include dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
- ❖ Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
- ❖ Use the services and assistance of the SBA and the Minority Business Development Agency of the Department of Commerce.
- ❖ If the prime contractor awards subcontracts, require the prime contractor to take the steps in paragraphs (a) through (e) of this section.

What are the New Contract Administration Provisions?

When the DBE rule goes into effect, there are a number of new provisions designed to prevent unfair practices that adversely affect DBEs. Those provisions are as follows:

- ❖ A recipient must require its prime contractor to pay its subcontractor for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the recipient.
- ❖ A recipient must be notified in writing by its prime contractor prior to any

termination of a DBE subcontractor for convenience by the prime contractor.

- ❖ If a DBE subcontractor fails to complete work under the subcontract for any reason, the recipient must require the prime contractor to employ the Six Good Faith Efforts if soliciting a replacement subcontractor.
- ❖ A recipient must require its prime contractor to employ the Six Good Faith Efforts even if the prime contractor has achieved its fair share objectives.

What are the New Forms Associated With the New Contract Administration Provisions?

EPA Form 6100-2 - DBE Program Subcontractor Participation Form. This form gives a DBE subcontractor the opportunity to describe the work the DBE subcontractor received from the prime contractor, how much the DBE subcontractor was paid and any other concerns the DBE subcontractor might have.

EPA Form 6100-3 - DBE Program Subcontractor Performance Form. This form captures an intended subcontractor's description of work to be performed for the prime contractor and the price of the work submitted to the prime.

EPA Form 6100-4 – DBE Program Subcontractor Utilization Form. This form captures the prime's intended use of an identified DBE subcontractor, and the estimated dollar amount of the subcontract.

Form	Requirement	Provided By	Completed By	Submitted To
EPA Form 6100-2	Recipients required to have prime contractors provide form to Subcontractors	Prime Contractors	DBE Subcontractors	EPA DBE Coordinator
EPA Form 6100-3	Recipients required to have prime contractors provide form to Subcontractors	Prime Contractors	DBE Subcontractors	Recipients as part of bid or proposal package
EPA Form 6100-4	Recipients required to have prime contractors complete the form	Recipients	Prime Contractors	Recipients as part of bid or proposal package

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Participation Form**

An EPA Financial Assistance Agreement Recipient must require its prime contractors to provide this form to its DBE subcontractors. This form gives a DBE¹ subcontractor² the opportunity to describe work received and/or report any concerns regarding the EPA-funded project (e.g., in areas such as termination by prime contractor, late payments, etc.). The DBE subcontractor can, as an option, complete and submit this form to the EPA DBE Coordinator at any time during the project period of performance.

Subcontractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Prime Contractor Name		Issuing/Funding Entity:	

Contract Item Number	Description of Work Received from the Prime Contractor Involving Construction, Services, Equipment or Supplies	Amount Received by Prime Contractor

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Participation Form**

Please use the space below to report any concerns regarding the above EPA-funded project:

Subcontractor Signature	Print Name
Title	Date

The public reporting and recordkeeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Performance Form**

This form is intended to capture the DBE¹ subcontractor's² description of work to be performed and the price of the work submitted to the prime contractor. An EPA Financial Assistance Agreement Recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractors bid or proposal package.

Subcontractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Prime Contractor Name		Issuing/Funding Entity:	

Contract Item Number	Description of Work Submitted to the Prime Contractor Involving Construction, Services, Equipment or Supplies	Price of Work Submitted to the Prime Contractor
DBE Certified By: <input type="checkbox"/> DOT <input type="checkbox"/> SBA <input type="checkbox"/> Other: _____		Meets/ exceeds EPA certification standards? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> Unknown

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Performance Form**

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
Title	Date

Subcontractor Signature	Print Name
Title	Date

The public reporting and recordkeeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Utilization Form**

This form is intended to capture the prime contractor's actual and/or anticipated use of identified certified DBE¹ subcontractors² and the estimated dollar amount of each subcontract. An EPA Financial Assistance Agreement Recipient must require its prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

Prime Contractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Issuing/Funding Entity:			

I have identified potential DBE certified subcontractors	__ YES	__ NO	
If yes, please complete the table below. If no, please explain:			
Subcontractor Name/ Company Name	Company Address/ Phone/ Email	Est. Dollar Amt	Currently DBE Certified?

Continue on back if needed

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Utilization Form**

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
Title	Date

The public reporting and recordkeeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.



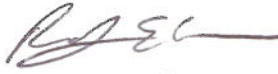
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

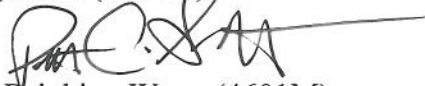
MAR 20 2014

OFFICE OF WATER

MEMORANDUM

SUBJECT: Implementation of American Iron and Steel provisions of P.L. 113-76,
Consolidated Appropriations Act, 2014

FROM: For Andrew D. Sawyers, Director 
Office of Wastewater Management (4201M)

Peter C. Grevatt, Director 
Office of Ground Water and Drinking Water (4601M)

TO: Water Management Division Directors
Regions I - X

P.L. 113-76, Consolidated Appropriations Act, 2014 (Act), includes an “American Iron and Steel (AIS)” requirement in section 436 that requires Clean Water State Revolving Loan Fund (CWSRF) and Drinking Water State Revolving Loan Fund (DWSRF) assistance recipients to use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, or repair of a public water system or treatment works if the project is funded through an assistance agreement executed beginning January 17, 2014 (enactment of the Act), through the end of Federal Fiscal Year 2014.

Section 436 also sets forth certain circumstances under which EPA may waive the AIS requirement. Furthermore, the Act specifically exempts projects where engineering plans and specifications were approved by a State agency prior to January 17, 2014.

The approach described below explains how EPA will implement the AIS requirement. The first section is in the form of questions and answers that address the types of projects that must comply with the AIS requirement, the types of products covered by the AIS requirement, and compliance. The second section is a step-by-step process for requesting waivers and the circumstances under which waivers may be granted.

Implementation

The Act states:

Sec. 436. (a)(1) None of the funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12) shall be used for a project for the construction, alteration, maintenance, or repair of a public water system or treatment works unless all of the iron and steel products used in the project are produced in the United States.

(2) In this section, the term “iron and steel products” means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.

(b) Subsection (a) shall not apply in any case or category of cases in which the Administrator of the Environmental Protection Agency (in this section referred to as the “Administrator”) finds that—

(1) applying subsection (a) would be inconsistent with the public interest;

(2) iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or

(3) inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

(c) If the Administrator receives a request for a waiver under this section, the Administrator shall make available to the public on an informal basis a copy of the request and information available to the Administrator concerning the request, and shall allow for informal public input on the request for at least 15 days prior to making a finding based on the request. The Administrator shall make the request and accompanying information available by electronic means, including on the official public Internet Web site of the Environmental Protection Agency.

(d) This section shall be applied in a manner consistent with United States obligations under international agreements.

(e) The Administrator may retain up to 0.25 percent of the funds appropriated in this Act for the Clean and Drinking Water State Revolving Funds for carrying out

the provisions described in subsection (a)(1) for management and oversight of the requirements of this section.

(f) This section does not apply with respect to a project if a State agency approves the engineering plans and specifications for the project, in that agency's capacity to approve such plans and specifications prior to a project requesting bids, prior to the date of the enactment of this Act.

The following questions and answers provide guidance for implementing and complying with the AIS requirements:

Project Coverage

1) What classes of projects are covered by the AIS requirement?

All treatment works projects funded by a CWSRF assistance agreement, and all public water system projects funded by a DWSRF assistance agreement, from the date of enactment through the end of Federal Fiscal Year 2014, are covered. The AIS requirements apply to the entirety of the project, no matter when construction begins or ends. Additionally, the AIS requirements apply to all parts of the project, no matter the source of funding.

2) Does the AIS requirement apply to nonpoint source projects or national estuary projects?

No. Congress did not include an AIS requirement for nonpoint source and national estuary projects unless the project can also be classified as a 'treatment works' as defined by section 212 of the Clean Water Act.

3) Are any projects for the construction, alteration, maintenance, or repair of a public water system or treatment works excluded from the AIS requirement?

Any project, whether a treatment works project or a public water system project, for which engineering plans and specifications were approved by the responsible state agency prior to January 17, 2014, is excluded from the AIS requirements.

4) What if the project does not have approved engineering plans and specifications but has signed an assistance agreement with a CWSRF or DWSRF program prior to January 17, 2014?

The AIS requirements do not apply to any project for which an assistance agreement was signed prior to January 17, 2014.

5) What if the project does not have approved engineering plans and specifications, but bids were advertised prior to January 17, 2014 and an assistance agreement was signed after January 17, 2014?

If the project does not require approved engineering plans and specifications, the bid advertisement date will count in lieu of the approval date for purposes of the exemption in section 436(f).

6) What if the assistance agreement that was signed prior to January 17, 2014, only funded a part of the overall project, where the remainder of the project will be funded later with another SRF loan?

If the original assistance agreement funded any construction of the project, the date of the original assistance agreement counts for purposes of the exemption. If the original assistance agreement was only for planning and design, the date of that assistance agreement will count for purposes of the exemption only if there is a written commitment or expectation on the part of the assistance recipient to fund the remainder of the project with SRF funds.

7) What if the assistance agreement that was signed prior to January 17, 2014, funded the first phase of a multi-phase project, where the remaining phases will be funded by SRF assistance in the future?

In such a case, the phases of the project will be considered a single project if all construction necessary to complete the building or work, regardless of the number of contracts or assistance agreements involved, are closely related in purpose, time and place. However, there are many situations in which major construction activities are clearly undertaken in phases that are distinct in purpose, time, or place. In the case of distinct phases, projects with engineering plans and specifications approval or assistance agreements signed prior to January 17, 2014 would be excluded from AIS requirements while those approved/signed on January 17, 2014, or later would be covered by the AIS requirements.

8) What if a project has split funding from a non-SRF source?

Many States intend to fund projects with “split” funding, from the SRF program and from State or other programs. Based on the Act language in section 436, which requires that American iron and steel products be used in any project for the construction, alteration, maintenance, or repair of a public water system or treatment works receiving SRF funding between and including January 17, 2014 and September 30, 2014, any project that is funded in whole or in part with such funds must comply with the AIS requirement. A “project” consists of all construction necessary to complete the building or work regardless of the number of contracts or assistance agreements involved so long as all contracts and assistance agreements awarded are closely related in purpose, time and place. This precludes the intentional splitting of SRF projects into separate and smaller contracts or assistance agreements to avoid AIS coverage on some portion of a larger

project, particularly where the activities are integrally and proximately related to the whole. However, there are many situations in which major construction activities are clearly undertaken in separate phases that are distinct in purpose, time, or place, in which case, separate contracts or assistance agreement for SRF and State or other funding would carry separate requirements.

9) What about refinancing?

If a project began construction, financed from a non-SRF source, prior to January 17, 2014, but is refinanced through an SRF assistance agreement executed on or after January 17, 2014 and prior to October 1, 2014, AIS requirements will apply to all construction that occurs on or after January 17, 2014, through completion of construction, unless, as is likely, engineering plans and specifications were approved by a responsible state agency prior to January 17, 2014. There is no retroactive application of the AIS requirements where a refinancing occurs for a project that has completed construction prior to January 17, 2014.

10) Do the AIS requirements apply to any other EPA programs, besides the SRF program, such as the Tribal Set-aside grants or grants to the Territories and DC?

No, the AIS requirement only applies to funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12)

Covered Iron and Steel Products

11) What is an iron or steel product?

For purposes of the CWSRF and DWSRF projects that must comply with the AIS requirement, an iron or steel product is one of the following made primarily of iron or steel that is permanently incorporated into the public water system or treatment works:

- Lined or unlined pipes or fittings;
- Manhole Covers;
- Municipal Castings (defined in more detail below);
- Hydrants;
- Tanks;
- Flanges;
- Pipe clamps and restraints;
- Valves;
- Structural steel (defined in more detail below);
- Reinforced precast concrete; and
- Construction materials (defined in more detail below).

12) What does the term ‘primarily iron or steel’ mean?

‘Primarily iron or steel’ places constraints on the list of products above. For one of the listed products to be considered subject to the AIS requirements, it must be made of greater than 50% iron or steel, measured by cost. The cost should be based on the material costs.

13) Can you provide an example of how to perform a cost determination?

For example, the iron portion of a fire hydrant would likely be the bonnet, body and shoe, and the cost then would include the pouring and casting to create those components. The other material costs would include non-iron and steel internal workings of the fire hydrant (i.e., stem, coupling, valve, seals, etc). However, the assembly of the internal workings into the hydrant body would not be included in this cost calculation. If one of the listed products is not made primarily of iron or steel, United States (US) provenance is not required. An exception to this definition is reinforced precast concrete, which is addressed in a later question.

14) If a product is composed of more than 50% iron or steel, but is not listed in the above list of items, must the item be produced in the US? Alternatively, must the iron or steel in such a product be produced in the US?

The answer to both question is no. Only items on the above list must be produced in the US. Additionally, the iron or steel in a non-listed item can be sourced from outside the US.

15) What is the definition of steel?

Steel means an alloy that includes at least 50 percent iron, between .02 and 2 percent carbon, and may include other elements. Metallic elements such as chromium, nickel, molybdenum, manganese, and silicon may be added during the melting of steel for the purpose of enhancing properties such as corrosion resistance, hardness, or strength. The definition of steel covers carbon steel, alloy steel, stainless steel, tool steel and other specialty steels.

16) What does ‘produced in the United States’ mean?

Production in the United States of the iron or steel products used in the project requires that all manufacturing processes, including application of coatings, must take place in the United States, with the exception of metallurgical processes involving refinement of steel additives. All manufacturing processes includes processes such as melting, refining, forming, rolling, drawing, finishing, fabricating and coating. Further, if a domestic iron and steel product is taken out of the US for any part of the manufacturing process, it becomes foreign source material. However, raw materials such as iron ore, limestone and iron and steel scrap are not covered by the AIS requirement, and the

material(s), if any, being applied as a coating are similarly not covered. Non-iron or steel components of an iron and steel product may come from non-US sources. For example, for products such as valves and hydrants, the individual non-iron and steel components do not have to be of domestic origin.

17) Are the raw materials used in the production of iron or steel required to come from US sources?

No. Raw materials, such as iron ore, limestone, scrap iron, and scrap steel, can come from non-US sources.

18) If an above listed item is primarily made of iron or steel, but is only at the construction site temporarily, must such an item be produced in the US?

No. Only the above listed products made primarily of iron or steel, permanently incorporated into the project must be produced in the US. For example trench boxes, scaffolding or equipment, which are removed from the project site upon completion of the project, are not required to be made of U.S. Iron or Steel.

19) What is the definition of ‘municipal castings’?

Municipal castings are cast iron or steel infrastructure products that are melted and cast. They typically provide access, protection, or housing for components incorporated into utility owned drinking water, storm water, wastewater, and surface infrastructure. They are typically made of grey or ductile iron, or steel. Examples of municipal castings are:

- Access Hatches;
- Ballast Screen;
- Benches (Iron or Steel);
- Bollards;
- Cast Bases;
- Cast Iron Hinged Hatches, Square and Rectangular;
- Cast Iron Riser Rings;
- Catch Basin Inlet;
- Cleanout/Monument Boxes;
- Construction Covers and Frames;
- Curb and Corner Guards;
- Curb Openings;
- Detectable Warning Plates;
- Downspout Shoes (Boot, Inlet);
- Drainage Grates, Frames and Curb Inlets;
- Inlets;
- Junction Boxes;
- Lampposts;
- Manhole Covers, Rings and Frames, Risers;

Meter Boxes;
Service Boxes;
Steel Hinged Hatches, Square and Rectangular;
Steel Riser Rings;
Trash receptacles;
Tree Grates;
Tree Guards;
Trench Grates; and
Valve Boxes, Covers and Risers.

20) What is ‘structural steel’?

Structural steel is rolled flanged shapes, having at least one dimension of their cross-section three inches or greater, which are used in the construction of bridges, buildings, ships, railroad rolling stock, and for numerous other constructional purposes. Such shapes are designated as wide-flange shapes, standard I-beams, channels, angles, tees and zees. Other shapes include H-piles, sheet piling, tie plates, cross ties, and those for other special purposes.

21) What is a ‘construction material’ for purposes of the AIS requirement?

Construction materials are those articles, materials, or supplies made primarily of iron and steel, that are permanently incorporated into the project, not including mechanical and/or electrical components, equipment and systems. Some of these products may overlap with what is also considered “structural steel”. This includes, but is not limited to, the following products: wire rod, bar, angles, concrete reinforcing bar, wire, wire cloth, wire rope and cables, tubing, framing, joists, trusses, fasteners (i.e., nuts and bolts), welding rods, decking, grating, railings, stairs, access ramps, fire escapes, ladders, wall panels, dome structures, roofing, ductwork, surface drains, cable hanging systems, manhole steps, fencing and fence tubing, guardrails, doors, and stationary screens.

22) What is not considered a ‘construction material’ for purposes of the AIS requirement?

Mechanical and electrical components, equipment and systems are not considered construction materials. Mechanical equipment is typically that which has motorized parts and/or is powered by a motor. Electrical equipment is typically any machine powered by electricity and includes components that are part of the electrical distribution system.

The following examples (including their appurtenances necessary for their intended use and operation) are NOT considered construction materials: pumps, motors, gear reducers, drives (including variable frequency drives (VFDs)), electric/pneumatic/manual accessories used to operate valves (such as electric valve actuators), mixers, gates, motorized screens (such as traveling screens), blowers/aeration equipment, compressors, meters, sensors, controls and switches, supervisory control and

data acquisition (SCADA), membrane bioreactor systems, membrane filtration systems, filters, clarifiers and clarifier mechanisms, rakes, grinders, disinfection systems, presses (including belt presses), conveyors, cranes, HVAC (excluding ductwork), water heaters, heat exchangers, generators, cabinetry and housings (such as electrical boxes/enclosures), lighting fixtures, electrical conduit, emergency life systems, metal office furniture, shelving, laboratory equipment, analytical instrumentation, and dewatering equipment.

23) If the iron or steel is produced in the US, may other steps in the manufacturing process take place outside of the US, such as assembly?

No. Production in the US of the iron or steel used in a listed product requires that all manufacturing processes must take place in the United States, except metallurgical processes involving refinement of steel additives.

24) What processes must occur in the US to be compliant with the AIS requirement for reinforced precast concrete?

While reinforced precast concrete may not be at least 50% iron or steel, in this particular case, the reinforcing bar and wire must be produced in the US and meet the same standards as for any other iron or steel product. Additionally, the casting of the concrete product must take place in the US. The cement and other raw materials used in concrete production are not required to be of domestic origin.

If the reinforced concrete is cast at the construction site, the reinforcing bar and wire are considered to be a construction material and must be produced in the US.

Compliance

25) How should an assistance recipient document compliance with the AIS requirement?

In order to ensure compliance with the AIS requirement, specific AIS contract language must be included in each contract, starting with the assistance agreement, all the way down to the purchase agreements. Sample language for assistance agreements and contracts can be found in Appendix 3 and 4.

EPA recommends the use of a step certification process, similar to one used by the Federal Highway Administration. The step certification process is a method to ensure that producers adhere to the AIS requirement and assistance recipients can verify that products comply with the AIS requirement. The process also establishes accountability and better enables States to take enforcement actions against violators.

Step certification creates a paper trail which documents the location of the manufacturing process involved with the production of steel and iron materials. A step certification is a process under which each handler (supplier, fabricator, manufacturer,

processor, etc) of the iron and steel products certifies that their step in the process was domestically performed. Each time a step in the manufacturing process takes place, the manufacturer delivers its work along with a certification of its origin. A certification can be quite simple. Typically, it includes the name of the manufacturer, the location of the manufacturing facility where the product or process took place (not its headquarters), a description of the product or item being delivered, and a signature by a manufacturer's responsible party. Attached, as Appendix 5, are sample certifications. These certifications should be collected and maintained by assistance recipients.

Alternatively, the final manufacturer that delivers the iron or steel product to the worksite, vendor, or contractor, may provide a certification asserting that all manufacturing processes occurred in the US. While this type of certification may be acceptable, it may not provide the same degree of assurance. Additional documentation may be needed if the certification is lacking important information. Step certification is the best practice.

26) How should a State ensure assistance recipients are complying with the AIS requirement?

In order to ensure compliance with the AIS requirement, States SRF programs must include specific AIS contract language in the assistance agreement. Sample language for assistance agreements can be found in Appendix 3.

States should also, as a best practice, conduct site visits of projects during construction and review documentation demonstrating proof of compliance which the assistance recipient has gathered.

27) What happens if a State or EPA finds a non-compliant iron and/or steel product permanently incorporated in the project?

If a potentially non-compliant product is identified, the State should notify the assistance recipient of the apparent unauthorized use of the non-domestic component, including a proposed corrective action, and should be given the opportunity to reply. If unauthorized use is confirmed, the State can take one or more of the following actions: request a waiver where appropriate; require the removal of the non-domestic item; or withhold payment for all or part of the project. Only EPA can issue waivers to authorize the use of a non-domestic item. EPA may use remedies available to it under the Clean Water Act, the Safe Drinking Water Act, and 40 CFR part 31 grant regulations, in the event of a violation of a grant term and condition.

It is recommended that the State work collaboratively with EPA to determine the appropriate corrective action, especially in cases where the State is the one who identifies the item in noncompliance or there is a disagreement with the assistance recipient.

If fraud, waste, abuse, or any violation of the law is suspected, the Office of Inspector General (OIG) should be contacted immediately. The OIG can be reached at 1-

888-546-8740 or OIG_Hotline@epa.gov. More information can be found at this website: <http://www.epa.gov/oig/hotline.htm>.

28) How do international trade agreements affect the implementation of the AIS requirements?

The AIS provision applies in a manner consistent with United States obligations under international agreements. Typically, these obligations only apply to direct procurement by the entities that are signatories to such agreements. In general, SRF assistance recipients are not signatories to such agreements, so these agreements have no impact on this AIS provision. In the few instances where such an agreement applies to a municipality, that municipality is under the obligation to determine its applicability and requirements and document the actions taken to comply for the State.

Waiver Process

The statute permits EPA to issue waivers for a case or category of cases where EPA finds (1) that applying these requirements would be inconsistent with the public interest; (2) iron and steel products are not produced in the US in sufficient and reasonably available quantities and of a satisfactory quality; or (3) inclusion of iron and steel products produced in the US will increase the cost of the overall project by more than 25 percent.

In order to implement the AIS requirements, EPA has developed an approach to allow for effective and efficient implementation of the waiver process to allow projects to proceed in a timely manner. The framework described below will allow States, on behalf of the assistance recipients, to apply for waivers of the AIS requirement directly to EPA Headquarters. Only waiver requests received from states will be considered. Pursuant to the Act, EPA has the responsibility to make findings as to the issuance of waivers to the AIS requirements.

Definitions

The following terms are critical to the interpretation and implementation of the AIS requirements and apply to the process described in this memorandum:

Reasonably Available Quantity: The quantity of iron or steel products is available or will be available at the time needed and place needed, and in the proper form or specification as specified in the project plans and design.

Satisfactory Quality: The quality of iron or steel products, as specified in the project plans and designs.

Assistance Recipient: A borrower or grantee that receives funding from a State CWSRF or DWSRF program.

Step-By-Step Waiver Process

Application by Assistance Recipient

Each local entity that receives SRF water infrastructure financial assistance is required by section 436 of the Act to use American made iron and steel products in the construction of its project. However, the recipient may request a waiver. Until a waiver is granted by EPA, the AIS requirement stands, except as noted above with respect to municipalities covered by international agreements.

The waiver process begins with the SRF assistance recipient. In order to fulfill the AIS requirement, the assistance recipient must in good faith design the project (where applicable) and solicit bids for construction with American made iron and steel products. It is essential that the assistance recipient include the AIS terms in any request for proposals or solicitations for bids, and in all contracts (see Appendix 3 for sample construction contract language). The assistance recipient may receive a waiver at any point before, during, or after the bid process, if one or more of three conditions is met:

1. Applying the American Iron and Steel requirements of the Act would be inconsistent with the public interest;
2. Iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or
3. Inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

Proper and sufficient documentation must be provided by the assistance recipient. A checklist detailing the types of information required for a waiver to be processed is attached as Appendix 1.

Additionally, it is strongly encouraged that assistance recipients hold pre-bid conferences with potential bidders. A pre-bid conference can help to identify iron and steel products needed to complete the project as described in the plans and specifications that may not be available from domestic sources. It may also identify the need to seek a waiver prior to bid, and can help inform the recipient on compliance options.

In order to apply for a project waiver, the assistance recipient should email the request in the form of a Word document (.doc) to the State SRF program. It is strongly recommended that the State designate a single person for all AIS communications. The State SRF designee will review the application for the waiver and determine whether the necessary information has been included. Once the waiver application is complete, the State designee will forward the application to either of two email addresses. For CWSRF waiver requests, please send the application to: cwsrfwaiver@epa.gov. For DWSRF waiver requests, please send the application to: dwsrfwaiver@epa.gov.

Evaluation by EPA

After receiving an application for waiver of the AIS requirements, EPA Headquarters will publish the request on its website for 15 days and receive informal comment. EPA Headquarters will then use the checklist in Appendix 2 to determine whether the application properly and adequately documents and justifies the statutory basis cited for the waiver – that it is quantitatively and qualitatively sufficient – and to determine whether or not to grant the waiver.

In the event that EPA finds that adequate documentation and justification has been submitted, the Administrator may grant a waiver to the assistance recipient. EPA will notify the State designee that a waiver request has been approved or denied as soon as such a decision has been made. Granting such a waiver is a three-step process:

1. Posting – After receiving an application for a waiver, EPA is required to publish the application and all material submitted with the application on EPA’s website for 15 days. During that period, the public will have the opportunity to review the request and provide informal comment to EPA. The website can be found at: http://water.epa.gov/grants_funding/aisrequirement.cfm
2. Evaluation – After receiving an application for waiver of the AIS requirements, EPA Headquarters will use the checklist in Appendix 2 to determine whether the application properly and adequately documents and justifies the statutory basis cited for the waiver – that it is quantitatively and qualitatively sufficient – and to determine whether or not to grant the waiver.
3. Signature of waiver approval by the Administrator or another agency official with delegated authority – As soon as the waiver is signed and dated, EPA will notify the State SRF program, and post the signed waiver on our website. The assistance recipient should keep a copy of the signed waiver in its project files.

Public Interest Waivers

EPA has the authority to issue public interest waivers. Evaluation of a public interest waiver request may be more complicated than that of other waiver requests so they may take more time than other waiver requests for a decision to be made. An example of a public interest waiver that might be issued could be for a community that has standardized on a particular type or manufacturer of a valve because of its performance to meet their specifications. Switching to an alternative valve may require staff to be trained on the new equipment and additional spare parts would need to be purchased and stocked, existing valves may need to be unnecessarily replaced, and portions of the system may need to be redesigned. Therefore, requiring the community to install an alternative valve would be inconsistent with public interest.

EPA also has the authority to issue a public interest waiver that covers categories of products that might apply to all projects.

EPA reserves the right to issue national waivers that may apply to particular classes of assistance recipients, particular classes of projects, or particular categories of iron or steel products. EPA may develop national or (US geographic) regional categorical waivers through the identification of similar circumstances in the detailed justifications presented to EPA in a waiver request or requests. EPA may issue a national waiver based on policy decisions regarding the public's interest or a determination that a particular item is not produced domestically in reasonably available quantities or of a sufficient quality. In such cases, EPA may determine it is necessary to issue a national waiver.

If you have any questions concerning the contents of this memorandum, you may contact us, or have your staff contact Jordan Dorfman, Attorney-Advisor, State Revolving Fund Branch, Municipal Support Division, at dorfman.jordan@epa.gov or (202) 564-0614 or Kiri Anderer, Environmental Engineer, Infrastructure Branch, Drinking Water Protection Division, at anderer.kirsten@epa.gov or (202) 564-3134.

Attachments

Appendix 1: Information Checklist for Waiver Request

The purpose of this checklist is to help ensure that all appropriate and necessary information is submitted to EPA. EPA recommends that States review this checklist carefully and provide all appropriate information to EPA. This checklist is for informational purposes only and does not need to be included as part of a waiver application.

Items	✓	Notes
<p>General</p> <ul style="list-style-type: none"> • Waiver request includes the following information: <ul style="list-style-type: none"> — Description of the foreign and domestic construction materials — Unit of measure — Quantity — Price — Time of delivery or availability — Location of the construction project — Name and address of the proposed supplier — A detailed justification for the use of foreign construction materials • Waiver request was submitted according to the instructions in the memorandum • Assistance recipient made a good faith effort to solicit bids for domestic iron and steel products, as demonstrated by language in requests for proposals, contracts, and communications with the prime contractor 		
<p>Cost Waiver Requests</p> <ul style="list-style-type: none"> • Waiver request includes the following information: <ul style="list-style-type: none"> — Comparison of overall cost of project with domestic iron and steel products to overall cost of project with foreign iron and steel products — Relevant excerpts from the bid documents used by the contractors to complete the comparison — Supporting documentation indicating that the contractor made a reasonable survey of the market, such as a description of the process for identifying suppliers and a list of contacted suppliers 		
<p>Availability Waiver Requests</p> <ul style="list-style-type: none"> • Waiver request includes the following supporting documentation necessary to demonstrate the availability, quantity, and/or quality of the materials for which the waiver is requested: <ul style="list-style-type: none"> — Supplier information or pricing information from a reasonable number of domestic suppliers indicating availability/delivery date for construction materials — Documentation of the assistance recipient's efforts to find available domestic sources, such as a description of the process for identifying suppliers and a list of contacted suppliers. — Project schedule — Relevant excerpts from project plans, specifications, and permits indicating the required quantity and quality of construction materials • Waiver request includes a statement from the prime contractor and/or supplier confirming the non-availability of the domestic construction materials for which the waiver is sought • Has the State received other waiver requests for the materials described in this waiver request, for comparable projects? 		

Appendix 2: HQ Review Checklist for Waiver Request

Instructions: To be completed by EPA. Review all waiver requests using the questions in the checklist, and mark the appropriate box as Yes, No or N/A. Marks that fall inside the shaded boxes may be grounds for denying the waiver. If none of your review markings fall into a shaded box, the waiver is eligible for approval if it indicates that one or more of the following conditions applies to the domestic product for which the waiver is sought:

1. The iron and/or steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality.
2. The inclusion of iron and/or steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

Review Items	Yes	No	N/A	Comments
Cost Waiver Requests <ul style="list-style-type: none"> • Does the waiver request include the following information? <ul style="list-style-type: none"> — Comparison of overall cost of project with domestic iron and steel products to overall cost of project with foreign iron and steel products — Relevant excerpts from the bid documents used by the contractors to complete the comparison — A sufficient number of bid documents or pricing information from domestic sources to constitute a reasonable survey of the market • Does the Total Domestic Project exceed the Total Foreign Project Cost by more than 25%? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Availability Waiver Requests <ul style="list-style-type: none"> • Does the waiver request include supporting documentation sufficient to show the availability, quantity, and/or quality of the iron and/or steel product for which the waiver is requested? <ul style="list-style-type: none"> — Supplier information or other documentation indicating availability/delivery date for materials — Project schedule — Relevant excerpts from project plans, specifications, and permits indicating the required quantity and quality of materials • Does supporting documentation provide sufficient evidence that the contractors made a reasonable effort to locate domestic suppliers of materials, such as a description of the process for identifying suppliers and a list of contacted suppliers? • Based on the materials delivery/availability date indicated in the supporting documentation, will the materials be unavailable when they are needed according to the project schedule? (By item, list schedule date and domestic delivery quote date or other relevant information) • Is EPA aware of any other evidence indicating the non-availability of the materials for which the waiver is requested? Examples include: <ul style="list-style-type: none"> — Multiple waiver requests for the materials described in this waiver request, for comparable projects in the same State — Multiple waiver requests for the materials described in this waiver request, for comparable projects in other States — Correspondence with construction trade associations indicating the non-availability of the materials • Are the available domestic materials indicated in the bid documents of inadequate quality compared those required by the project plans, specifications, and/or permits? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Appendix 3: Example Loan Agreement Language

ALL ASSISTANCE AGREEMENT MUST HAVE A CLAUSE REQUIRING COMPLIANCE WITH THE AIS REQUIREMENT. THIS IS AN EXAMPLE OF WHAT COULD BE INCLUDED IN SRF ASSISTANCE AGREEMENTS. EPA MAKES NO CLAIMS REGARDING THE LEGALITY OF THIS CLAUSE WITH RESPECT TO STATE LAW:

Comply with all federal requirements applicable to the Loan (including those imposed by the 2014 Appropriations Act and related SRF Policy Guidelines) which the Participant understands includes, among other, requirements that all of the iron and steel products used in the Project are to be produced in the United States (“American Iron and Steel Requirement”) unless (i) the Participant has requested and obtained a waiver from the Agency pertaining to the Project or (ii) the Finance Authority has otherwise advised the Participant in writing that the American Iron and Steel Requirement is not applicable to the Project.

Comply with all record keeping and reporting requirements under the Clean Water Act/Safe Drinking Water Act, including any reports required by a Federal agency or the Finance Authority such as performance indicators of program deliverables, information on costs and project progress. The Participant understands that (i) each contract and subcontract related to the Project is subject to audit by appropriate federal and state entities and (ii) failure to comply with the Clean Water Act/Safe Drinking Water Act and this Agreement may be a default hereunder that results in a repayment of the Loan in advance of the maturity of the Bonds and/or other remedial actions.

Appendix 4: Sample Construction Contract Language

ALL CONTRACTS MUST HAVE A CLAUSE REQUIRING COMPLIANCE WITH THE AIS REQUIREMENT. THIS IS AN EXAMPLE OF WHAT COULD BE INCLUDED IN ALL CONTRACTS IN PROJECTS THAT USE SRF FUNDS. EPA MAKES NO CLAIMS REGARDING THE LEGALITY OF THIS CLAUSE WITH RESPECT TO STATE OR LOCAL LAW:

The Contractor acknowledges to and for the benefit of the City of _____ (“Purchaser”) and the _____ (the “State”) that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund that have statutory requirements commonly known as “American Iron and Steel;” that requires all of the iron and steel products used in the project to be produced in the United States (“American Iron and Steel Requirement”) including iron and steel products provided by the Contractor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Purchaser and the State that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Purchaser or the State. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney’s fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

Appendix 5: Sample Certifications

The following information is provided as a sample letter of **step** certification for AIS compliance. Documentation must be provided on company letterhead.

Date

Company Name

Company Address

City, State Zip

Subject: American Iron and Steel Step Certification for Project (XXXXXXXXXX)

I, (company representative), certify that the (melting, bending, coating, galvanizing, cutting, etc.) process for (manufacturing or fabricating) the following products and/or materials shipped or provided for the subject project is in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

Item, Products and/or Materials:

1. XXXX
2. XXXX
3. XXXX

Such process took place at the following location:

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

The following information is provided as a sample letter of certification for AIS compliance. Documentation must be provided on company letterhead.

Date

Company Name

Company Address

City, State Zip

Subject: American Iron and Steel Certification for Project (XXXXXXXXXXXX)

I, (company representative), certify that the following products and/or materials shipped/provided to the subject project are in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

Item, Products and/or Materials:

1. XXXX
2. XXXX
3. XXXX

Such process took place at the following location:

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

DIVISION 03
SITE WORK

SECTION 03050

DEMOLITION AND REMOVAL

PART 1 – GENERAL

1.01 SCOPE

- A. This section includes providing all materials, equipment, labor, and services required for all work associated with the demolition, removal and proper off-site disposal of all existing structures or past site improvements within the project site as specified herein and as shown on the Drawings. Such work may consist of, but not be limited to, pavement materials, berms, curbs, concrete, sewer manhole structures, sewer pipes, fencing, debris, and the legal offsite disposal of this material.

1.02 SUBMITTALS

- A. Submittals shall be provided in accordance with the requirements as specified in Section 01340.
- B. The Contractor shall submit to the Owner a schedule of the Contractor's removal and disposal phasing for this project.

1.01 QUALITY CONTROL

- A. Provide in accordance with the requirements as specified in Section 01400.

PART 2 – PRODUCTS

2.01 GENERAL

- A. The Contractor shall provide all materials and equipment in suitable and adequate quantity to accomplish the work shown and as specified.

PART 3 – EXECUTION

3.01 PAVEMENT

- A. Remove flexible pavement, base, and subbase courses within the limits shown.
- B. Pavement, base or sub-base materials that meet or are processed to meet the requirements as specified in Section 03200 may be stockpiled for later use.

3.02 FENCE AND GATES

- A. Remove fence and gates of various size and type to facilitate the work of this Contract.
- B. Fence fabric shall be carefully removed, rolled and reinstalled once the work in that area is complete.

03050-1

3.03 SEWER MANHOLE AND PIPING

- A. The Contractor shall remove and dispose of existing sewer manhole and sewer piping as indicated on the Drawings.

3.04 SOLID WASTE

- A. The Contractor shall legally dispose of all solid waste generated as a result of this project at a licensed solid waste facility selected by the Contractor. The Contractor shall maintain all bill of lading documentation to document legal off-site disposal.
- B. Solid waste shall be stored, transported, and disposed of in accordance with the Rhode Island Department of Environmental Management's Solid Waste Regulations, latest edition.

3.05 HAZARDOUS WASTE

- A. Should the Contractor encounter hazardous waste as a result of this project, the hazardous waste shall be removed, transported, and disposed of in accordance with the Rhode Island Department of Environmental Management's Hazardous Waste Regulations, latest edition.
- B. Should the Contractor encounter contaminated soil in any excavation he shall notify Owner and Engineer immediately.

3.06 MECHANICAL AND ELECTRICAL EQUIPMENT

- A. The Contractor's operation shall not affect any mechanical or electrical equipment in the Headworks Building or downstream facilities.

END OF SECTION

03050-2

SECTION 03110

SITE PREPARATION

PART 1 – GENERAL

1.01 WORK INCLUDED

- A. The work under this section includes, but is not limited to protection of existing trees, removal of trees and other vegetation, clearing and grubbing, and topsoil stripping and stockpiling.

1.02 RELATED WORK

- A. Section 03200 – Earthwork
- B. Section 03273 - Erosion and Sedimentation Control
- C. Section 03920 – Loaming and Seeding

1.03 JOB CONDITIONS

- A. Conduct site-clearing operations to ensure a minimum interference with roads and site uses within and adjacent to the project area.
- B. Provide means and methods to protect and to prevent damage to existing site features that are to remain in place. Any damaged site features shall be restored to their original condition, acceptable to parties having jurisdiction, at no additional expense to Owner.
- C. Protection of existing trees and vegetation during site-clearing operations of all trees indicated to be left standing in place by Engineer and/or WSA must be provided. Such protection shall prevent unnecessary cutting, breaking or skinning of roots, skinning and bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within drip line, excess foot or vehicular traffic, or parking of vehicles within drip line. Temporary guards shall be provided to protect trees and vegetation to be left standing.

PART 2 – MATERIALS (NOT USED)

PART 3 – EXECUTION

3.01 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Provide erosion-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties as underlined in Section 03273
- C. Locate and clearly flag trees and vegetation to remain or to be relocated.
- D. Protect existing site improvements from damage during construction.

03110-1

1. Restore damaged improvements to their original condition, as acceptable to WSA, at no additional expense to Owner.

3.02 TREE PROTECTION

- A. Erect and maintain a temporary fence around drip line of individual trees or around perimeter drip line of groups of trees to remain. Remove fence when construction is complete.
- B. Do not excavate within drip line of trees, unless otherwise indicated.
- C. Where excavation for new construction is required within drip line of trees, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.
- D. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations, in a manner approved by Engineer, at no additional expense to Owner.

3.03 CLEARING AND GRUBBING

- A. Remove obstructions: trees, shrubs, brush, grass and other vegetation, and any other obstructions within the limits of work defined on the Drawings. Removal shall include digging out of stumps and roots. Items removed by Contractor shall be hauled off-site for disposal.
- B. Site shall be cleared of trees, shrubs and other vegetation, except for those indicated to be left standing. Stumps, roots, and other debris protruding through ground surface shall be removed. Only hand methods shall be used for grubbing inside drip line of trees indicated to be left standing. Depressions caused by clearing and grubbing operations shall be filled with satisfactory subgrade soil material, unless further excavation or earthwork is indicated.
- C. Existing above-grade and below-grade improvements shall be removed or relocated to permit construction and other work, as indicated.

3.04 TOPSOIL STRIPPING

- A. Remove trees, shrubs, brush and grass before stripping topsoil.
- B. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil materials.
- C. Stockpile topsoil away from edge of excavations in laydown and staging area indicated on the Drawings. Grade and shape stockpiles to drain surface water.

3.05 SITE IMPROVEMENTS

- A. Remove or relocate existing above and below-grade improvements as indicated and to facilitate new construction.

3.06 DISPOSAL OF WASTE MATERIALS

03110-2

- A. Waste material shall be transported to a licensed waste disposal site, selected by the Contractor, at no additional expense to the Owner.

END OF SECTION

03110-3

SECTION 03149

MAINTAINING EXISTING FLOW

PART - 1 GENERAL

1.01 SECTION INCLUDES

- A. Requirements to maintain existing flow and implement and complete all flow diversions and/or bypass pumping required to complete all Work under this Contract.

1.02 PERFORMANCE REQUIREMENTS

- A. It is essential to the operation of the existing sewerage system that there be no interruption of the wastewater flow throughout the duration of this project. An interruption shall be considered, but may not be limited to, any condition that in the sole opinion of the Owner/Engineer adversely affects or alters operation of the existing sewerage system and/or any other portion or component of the existing collection system including the associated flows; allows the level of sewage flow to increase, rise, collect, surcharge and/or overflow existing facilities in any manner; or results in any operational or permit violations being issued to the Owner.
- B. The Contractor shall provide, maintain, and operate temporary facilities such as dams, bulkheads, pumping equipment (both primary and backup units as required) conduits, electrical power, and all other labor and equipment to intercept and maintain the existing sewage flow before it reaches the point where it would interfere with work, carry it past his work, and return it to the existing facilities beyond his work.
- C. If septic tanker trucks are utilized to divert flow from existing services, the Owner/Engineer will permit the discharge of flow at the Warwick Wastewater Treatment Plant without charge.
- D. The bypass operation will be planned in such a way in conjunction with the relining project as to restore flow to the existing pipe should there be any construction delays with the CIPP project.
- E. The Owner / Engineer may prohibit the carrying out of any work at any time when in his sole judgment, increased flow conditions are unfavorable or not suitable, or at any time, regardless of the existing flows, when proper precautions are not being taken to safeguard the existing sewerage system, previously constructed work, work in progress and/or the general public.
- F. The Contractor's attention is directed to the fact that the existing wastewater flow may be affected by high groundwater and rainfall. Increases in normal flow should be expected during periods of wet weather. The Contractor shall therefore take all precautions necessary including monitoring weather forecasts to fully accommodate,

control and sufficiently handle the increases in flow during periods of wet weather and/or storms as well as periods of normal flow.

- G. In case of damage caused by the failure of the Contractor to take adequate precautions, the Contractor shall repair or replace equipment damaged and shall make Such repairs or rebuild such parts of the damaged work, as the Owner may require, at no additional expense to the Owner.
- H. The proposed bypass locations provided on the plans are suggested routes and locations for piping. The routes provided are accessible. The Contractor shall determine the size and location of proposed bypass pumps and proposed routes as part of their shop drawing submitted.
- I. Work on private property will not be permitted with approval of the Warwick Sewer Authority.

1.03 SUBMITTALS

- A. In accordance with SECTION 01300 submit the following:
 - 1. Detailed plans and descriptions outlining all provisions and precautions to be taken regarding the control and handling of existing sewage flows.
 - 2. Include such items as schedules, locations, elevations, capacities of equipment, materials, traffic maintenance plans, and all other incidental items necessary and/or required by the Owner to insure proper protection of the facilities and compliance with the requirements herein specified.
 - 3. Qualifications as described herein
 - 4. Detailed proposal for noise prevention measures for review of at least thirty (30) consecutive calendar days prior to anticipated usage.
 - 5. Shop drawings for all pumping, piping, temporary ramps, and appurtenances for type and size of equipment required to perform the flow diversion and/or bypass pumping work as required herein.
- B. The Owner/Engineer reserves the right to limit and/or otherwise restrict the Contractor's overall proposal and/or operations without claim should the Owner/Engineer deem it to be in the Owner's or public's best interest to do so.

1.04 QUALITY ASSURANCE

- A. Qualifications
 - 1. The design, installation and operation of the temporary pumping system shall be the Contractor's responsibility. The Contractor shall employ the services of a vendor who can demonstrate to the Engineer that he specializes in the design and operation of temporary bypass pumping systems. The vendor shall provide at least five (5) references of projects of similar size and complexity in wastewater

applications performed by his firm within the past three years within New England. The bypass system shall meet the requirements of codes and regulatory agencies having jurisdiction.

2. The vendor shall demonstrate the bypass pumping equipment is automated and is capable of functioning without the assistance of an operator.
3. The vendor shall demonstrate the pumping equipment can operate for an extended period of time running dry. After this period of time, the pump shall have the capability of pulling a 25" Hg vacuum without adjustment or repair.
4. The vendor shall demonstrate sufficient service resources and repair parts in stock to fulfill service or repair of rental equipment within one hour of a service call, twenty-four hours per day, and seven days per week.
5. Temporary components of the bypass system including pumps, pipe, hose, valves, and fittings shall be provided by one bypass vendor. Hydraulic calculations and drawings required by the submittals shall be provided by the bypass vendor and stamped and certified by a Professional Engineer licensed in the State of the installation.

1.05 SPECIAL BYPASS REQUIREMENTS

- A. The Contractor's attention is directed to the fact that there may be a number of multiunit residences and businesses in the project area. Any work affecting the existing sewer, such as sewer rehabilitation and the installation of cured-in-place liners, shall address maintaining flows for these residences and businesses. In cases where flow cannot be maintained shut-downs shall be limited to 24 hours.

PART - 2 PRODUCTS

2.01 GENERAL

- A. At a minimum, all equipment shall be supplied in duplicate for emergency situations. Provide adequate on-line backup facilities so that no interruption in service is encountered. Equipment and installation are subject to the approval of the Owner and the Engineer.

2.02 PUMPING SYSTEM(S)

- A. All pumping units (primary and secondary) and appurtenances shall be sized properly to handle the flows encountered including increased flows due to wet weather.
- B. The bypass will include the required pumps to maintain sewerage flow along with a redundant set up should the primary pumps fail.

2.03 PIPING SYSTEM(S)

- A. All piping systems (primary and secondary) and appurtenance shall be sized properly to handle the flows encountered including increased flows due to wet weather.

- B. Provide temporary bypass suction piping from the upstream manhole(s) to the bypass pumps, and temporary discharge piping from the bypass pumps to the downstream manhole(s).

2.04 POWER GENERATING FACILITIES

- A. Include power generating facilities capable of providing all power necessary to operate any primary and secondary pumping systems.
- B. Maintain facility to be ready for use if required.

2.05 NOISE PREVENTION

- A. Noise prevention measures for all equipment shall be used to insure minimum noise impact or surrounding areas.
- B. Measures may include but shall not be limited to insulation, electric pumping units, and hospital grade silencers or mufflers.
- C. Noise shall be kept to a minimum particularly if any night, Saturday, Sunday or holiday work be deemed necessary by the Engineer for work under this Contract.
- D. Should at any time prior to or during the performance of above mentioned work, the Engineer determines the noise prevention measures being used are not adequate, the Contractor shall at no additional cost to the Owner suspend all work until acceptable measures are incorporated.

PART - 3 EXECUTION

3.01 PUBLIC SAFETY AND CONVENIENCE

- A. General
 - 1. The Contractor shall at all times keep the streets, highways, roads, driveways, parking lots, private walks, and public sidewalks open for pedestrian and vehicular traffic unless otherwise authorized by the Owner/Engineer.
- B. Public Travel Ways
 - 1. Any authorized temporary closure of any streets, highways or roads shall be coordinated with the local Fire, Police and/or Department of Public Works as required by the municipality.
- C. Municipal, Commercial and Private Property
 - 1. Any authorized, temporary closure of any municipal, commercial or private driveway or access route will require the Contractor provide 48-hour notice to abutters of the temporary restriction of access to their property. The Contractor will make every attempt to schedule his work with as little inconvenience to the property owner as possible

3.02 INSTALLATION

- A. Keep the Engineer advised at all times of any changes made to the overall operation(s) to accommodate field conditions.
- B. Flow diversions and/or bypass pumping shall be maintained at all times as long as it is necessary to maintain the flow through the limits of the project during construction.
- C. Maintain auxiliary and/or emergency equipment at the site to continue flow diversion and/or by-pass pumping operations in the event of a breakdown and/or loss of normal power.
- D. No work shall begin until all provisions and requirements of this Section have been reviewed and approved by the Owner/Engineer.
- E. The Owner/Engineer reserves the right to limit and/or otherwise restrict the Contractor's overall activities and/or operations at any time without claim should the Engineer deem it to be in the Owner's or public's best interest to do so.

END OF SECTION

SECTION 03200

EARTHWORK

PART 1 – GENERAL

1.01 WORK INCLUDED

- A. The Work under this section includes the furnishing of all labor, equipment and materials, excluding available on-site materials, and performing all operations in connection with excavating, backfilling, compacting, grading and all other incidental work necessary for construction.

1.02 RELATED WORK

- A. Section 03050 – Demolition and Removal
- B. Section 03800 – Erosion and Sedimentation Control
- C. Section 03305 – Support of Excavation and Dewatering
- D. Section 03920 – Loam and Seeding

1.03 REFERENCES

- A. Within this section, the State of Rhode Island Standard Specification for Road and Bridge Construction, latest edition, will be referred to as the "State Standards", "RIDOT Standards" or "RIDOT Standard Specifications". Provisions of Part 100 – General Requirements and Covenants as well as references to measurement and payment do not pertain to this contract and are hereby excluded.
- B. ASTM C 33 – Specification for Concrete Aggregate
- C. ASTM D 75 – Standard Practice for Sampling Aggregates
- D. ASTM D 422 – Particle Size Analysis of Soil
- E. ASTM D 1556 - Density of Soil in Place by the Sand-Cone Method.
- F. ASTM D 1557 - Moisture - Density Relations of Soils and Soil-Aggregate Mixture Using 10-lb. (4.5 - Kg.) Rammer and 18-inch (457 mm) Drop. (Modified Proctor)
- G. ASTM D 2167 - Density of Soil in Place by the Rubber-Balloon Method.
- H. ASTM D 2922 - Density of Soil in Place by the Nuclear Method.

1.04 LAWS AND REGULATIONS

- A. All Work under this Contract shall be accomplished in accordance with regulations of local, county, state, and federal agencies and national or utility company standards as they apply.

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1.05 SAFETY

- A. Methods of operation utilized in work related to these Specifications shall be such as to provide maximum protection against injury or death to workmen or the public. Requirements of the Rhode Island Occupational Safety and Health Acts as to safety regulations and procedures shall be adhered to for all work covered by these Specifications.
- B. The Contractor shall be solely responsible for making all excavations in a safe manner. Provide appropriate measures to retain excavation side slopes and prevent earth slides to ensure that persons working in or near the excavation are protected. Contractor shall determine the actual trench configuration and extent of excavation required.

1.06 EXISTING UTILITIES

- A. Call Dig Safe 1-888-DIG-SAFE (1-888-344-7233) 72 hours before commencing with any excavation, in order that all pertinent utility companies become informed of such work.
- B. If active utilities existing on the site are encountered, they shall be carefully protected from damage. When an active utility line is exposed during construction, its location and elevation shall be documented and both the Engineer and the utility owner notified in writing. Location and elevation of utilities exposed during construction shall be recorded on as-built drawings.
- C. Active utility lines damaged in the course of construction operations shall be repaired or replaced as determined by Engineer and utility owner, without additional cost to the WSA.

1.07 SUBSURFACE DATA

- A. Variations in existing ground conditions differing from those indicated on information provided as part of the Contract Documents shall not, under any conditions, constitute grounds for changes in Contract Price or completion dates of this Contract.
- B. Upon notification to and approval from the WSA as applicable, the Bidders may be allowed the right to make any subsurface explorations they deem necessary to satisfy themselves of the existing ground conditions. All explorations shall be performed in compliance with the requirements of the Contract Documents.

1.08 JOB CONDITIONS

- A. All excavations shall be kept dry at all times, and all construction work shall be performed in the dry, unless otherwise authorized or directed by the Engineer.

1.09 EARTH MATERIALS

- A. All excavated earth materials approved by the Engineer as suitable for reuse shall be used for backfilling excavations and for rough grading as necessary for the completion of the Contract Work. All surplus materials, unsuitable materials, and pavement materials shall be hauled off-site. All removal and stockpiling shall be performed by the Contractor at no additional expense to the Owner. Stockpiles, which will remain for more than 5 calendar days, shall be surrounded by a straw bale barrier with the barriers maintained for the duration of the Contract.

- B. Common borrow, gravel borrow bedding, processed gravel, and crushed stone shall be supplied by the Contractor from controlled off-site sources as required. Common borrow shall be provided first from the project excavation work, and then supplied by the Contractor from controlled off-site sources as required. All loading, hauling, stockpiling, and protection of stockpiles shall be performed by the Contractor at no additional expense to the Owner.
- C. The Contractor shall make all gradation tests in accordance with ASTM D 422 to locate acceptable sources of imported material. The Contractor shall perform two initial gradation tests for all material to be imported from each off-site source location. For each additional 1,000 cubic yards of material, the Contractor shall perform one additional gradation test. The Contractor shall perform additional gradation tests as directed by the Engineer if variation in gradation is occurring, or if the material appears to depart from the Specifications. Certification that the material conforms to the Specification requirements along with copies of the test results from a qualified commercial testing laboratory shall be submitted to the Engineer for approval within 48 hours of testing and at least 14 calendar days before the material is required for use. All material samples shall be a minimum of 40 pounds and furnished by the Contractor at no additional expense to the Owner. Samples shall be representative and be clearly marked to show the source of the material and the intended use on the project. Sampling of the material source shall be done by the Contractor in accordance with ASTM D75. Tentative acceptance of the material shall be based on an inspection of the source by the Engineer and/or the certified test results submitted by the Contractor to the Engineer, at the Engineer's discretion. No imported materials shall be delivered to the site until the proposed source and the materials tested have been accepted in writing by the Engineer. Final acceptance will be based on Quality Control and Quality Assurance tests made on samples of material taken from the completed and compacted course.
- D. If tests conducted by the Contractor or the Engineer indicate that the material does not meet Specification requirements, material placement will be terminated until corrective measures are taken. Material that does not conform to the Specification requirements and is placed in the work shall be removed and replaced by the Contractor at no additional expense to the Owner. Retesting of material that does not meet specification requirements shall be performed by the Contractor at no additional expense to the Owner.
- E. Unsuitable Excavated Materials:
 - 1. Unsuitable materials are herein defined as organic material, peat, organic silt, rubbish, trash, building debris, or combinations thereof, all having unsuitable in-situ bearing properties; and all materials of whatever description which are too loose or saturated for use as backfill to provide satisfactory bearing. If unsuitable material is encountered at the depths indicated on the Drawings for bottom limit of excavation, the Contractor shall immediately notify the Engineer and shall not proceed further until instructions are given.
 - 2. The Contractor shall satisfactorily excavate and remove all unsuitable material to lines, grades and limits indicated on the Drawings or as directed in writing by the Engineer. All resulting below grade excavations shall be refilled with common borrow, processed gravel, gravel bedding, or crushed stone as directed.
 - 3. Material, which becomes unsuitable as a result of the Contractor's lack of dewatering or improper dewatering shall be removed by the Contractor and replaced with processed gravel or gravel bedding all as directed and approved by the Engineer at no additional expense to the WSA.

1.10 SHORING, SHEETING, BRACING, AND SLOPING

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- A. The Contractor shall furnish, install, and maintain shoring, sheeting, bracing, and sloping necessary to support the sides of excavations, to keep and to prevent any movement which may damage adjacent pavements, utilities, or structures, damage or delay the work, or endanger life and health. Furnish, install, and maintain shoring, sheeting, bracing, and sloping as required by OSHA and other applicable governmental regulations and agencies.

1.11 SUBMITTALS

- A. Shop drawings shall be submitted in accordance with the requirements as specified in Section 01340.
- B. Provide the following submittals:
 - 1. Certification, test results, source, and samples for all imported earth materials. Submit bag samples (40 lbs minimum) of each type of fill material to be used for backfilling to the Engineer at least 10 working days in advance of its required use. Representative samples of excavated fill material, which will be used for backfill shall also be submitted for testing.
 - 2. Catalog and manufacturer's data sheets for compaction equipment.
 - 3. Copies of permits obtained for excavations that are required by state and local governing authorities.

1.12 QUALITY CONTROL

- A. Provide in accordance with the requirements as specified in Section 01400.
- B. All material limits shall be constructed within a vertical tolerance of 0.1 foot and a horizontal tolerance of 1 foot except where dimensions or grades are shown or specified as minimum. All grading shall be performed to maintain slopes and drainage as shown. No reverse slopes will be permitted.
- C. Perform rock removal in accordance with applicable requirements of governing authorities having jurisdiction.
- D. Obtain permits from authorities having jurisdiction before explosives are brought to site or drilling for setting of explosives is started.
 - 1. Notify WSA and, Engineer of schedule and procedures prior to explosive use.

PART 2 – PRODUCTS

2.01 SOIL AND ROCK MATERIALS

- A. Common Borrow:
 - 1. Common borrow to be used as backfill material in trenches and in site grading shall conform to RIDOT Standard Specifications, Section M.01.01, Common Borrow.
 - 2. Common borrow shall consist of a workable soil. The maximum stone size shall be six (6) inches in any dimension and shall not comprise more than 5% of the total soil mass. The soil

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shall be free of organic materials, loam, wood, trash and other objectionable materials which may be compressible or which cannot be properly compacted. Its physical properties shall be such that it is readily spread and compacted. Snow, ice, and frozen soil are not suitable fill material and shall not be permitted.

B. Compacted Gravel Subbase:

1. Compacted Gravel Subbase soil shall be free of rubble, wood, stumps, brush, metal, cinders, trash, demolition debris, garbage, topsoil, organic soil, loam, sludge and other deleterious materials. Gravel subbase for the initial lifts shall be inert soil, processed or natural, and shall conform to RIDOT Standard Specifications Section M.01.02.1 except that 100% by weight shall be less than 1 inch in size. Gravel subbase for the final lift shall conform to RIDOT Standard Specifications Section M.01.02.2 except that 100% by weight shall be less than 1 inch in size.

C. Pipe Bedding:

1. Pipe bedding shall be a uniform sand conforming to RIDOT Standard Specifications, Section M.01.02.1 except that 100% by weight shall be less than $\frac{3}{4}$ inches in size.

D. Crushed Stone:

1. Crushed stone shall be clean, hard, durable rock fragments and shall conform to RIDOT Standard Specifications M.01.09 Type VI-Cover Stone.

PART 3 – EXECUTION

3.01 GENERAL SOIL PLACEMENT AND COMPACTION

- A. All excavations will be to suitable depth to provide adequate bedding for installed manhole structures and sewer piping as required on the Drawings and in these Specifications. Excavated materials suitable for reuse shall be stockpiled in approved locations with appropriate erosion and sedimentation measures. Unsuitable materials will be disposed of in the manner specified within these Specifications.
- B. All fills, refills, and backfills shall be compacted to not less than 95 percent of the specified ASTM D1557 (Modified Proctor) maximum dry density, unless specified elsewhere.
- C. All percentages of compaction specified herein shall be related to the maximum dry density as established by ASTM D1557 and verified in the field by ASTM designation D1556, D2167 or D2922. Prior to placing, at least one (1) laboratory test shall be made on a representative sample of each of the fill and backfill materials proposed to be furnished for the earthwork operations; to determine gradation and moisture-density characteristics.
- D. Field density tests to determine the actual in-place densities being attained will be made at the expense of the Contractor and in sufficient quantity to determine that the required compaction is being attained. A minimum of two (2) tests shall be performed per lift of material placed, and at least every 200 linear feet of trench for all soil materials. Engineer may also periodically perform independent compaction testing on behalf of the WSA. The Contractor shall recompact soil, including removing and replacing lift, if necessary, and retest if backfill fails to comply with the

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minimum percent of compaction required. The Contractor shall not place subsequent lifts until the prior lift is accepted by Engineer.

- E. Where vibratory compaction equipment is specified herein or is directed to be used by Engineer, all such equipment whether plate-type or roller shall be furnished with a vibrating surface at least 24 inches in width, and capable of operating at a minimum of 2,000 blows per minute. Equipment not specifically designed as vibrating compaction equipment shall not be permitted for compaction of either existing in-place materials or of fills, refills, and backfills. Jackhammers, rubber-tired vehicles and similar equipment not specifically designed and manufactured for the compaction of granular materials will not be approved for use.
- F. Surfaces to be compacted shall, unless otherwise specified, be compacted by not less than six (6) complete passes of the approved vibratory compactors, in order to obtain the required percentage of compaction. A complete pass shall consist of the entire coverage of the surface area to be compacted with one trip of the equipment. Each trip of the equipment shall overlap the previous trip by at least one (1) foot.
- G. Dumping, spreading, preparing and compacting of several layers of fill materials across the site may be performed simultaneously, providing there is sufficient total area to permit these operations to proceed in a systematic manner.
- H. No rolling equipment shall be used to compact fill, refill or backfill materials within four (4) feet of the vertical faces of any concrete walls or utility pipes. Plate vibratory tampers shall be used in these restricted areas, and in other areas too confined to satisfactorily use rolling equipment.
- I. It is the intent of these compaction requirements that the minimum in-place dry density of the compacted materials resulting from the specified minimum number of passes of the compaction equipment will be equal to or greater than the minimum percentages specified herein. Additional passes of the specified equipment shall be required if the minimum in-place dry densities as specified are not obtained with the minimum passes indicated.
- J. Any excavations improperly backfilled or where settlement occurs shall be reopened to the depth required, then refilled with approved materials and compacted, and the surface restored to the required grade and condition, at no additional expense to WSA.
- K. Any damage due to excavation, backfilling or settlement of the backfill, or injury to persons or damage to property occurring as a result of such damage shall be the responsibility of the Contractor. All costs to repair such damage, in a manner satisfactory to the Engineer, shall be borne by the Contractor and at no additional expense to WSA and in a manner satisfactory to Engineer.

3.02 TRENCH EXCAVATION

- A. Excavation for all manholes and piping shall conform to the lines and grades shown on the Drawings. Excess or unsuitable material removed from the excavations shall be replaced with approved material. The Contractor will be responsible for all sheeting, bracing, trench boxes, etc., necessary to complete the excavation and pipe installation in a safe manner.
- B. Minimum width of unsheeted trenches or the minimum clear width of sheeted trenches in which pipe is to be laid shall be 24 inches greater than the outside diameter of the pipe. Sheeting requirements shall be independent of trench width. The maximum clear width at the top of the pipe

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or above the pipe will not be limited, except in cases where excess width of excavation would cause damage to adjacent structures.

- C. Utility trenches shall be excavated a minimum of 6-inches below the bottom of the utility line to accommodate bedding material, except where rock is encountered the trench shall be a minimum of 12-inches below the bottom of the utility line. Allow for working space and slopes as shown or required. Do not carry excavations deeper than the elevations shown unless directed by the Engineer. Excavation carried below the grade lines shown or established by the Engineer shall be filled with the same material as specified for the overlying backfill, and compacted as required for such overlying backfill.
- D. After completion of excavation, and prior to bedding material placement, compact the excavation surface with a heavy vibratory roller or other suitable equipment to detect soft or loose zones. Notify the Engineer prior to commencement of compacting. If soft or loose zones are found excavate the soft or loose material to a depth accepted by the Engineer, then fill with Gravel Borrow Bedding or Crushed Stone as directed by the Engineer. The cost of such excavation shall be paid for under the appropriate unit price bid item.

3.03 PIPE BEDDING AND BACKFILLING

A. Trench Bedding

- 1. All pipelines shall be laid in Sand Bedding Material as noted in the Drawings except in high groundwater areas, or as directed, where Crushed Stone Bedding Material shall be used.
- 2. Bedding Material shall be placed in maximum 10" lifts and each lift compacted to a minimum of 95% relative compaction.
- 3. Bedding material shall be placed from the bottom of the excavation to mid-diameter of the pipe in maximum 10" lifts, for the full width of the trench. Subsequent lifts of bedding material shall extend to 1-foot above the pipe crown.

B. Trench Backfilling

- 1. Each layer of backfill material shall be moistened as necessary and compacted in such a manner as to permit the proper and desired compaction of the filled excavation to provide the necessary support and protection for the pipe, and so that paving of excavated areas can proceed immediately after backfilling is completed.
- 2. Backfill materials placed from 12-inches above a pipe to the bottom of a pavement base course or to the bottom of Topsoil shall meet the requirements of Common Borrow except where specified elsewhere. Excavated soil from the trench shall first be considered for use as backfill provided it meets the requirements of Common Borrow.
- 3. The moisture content of Common Borrow backfill shall be such that proper compaction will be obtained. Backfill shall be compacted to the minimum densities specified hereinafter. Unless otherwise approved by the Engineer in writing, the backfill shall be spread in layers not exceeding 12 inches in loose depth, and each layer shall be compacted to 95% of standard Proctor density. It is the responsibility of the Contractor to assure that the minimum specified densities are obtained. Puddling or jetting of backfill with water will not be permitted.

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4. Fill, adjacent to pipelines and structures shall be placed evenly on both sides to prevent displacements.
5. The Contractor shall exercise care in all operations to prevent disturbing joints, displacement of or damage to the pipes already in place. As the Work progresses, the pipelines will be checked by the Engineer to determine whether any disturbance, displacement or damage has occurred. The Engineer may also request that pipes be excavated and exposed to observe if the pipe has been damaged. If inspection shows poor alignment, displaced or damaged pipe, disturbed joints, or any other defects, all defects designated by the Engineer shall be remedied in a satisfactory manner by the Contractor, at no additional expense to WSA.
6. Any backfill that fails to comply with the minimum density requirements specified hereinafter shall be re-compacted or, if necessary, removed to the limits directed by the Engineer. The trench shall then be refilled with approved materials and by approved methods. The backfill shall be compacted by approved methods to the minimum requirements specified herein. All of this work shall be performed by the Contractor at no additional expense to WSA.
7. After backfilling, the Contractor shall maintain the filled surfaces in good condition, with a smooth surface level with adjacent undisturbed surfaces. Any subsequent settling shall be immediately repaired by the Contractor in a manner satisfactory to the Engineer, and such maintenance shall be provided by the Contractor for the remainder of this Contract, at no additional expense to WSA.

3.04 COMPACTED GRAVEL SUBBASE

- A. Gravel Subbase shall be placed in 4-inch maximum lifts at the locations indicated on the Drawings. Each lift must be compacted to 95% of the maximum dry density as determined by a Modified Proctor Test (ASTM D1557).

3.05 DISPOSAL OF PAVEMENT MATERIAL/UNSUITABLE NON-EARTH MATERIALS

- A. All pavement and unsuitable non-earth materials resulting from earthwork shall be removed and disposed of off-site in accordance with Section 02050.

END OF SECTION

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SECTION 03305

SUPPORT OF EXCAVATION AND DEWATERING

PART 1 – GENERAL

1.01 DESCRIPTION

- A. The work specified in this section includes designing, furnishing, installing, documenting, maintaining, and removing excavation support and dewatering systems as required for surface excavations for construction of all underground structures and piping. Unless otherwise indicated on the Drawings, the support system may be either single-staged or multi-staged comprised of steel sheet pile walls, soldier piles and lagging, wood sheeting secured in place with bracing members such as wales, struts, or shores, concrete diaphragm slurry wall, secant pipe walls, shotcrete, steel liner plates with supports (consisting of steel ring beams, steel walers and/or struts), tiebacks, pre-grouting, any combination, or other system designed by the Contractor and submitted to the Engineer for review. Soldier piles and lagging support systems and wood sheeting systems will not be allowed in situations more than 1 foot below the groundwater table.
- B. The Contractor is also responsible in designing, furnishing, installing and operating all necessary dewatering system to accomplish the construction prescribed in the Drawings and Specifications. The dewatering system shall be compatible with selected excavation support system, and achieve the criteria listed in this Section and on the Drawings.
- C. Support systems shall be provided, as necessary to:
 - 1. Comply with all applicable federal, state, and local safety and health codes and regulations;
 - 2. Permit the proper installation and construction of the work;
 - 3. Prevent injury to persons or damage to pavement, utilities, or structures;
 - 4. Prevent injurious caving, water intrusion, erosion, loss of ground, or where shown on the Drawings as necessary for unforeseen reasons, or where directed by the Owner or Engineer, all in accordance with the Drawings and Specifications, and as directed;
 - 5. Be stable during all construction phases against unbalanced hydrostatic forces and piping; and
 - 6. Limit influence to adjacent structures and utilities due to changes in the groundwater elevation.
- D. Design, provide, install, operate, maintain, and remove a temporary dewatering system as necessary to:
 - 1. Lower groundwater levels or hydrostatic pressure heads in the soils within the excavation limits to a minimum by the Contractor to stabilize the bottom of the excavation, and keep the effects of the upward seepage gradients *within the conditions established on the working shop drawings*;

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2. Maintain a dry and stable subgrade;
 3. Do not lower the groundwater table outside the excavation support system greater than 1 foot below the normal groundwater elevation established prior to the start of the excavation, incorporating a recharge system as may be necessary;
 4. Control and remove seepage, surface water, and precipitation in excavations; and
 5. Provide sedimentation control to reduce total suspended solids in effluent prior to discharge.
- E. Design, provide, install, operate, maintain, and remove a temporary surface water control system which will divert surface water away from excavations, trenches, utilities, and all other work areas.
- F. The Contractor shall be responsible to dewater in excavations for foundations, abutments, grade beams, temporary excavation support, drainage and utility construction, below grade slabs and walls, and all other excavations.
- G. Related Work Described Elsewhere:
1. Section 01400 - Quality Control
 2. Section 03200 – Earthwork

1.02 REFERENCES

- A. API, American Petroleum Institute
- B. AWWA, American Wood-Preservers Association
- C. PTI, Post Tensioning Institute

1.03 SUBMITTALS

- A. Submittals shall be provided in accordance with the requirements as specified in Section 01340. Construction shall not begin until shop drawings are reviewed by the Owner and Engineer.
- B. Where the design of excavation support is not furnished, Contractor shall submit complete details of the proposed method, including materials and equipment intended for use, the time required for each operation, and other pertinent information.
- C. Submittals must include details of dewatering and water control, means of monitoring groundwater levels outside the excavations and methods of maintaining or reestablishing groundwater levels at prescribed elevations controlling groundwater ingress at the invert of the excavation and flows from the bedding material of existing sewers, specifics about temporary support loading and resistance to deflections and stress, and all appropriate information about the system selected.
- D. Working Drawings

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1. Prepare and submit working drawings and calculations showing the method(s), staging, necessary details for excavation support systems and temporary support for work, and the dewatering systems including pumps, piping and other required elements.
 2. Show all materials, sizes and members, connections, and methods and sequence installation and removal of the excavation support system.
 3. Working Drawings and design calculations, at a minimum, shall indicate the following:
 - a. Design criteria, including design loads and surcharge loads related to construction equipment, nearby structures and facilities.
 - b. Details, arrangement and method of assembly and disassembly of proposed system and sequence of construction.
 - c. Connection details.
 - d. Method of preloading the bracing.
 - e. Full excavation depth.
 - f. Loads on support system for various stages of excavation and bracing removal.
 - g. Expected equipment loads.
 - h. Maximum design load carried by various members of support system, and preload values.
 - i. Depths below main excavation to which support system will be installed.
 - j. Methods of resolving difficulties arising from misalignment of soldier piles or steel sheet piling exposed during excavation, and criteria for implementing procedures.
 - k. Design calculations, for various stages of excavation and bracing removal.
 - l. Existing utility facilities. After checking locations by field investigations, revise drawings to show actual locations of facilities and excavation supports interfering with proposed Work, and measures proposed to overcome such interferences.
 - m. Manufacturers' product data.
- E. Design Computations: The Contractor shall submit complete computations for the design of the excavation support system(s) proposed to be installed.
- F. All computations shall be made and stamped by a registered Professional Engineer, specializing in geotechnical construction, licensed to practice in the State of Rhode Island. The Contractor shall submit qualification and experience records for the registered Professional Engineer to the Engineer prior to performing the ground support design. Unless otherwise specified, the registered Professional Engineer shall have at least 5 years of experience, all in the last 10 years, in the design of the specific ground support systems to be used. The Professional Engineer shall be able to

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demonstrate completion of not less than three acceptable installations which have provided satisfactory performance.

G. Other Submittals:

1. The design and layout will be reviewed by the Engineer as to type and suitability, providing that the arrangements presented by the Contractor are satisfactory, but such review will not relieve the Contractor of the sole responsibility for the adequacy of the system, nor shall it be construed as a guarantee that the Contractor's proposed equipment, materials and methods for sheeting and bracing will be adequate for the work required at the locations of and for the work required by this contract.

1.04 QUALITY CONTROL

- A. Provide in accordance with the requirement as specified in Section 01400.
- B. Support of excavation shall be of sufficient strength to safely sustain all loads from the sides of the excavations, together with all water pressure and reasonable surcharge.
- C. The Contractor shall, at all times, be entirely responsible for the adequacy of sheeting and bracing used:
 1. to permit the satisfactory and safe installation and construction of the work;
 2. to provide adequate protection against damage to all existing utilities, structures, and completed portions of the work; and
 3. to prevent injury to persons.
- D. The Contractor shall control and pitch the grading to prevent water from running into the excavated areas of the structures, or to prevent damage to other structures or work already accomplished.
- E. Welding Operations – in accordance with AWS D1.1.
- F. Installation and testing of tiebacks shall be performed by personnel having a minimum of 5 years of experience, all in the last 7 years, in the design and installation procedures recommended by the manufacturer and shall be able to demonstrate completion of not less than three acceptable installations which have provided satisfactory performance. All tieback and internal brace testing and pre-stressing shall be performed in the presence of the Engineer. Work completed without the Engineer being present will not be accepted. The Contractor shall provide personnel to perform the required tests on tiebacks and report the data obtained from the tests.

1.05 DESIGN CRITERIA

- A. The design criteria for Dewatering shall be as follows:
 1. The methods of controlling water, inside and outside the excavation, shall be at the choice of the Contractor who shall be solely responsible for the design, furnishing, fabrication,

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- performance, location, arrangement, and depth of any system or systems selected to accomplish the Work. The dewatering system proposed shall be made compatible with the design and requirements for the excavation support system. These systems may include gravity wells, vacuum well points, deep well pumps, or open pumping from sumps depending upon location on-site and soil conditions.
2. Discharge of groundwater shall be in accordance with all permits. No discharge of groundwater is allowed into completed sections of sewer, and no discharge is allowed into town drainage structures without prior approval.
 3. The Contractor shall manage on-site discharge of construction dewatering to prevent off-site surface runoff and damage to on-site construction.
 4. Sedimentation basins shall be included in the system design and the Contractor shall be responsible for implementing appropriate measures and/or using appropriate equipment to capture, remove, and dispose of sediments deemed unsuitable for discharge under the applicable Permit.
 5. If evidence of contamination is suspected or detected (visual or olfactory evidence, or through chemical test data), dewatering activities shall be modified immediately and the Engineer shall be notified. In the case of suspected or detected contamination, water from dewatering shall be pumped directly from the excavation to fractional tanks. Sufficient tank storage capacity shall be provided to allow for storage during testing and temporary treatment without affecting the construction excavation progress.

PART 2 – PRODUCTS

2.01 STRUCTURAL STEEL MATERIALS

- A. Steel sheet piling – ASTM A328, hot-rolled, continuous interlocking type, new.

2.02 LAGGING

- A. Timber Lagging: use sound, well-seasoned Douglas Fir of rectangular cross section, Grade 2 or better. Timber shall be stamped and certified ALOPB LP-22 by the American Preserves Bureau.
- B. Moisture Content shall not exceed 20%.
- C. Minimum fiber stress in bending perpendicular to the grain shall be 1200 psi.

2.03 TIMBER SHEETING

- A. Any species of wood sheets which will satisfactorily withstand all driving and construction stresses and the loads to which the members will be subjected, may be used for sheeting and bracing.
- B. Wood sheeting shall not be less than 3 inches nominal thickness.

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- C. All timber sheeting and bracing shall be free from worm holes, windshakes, loose knots, decayed or unsound portions or other defects which might impair its strength or tightness.

2.04 DEWATERING

- A. All materials and equipment shall be of appropriate type and shall be maintained in proper operating condition.
- B. Materials and equipment shall be of suitable size, capacity and type to dewater the site soils and excavations; to maintain dry and stable working surfaces; to create the required subsurface depressurization as needed to establish design gradient conditions, and to pump, store, manage, treat and discharge dewatering effluent.
- C. Sedimentation tanks shall be of sufficient size and capacity to handle the dewatering flows, and to reduce suspended materials in the dewatering effluent in accordance with all permits obtained for the Project. The tank shall contain baffles to reduce velocities and allow sediment to settle inside the tank. At the discharge port, a filter cloth or bag assembly shall be installed to reduce the sediments in the discharge water.
- D. Maintain and employ adequate back-up equipment in the case of equipment breakdown.
- E. Provide a calibrated flow meter to measure the discharge flow rate and the total volume of water discharged.

2.05 OTHER MATERIALS

- A. The Contractor shall provide all hardware and fastenings necessary to accomplish satisfactory installation of all sheeting and bracing.

2.06 EQUIPMENT

- A. The Contractor shall use only equipment which will meet the noise limits established by local codes and ordinances. If the Contractor's existing equipment exceeds these maximum noise levels, immediately remove the equipment from service, or take other remedial action to achieve compliance with the specifications.

2.07 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. The Contractor shall time delivery and installation of materials to avoid extended on-site storage, and to avoid delaying work of other trades. Keep materials protected during fabrication, delivery, storage, handling and erection. Keep timber dry during storage and provide for air circulation in stacks of timber.

PART 3 – EXECUTION

3.01 INSTALLATION

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- A. General: Sheet piling and bracing shall be of sufficient strength to sustain all loads from the sides of the excavations, together with all water pressure and surcharge.
- B. The Contractor shall be entirely responsible for adequacy of sheet piling and bracing used, and shall take all precautions necessary to prevent movement of material along the sides of excavations, and to prevent the intrusion of water beyond that which his pumping or well point system can control.
- C. Sheet piling shall be permanently left in place where indicated or directed.
- D. It is expressly understood and agreed that whenever sheet piling and bracing is used, it shall not relieve the Contractor of the sole responsibility for any damages, delays, or injury due to installation or failure of the sheet piling or bracing, or the settling of the backfill, the pipeline, or the adjacent ground.
- E. All systems shall be designed so that excavation can be completed without unacceptable movement of existing soil.
- F. The contractor shall use grout to seal off groundwater infiltrating into the excavation from under existing utility conduits, where it is encountered within the excavation. The grout shall be installed such that it will provide a positive groundwater cutoff.

3.02 TIMBER SHEETING

- A. Sheet piling shall be driven to sufficient depth below the deepest excavation level to maintain sufficient restraint of the adjacent soil and to prevent movement of the sheet piling or excessive intrusion of groundwater.
- B. If voids occur behind the sheet piling, they shall be filled immediately with proper material from earth excavation or other sources to the satisfaction of the Engineer.
- C. Withdrawal of sheet piling shall be carefully performed to prevent movement of material along the sides of the backfilled excavations, to prevent damage to utilities, structures, or the work, and to avoid injury to persons.
- D. Unless otherwise permitted, sheet piling shall be withdrawn in lifts of not more than 4 feet, and all voids shall be filled immediately with selected materials and thoroughly compacted.

3.03 STEEL SHEET PILING

- A. Install in plumb position with each pile interlocked with adjoining piles for its entire length so as to form a continuous diaphragm throughout the length of each run of wall, being tightly against original ground. Use vibratory pile driver to install sheet piling to depth required for design. The equipment and methods of installation, cutting, and splicing shall conform to the approved Working Drawings and all approved Shop Drawings.
- B. Steel sheet piling located within a one to one slope from the bottom of the foundation element shall not be removed.
- C. Do not drive sheet piling within 100 feet of concrete less than 7 days old.

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- D. The contractor shall assess the subsurface conditions at the location of the excavation support system and evaluate the applicability and suitability of sheet pile installation and driving. The impact of sheet pile driving on existing structures shall be analyzed and the maximum allowable vibration at existing nearby structures shall not be so great as to result in distress or adverse disturbance to the subsurface soils, but in no case exceed one inches per second.
- E. Drive sheeting to the required depths to provide groundwater cutoff. Do not overdrive sheeting so as to cause damage to sheet pile tips or interlocks. Sheet piles shall be embedded sufficiently to minimize groundwater table drawdown to less than 2 feet (from initial groundwater table level recorded) measured 10 feet from the sheeting at all times when the excavation is underway.
- F. Sheet pile shall be installed in a manner to minimize any seepage through the interlocking joints. Areas where excessive seepage is observed shall be packed with oakum or other equivalent product as directed by the Engineer.
- G. Sheeting after driving shall be in direct contact with material to be retained.
- H. Adhere to noise restrictions defined in the Specifications or imposed by the governing agencies.

3.04 SOLDIER PILES AND LAGGING

- A. Do not use soldier piles and lagging for any excavation support systems in this contract where the bottom of excavation will extend below “historic” groundwater level.
- B. Provide bored holes for soldier piles adequate to accommodate pile sections shown on approved Working Drawings. Extend holes to necessary depth below level of subgrade. When pre-boring is to occur within 2 feet of a utility, uncover utility and install a steel drill casing to a level at least 6 inches below bottom of utility prior to pre-boring.
- C. Carry bottom of sheeting system to a depth below main excavation adequate to prevent lateral movement and to obtain adequate vertical support. In areas where additional excavation is required below main excavation subgrade, prevent movement of main excavation supports.
- D. Encase soldier piles with 2500 psi concrete up to lowest point of excavation adjacent to pile location. Fill remainder of hole with lean concrete, completely encasing pile.
- E. Use timber lagging secured in place to soldier piles.
- F. Follow excavation closely with placement of lagging. Do not allow height of unlagged face of excavation to exceed 5 feet in rock and predominately clayey soils, or 3 feet in sandy soils. Extend lagging to final subgrade. Decrease height as required to prevent ground movement.
- G. Do not permit height of unlagged face to exceed 15 inches if water flows from face of excavation, or if soil (of any type) in face moves towards excavation area. Decrease unlagged face height as required to prevent ground movement.

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- H. Carefully perform excavation for installation of lagging to minimize formation of voids. Separate lagging members only as necessary to permit packing behind them.
- I. Pack behind lagging as installation progresses; establish tight contact between excavation face and lagging. Pack openings between lagging members with straw or other suitable material to allow free drainage of water without loss of soil or sand packing.
- J. If unstable material is encountered during excavation, take suitable measures to contain unstable material in place and prevent ground displacement, which may cause damage.
- K. Maintain sufficient quantity of material on hand for lagging, bracing and other operation for protection of Work and for use in case of accident or emergency.

3.05 SUPPORT SYSTEMS WITH INTERNAL BRACING

- A. Use walers, struts, and rakers as necessary to provide internal support of excavation faces retained by soldier piles. Internal columns are unacceptable.
- B. When walers are used, obtain tight bearing between wales and wall, and ample bearing area with star pack for load transfer.
- C. Provide struts as indicated and intermediate bracing as needed to enable struts to carry maximum design load without distortion or buckling.
- D. Provide diagonal bracing as needed for stability of system.
- E. Include web stiffeners, plates or angles as needed to prevent rotation, crippling or buckling of connections and points of bearing between structural steel members. Allow for eccentricities caused by field fabrication and assembly.
- F. Install and maintain internal bracing support members in tight contact with each other and with surface being supported. Attach struts to wales using direct end bearing vertical plate (shimmed) connections at all levels.
- G. Design internal bracing support members for maximum forces occurring during excavation or removal stages.
- H. Preloading:
 - 1. Preload internal bracing members, including struts, (except deck beams), shores and similar members, to 50 percent of design compression load occurring during excavation phase.
 - 2. Use procedures that produce uniform loading on bracing members without inducing appreciable eccentricities or overstressing and distortion.
 - 3. Make provisions for permanently fixing each member with steel shims or wedges welded into place.

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4. Accomplish preloading by jacking supports in place against soldier piles or wales.
 5. Do not use wooden wedges to preload bracing member.
 6. Include in preloading system means to determine, within five percent, amount of preload induced into bracing members.
- I. If decking beams are not required, or if decking beams are not designed to support excavation loads, install uppermost tier of bracing at vertical distances not more than 8 feet below top of excavation.
 - J. Install tiers of internal bracing with a vertical distance between them and level of excavation below of not greater than 15 feet. Reduce maximum vertical distance to 9 feet where ground movement and settlement shall be minimized to prevent damage, where indicated or as directed.
 - K. Excavate below point of support as indicated. Install bracing, and preload immediately after installation and before continuing excavation.
 - L. When removing struts, increase vertical spacing provided invert slab has been in place for at least 10 days and support system is adequate to safely support adjacent structures and works.
 - M. Vertical spacing of bracing may be increased when removing struts, provided support system is adequate to support adjacent structures and works.

3.06 REMOVAL OF SUPPORTING SYSTEM

- A. When removing excavation support system, do not disturb or damage adjacent buildings, structures, construction, or utility facilities. Fill voids immediately with lean concrete or with approved backfill compacted to the density as specified in Section 03200.
- B. Except as specified herein and below, remove sheeting system to a depth of at least 6 feet below the ground surface.
- C. Remove material of supporting system from the worksite immediately.

3.07 MAINTENANCE OF SOIL SUPPORTS

- A. Maintain a sufficient quantity of materials on hand throughout the conduct of work for lagging and bracing and other operations for protection of the work and for use in case of accident or emergency.
- B. Seal water and groundwater leaks greater than 5 gpm which are uncovered in the walls as excavation progresses.
- C. When tiebacks are used, release tension in tiebacks as the excavation is backfilled. Do not leave tensioned tiebacks in place at the completion of the work.

3.08 DEWATERING SYSTEM

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CONTRACT 101

Date: 4/2021

SUPPORT OF EXCAVATION
AND DEWATERING

- A. Operation and Performances: Operate the dewatering system continuously, 24 hours per day, 7 days per week, until such time as construction work below existing water levels is complete, unless directed otherwise.
- B. Measure and record the performance of the dewatering system at the same time each day by use of suitable observation wells or piezometers installed in conjunction with the dewatering system. After placement of structures, pipelines and backfill, excluding cast-in-place concrete slabs, the water level may be allowed to rise, but at no time allow it to be higher than 1 foot below the prevailing level of excavation or backfill.
- C. The Contractor shall adapt and modify the dewatering and sedimentation treatment system(s) as required throughout the course of the Work to meet the requirements of the Work. The Contractor shall be responsible for designing, providing, installing, operating, monitoring and maintaining the dewatering systems(s).
- D. Maintain site, construction dewatering equipment, and subsurface drainage in an acceptable manner during the course of the Work. Collect and discharge surface water, seepage, precipitation, groundwater and other water which may enter excavations. Control the inflow of water at all times during construction, to prevent groundwater lowering outside the site limits and to permit all work to be performed in-the-dry.
- E. Provide, install, maintain, and operate pumps, wells, sumps and related equipment, including standby equipment, of sufficient capacity to adequately dewater excavations until the required construction, installation, and backfilling of underground structures are completed to a level above the water level. When installing tank vaults, sewer manholes, or other structures that may be subject to buoyant forces, maintain dewatering operations until sufficient structure dead weight or backfill is placed to resist uplift forces.
- F. Install the dewatering system(s) for wall foundation, temporary excavation support, utility, and all other excavations in accordance with accepted shop drawings.
- G. All wells or sumps shall be surrounded by suitable filter fabric, crushed stone, or other acceptable materials to prevent the migration or pumping of fine-grained materials and subgrade disturbance.
- H. Maintain site grades to direct surface runoff to collection points. Prevent surface water from running or collecting over prepared subgrades or fill surfaces. Do not permit standing water to accumulate in excavations.
- I. Provide access to the dewatering system(s) to the Owner and Engineer at all times to obtain samples of the dewatering effluent prior to and after treatment.
- J. Modify dewatering procedures which cause or may cause, in the opinion of the Owner or Engineer, damage to new or existing facilities. Modifications to dewatering system(s) shall be made at no additional cost to Owner.

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- K. All dewatering system(s) shall include methods to remove sediment and suspended particles from the dewatering effluent to comply with permit requirements. These methods shall include, at a minimum, baffled sedimentation tank(s) of sufficient size, and other measures, as required.
- L. If sediment or other materials discharged from the dewatering system accumulates in the storm drains or other utilities, the Contractor shall completely clean and remove all sediment from impacted utilities to the satisfaction of the Owner of the utility, at no additional cost to the utility owner.
- M. Permanent utilities and piping shall not be used as part of dewatering system(s).
- N. Remove and backfill dewatering elements when no longer required, using methods acceptable to the Engineer. Backfill any voids resulting from dewatering system removal with cement grout, concrete, or other material as directed by the Engineer to prevent potential loss of ground.
- O. Inform the Engineer in writing of any changes made to accommodate field conditions.

END OF SECTION

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SECTION 03763

PIPELINE CLEANING

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes

1. Requirements for cleaning and TV inspection of sewer pipes.

B. Water for Construction

1. Drawing water from hydrants shall be coordinated with the City of Warwick Water Department.
 - a. Contact information is:
Warwick Water Department
935 Sandy Lane
Warwick, RI 02889
(401) 738-2008

C. Related Sections

1. Section 01570 - Traffic Regulations
2. Section 03149 - Maintaining Existing Flow
3. Section 03764 - Television Inspection
4. Section 03769 – Disposal of Materials

1.02 REFERENCES

A. National Association of Sewer Service Companies

1. NASSCO Recommended Specifications for Sewer Collection System Rehabilitation.

1.03 CLEANING AND DISPOSAL REQUIREMENTS

- A. The Contractor's attention is directed to the requirements set forth by the **State of Rhode Island, Department of Environmental Management (RIDEM)** regarding "Special Wastes" and the proper disposal thereof. All waste materials and debris, as designated by the Owner and/or Engineer including but not limited to any pump station, sewers and associated structures, or any portions thereof, including but not limited to sludge, grit sediment, dirt, sand, rock, grease, roots and other liquid, solid or slime-solid material contained therein, shall be considered, "Special Wastes".

- B. Remove dirt, grease, rocks, sand, iron tuberculation and other materials and obstructions from

the pipeline.

- C. Pipeline Cleaning shall be performed by hydraulically propelled or high velocity jet cleaning equipment. Selection of equipment shall be based on such field conditions as an access availability and type of debris to be removed.
- D. Clean pipeline to restore a minimum of 95 percent of the original carrying capacity of the pipe, and suitably to permit lining of the pipeline.
- E. The Contractor is required to test and dispose of any waste material removed from the pipeline in accordance with State and Federal requirements. Testing of waste material will be at the Contractor's expense.
- F. The Contractor shall notify the Engineer of the proposed disposal location and requirements of that disposal facility to allow disposal of waste material.
- G. The Contractor is required to store any waste material until all testing requirements of the proposed facility have been met and shall submit copies of all test results to the Engineer.

1.04 SUBMITTALS

- A. Submit in accordance with Specification Section 01300.
 - 1. Provide detailed plans and descriptions outlining cleaning and television inspection procedures and all provisions and precautions regarding the handling of existing sewage flows.

1.05 QUALITY ASSURANCE

- A. Perform general work in accordance with NASSCO recommended specifications for sewer collection system rehabilitation.

1.06 QUALIFICATIONS

- A. Company specializing in performing the work of this section with minimum of three (3) years' experience.

1.07 TRAFFIC CONTROL

- A. In accordance with Specification Section 01570.

PART 2 PRODUCTS NOT USED

PART 3 EXECUTION

3.01 CLEANING PROCEDURES

A. Sewer Cleaning

1. The designated pipelines shall be cleaned using hydraulically propelled or high velocity jet cleaning equipment.
2. Selection of the equipment used shall be based on the conditions of the lines at the time the work commences.
3. Equipment and methods selected shall be satisfactory to the Engineer.
4. Equipment selected for cleaning shall be capable of removing dirt, grease, rocks, sand, iron tuberculation and other deleterious materials and obstruction from the pipelines.

B. Material Removal

1. Sludge, dirt, sand rocks, grease and other solid or semi-solid material resulting from the cleaning operation shall be removed at the downstream manhole of the section which could cause line stoppages.

C. Disposal of Materials

1. Solids or semi-solids resulting from the cleaning operations shall be removed from the site and disposed legally.

D. Cleaning Precautions

1. During all pipeline cleaning operations, satisfactory precautions shall be taken to protect the pipelines from damage that might be inflicted by the improper use of cleaning equipment.
2. Whenever hydraulically propelled cleaning tools, which depend upon water pressure to provide their cleaning force or any tools which retard the flow of water in the pipeline are used, precautions shall be taken to ensure that the water pressure created does not cause any damage or flooding to public or private property.
3. The flow of sewage in the sewer lines shall be utilized to provide necessary pressures by hydraulic cleaning devices whenever possible.
4. When additional quantities of water from fire hydrants are necessary to avoid delay in normal working procedures, the water shall be conserved and not used unnecessarily.
5. No fire hydrant shall be obstructed in case of a fire in the area served by the hydrant nor shall a hydrant be used for the purpose described unless a vacuum break is provided.

E. Root Removal:

1. Any visible roots shall be removed as required by the Engineer.
2. Roots shall be removed in all sections by mechanical methods.

3. Chemical root treatment shall also be used as approved by the Engineer.
 - a. Herbicide to be EPA approved.
 - b. Herbicide must be integral part of chemical sealant material.
 - c. Application to be done in accordance with manufacturers written instructions.
 - d. Any surrounding vegetation damaged due to Contractors operation shall be replaced at no expense to the Owner.
- F. Pumping and flow bypassing
 1. The Contractor shall supply the necessary pumps, conduits and other equipment to divert the flow of sewage around the pipeline section in which work is to be performed.
 2. Handling existing sewage flows and bypass pumping shall be in accordance with Specification Section 03149.
- G. Flow Control Precautions
 1. Whenever flows in a sewer line are blocked, plugged or bypassed, sufficient precautions must be taken to protect the sewer lines from damage that might be inflicted by excessive sewer surcharging.
 2. Further, precautions must be taken to ensure that sewer flow control operations do not cause flooding or damage to public or private property being served by the sewers involved.
 3. Coordination with private property owners is required.

3.02 FIELD QUALITY CONTROL

- A. After cleaning, the sewer pipes shall be visually inspected by means of closed-circuit television. The inspection shall be recorded on DVD's and printed TV inspection logs in accordance with Specification Section 02764.
- B. After videotaping the cleaned pipeline any pipe not sufficiently cleaned shall be cleaned again to obtain satisfactory results at no additional cost to the Owner.
- C. Provide two digital video disks (DVDs), one original and one copy to document conditions following completion of the cleaning process.

END OF SECTION

SECTION 03764

TELEVISION INSPECTION

1.01 GENERAL

- A. Summary
 - 1. Requirements for television inspection of pipelines.
- B. Related Sections
 - 1. Section 01570 - Traffic Regulations
 - 2. Section 03149 - Maintaining Existing Flow
 - 3. Section 03763 – Pipeline Cleaning

1.02 REFERENCES

- A. National Association of Sewer Service Companies
- B. NASSCO Recommended Specifications for Sewer Collection System Rehabilitation.

1.03 SUBMITTALS

- A. In accordance with Specification Section 01300, submit the following:
 - 1. Outline of the procedures proposed to accomplish the work. Include a detailed description of the methods and equipment to be used for each operation. Outline TV inspection procedures and all provisions and precautions regarding the handling of existing sewage flows.

1.04 QUALIFICATIONS

- A. Company specializing in performing the work of this section with minimum five (5) years documented experience.

2.01 PRODUCTS

- A. TV Inspection Logs:
 - 1. Printed location records clearly showing the location, in relation to an adjacent manhole of each infiltration point observed during inspection and other points of Significance such as locations of building sewers, unusual conditions, roots, storm sewer connections, broken pipe, presence of scale and corrosion, deposits, and other discernible features.
 - 2. The logs shall list the upstream manhole, downstream manhole, survey direction (with/against flow), date of inspection, time of inspection, and size of pipe, material of pipe and inspectors name.
- B. DVD Recordings/ Memory Sticks:
 - 1. Color video and audio record documenting TV inspection of conditions subsequent to cleaning. The purpose of recording shall be to supply a visual and audio record of problem areas of the lines that may be replayed.

2. At the beginning of each recording it shall list the upstream manhole, downstream manhole, survey direction (with/against flow), date of inspection, time of inspection, size of pipe, material of pipe and inspectors name.
3. Video recording playback shall be at the same speed that it was recorded. Slow motion or stop-motion playback features may be supplied at the option of the Contractor.
4. Title to the tape shall remain with the Contractor; however, the Owner reserves the right to purchase any additional DVD's at the completion of the project.
5. Provide two (2) sets of DVD's/ Memory Sticks complete with TV logs in the required format.

3.01 EXECUTION

A. PREPARATION

1. Control traffic in accordance with Specification Section 01570.
2. Bypass sewage flow to allow performance of work. Handling existing sewage flows and bypass pumping shall be as specified in Specification Section 03149.
3. Clean sewer lines in accordance with Specification Section 03763.

B. TV INSPECTION

1. TV inspect sewer pipes following initial cleaning and following rehabilitation work prior to putting the line back in service.
2. After cleaning, the sewer pipes shall be visually inspected by means of color closed- circuit television. The inspection shall be recorded on DVD and printed TV inspection logs.

C. EQUIPMENT

1. Television Camera to be specifically designed and constructed for such inspection; equipped with a light to allow a clear picture of the entire periphery of the pipe; operative in 100 percent humidity conditions; and equipped with manual or power winch, TV cable, powered rewinds or other devices that do not obstruct the camera view to move the camera through the line.
2. Camera shall be moved through the line in either direction at a moderate rate, stopping when necessary to permit proper documentation of the sewer's condition. In no case will the television camera be pulled at a speed greater than 30 feet per minute. At areas of interest, the camera shall be capable of rotating its lens 360- degrees to obtain a clearer, more direct viewing angle. The camera must be capable of rotating to view up into all laterals for inspection recording purposes post lining. Manual winches, power winches, TV cable, and powered rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the sewer conditions shall be used to move the camera through the sewer line.
3. Camera, television monitor, recording device and all other components of the video system shall be capable of producing picture quality acceptable to the Engineer.

4. TV inspection equipment shall be equipped with a meter device to locate defects by measurement. Marking on the cable, or the like, which would require interpolation for depth of manhole, will not be allowed. Accuracy of the distance meter shall be acceptable to the Engineer.
5. When manually operated winches are used to pull the television camera through the line, telephones or other suitable means of communication shall be set up between the two manholes of the section being inspected to ensure good communication between members of the crew.
6. If, during the inspection operation, the television camera will not pass through the entire manhole section, set up equipment so that the inspection can be performed from the opposite manhole.

3.03 FIELD QUALITY CONTROL

1. TV Inspection Records: Complete records shall be kept of TV inspection performed in each manhole section. The records shall identify the following information:
 - a. Identification of the manhole section tested.
 - b. Distance and location of services laterals
 - c. Distance, location (footage) and description of problem including but not limited to cracks, broken pipe, hole in pipe and roots. Record on DVD and memory stick all footage inside the sewer pipe. All DVD's and necessary playback equipment shall be readily accessible for review by the Engineer during the project.

END OF SECTION

SECTION 03766

CURED IN PLACE PIPE (CIPP) INSTALLATION IN SEWER MAIN (INVERSION METHOD)
and/or
(UV CIPP METHOD)

PART - 1 GENERAL

1.01 SUMMARY

A. Section Includes

1. Requirements for reconstruction of pipelines by installation of resin impregnated flexible felt tube inverted into the existing pipeline utilizing hydrostatic head or pressurized air. Curing shall be accomplished by circulating hot water, steam to cure the resin composite into a hard, impermeable, structurally sound, continuous, tight fitting, water tight pipe within a pipe.
2. Installation of resin impregnated flexible felt tube by pull-in-place process as approved by the Owner / Engineer will be considered an acceptable alternate to the inversion process.
3. Requirements for reconstruction of pipelines by installation of Fiberglass tube material or equivalent that will require the cure process to utilize Ultra Violet (UV) light. This process will meet the standards required to rehabilitate a pipe line that has been determined to be structurally unsound and able to support or exceed the engineered loads on the pipe structure.

B. Water for Construction

1. The Owner shall supply all water required by the Contractor for the pipeline cleaning and CIPP curing process. The Contractor must coordinate acceptable supply locations and contact the Owner in advance prior to use of any water for the Project.

C. Related Sections

1. Section 01060 - Regulatory Requirements
2. Section 03149 – Maintaining Existing Flow
3. Section 03763 - Pipeline Cleaning
4. Section 03764 - Television Inspection

1.02 REFERENCES

A. American Society for Testing and Materials

1. ASTM D790 - Test Methods for Flexural Properties of Un-reinforced and Reinforced Plastics and Electrical Insulating Materials.
2. ASTM F1216 - Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube.
3. F1743 - Standard Practice for Rehabilitation of Existing Pipelines and Conduits by Pulled-in-Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP).

1.03 DESIGN REQUIREMENTS

- A. The cured-in-place pipe (CIPP) shall be designed for a Fully Deteriorated design condition in which it is assumed that the existing host pipe provides no structural support. The CIPP shall be designed to carry soil, groundwater, and other superimposed loads.
- B. The CIPP thickness shall be designed in accordance with ASTM F1216 under the following conditions:
 - 1. Fully deteriorated gravity pipe: Pipe diameters and material type per contract Drawings
 - 2. Height of ground water above invert: Assume at ground surface level
 - 3. Height of soil above top of pipe: Per Contract Drawings
 - 4. Live load: AASHTO HS-20
 - 5. Soil Density: 120 lbs./cubic foot
 - 6. Orality: 2% to 8%, as applicable per Contract application

The CIPP design will assume no bonding to the original pipe.

- C. Hydraulic Capacity - The hydraulic cross-section of the original pipe shall be maintained as a much as possible. The completed CIPP shall provide a minimum of the full flow capacity of the original pipe before rehabilitation.

1.04 SUBMITTALS

- A. Shop Drawings
 - 1. Submit in accordance with Specification Section 01300
 - a. Description of materials.
 - b. Installation process.
 - c. Long term creep data, testing duration 10,000 hours minimum.
 - d. Wall thickness design calculations prepared by a professional engineer.
 - e. Bypass pumping plan.
 - f. Installer's qualifications and relative experience.
- B. Samples
 - 1. Product samples which indicate conformance with this specification as requested by the Owner/Engineer.

1.05 SAFETY REQUIREMENTS

- A. Perform all work in strict accordance with applicable OSHA standards. Particular attention is drawn to those safety requirements involving working with scaffolding and entering confined spaces.

1.06 SCHEDULING

- A. Notification
 - 1. Notify all wastewater generators serviced by the sewer main being lined and when the sewer will be off line. Services shall not be shut-down for more than 24-hours.

2. Notification to such generators shall be done one week and again at 24-hours prior to the scheduled installation of the liner.
3. Notification shall be done in writing and include contact telephone number.
4. Coordinate schedule with Owner/Engineer.

B. Special Conditions:

1. This project will significantly impact certain businesses while being performed. In Order to mitigate these impacts, scheduling of installation will require weekend Work, Saturday and Sunday. These special conditions will be identified during pre-bid conference and the pre - construction meeting with the approved vendor.

1.07 WARRANTY

1. During the (3) year Warrantee Period any defects, which may or has affected the integrity and/or strength of the pipe shall be fully repaired at the Contractor's expense, in a manner approved by the Owner/Engineer.

1.08 QUALITY ASSURANCE

- A. Products must have been used in five (5) successful wastewater collection system projects of similar size and scope of the Work and be documented to the satisfaction of the Owner/Engineer.
- B. Furnish reports to the Engineer of third party test data for chemical resistance, physical properties, structural capabilities, performance (both short-term and long- term), and flow coefficient properties.
- C. Installers to be licensed by the patent holder/manufacturer of the cured-in-place inversion and/or pull-in-place process as appropriate, with a minimum of five (5) active years of experience in installing similar size CIPP. Furnish written qualifications of licensed installers.

PART - 2 PRODUCTS

2.01 MANUFACTURERS

- A. Inversion process and materials shall be by Insituform Technologies, Inc., Memphis, TN; Inliner USA, Inc., Houston, TX; Pipeline Products, Mamaroneck, NY. Reline America UV Group or approved equal.

2.02 MATERIALS

- A. In accordance with ASTM F1216
- B. Resin Impregnated Felt Tube
 1. Sized to tightly fit internal dimensions and overall length of original host pipe when installed.
 2. Manufactured to withstand installation pressures.
 3. Overlapping layers of felt in longitudinal seams that may cause lumps in the final product shall not be utilized.

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4. Allow for circumferential stretching during installation including those necessary to accommodate and fit irregular pipe sections.
5. Provide tube length required to span distance between access points.
6. Have sufficient strength and capability to bridge areas of missing pipe or portions thereof.
7. Resin and catalyst system compatible with the inversion process.
8. Outside layer of Tube to be coated with impermeable, flexible membrane that will contain resin.

C. CIPP shall conform to the following:

Physical Property	Standard	Minimum Results
Flexural Stress	(Modified ASTM D790)	4,500 psi
Flexural Modulus of Elasticity	(Modified ASTM D790)	250,000 psi

1. Values are for commonly used polyester resins in the United States. Values for non-typical polyesters, vinyl esters and epoxies may be substituted when applicable as approved by the Engineer.
2. Chemically resist internal exposure to domestic sewage in accordance with ASTM F1216 Appendix X.
3. Wall thickness shall be not less than the minimum required by ASTM F1216, Appendix XI.
4. No materials to be included in the tube that may cause de-lamination in cured CIPP.
5. Homogeneous across the entire wall thickness containing no intermediate or encapsulated elastomeric layers.
6. No dry or unsaturated layers shall be evident.
7. The CIPP shall not contain fiberglass unless required with the UV CIPP process.
8. Provide uniformed wall thickness during wet-out process that when compressed at installation pressures will meet or exceed the calculated minimum design thickness.

PART - 3 EXECUTION

3.01 EXAMINATION

- A. Verify all lengths between manholes, sewer depths and service connection locations prior impregnation and insertion of liner

3.02 PREPARATION

- A. Cleaning Pipelines shall be in accordance with Specification Section 03763 with the following additional requirements.
 1. Remove all internal debris from the pipe line prior to the inversion process by utilizing any one or combination of rodding machines, high velocity water jet machines, hydraulically propelled machines, etc.
 2. Selection of the equipment used shall be based on the condition of the existing pipeline at the time the work commences.
 3. Methods to be approved by the Owner/Engineer.

4. Debris resulting from the cleaning operation shall be removed from the downstream manhole of the section being cleaned.
 5. Passing debris from one manhole section to another will not be permitted.
 6. The Contractor shall remove all debris from site during the cleaning operation.
 7. Based on closed circuit television inspection, the Owner/Engineer shall be the sole judge for any final acceptance of the completed pipeline cleaning. Specific areas of pipeline, which have not been cleaned to the satisfaction of the Owner/Engineer shall be re-cleaned and re-inspected as necessary at the Contractor's expense.
- B. Inspection shall be in accordance with Specification Section 03764 with the following additional requirements.
1. Using a "pan & tilt" camera, closed circuit television inspections shall be performed by experienced personnel trained in locating breaks, obstacles and service connections, using equipment specifically designed for this purpose.
 2. Perform a "Before" CIPP liner installation interior inspection of the pipeline to locate any conditions which may prevent proper CIPP inversion into the existing pipeline, locate and document all existing sewer service lateral connections for future reinstatement, and to inspect the final pipeline condition, log the location of these conditions for correction.
 3. Two (2) copies on a memory stick shall be provided to the Owner and the Engineer for record and future reference.
- C. Pumping and Flow Bypassing
1. Supply the necessary pumps, conduits and other equipment to divert the flow of sewage around the pipeline section in which work is to be performed.
 2. Handling existing sewage flows and bypass pumping shall be in accordance with Specification Section 03149.
- D. Flow Control Precautions
1. Whenever flows in a sewer line are blocked, plugged or bypassed, sufficient precautions must be taken to protect the sewer lines from damage that might be inflicted by excessive sewer surcharging.
 2. Further, precautions must be taken to ensure that sewer flow control operations do not cause flooding or damage to public or private property being served by the sewers involved.
 3. Coordination with private property owners is required.
- E. Line Obstructions
1. Clear lines of obstructions such as solids, dropped debris, protruding service connections, collapsed pipe, or other obstructions that may prevent normal installation at no additional cost to the Owner.
 2. Protruding services shall be cut/ground flush to the wall of the sewer main prior to rehabilitation. The cutting shall be completed with the use of a robotic cutter specifically designed for such work. The cutter shall be capable of cutting PVC, VC, cast iron and ductile iron pipe. All cut pieces shall be removed from the sewer main. Cutting protruding services with a chain-knocker or root cutting machine will not be permitted.

3.03 INSTALLATION

A. Staging Area

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1. Designate location where the tube will be resin impregnated prior to installation.
- B. Inspection
1. Allow Owner/Engineer to inspect materials, wet-out procedures and all operations involved with television inspections, as well as installing and curing the liner.
- C. Installation
1. In accordance with ASTM F1216 or ASTM 1743 as applicable.
- D. Curing
1. After installation is complete, apply steam or heated water for the curing process.
 2. Fit the heat source with suitable sensors to monitor the temperature of the incoming and outgoing water or steam supply. Fit another sensor between the impregnated tube and the pipe invert at the termination to monitor curing temperature.
 3. Uniformly raise the water or steam temperature to a level required to effectively cure the resin as determined by the resin/catalyst system employed.
 4. Maintain water or steam in tube to the temperature required in accordance to the resin manufacturer's instructions.
 5. Initial cure deemed complete when inspection shows exposed portions of the tube to be hard and sound and remote temperature sensor indicates temperature is of a magnitude to realize a cure in the resin.
 6. Continue cure period as recommended by the resin manufacturer, as modified for the cured-in-place inversion process.
- E. Cool Down
1. Cool hardened pipe in accordance with resin manufacturer's requirements.
 2. The inversion water cannot be discharged into any river, stream or wetland.
- F. Finish
1. Cut new pipe at suitable location in manhole.
 2. The finished pipe shall be continuous and watertight over the total length of the inversion run, and be free from defects, foreign inclusions, dry spots, pin holes, lifts and de-laminations.
 3. Remove and replace defective areas.
- G. Sealing Pipe at Manhole
1. If due to existing broken or misaligned pipe at the manhole wall, the new pipe fails to make a tight seal, a seal shall be applied using a resin mixture compatible with the pipe and the materials as directed by the Engineer.

3.04 SEWER SERVICE LATERAL CONNECTIONS

- A. After the new pipe has been cured-in-place, reestablish all existing active service lateral connections to no less than 95% of the existing pipe diameter at the locations recorded on the DVD's and TV inspection logs.
- B. Reestablish service lateral connections without excavation, and in the case of non-man entry pipes, from the interior of the pipe by means of a television camera and remote controlled cutter specifically.

- C. Openings shall be rough cut then edges ground smooth, conforming to the existing opening.
- D. After reestablishing the service lateral connection, the end of the service lateral connection shall be sealed to prevent infiltration from the edge of the newly lined sewer to a minimum distance of twelve (12) inches up the service lateral connection utilizing a lateral packer and an acrylamide base gel chemical sealing material compatible with the liner and the existing pipe.
 - 1. Seal all service lateral connections unless directed otherwise by the Engineer after review of the post lining television inspection recordings.
 - 2. Lateral packer shall be 2001L Lateral Packer by Logiball, Inc. or a product deemed equal by the Engineer.
 - 3. Chemical sealing material shall be AV100 Grout by Avanti International, Webster, TX, or a product deemed equal by the Engineer.

3.05 FIELD QUALITY CONTROL

- A. Site Tests
 - 1. The water-tightness of the pipe shall be gauged while curing under positive head, or other method approved by the Engineer.
 - 2. Provide samples and testing of physical properties in accordance with ASTM F1216 and ASTM F1743.
 - 3. Additional testing if required will be by the Owner.
- B. Laboratory Tests
 - 1. The Contractor shall submit liner samples to a certified third-party laboratory for testing. Laboratory tests include:
 - a. Thickness measurements on CIPP portion of sample in accordance with ASTM D5813-04(08) at a minimum of six (6) locations per sample.
 - b. Flexural Stress (Yield Strength) in accordance with ASTM D790.
 - c. Flexural Modulus of Elasticity in accordance with ASTM D790.
- C. Final Inspection and Acceptance
 - 1. Provide the Owner and Engineer each with two (2) properly labeled DVD's, Memory Sticks and corresponding TV inspection logs containing a complete record of the televised internal pipe inspection demonstrating Contract compliance of the completed work, corrected conditions and reestablished sewer service lateral connections.

3.06 CLEANING AND SITE RESTORATION

- A. Upon acceptance of the CIPP installation and any testing associated therewith, restore the project area affected during the operation to a condition at least equal to that existing prior to the work.

END OF SECTION

SECTION 03767

MANHOLE LINING REHABILITATION

PART 1 - GENERAL

1.1 WORK OF THIS SECTION

- A. This section defines the scope of work of the specification which includes executing surface preparation, cleaning, application of specified products, inspection and testing for general repairs and lining of newly installed, existing, and defective specified structures and surfaces by a monolithic application of a high build, 100% solids, structural epoxy system to seal infiltration/exfiltration, repair voids and deterioration, and provide enhanced corrosion protection as a total rehabilitative lining system.
- B. Procedures for qualifying and are described herein. In addition to the lining system, different repair methods and procedures are listed in this specification. All structures scheduled for rehabilitation shall be cleaned, prepared, repaired, patched and/or sealed as required prior to the application of the structural epoxy system.

1.2 SCOPE OF WORK

- A. The Contactor shall be responsible for furnishing all labor, supervision, products, materials, and equipment required to complete all rehabilitation work and testing in accordance with this Specification.
- B. All Sections of this Specification are mutually complimentary and the overall intent is that the Contractor shall provide for everything in his portion of the work required to make a complete and operable job in every respect unless specifically noted otherwise.
- C. It is the intent of this Specification to ensure that the work, as completed shall meet all applicable codes, ordinances, rules and regulations of every authority having jurisdiction in the area where the project(s) is located. Failure of the Contractor to point out items that do not meet such requirements does not relieve the Contractor or the Subcontractors of the responsibility of meeting them.
- D. All supplies shall be stored and maintained by the Contractor in accordance with manufacturer's recommendations. Materials shall not be exposed to adverse conditions prior to the work. All materials shall be kept in secured area and away from general public access. The Contractor shall review and maintain all Safety Data Sheets (SDS), product labeling, and technical literature at the project site.

1.3 REFERENCES

- A. The latest codes and standards referenced herein and belonging to the following organizations shall be followed:
 - 1. American Society for Testing and Materials (ASTM)
 - 2. National Association of Corrosion Engineers, NACE International (NACE)
 - 3. The Society for Protective Coatings (SSPC)
 - 4. Occupational Safety and Health Administration (OSHA)
 - 5. Resource Conservation and Recovery Act (RCRA)
 - 6. United States Environmental Protection Agency (EPA)
 - 7. Environmental Technology Verification (ETV)

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8. International Concrete Repair Institute (ICRI)
9. National Association of Sewer Service Companies (NASSCO)
10. National Sanitation Foundation (NSF)
11. Center for Innovative Grouting Materials and Technology (CIGMAT)
12. American Association of State Highway and Transportation Officials (AASHTO)

1.4 SUBMITTALS

A. Product Data

1. Technical data sheets and safety data sheets on each product proposed shall be furnished. The technical data, with quantitative and qualitative values based on ASTM testing results, and/or other 3rd party testing methods shall demonstrate performance conformity with these specifications. If submitting an alternative product, please follow procedures set forth in Shop Drawings Section 01340.

B. Application Data

1. Project specific guidelines and recommendations.
2. Proof of any required federal, state or local permits or licenses necessary for the project.
3. Design details for any ancillary systems and equipment to be used on site for surface preparation, application and testing.
4. Confined space entry, flow diversion and/or bypass plans shall be presented by Contractor to Owner as necessary to perform the specified work.
5. Applicator: Company specializing in performing work of this section with minimum ten (10) years documented experience and approved by coating material manufacturer. If spraying, contractor must be certified by manufacturer verifying ownership proper equipment and training.
6. Three (3) recent references of Applicator indicating successful application of coating product(s) of the same or similar material type as specified herein, within municipal sanitary sewer manhole environments.
7. Written warranty.
 - i. Materials and labor shall be warranted with bond by the Contractor of applied material systems for a period of ten (10) years from the date of final acceptance of the project, once correctly applied by an approved applicator and inspected.
 - ii. Failure will be deemed to have occurred if the protective system fails to (a) prevent the internal damage or corrosion of the underlying structure due to bacteriological, chemical, gaseous, erosive and abrasive attack. It does not include excessive atypical non-wastewater induced chemical abuse or atypical acts of God which cause structural damage, (b) seal and protect the substrate and environment from contamination by effluent, (c) seal and protect from influent.
 - iii. Contractor shall, within a reasonable time after receipt of written notice thereof, repair defects in materials or workmanship which may develop during said warranty period, and any damage to other work caused by such defects or the repairing of same, at his own expense and without cost to the Owner.

C. Or Equal Submittal

1. In order to be considered as an equal product, said product will have to meet the minimum physical and performance properties described herein as measured by the applicable ASTM standards referenced or other 3rd party referenced testing methods. Testing results must be performed and presented in the form of technical data sheets. Said product

manufacturer must provide documentation supporting product's success and history in closed-wastewater-environments for at least ten (10) years.

PART 2 – PRODUCTS

2.1 ACTIVE LEAK CONTROL

- A. Active leak control materials are to be utilized to stop running water, infiltration, and other water stop needs.
- B. All active leak control materials must be compatible with repair and lining materials.
- C. Active leak control materials

- 1. Hydraulic cement

- i. Quick setting, hydraulic cement compound designed for minor patching, and as a leak stopper and water plug, which stops running water and/or seepage through concrete.
 - ii. Approved material shall exhibit the following physical properties:

Initial Set Time @ 77F	1-3 minutes
Tensile Strength, ASTM C-496	640+ psi
Compressive Strength, ASTM C-109	
1 day	≥ 1,500 psi
28 days	≥ 5,000 psi

- iii. Specified material(s) are listed below, or prior approved equal:

- Epoxytec Mortartec Hydrxx (#RCHY) by Epoxytec

- 2. Chemical grout

- i. Chemical grout material used for grouting active leaks shall be injection hydrophobic polyurethane or equal.
 - ii. While being injected, the chemical sealant must be able to react/perform in the presence of water.
 - iii. The cured material must withstand submergence in water, without degradation.
 - iv. The resultant sealant (grout) formation must be impervious to water penetration.
 - v. The final sealant must withstand freeze-thaw and wet-dry cycles without causing adverse changes to the sealant.
 - vi. The final sealant formation must not be biodegradable.
 - vii. Chemical grouting material final cure must not exceed one (1) hour.
 - viii. Chemical grouting material must be compatible to other specified top coating and repair material and the final topcoat of the structural epoxy system.

2.2 CONCRETE REPAIR

- A. Concrete repair methods include isolated, sectional, and fully restorative methods including brick, concrete, and other masonry filling, patching, termination of materials, seams, anchors, and rebuilding based on various conditions in order to repair imperfections that adversely affects flow,

would compromise the structure and liner in the future, and to restore the structure to a profile accepting to the lining system.

B. Concrete patching and rebuilding

1. Concrete patching repair shall be performed for any spot repairs, filling or repairs of deep spalls, voids, gaps, bugholes/holes, and/or crevasses.
2. Rebuild isolated structures, inverts, benches and/or troughs, or other flow structures requiring build-up and/or rebuild in order to provide smooth flow transition waterway with no distortion of flow or connections.
3. Materials
 - i. The material is early-high strength, high build, sewer grade silica fume, fiber reinforced, industrial-grade modified mortar exhibiting the following minimum properties:

Flexural Strength, ASTM C-293 (28 days)	≥ 950 psi
Initial Cure	< 24 hours
Tensile Strength, ASTM C-496	≥ 300 psi
Bond Strength, ASTM C-882 (mod- 7 days)	≥ 800 psi
Shrinkage, ASTM C-596	< 0.05%
Freeze/Thaw, ASTM C666	100 cycles, no damage

- ii. Specified material(s) are listed below, or prior approved equal:

Epoxytec Mortartec (#RCM01,02, RCME1, RCHY) by Epoxytec

C. Resurfacing

1. Concrete repair methods may also include resurfacing the substrate to create uniformity of the surface to accept coatings and to restore the substrate's profile. This will be required for any newly installed concrete structures to reduce the occurrences of outgassing, and for existing structures where degradation to substrate profile is greater than an ICRI CSP-6, and/or when the substrate requires restoration bringing profile to near-original.
2. Resurfacing thicknesses for existing structures, the thickness shall range between 1/4 inch and 1/2 inch (1/4" – 1/2"). For newly installed concrete structures, thicknesses shall be between 1/16 inch to 1/8 inch (1/16" – 1/8"). Should the substrate and structure require repair beyond half-inch, refer to Section 2.2(B) "Concrete repair" for repairing materials beyond half-inch (1/2") thickness.
3. Materials
 - i. The material is a fiber-reinforced, high build, corrosion resistant epoxy-modified-mortar, fortified with silica fume and micro silica. The hardened epoxy binder is dense and highly impermeable. The above performance is achieved by a complex formulation of mineral, organic resin and densifying agents and sophisticated chemical additives combined with next generation water-borne epoxy curing agents. Graded quartz sands are used to enhance particle packing and further improve the fluidity and hardened density. The composition also possesses excellent thin-section toughness, high modulus of elasticity and is self-bonding
 - ii. The epoxy-modified-mortar shall exhibit excellent thin-section toughness and applied as low as 1/16 inch thickness, and capable of build-up up to 1-inch.
 - iii. The epoxy-modified-mortar must be designed to accept the top coat structural epoxy at a minimum of two (2) hours after application at 77F.
 - iv. The epoxy-modified-mortar can be applied by hand and/or wet-shot spray applied.

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- v. The epoxy-modified-mortar shall not require any further preparation or conditioning within 36 hours (at 77F) to accept structural epoxy top coat applications.
- vi. Specified material(s) are listed below, or prior approved equal:

Epoxytec Mortartec Ceramico (#RCME1) by Epoxytec

D. Exposed reinforcing bars

- 1. Exposed reinforcing bars must be treated with rust inhibiting primer, and encapsulated/patched with high density mortar.
- 2. Materials
 - i. Rust inhibiting primer must be epoxy-based, rust inhibiting primer designed for rapid curing, and for steel applications.
 - ii. High density mortar patching will consist of any of the specified repair mortars within this section. Refer to RIDOT Standard Specification for repairing materials.
 - iii. Specified material(s) are listed below, or prior approved equal:

Epoxytec A1 Primecoat (#MP1R) by Epoxytec

2.3 LINING

A. General

- 1. It is the intent of this section to provide for the waterproofing, sealing, structural reinforcement and corrosion protection of manholes and similar underground structures by the safe, quick and economical application of an ultra-high build 100% solids structural epoxy liner.
- 2. This specification establishes the minimum standard for material and method of application for the structural reinforcement, sealing and corrosion protection of leaking and deteriorated manholes by lining with a 100% solids, high build structural grade epoxy. The structural epoxy liner shall be installed at a minimum thickness of 100 mils DFT (0.1”).
- 3. The structural epoxy lining system will be used on surfaces in order to protect against corrosion and seal from I&I.

B. Materials

- 1. Structural epoxy lining system must be a structural epoxy exhibiting the following features:
 - i. The structural epoxy must have undergone testing and verified by the US Environmental Protection Agency’s, Environmental Technology Verification Program for Infrastructure Rehabilitation Technologies (EPA ETV).
 - ii. The structural epoxy must be 100% solid, no VOCs.
 - iii. The structural epoxy must be a high flexural strength, fiber-filled system; a fiber-reinforced-polymer (FRP) formulates technology.
 - iv. The structural epoxy must be self-priming, requiring no primer.
 - v. The structural epoxy must adhere to concrete with adhesion testing results in PSI that outperformed the cohesion of concrete on both dry concrete and wet brick (CIGMAT CT-2/3).
 - vi. The structural epoxy must be moisture tolerant up 100% and fully cure underwater.

- vii. The structural epoxy must withstand freeze-thaw and wet-dry cycles without causing adverse changes to the cure and performance properties.
 - viii. The structural epoxy must be able to be applied by trowel (hand-applied) in order to mobilize and apply in limited access areas.
 - ix. The structural epoxy must hang with vertical and overhead thickness capability of 1/16 inch to 3/8 inch in one pass without sag.
 - x. The structural epoxy must have an indefinite recoat window without preparation for simple repair requirements.
 - xi. The structural epoxy shall be resistant to all forms of chemical or bacteriological attack found in municipal sanitary sewer systems, including severe hydrogen sulfide (up to 800ppm).
 - xii. The coating system must be a dense structural epoxy (epoxide) coating system (16,000psi or greater) exhibiting elongation (ASTM D2370) of 5% (minimum) to 10% (maximum) to ensure properties which withstand minor movement, vibration, and access induced mechanical impact.
2. Approved material shall exhibit the following physical properties:
- | | |
|---|-------------------|
| i. Type FRP-type, hybrid polymer | (epoxy/epoxide) |
| ii. Solids by Volume ASTM D2697 | 100% |
| iii. Solvent (VOC) ASTM D3960 | none |
| iv. Adhesion Strength (concrete, dry) CIGMAT CT-2/3 | substrate failure |
| v. Adhesion Strength (brick, wet) CIGMAT CT-2/3 | substrate failure |
| vi. Adhesion Strength (steel) ASTM D4541 | 1,500+ psi |
| vii. Water Absorption ASTM D1653 | < 0.1 g/sq.m. |
| viii. Acid Exposure (pH 1, H2SO4) CIGMAT CT-1 | passed |
| ix. Tensile Strength ASTM D638 | 5,500+ psi |
| x. Flexural Modulus ASTM D790 | 500,000+ psi |
| xi. Flexural Strength ASTM D790 | 4,000+ psi |
| xii. Compressive Strength ASTM D695 | 16,000+ psi |
| xiii. Elongation ASTM D2370 | 4-6% |
| xiv. Complete Cure | 18 hours (77F) |
3. Specified material(s) are listed below, or prior approved equal:

Epoxytec CPP #RC3 (and/or CPP Sprayable #C311S) by Epoxytec

2.4 MANHOLE CHIMNEY SEALS

A. General

1. Manhole frame sealing includes the sealing of the frame joint area and the chimney above the cone of the manhole with either an applied internal flexible seal.
2. The contractor shall have a manufacturer's recommended expansion tool, removal tool if necessary and all other equipment/tools required to install the specified frame seals.
3. Frame sealing will be executed after the lining section is complete and coating is fully cured.

B. Materials

1. Polymer manhole chimney seals are designed to prevent leakage of water into the manhole through the frame joint area and the area above the manhole cone including all extensions to the chimney area. This typically occurs as the manhole ages, and in time undergoes vibration, impact, and movement. Therefore, polymer seals with the correct properties are often sought as a preventive measure to bridge this concern should the frame start moving beyond its original design capabilities.
2. Primer
 - i. Primer is encouraged on section of metal to increase the surface bond prior to applying the elastomer.
 - ii. The material must be epoxy based, designed to set quickly within 15 minutes, and formulated for polyurethane bonding.
 - iii. Specified material(s) are listed below, or prior approved equal:
Epoxytec 45 Primecoat (#PR45) by Epoxytec
3. Polymer elastomer
 - i. The polymer elastomer chimney seal material shall be corrosion resistant and applied to the inside wall of the entire chimney area as specified in the contract documents.
 - ii. The material must be a 2-component, hand-applied high build polyurethane.
 - iii. Approved material shall exhibit the following physical properties:
 1. Shore Hardness ASTM C92 45 A
 2. Freeze / Thaw ASTM C666 300 cycles - no damage
 3. Bond Durability ASTM C920-87 No failure after 25% extension
 4. Tear Resistance ASTM D624-86 44 lbs./in.
 5. Ultimate Elongation ASTM D412 800%
 - iv. Specified material(s) are listed below, or prior approved equal:

Epoxytec Uroseal 45V (#J45V) by Epoxytec

PART 3- EXECUTION

3.1 GENERAL

- A. All work shall be in strict accordance with the specifications and recommendation including application of all products as required and in accordance with manufacturer's directions.

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- B. Contractor shall conform to all local, state and federal regulations including those set forth by OSHA, RCRA and the EPA and any other applicable authorities.
- C. Products are to be kept dry, in a climate controlled environment, protected from weather and stored under cover. Products are to be stored and handled according to their safety data sheets. When freezing temperatures are expected in the area, the Contractor shall take measures to keep applied materials warm (as per manufacturer's guidelines) and provide the required heat in the structure before repair work is started.
- D. Any invert(s), channels, drains, or other openings shall be covered during construction operations to prevent loose materials from collection.
- E. Bypassing and/or blocking of flow shall be done only with prior approval of the WSA. Contractor shall be responsible for transporting or pumping water to maintain operation of any flow, treatment, collection or distribution system while repairs or lining to structures are made.
- F. The Contractor obtain water in coordination with the Warwick Water Department. Contractor shall be responsible for transporting the water.
- G. It shall be the contractor's responsibility to provide traffic control required by the particular location and/or jurisdiction.
- H. Use approved equipment designed, recommended and/or manufactured by the material supplier specifically for the application of all materials.
- I. Applicator shall initiate and enforce quality control procedures consistent with applicable ICRI, NACE, and/or SSPC standards and the repair/coating manufacturer's recommendations.
- J. Examination
 - 1. Examine surface to receive rehabilitation prior to applying any materials. Notify Owners in writing if surfaces are not acceptable for rehabilitation and/or lining.
 - 2. All structures to be repaired and coated shall be readily accessible to the Applicator.
 - 3. Any active flows shall be dammed, plugged or bypassed as required to ensure that the liquid flow is maintained below the surfaces to be coated and that concrete to be coated has not reached moisture levels surpassing 90%. Flows should be totally plugged and/or diverted when coating any invert. All extraneous flows into the structures at or above the area coated shall be plugged and/or diverted until the structural epoxy coating has set hard to the touch.
 - 4. Temperature of the surface to be coated must be maintained between 65F and 110F during application. Prior to and during application, care should be taken to avoid exposure of direct sunlight or other intense heat source to the structure being coated. Specified surfaces should be shielded to avoid exposure of direct sunlight or other intense heat source. Where varying surface temperatures do exist, coating installation should be scheduled when the temperature is falling versus rising.
 - 5. New Portland cement concrete structures shall have endured a minimum of 28 days since installation, prior to commencing epoxy structural coating installation.
 - 6. Prior to commencing surface preparation, Contractor shall inspect all surfaces specified to receive the coating and notify Owner, of any noticeable disparity in the site, structure or surfaces which may interfere with the work, use of materials or procedures as specified herein.

3.2 CLEANING AND PREPARATION OF SUBSTRATE

- A. Surface preparation must be achieved immediately prior to utilizing any repair material and/or coatings; re-inspection and/or subsequent surface preparation may need to be repeated should conditions change after initial preparation.

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- B. All receiving surfaces shall be thoroughly cleaned and made free of all foreign materials including dirt, grit, roots, grease, sludge and all debris or material that may be attached to the substrate.
- C. Surface preparation shall be performed on all specified surfaces to be lined or rehabilitated. Unless otherwise noted, all newly installed concrete structures should first undergo curing of minimum 28 days prior to surface preparation and rehab/lining execution.
- D. The objective of surface preparation is to produce a surface that is suitable for application and adhesion of the specified protective coating system and repair products.
 - 1. Protrusions such as from burrs, sharp edges, fins, and concrete spatter shall be removed during surface preparation.
 - 2. Voids and other defects that are at or near the surface shall be exposed during surface preparation.
 - 3. All concrete that is not sound shall be removed so that only sound concrete remains.
- E. Surface preparation must achieve a clean and sound substrate in accordance with SSPC-SP13/NACE No. 6 "Surface Preparation of Concrete."
 - 1. High pressure water cleaning or water jetting, and/or pre-approved dry or wet abrasive blasting may be necessary in order to achieve acceptable surface preparation free of all foreign material, laitance, oils, grease, incompatible existing coatings, waxes, form release, curing compounds, efflorescence, sealers, salts, and/or other contaminants.
 - 2. An ICRI profile of CSP 3 or higher shall be achieved.
 - 3. For existing structures, surface preparation shall yield a pH of 7 or higher.
 - 4. No surface water or active leaks are to be present. Prepared concrete surfaces shall be tested for residual moisture after cleaning and drying, and prior to the application of the coating. Drying may be required with forced air and/or dry heat to achieve moisture levels below 80% prior to coating.
 - 5. When grease and oil are present within the structure, an approved detergent or degreaser may be used integrally with the high pressure cleaning water if conditions dictate.
- F. All materials resulting from the cleaning shall be caught at the base of each structure and removed prior to applying specified products.
- G. All loose or defective concrete, mortar, brick, grout, ledges, steps and protruding ledges shall be removed to provide an accessible and uniformed surface prior to application of materials.

3.3 ACTIVE LEAK CONTROL PROCEDURE

- A. Execution
 - 1. When leaks are not readily identifiable upon cleaning operation, use blowers to dry interior for positive identification of leaks and weeping areas.
 - 2. Hydraulic cement
 - i. The work consists of hand applying a dry quick-setting cementitious mix designed to instantly stop running water or seepage in all types of concrete and concrete structures. The certified applicator shall apply material in accordance with manufacturers' recommendations.
 - ii. The area to be repaired must be clean and free of all debris.
 - iii. Proper applications should not require any special mixing of product or special curing requirements after application.
 - 3. Chemical grout
 - i. Application of materials shall be by injection method only.
 - ii. Mixing and handling of all the chemical grout materials shall be in strict accordance with manufacturer's recommendations.

- iii. All excess chemical grout must be removed from the surface via mechanical grinding means and top patched with Hydraulic cement.

3.4 CONCRETE REPAIR METHODS

- A. All loose, cracked and corroded materials shall be removed from the area, exposing a sound substrate.
- B. The materials shall be formed, trowel-applied, or shotcrete sprayed utilizing proper equipment on to specified surfaces. Follow instructions as published by the material manufacturer. If spraying, consult manufacturer for proper instruction and material version.
- C. Concrete patching and rebuilding
 - 1. Execution
 - i. Once cured, and before applying any lining system materials, refer to material specifications for post-cure preparation and readiness instructions. Follow mixing, application and handling instructions as written per materials product technical data sheets and SDS.
 - ii. Apply materials and allow proper curing times prior to coating/lining.
- D. Resurfacing
 - 1. Execution
 - i. Follow mixing, application and handling instructions as written per materials product technical data sheets and SDS.
 - ii. The mortar kits come pre-proportioned, for hand applications- use full kits as supplied, no do not any extra water.
 - iii. For spray applications, water may be added, but limited, as specified by the Manufacturer.
 - iv. When mixed, a paste-like material will develop which may be troweled, sprayed, cast, pumped or gravity-flowed applied.
 - v. This mortar will harden quickly without any need for special curing. Therefore, execute finishing work by trowel immediately after applying or disbursing onto the substrate.
 - vi. Either commence spraying or hand applying.
 - vii. The epoxy-modified-mortar shall be applied at a 1/4 inch minimum, and 1/2 inch maximum (1/4" – 1/2") for existing infrastructure. And between 1/16 inch and 1/8 inch (1/16" – 1/8") for newly installed structures.
 - viii. Finish with trowel.
 - ix. Allow at least two (2) hours (77F) to cure, minimum, before applying the specified structural epoxy coating, but do not exceed thirty-six (36) hours. The window and condition to apply the structural epoxy coating remains open for 36 hours. Should this window expire, consult with manufacturer for written and approved guidance and instruction.
- E. Exposed reinforcing bars
 - 1. Execution
 - i. Prepare and clean via SSPC-SP 2 or 3 exposed reinforcing bars then clean with solvent (SSPC SP-1).
 - ii. Treat with an epoxy-based, rapid-setting, rust inhibiting primer.
 - iii. Allow primer to cure.
 - iv. Patch with concrete patching materials as specified in "Concrete patching and rebuilding" section. Follow product and manufacturer execution specifications accordingly.

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3.5 LINING METHOD AND PROCEDURE

A. Execution

1. Application procedures shall conform to the recommendations of the structural epoxy coating manufacturer, including material handling, mixing, safety, and application equipment.
2. Top coating or additional coats of the structural epoxy coating should occur as soon as the prior coat becomes tack free, but no later than the recoat window for the specified material(s). Additional surface preparation procedures will be required if this recoat window is exceeded.
3. Follow all published and manufacturer recommended application methods.
4. If spraying, the Contractor must be certified to spray by the coating manufacturer verifying training and that the spray equipment is approved by the coating manufacturer, specifically designed to accurately ratio and condition the specified structural epoxy coating materials. Refer to the manufacturers' spray instruction and procedure prior to procuring material and applying any material in order to receive proper material variations and application considerations.
 - i. Apply at a minimum thickness of 100 mils DFT (0.1 inches).
5. If trowel-applied, properly mix and apply materials to all specified surfaces by hand-applied methods with trowel or trowel-type tools.
 - i. Combine 2 gallons kits, Part B to Part A of the packaged material, mix with a low-speed drill mixer for five (5) minutes until a homogenous blend is achieved.
 - ii. Trowel the surface or section: for finishing, allow product to start initial gel (circa 30 minutes at 77F) and rub down with water to create a smooth, uniform finish.
 - iii. Apply at a minimum thickness of 100 mils DFT (0.1 inches).
6. Allow 24 hours to cure.

3.6 INSTALLATION OF CHIMNEY SEAL

A. Execution

1. On the metal surfaces, prepare surface to a SSPC-SP3 "Power Tool Cleaning" standard so that the preparation removes all loose mill scale, loose rust, loose paint, and other loose detrimental foreign matter by power wire brushing, power sanding, power grinding, power tool chipping, and power tool descaling.
 - i. After preparation, clean with SSPC-SP1 "Solvent Cleaning" method to remove dust and debris.
 - ii. Allow solvent or cleaner to dry out.
 - iii. Apply one coat of epoxy primer.
 1. Primer shall be applied as directed on manufacturer published data sheets at 2-3 mils WTF.
 2. Allow primer to cure until it is tack-free. This time depends on conditions; blowing forced air will assist the cure time.
2. To prepare other substrates, refer to concrete preparation sections of this specification as described for cementitious/brick/or mortar substrates. Should you have to prepare installed liner, solvent rub and wire brush to create scored abrasion prior to top coating with polymer elastomer.

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3. Once the primer is tack-free, apply polymer elastomer as directed on manufacturer published data sheets at 125 mils (1/8") DFT for peak to valley.

3.7 QUALITY ASSURANCE AND ACCEPTANCE

- A. Surface preparation inspection must take place prior to proceeding to material applications, this applies to both repair and lining applications.
 1. Applicator must record, and submit to coating manufacturer's representative or designated inspector:
 - i. pH level
 - ii. Moisture content
 - iii. Abrasive media type and/or preparation methods
 - iv. ICRI conditions
- B. During application, Applicator shall regularly perform and record epoxy coating thickness readings with a wet film thickness gage, such as those meeting ASTM D4414 - Standard Practice for Measurement of Wet Film Thickness of Organic Coatings by Notched Gages or other type of measuring probe or similar, to ensure uniform thickness during application
- C. Applicator shall perform holiday detection on all surfaces coated with the epoxy coating in the presence of the coating manufacturer's representative or designated inspector. After the epoxy coating has set hard to the touch, surfaces shall first be dried, an induced holiday shall then be made on to the coated concrete surface and shall serve to determine the minimum/maximum voltage to be used to test the coating for holidays at that particular area. The spark tester shall be initially set at 100 volts per 1 mil (25 microns) of film thickness applied but may be adjusted as necessary to detect the induced holiday (refer to NACE RPO188-99).
 1. All detected holidays shall be marked by the designated inspector and repaired. Additional epoxy coating material can be hand applied to the repair area. All touch-up/repair procedures shall follow the coating manufacturer's recommendations.
- D. Adhesion Testing is a destructive test method and should be used in moderation as an evaluation tool. Random testing areas should be identified to use for testing. Testing shall be conducted in accordance with ASTM D4541 as modified herein. Owner's representative shall select the areas to be tested. A minimum of three 20 mm dollies shall be affixed to the coated surface at the cone area, mid-section and at the bottom of the structure. The adhesive used to attach the dollies to the coating shall be rapid setting with tensile strengths in excess of the coating product and permitted to cure in accordance with manufacturer recommendations. The coating and dollies shall be adequately prepared to receive the adhesive. Failure of the dolly adhesive shall be deemed a non-test and require retesting. Prior to performing the pull test, the coating shall be scored to within 30 mils of the substrate by mechanical means without disturbing the dolly or bond within the test area. Two of the three adhesion pulls shall exceed 200 psi or concrete failure with more than 50% of the subsurface adhered to the coating. Should a structure fail to achieve two successful pulls as described above, additional testing shall be performed at the discretion of the Owner's inspection agent. Any areas detected to have inadequate bond strength shall be evaluated by the Owner's inspection agent. Further bond tests may be performed in that area to determine the extent of potentially deficient bonded area and repairs shall be made by Contractor.
- E. A final visual inspection shall be made by the Applicator and the coating manufacturer's representative or designated inspector. Any deficiencies in the finished coating shall be marked and repaired by Applicator according to the procedures set forth herein.

END OF SECTION

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SECTION 03769

DISPOSAL OF MATERIALS

PART - 1 GENERAL

1.01 SECTION INCLUDES

- A. Requirements for disposal of materials resulting from the cleaning of sewer pipes.

1.02 SUBMITTALS

- A. In accordance with Specification Section 01300, submit the following:
 - 1. Outline of the procedures proposed to accomplish the work.
 - 2. Include a detailed description of disposal methods and locations of disposal.

PART - 2 PRODUCTS - NOT USED

PART - 3 EXECUTION

3.01 DISPOSAL PROCEDURES

- A. Material encountered in the cleaning of sewer lines is considered “Special Waste” by the State of Rhode Island, Department of Environmental Management (RIDEM). The materials include sludge, sand, grit, debris, etc.
- B. The Contractor is required to test and dispose of any waste material removed from pipeline, manholes, etc. within the project area in accordance with State and Federal requirements. Testing of waste material will be at the Contractor’s expense.
- C. The materials being removed from the pipelines and manholes during the cleaning process shall be deposited in such a manner as to not endanger the public, plant personnel or persons performing the work. Such debris deposits may be of such nature, high in biological organic contents, or chemically aggressive that they will require proper disposal in a safe, health risk free, environment. The Contractor shall contact the Owner and Engineer and all agencies having jurisdiction thereof, for approval of debris disposal methods and locations of disposal, prior to disposing of any or all debris removed from pipe cleaning methods. All solids or semi-solids resulting from the cleaning operations shall be removed and satisfactorily disposed of off-site at the Contractor’s expense. No temporary storage will be allowed in the city.
- D. Debris must be transported in a watertight vehicle. The Contractor must ensure that no water leaks from the vehicle in any manner during the transportation. The Contractor is solely responsible for any cleanup of debris on route to disposal at a licensed disposal facility. The Contractor is also responsible for the payment of any fines that are incurred as a result of any incident which occurs during the transportation and/or disposal of the contents of the vehicle.
- E. Disposal must be at a licensed facility that is regulated to accept and properly dispose of the debris that is normally expected to be in a wastewater collection system.

- F. The WSA reserves the right to supply a disposal location for the debris if it is deemed necessary and will result in a cost savings.

END OF SECTION

SECTION 03800

EROSION AND SEDIMENTATION CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Temporary and permanent erosion control systems.
 - 2. Sedimentation Traps for Catch Basins and Inlets.
 - 3. Slope protection systems.
- B. Related Documents: The Contract Documents, as defined in Section 01010 - Summary of Work, apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other Documents.
- C. Related Sections:
 - 1. Section 03110 – Site Preparation
 - 2. Section 03200 – Earth Work
 - 3. Section 03350 – Excavation and Fill
 - 4. Section 03305 – Support Excavation and Dewatering

1.2 SUBMITTALS

- A. Submittal Procedures: Procedures for Quality Assurance/Control submittals.
 - 1. Material Source: Submit name of material suppliers.
 - 2. Provide materials from same source throughout Work. Change of source requires the Engineer's approval.

1.3 PROJECT CONDITIONS OR SITE CONDITIONS

- A. Environmental Requirements: Protect adjacent properties and water resources from erosion and sediment damage throughout Work.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Quick Growing Grasses: Wheat, rye, or oats.
- B. Compost Filter Sock: Indicated on Drawings.
- C. Temporary Mulches: Loose straw, netting, wood cellulose, or agricultural silage free of seed.

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- D. Catch Basin Inlet Protection: Indicated on Drawings.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Execution: Verification of existing conditions before starting Work.
- B. Verification of Conditions: Verify that field measurements, surfaces, substrates and conditions are as required, and ready to receive Work.
- C. Report in writing to the Engineer the prevailing conditions that will adversely affect satisfactory execution of the Work of this Section. Do not proceed with Work until unsatisfactory conditions have been corrected.
- D. By beginning Work, Contractor accepts conditions and assumes responsibility for correcting unsuitable conditions encountered at no additional cost to the Owner.

3.2 PREPARATION

- A. Review Soil Erosion and Sediment Control (SESC) Plan.
- B. Notify the Engineer of deficiencies or changes in the Soil Erosion and Sediment Control Plan (SESC) required by current site conditions. Revisions of plan will be made as determined by the Owner.

3.3 EROSION CONTROL AND SLOPE PROTECTION IMPLEMENTATION

- A. The Owner may direct the Contractor to limit surface area of erodible earth material exposed by clearing and grubbing, excavation, borrow and embankment operations and may direct Contractor to provide immediate permanent or temporary pollution control measures.
- B. Provide permanent erosion control measures at earliest practical time to minimize requirement for temporary erosion controls. Permanently seed and mulch cut slopes as excavation proceeds.
- C. Maintain temporary erosion control systems installed by Contractor as directed by the Owner to control siltation at all times throughout Work. Provide maintenance or additional Work directed by the Owner within 48 hours of notification by the Owner.
- D. Apply soil stabilization or seed slopes that may be easily eroded with wheat, rye or oat grasses.

END OF SECTION

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SECTION 03920
LOAM AND SEEDING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Seed.
 - 2. Water.
 - 3. Erosion Control Material.

- B. Related Documents: The Contract Documents apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other documents.

- C. Related Sections:
 - 1. Section 03200 - Earth Moving
 - 2. Section 03800 - Erosion and Sedimentation Controls

1.2 REFERENCES

- A. American Society For Testing and Materials (ASTM):
 - 1. ASTM C 602 - Specification for Agricultural Liming Materials.
 - 2. ASTM D 977 - Specification for Emulsified Asphalt.

- B. American Sod Producers Association (ASPA):
 - 1. ASPA STSMT - Specification for Turfgrass Sod Materials and Transplanting/Installing.

1.3 SUBMITTALS

- A. Section 013300 - Submittal Procedures: Procedures for submittals.
 - 1. Assurance/Control Submittals:
 - a. Certificates:
 - 1) Submit certificate from seed supplier for each grass-seed mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
 - 2) Submit certificate from sod supplier for each seed mixture, identifying sod source, including name and telephone number of supplier.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements: Conform to applicable requirements of the Local and State Department of Agriculture Extension Service of the state in which the project is located.

PART 2 - PRODUCTS

2.1 SEED

- A. Classification:
 - 1. State-Certified of latest season's crop delivered in original sealed packages bearing producer's guaranteed analysis for percentages of mixtures, purity, germination, weed seed content, and inert material.
 - 2. Label in conformance with applicable state seed laws.
 - 3. Wet, moldy, or damaged seed will be rejected.

2.2 STABILIZING MATERIALS

- A. Specified in Section 313200.
- B. Asphalt Adhesive: ASTM D 977, Grade RS-1. Use with straw or hay mulch.
- C. Cellulose Fiber: Use for anchoring straw. Fiber binding shall be applied at a net dry weight of 750 pounds per acre. Cellulose fiber may be mixed with water. Mixture shall contain maximum of 50 pounds of cellulose fiber per 100 gallons of water.
- D. Mulch Netting: Stake light weight plastic netting over the mulch according to manufacturer's recommendations. Stakes shall be driven to ground level.

2.3 WATER

- A. Suitable quality for irrigation.

2.4 EROSION CONTROL MATERIAL

- A. Net: Heavy, twisted jute mesh, plastic mesh, biodegradable paper fabric with knitted yarns, or standard weave burlap.

2.5 TOPSOIL

- A. Topsoil:
 - 1. Containing organic matter as needed to support establishment of plants; minimum 5 percent and maximum 20 percent organic matter as determined by soil testing service. Maximum particle size, 3/4 inch, with maximum 3 percent retained on 1/4 inch screen.
 - 2. Component Percentages:

- a. Silt: 25 to 50
- b. Clay: 10 to 30
- c. Sand: 20 to 30
- d. pH: 5.5 to 7.6

2.6 pH ADJUSTERS

- A. Lime:
 1. Material: ASTM C 602, Class T, agricultural commercial grade ground limestone containing not less than 50 percent of total oxides.
 2. Gradation: Minimum 75 percent passing 100 mesh sieve and 100 percent passing 20 mesh sieve.

2.7 FERTILIZER

- A. Bonemeal: Commercial, raw, finely ground; minimum 4 percent nitrogen and 20 percent phosphoric acid.
- B. Superphosphate: Commercial-Grade complete fertilizer of neutral character consisting of fast-and-slow-release nitrogen, 50 percent derived from natural organic sources of urea-form, phosphorous, and potassium in following composition:

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification of Conditions: Verify that field measurements, surfaces, and conditions are as required, and ready to receive Work.
- B. Report in writing to Contracting Officer prevailing conditions that will adversely affect satisfactory execution of the Work of this Section. Do not proceed with Work until unsatisfactory conditions have been corrected.

3.2 PREPARATION OF SUBSOIL

- A. Prepare subsoil to eliminate uneven areas and low spots. Maintain lines, levels, profiles, and contours. Make changes in grade gradual. Blend slopes into level areas.
- B. Remove foreign materials, weeds, and undesirable plants and their roots. Remove contaminated subsoil.
- C. Scarify subsoil to a depth of 3 inches where topsoil is to be placed. Repeat cultivation in areas where equipment, used for hauling and spreading topsoil, has compacted subsoil.

3.3 FERTILIZING

- A. Apply fertilizer in accordance with manufacturer's published instructions.
- B. Apply after smooth after smooth raking of topsoil and prior to roller compaction.
- C. Do not apply fertilizer at same time or with same machine as will be used to apply seed.
- D. Mix thoroughly into upper 2 inches of topsoil.
- E. Lightly water to aid the dissipation of fertilizer.
- F. No chemical fertilizers.

3.4 SEEDING

- A. Sow one-half of seed in one direction and remainder at right angles to first sowing.
- B. Cover seed to average depth of 1/2 inch by means of spike-tooth harrow, cultipacker, or other recommended device.
- C. Rolling:
 - 1. Immediately after seeding, firm entire area except for slopes in excess of 3 to 1 with a roller not exceeding 90 pounds for each foot of roller width.
 - 2. If seeding is performed with cultipacker-type seeder or hydroseeding, rolling may be eliminated.
- D. Erosion Control Material: Install in accordance with manufacturer's instructions.

PART 4 - 3.7 CLEANING AND PROTECTION

- A. Remove soil and debris created by lawn work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto surface of roads, walks, or other paved areas.
- B. Immediately after seeding, sodding or sprigging, protect the area against traffic or other use.
- C. Restore existing lawn and grass areas which have been damaged during execution of this work to original condition.
- D. Keep one paved pedestrian access route and one paved vehicular access route to each building clean at all time. Clean other paving when work in adjacent areas is complete.

4.2 ESTABLISHMENT PERIOD

- A. Definitions:

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1. Lawns and grasses establishment period will be in effect until lawns and grasses have been mowed 3 times.
2. Stand of lawn and grass is 95 percent ground cover of established species.

4.3 FINAL INSPECTION AND ACCEPTANCE

- A. Final Inspection and Acceptance:
 1. Final inspection will be made upon written request from the Contractor at least 10 days prior to last day of lawn and grasses establishment period.
- B. Replanting: Replant areas which do not have a satisfactory stand of lawns and grasses.
- C. Contractor is to maintain lawns and grasses for one year from completion.

END OF SECTION

SECTION 04305

ASPHALT PAVING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Bituminous concrete paving.
 - 2. Surface course.
 - 3. Base course.
- B. Related Documents: The Contract Documents, as defined in Section 011000 - Summary of Work, apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other Documents.
- C. Related Sections:
 - 1. Section 03200 - Earth Moving: Earthwork for Pavement.

1.2 REFERENCES

- A. Asphalt Institute (AI):
 - 1. AI MS-2 - Mix Design Methods for Asphalt Concrete and Other Hot Mix Types.
 - 2. AI MS-3 - Asphalt Plant Manual.
 - 3. AI MS-8 - Asphalt Paving Manual.
 - 4. AI MS-19 - Basic Asphalt Emulsion Manual.
- B. American Society for Testing and Materials (ASTM):
 - 1. ASTM D 242 - Specification for Mineral Fiber for Bituminous Paving Mixtures.
 - 2. ASTM D 698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 Pound Rammer and 12 inch Drop.
 - 3. ASTM D 1188 - Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Paraffin-Coated Specimens.
 - 4. ASTM D 1557 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 Pound Rammer and 18 inch Drop.
 - 5. ASTM D 1560 - Test Method for Resistance to Deformation and Cohesion of Bituminous Mixtures by Means of Hveem Apparatus.
 - 6. ASTM D 2397 - Specification for Cationic Emulsified Asphalt.
 - 7. ASTM D 2399 - Practice for Selection of Cutback Asphalt.
 - 8. ASTM D 2726 - Test Method for Bulk Specific Gravity and Density of Nonabsorbative Compacted Bituminous Mixtures.
 - 9. ASTM D 3381 - Specification for Viscosity-Graded Asphalt Cement for Use in Pavement Construction.
 - 10. ASTM D 3549 - Test Method for Thickness or Height of Compacted Bituminous Paving Mixture Specimens.
 - 11. ASTM D 4318 - Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

- C. American Association of State Highway and Transportation Officials (AASHTO)
 - 1. AASHTO T 88 - Particle Size Analysis of Soils.
- D. The Rhode Island Standard Specifications for Road and Bridge Construction, 2004 Edition including all addenda.

1.3 SYSTEM DESCRIPTION

- A. Design Requirements: All work and materials shall be done in accordance with the Rhode Island Standard Specifications for Road and Bridge Construction, 2004 Edition including all addenda.

1.4 SUBMITTALS

- A. Section 013300 - Submittal Procedures: Procedures for submittals.
 - 1. Assurance/Control Submittals:
 - a. Design Data:
 - 1) Submit design mix following format indicated Asphalt Institute Manual MS-2, Marshall Stability Method; including type/name of mix, gradation analysis, grade of asphalt cement used, Marshall Stability (pounds), flow, effective asphalt content (percent), and direct references to applicable state highway department specification sections for each material.
 - 2) Provide design mixture listed in current edition of applicable state highway department specifications.
 - 3) Use mix designs prepared within 2 years maximum.
 - 4) Provide documentation of state highway limitations, if any, on use of recycled content materials.
 - b. Certificates: Submit materials certificate to Testing Laboratory signed by material supplier and Contractor, certifying that materials comply with, or exceed, the requirements specified herein.
 - c. Qualification Documentation: Paving installer documentation of experience indicating compliance with specified qualification requirements.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with AI MS-8
- B. Installer Qualifications: Company specializing in performing the Work of this Section with minimum 5 years documented experience.
- C. Regulatory Requirements:
 - 1. Conform to applicable requirements for paving work on public property.
 - 2. Maintain access for vehicular and pedestrian traffic as required for other construction activities. Use temporary striping, flagmen, barricades, warning signs, and warning lights as required.

1.6 PROJECT CONDITIONS OR SITE CONDITIONS

- A. Jobsite Requirements:

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1. Apply prime and tack coats when ambient temperature is above 40 degrees F, and when temperature has been above 35 degrees F for 12 hours immediately prior to application. Do not apply when base is wet, contains excess moisture, or during rain.
2. Construct bituminous concrete paving when atmospheric temperature is above 40 degrees F.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Base Course shall be 2-inch Bituminous HMA CL 9.5. Placement shall be as indicated on Drawings, complying with Rhode Island Standard Specifications for Road and Bridge Construction, 2004 Edition including all addenda.
- B. Surface Course Class shall be HMA CL 9.5. Placement shall be as indicated on Drawings, complying with Rhode Island Standard Specifications for Road and Bridge Construction, 2004 Edition including all addenda.
- C. Tack Coat: Emulsified asphalt; ASTM D 2397 or ASTM D 2399, SS-1h, CSS-1, or CSS-1h, diluted with one-part water to one part emulsified asphalt.

2.2 EQUIPMENT

- A. Maintain equipment in satisfactory operating condition and correct breakdowns in a manner that will not delay or be detrimental to progress of paving operations.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification of Conditions: Verify that field measurements, surfaces, substrates and conditions are as required, and ready to for earthwork operations to begin.
 1. Verify gradients and elevations of base are correct, and base is dry.
- B. Report in writing to Owner prevailing conditions that will adversely affect satisfactory execution of the Work of this Section. Do not proceed with Work until unsatisfactory conditions have been corrected.
- C. By beginning Work, Contractor accepts conditions and assumes responsibility for correcting unsuitable conditions encountered at no additional cost to Owner. Where pipe lines and service connections are constructed, a bituminous pavement patch shall be placed over a well-compacted trench in all streets. After the trench is fully consolidated, and settlement of earth backfill is complete, but not before 75 days after installation of the main pipelines or services in any particular street, the street shall be prepared for a permanent pavement overlay. The roadway shall be swept clean with a motorized sweeper; frames and covers adjusted to grade; a tack coat applied; and the new pavement overlay installed. All bituminous pavements shall be applied with a self-propelled motorized spreader.
- D. The driveway surface course and street overlay surface course shall be placed at the same time.

- E. Cut edges of bituminous concrete paving shall be coated with asphalt emulsion prior to placing of new paving against the cut edge. This requirement applies to roadways and to bituminous sidewalk and driveway construction.
- F. Where road surfaces are to be overlaid curb line to curb line, or gutter line to gutter line, any necessary adjustment to existing drainage, sewer, or utility structures shall be made. There shall be no separate payment made for the adjustments.
- G. New paving shall be guaranteed for one year from the date of completion of the Contract. Any settlement noted within the one-year guarantee period shall be cut out and replaced to the proper grade, at no additional cost. Where road surfaces are to be overlaid the Contractor shall apply an asphalt emulsion tack coat at the rate of 0.075 gallons per square yard of surface to be overlaid. There shall be no separate payment made for the tack coat, and it shall be included in the unit prices bid for the various paving items.
- H. Where road surfaces are overlaid curb-to-curb or gutter-to-gutter, private lawns or public sidewalks which are needlessly damaged by the work shall be restored to their original conditions at no additional cost.
- I. Where regrading work is required, side slopes in or adjacent to the sidewalk areas shall be loamed and seeded at the direction of the Engineer.

3.2 BASE COURSE PLACEMENT

- A. Perform base course construction in a manner that will drain surface properly at all times and at the same time prevent runoff from adjacent areas from draining onto base course construction.
- B. Compact base material, 8-inch gravel borrow, to not less than 98 percent of optimum density as determined by ASTM D 698 or 95 percent of optimum density, as determined by ASTM D 1557, unless otherwise indicated on the Drawings.
- C. As soon as utility trenches for sewers, water and/or drainage are installed and backfill has been thoroughly compacted, a 2" bituminous concrete pavement patch shall be placed over all trenches without any overlapping.

3.3 SURFACE COURSE AND COLD PLANED STRIP PLACEMENT

- A. Perform base course construction in a manner that will drain surface properly at all times and at the same time prevent runoff from adjacent areas from draining onto base course construction.
- B. After the trenches have fully settled and the trenches restored to proper grade, but not before 75 days after installation of the pipelines, weather permitting, local streets shall be prepared and shall subsequently be provided with a 1-1/2 inch bituminous concrete overlay from curb line to curb line or gutter line to gutter line. The sequence of operations is as follows:
 1. A four-foot wide strip shall be cold planed along each gutter line as determined by the Contractor to properly match grade, and driveway pavements shall be cut and prepared as detailed on the plans.
 2. The existing road surface shall be swept clean with a motorized street sweeper of all sand and debris. Loose or broken pavement shall be removed and disposed of as previously specified in these Specifications. Existing potholes, depressions or holes resulting from the removal of loose or broken pavement or material displaced by cold planning or sweeping within limits of the proposed overlay shall be filled with bituminous material. Edge or surface irregularities shall be smoothed

- out or straightened, a leveling course shall be placed to create a roadway crown where required and as directed by the Engineer.
3. Existing drainage or sewer structures, gas or water roadway boxes or any other roadway utilities shall be adjusted to grade as previously specified.
 4. The road surface shall have an asphalt emulsion tack coat applied at the rate of 0.075 gallons per square yard immediately prior to overlay.
 5. 1-1/2 inch bituminous concrete surface course HMA CL 9.5 shall then be placed over the prepared surface.

3.4 APPLICATIONS

- A. Tack Coat:
 1. Apply to contact surfaces of previously constructed bituminous concrete base courses or portland cement concrete and surfaces abutting or projecting into bituminous concrete or into bituminous concrete pavement.
 2. Apply emulsified asphalt tack coat in accordance with applicable state highway specifications.

3.5 BITUMINOUS CONCRETE PLACEMENT

- A. Placement of Bituminous Concrete shall be in accordance with the Rhode Island Standard Specifications for Road and Bridge Construction, 2004 Edition including all addenda.

3.6 ROLLING AND COMPACTION

- A. The mixture, after being spread, shall be thoroughly compacted by rolling as soon as it will bear the weight of the rollers without undue displacement. The number, weight, and types of rollers and sequences of rolling operations shall be such that the required density and surface are consistently attained while the mixture is in a workable condition.
- B. Compact mixture with hot hand tampers or vibrating plate compactors in areas inaccessible to rollers.
- C. Breakdown Rolling: Accomplish breakdown or initial rolling immediately following rolling of joints and outside edge. Check surface after breakdown rolling, and repair displaced areas by loosening and filling with hot material.
- D. Second Rolling: Follow breakdown rolling as soon as possible, while mixture is hot. Continue second rolling until mixture has been thoroughly compacted.
- E. Finish Rolling: Perform finish rolling while mixture is still warm enough for removal of roller marks. Continue rolling until roller marks are eliminated and course has attained maximum density.
- F. Patching: Remove and replace paving areas mixed with foreign materials and defective areas. Cut out such areas and fill with fresh, hot bituminous concrete. Compact by rolling to maximum surface density and smoothness.
- G. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.7 CONSTRUCTION

A. Site Tolerances:

1. Paving Surface Smoothness: Maximum allowable 10-foot straightedge tolerance for smoothness.
 - a. Base Course Surface: 1/4 inch.
 - b. Wearing Surface Course: 3/16 inch.

B. City Requirements:

The Contractor shall conform to the City of Warwick Ordinance Amendment No. 0-3.0.1 dated February 24, 2003, of Section I, Chapter 56, Sec. 56-16. "On all construction projects which require excavation in the roadway of any street in the City, the Contractor performing the work shall apply pavement to the roadway within three (3) days of backfilling and closing the excavated portion of the roadway. Failure to apply pavement within the three-day period shall subject the Contractor to a penalty of \$500.00 per day for each day of the violation. Relief from the requirement to apply paving may be granted by the Director of Public Works and the Warwick Sewer Authority for weather conditions of other circumstances, which, in his or her discretion, would warrant the relief being granted."

3.8 FIELD QUALITY CONTROL

A. Section 014000 - Quality Requirements: Field inspection and testing procedures

B. Site Tests:

1. Paving Base Course: Perform testing of in-place base courses for compliance with requirements for thickness, compaction, density, and tolerance.
 - a. Moisture/Density Test: ASTM D 698 or ASTM D 1557.
 - b. Mechanical Analysis Test: AASHTO T-88.
 - c. Plasticity Index Test: ASTM D 4318.
 - d. Base Material Thickness Test: Minimum one test for every 20,000 square feet.
 - e. Base Material Compaction Test: Minimum one test for every 20,000 square feet.
 - f. Field Density Tests: Perform testing of in-place base courses for compliance with requirements for density using one of the following methods:
 - 1) Nuclear Method: ASTM D 2922, Method B (Direct Transmission).
 - g. Test each source of base material for compliance with applicable state highway specifications.
2. Compaction: Field density test for in place materials shall be performed by examination of field cores in accordance with one of the following standards:
 - a. Bulk Specific Gravity Using Saturated Surface-Dry Specimens: ASTM D 2726, minimum one core per 10,000 square feet, 3 cores.

END OF SECTION

APPENDIX A
RECORD OAKLAND BEACH
INTERCEPTOR PLANS

231-8007

Jo
OAKLAND
BEACH

CITY OF WARWICK, RHODE ISLAND SYSTEM OF SEWERS

CONTRACT NO. 29
EPA PROJECT NO. C440119-01

OAKLAND BEACH INTERCEPTOR FORCE MAIN AND PUMPING STATION

1978



HONORABLE JOSEPH W. WALSH, MAYOR

WARWICK SEWER AUTHORITY

JOSEPH P. McKEEVER, CHAIRMAN

CHARLES F. MORAN JR.

WALTER F. RICHARDSON, JR.

DONALD J. AGNEW

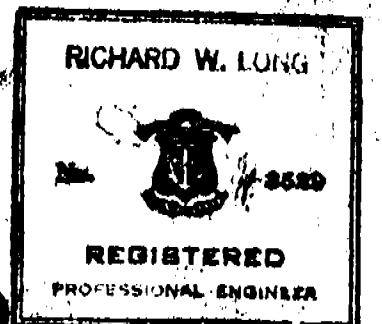
CLINTON I. PLACE

CE MAGUIRE, INC.

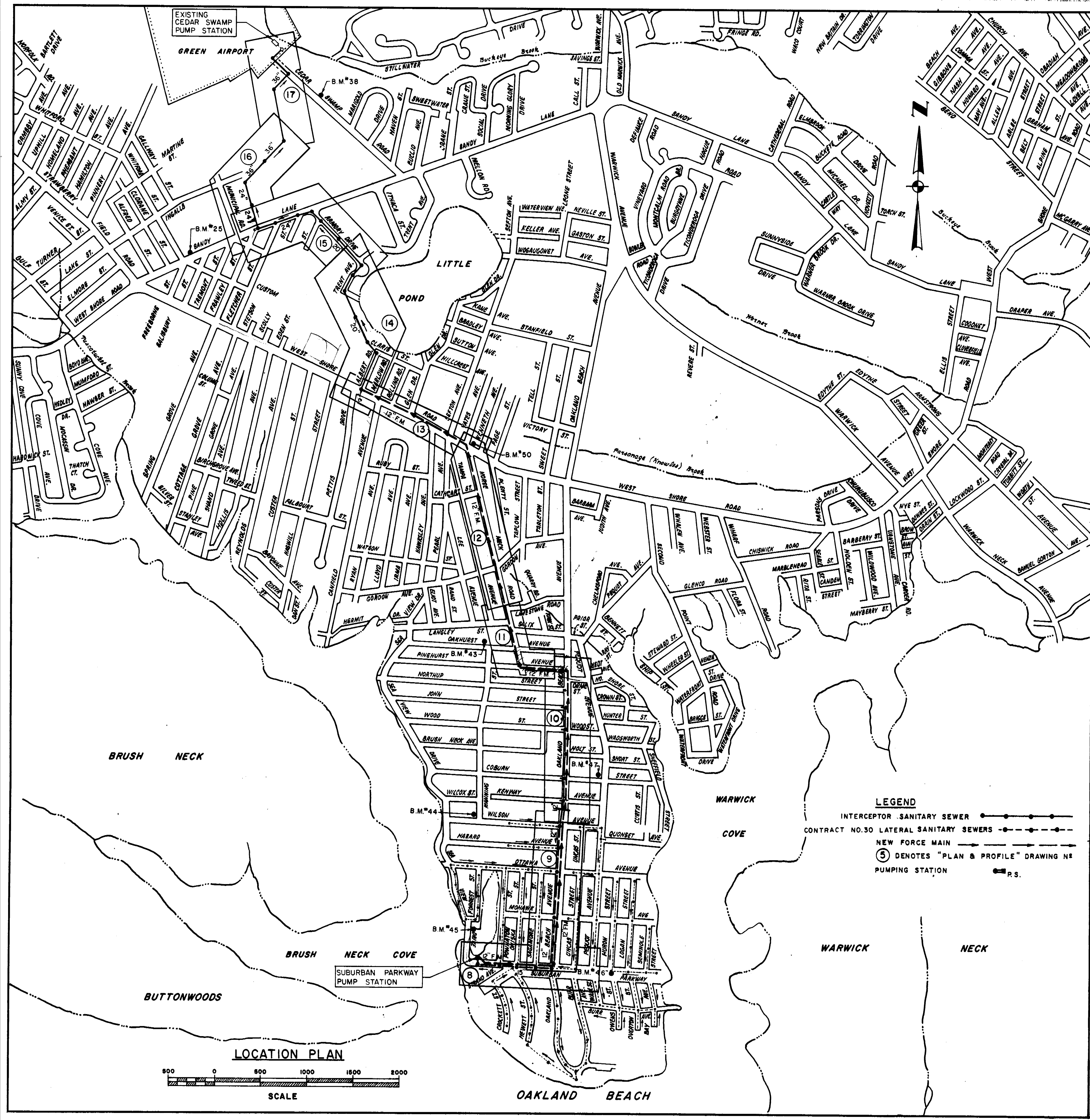
· ENGINEERS ·

PROVIDENCE, R.I. NEW BRITAIN, CONN. WALTHAM, MASS.

29



29



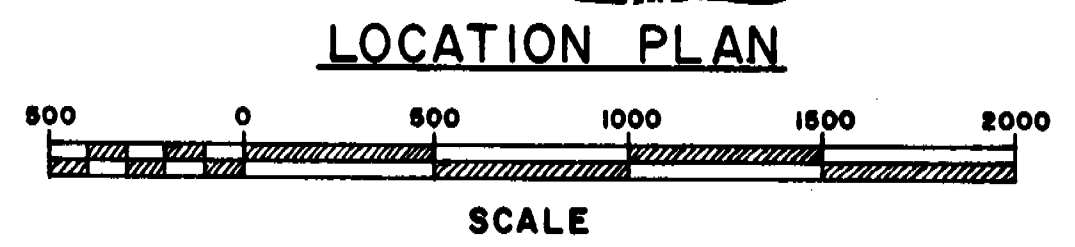
BENCH MARKS

NO.	DESCRIPTION	ELEV. M.S.L.
B.M. #25	CHISELED "+" ON S/E FLANGE BOLT ON HYDRANT, NORTH SIDE OF SANDY LANE IN FRONT OF MR. THAYER MEMORIAL ARENA.	37.43
B.M. #38	CHISELED "+" ON MOST SOUTHERLY FLANGE BOLT ON HYDRANT, N/E SIDE OF CEDAR SWAMP ROAD 50'± S/W OF HSE. #970 AND 16'± S/E OF POLE #10.	41.86
B.M. #43	R.R. SPIKE 1.01' OFF GROUND IN POLE #7 ACROSS FROM MANNING STREET ON OAKHURST AVENUE	22.58
B.M. #44	R.R. SPIKE 1.2'± OFF GROUND IN POLE #13 ON N/W CORNER OF MANNING STREET AND WILSON AVENUE	18.78
B.M. #45	CHISELED SQUARE ON S/E CORNER OF EAST SIDE OF BRIDGE ON SEA VIEW DRIVE, 300'± NORTH OF ITS INTERSECTION WITH SUBURBAN PARKWAY 50'± SOUTH OF FOREST STREET.	7.86
B.M. #46	CHISELED SQUARE ON S/W CORNER OF CONCRETE CURBING FOR DROP INLET, SOUTH SIDE OF MEDIAN STRIP, WEST SIDE OF BITUMINOUS CONCRETE CROSSING IN MEDIAN STRIP ON SUBURBAN PARKWAY AT OWENS STREET AND HURON STREET.	9.30
B.M. #47	R.R. SPIKE IN EAST SIDE OF POLE #7, 1.1'± ABOVE GROUND AT N/W CORNER OF PEQUOT AVENUE AND COBURN STREET.	17.27
B.M. #50	R.R. SPIKE 1.0'± ABOVE GROUND IN N/E SIDE OF POLE #196, NORTH SIDE OF WEST SHORE ROAD, 50'± WEST OF KENNETH AVENUE, 35'± N/E OF WEST SHORE ROAD AND HORSE NECK ROAD.	29.66

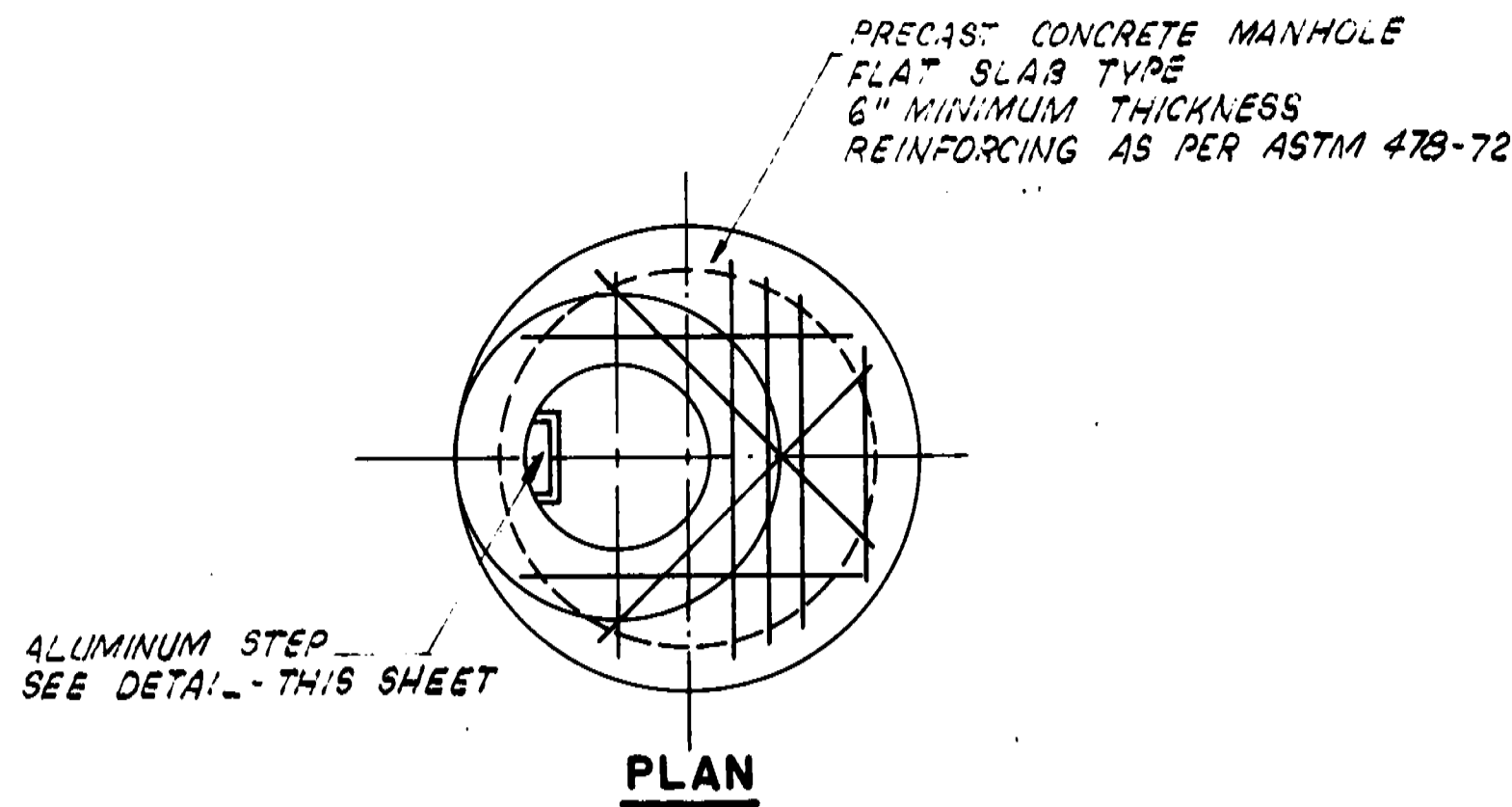
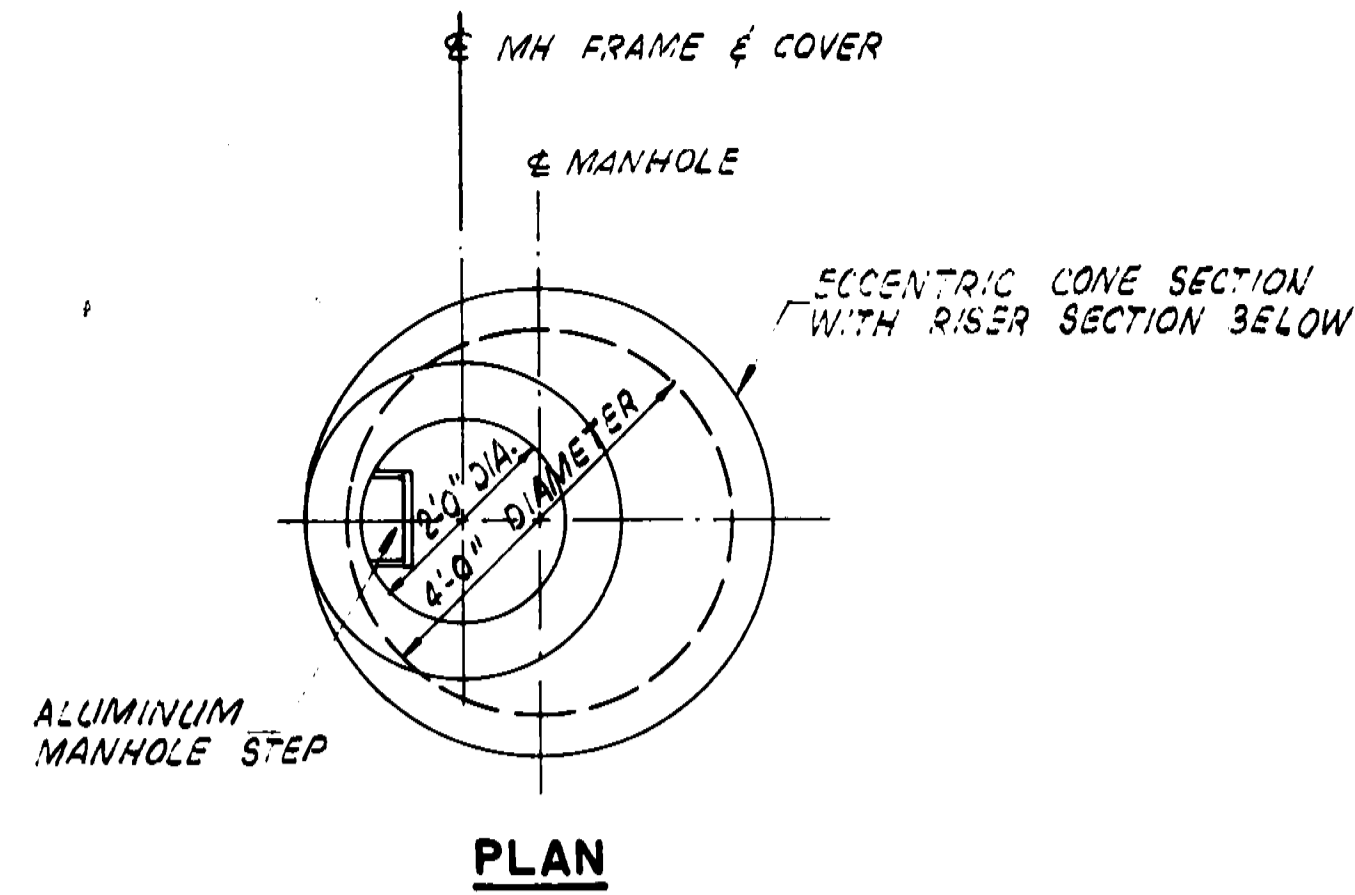
INDEX TO DRAWINGS

GENERAL	
DWG. NO.	DESCRIPTION
1.	LOCATION PLAN AND INDEX TO DRAWINGS
2.	TYPICAL MANHOLE DETAILS
3.	MANHOLE DETAILS
4.	MANHOLE DETAILS
5.	SPECIAL MANHOLE DETAILS
6.	LEGEND, GENERAL NOTES AND HOUSE CONNECTION DETAILS
7.	TRENCH DETAILS
PLAN AND PROFILE	
8.	SUBURBAN PARKWAY
9.	OAKLAND BEACH AVENUE
10.	OAKLAND BEACH AVENUE
11.	PINEHURST AVENUE - HORSE NECK ROAD
12.	HORSE NECK ROAD
13.	WEST SHORE ROAD
14.	OAKLAND BEACH INTERCEPTOR
15.	OAKLAND BEACH INTERCEPTOR
16.	OAKLAND BEACH INTERCEPTOR
17.	OAKLAND BEACH INTERCEPTOR
SUBURBAN PARKWAY PUMP STATION	
18.	SITE PLAN AND PROFILE
19.	PLAN AND ELEVATION
20.	PLANS AND SECTIONS
21.	ELECTRICAL

LEGEND
 INTERCEPTOR SANITARY SEWER ————
 CONTRACT NO.30 LATERAL SANITARY SEWERS - - - -
 NEW FORCE MAIN ————
 (5) DENOTES "PLAN & PROFILE" DRAWING NO.
 PUMPING STATION [Symbol] P.S.

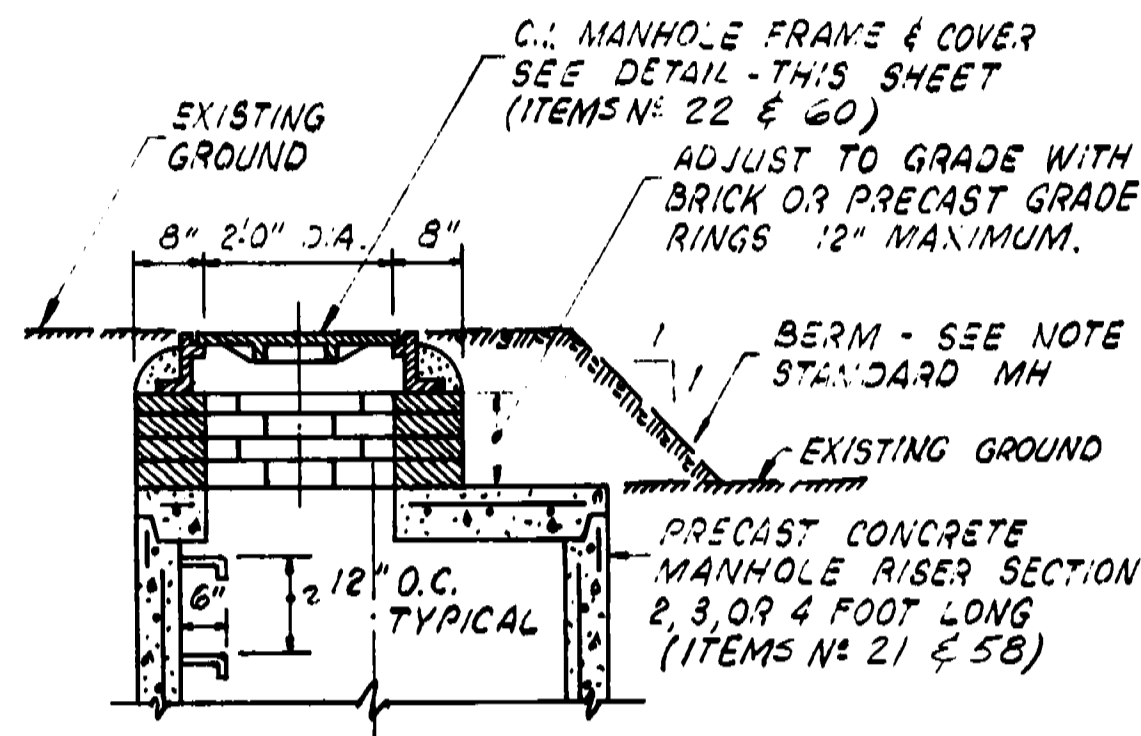
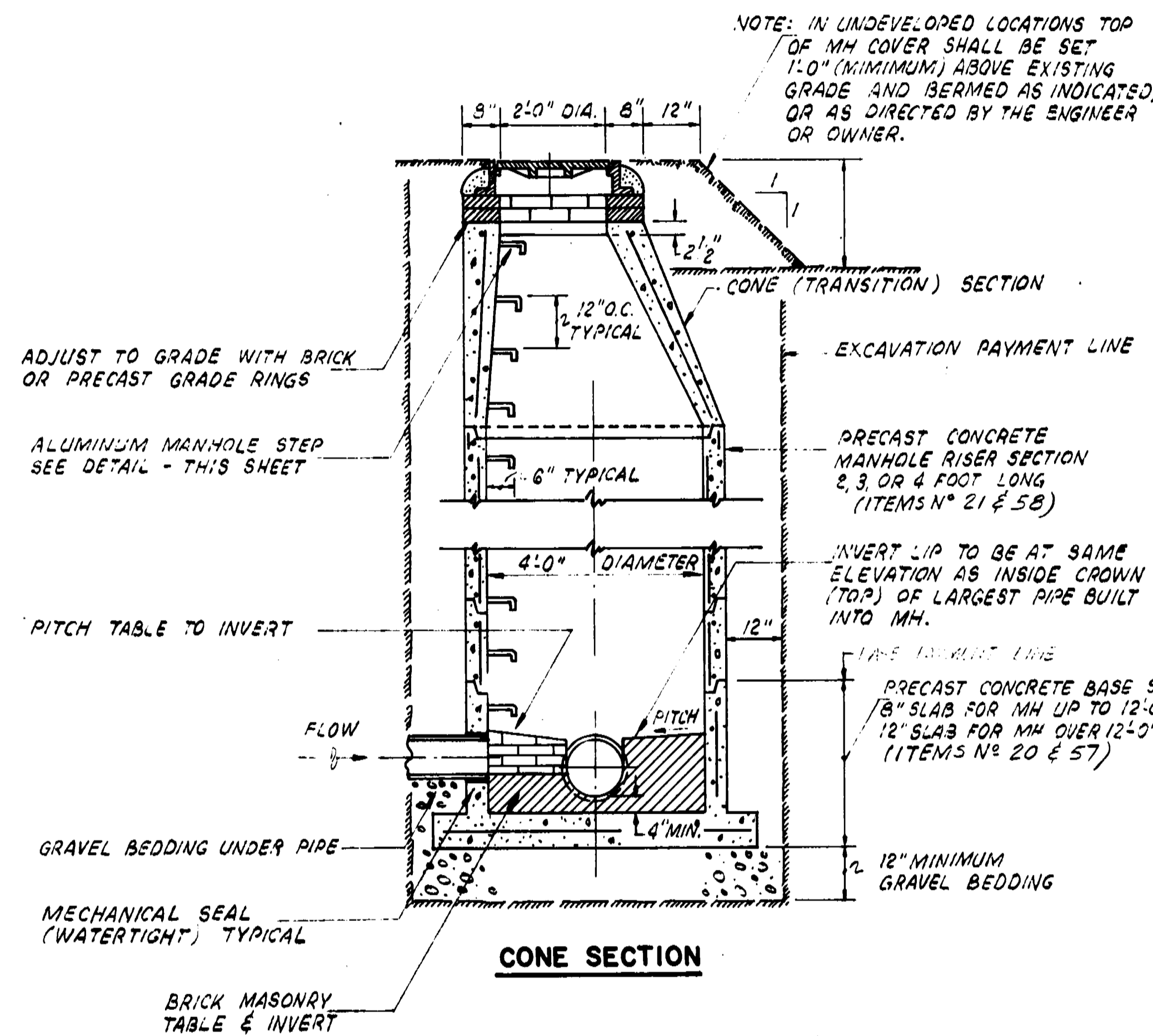
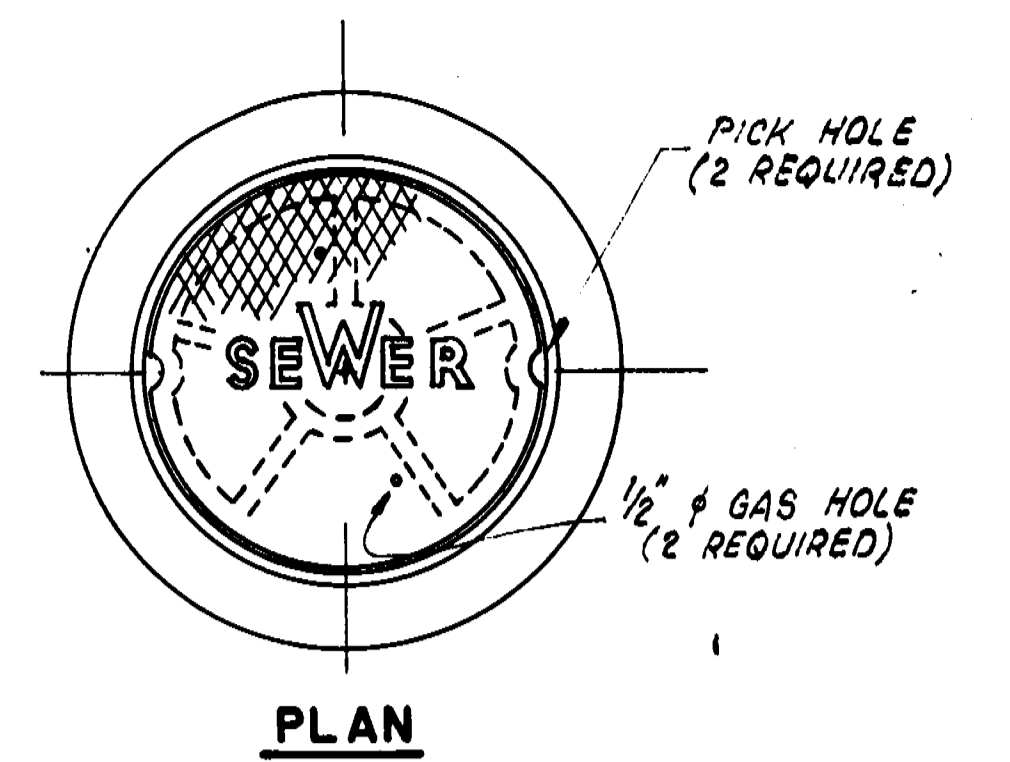
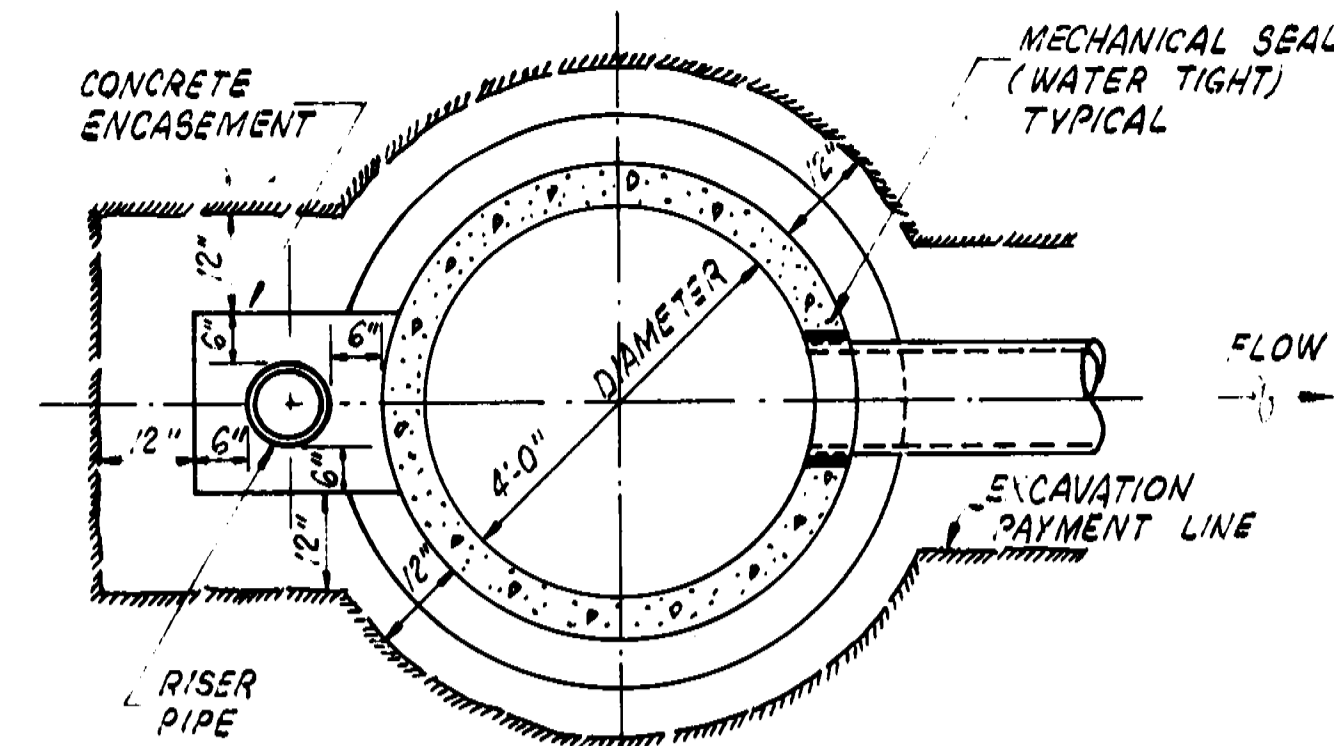


DRAWN C.M.-R.R.S. CHECKED R.F.A. APPROVED F.C.H. DATE 1978	CITY OF WARWICK, RHODE ISLAND WARWICK SEWER AUTHORITY SYSTEM OF SEWERS CONTRACT NO. 29
SCALE AS NOTED	GENERAL LOCATION PLAN & INDEX TO DRAWINGS
REV. NO. DESCRIPTION DATE BY APPROVED [Signature]	JOB NO. 2746 DWG. NO. 1 CE MAGURE, INC. ENGINEERS PROVIDENCE, R.I. WETHERFIELD, CONN. WALTHAM, MASS.

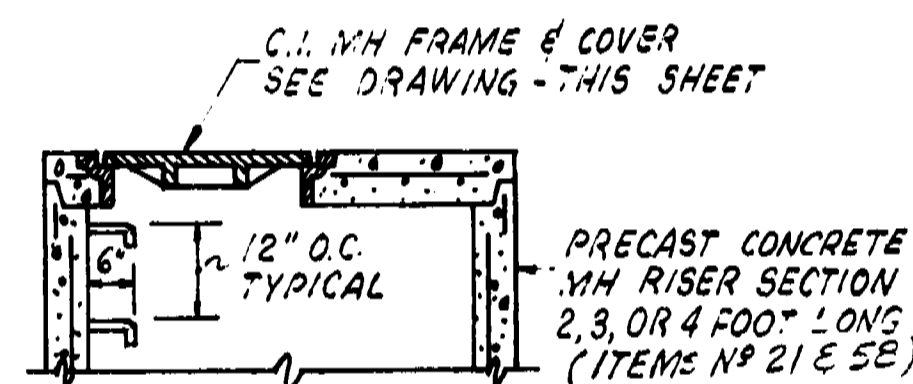


NOTE: USE 8" RISER PIPE & BENDS FOR INCOMING SEWER OF 12" OR LESS. FOR INCOMING SEWER LARGER THAN 12" THE RISER PIPE & BENDS SHALL BE 10"

NOTE: ALL MANHOLE COVERS SHALL HAVE THE WORD "SEWER" (WITH AN OVERSIZED "W") CAST THEREON.



LOW PROFILE

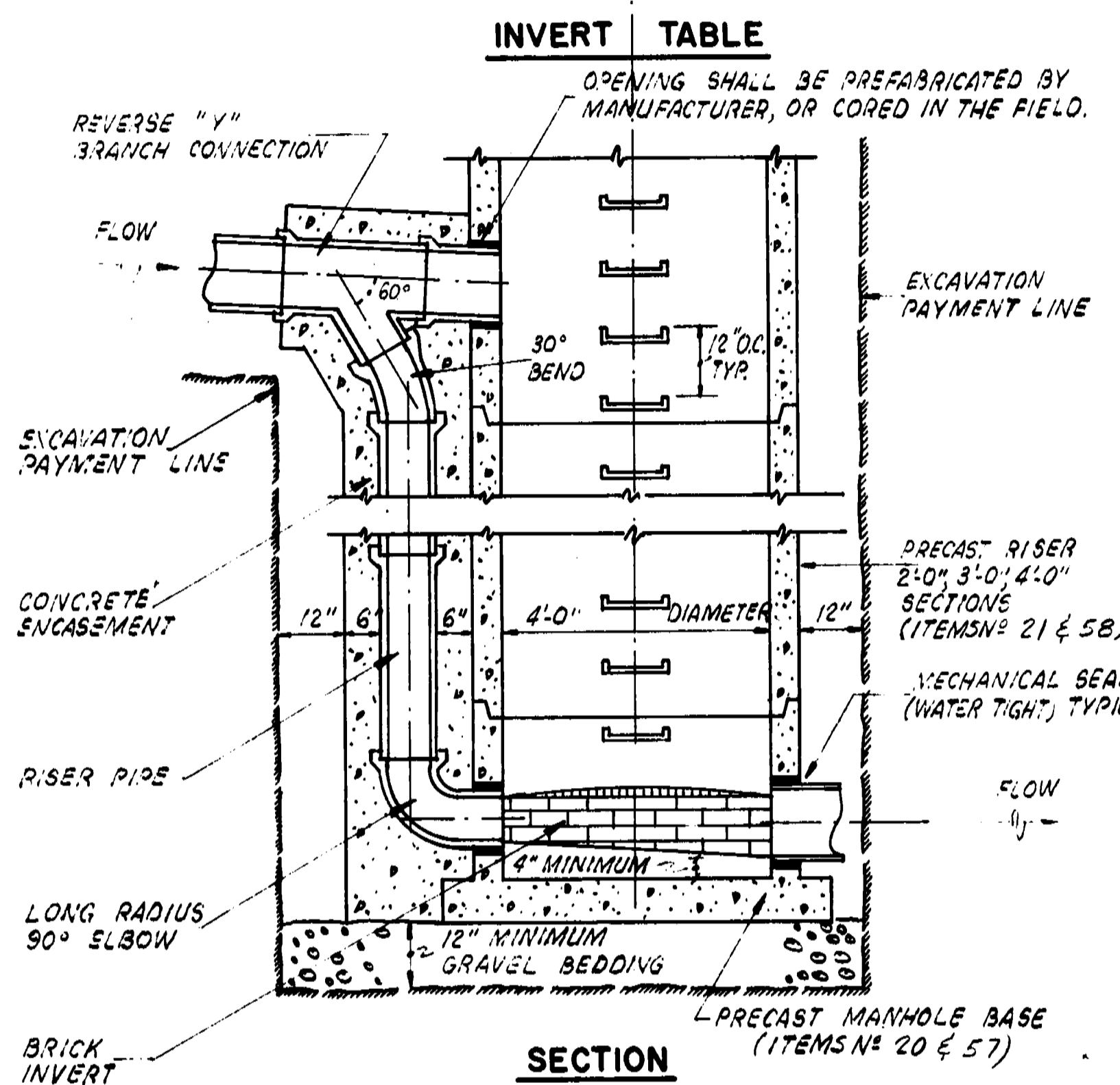


SHALLOW PROFILE

FLAT TOP SECTIONS

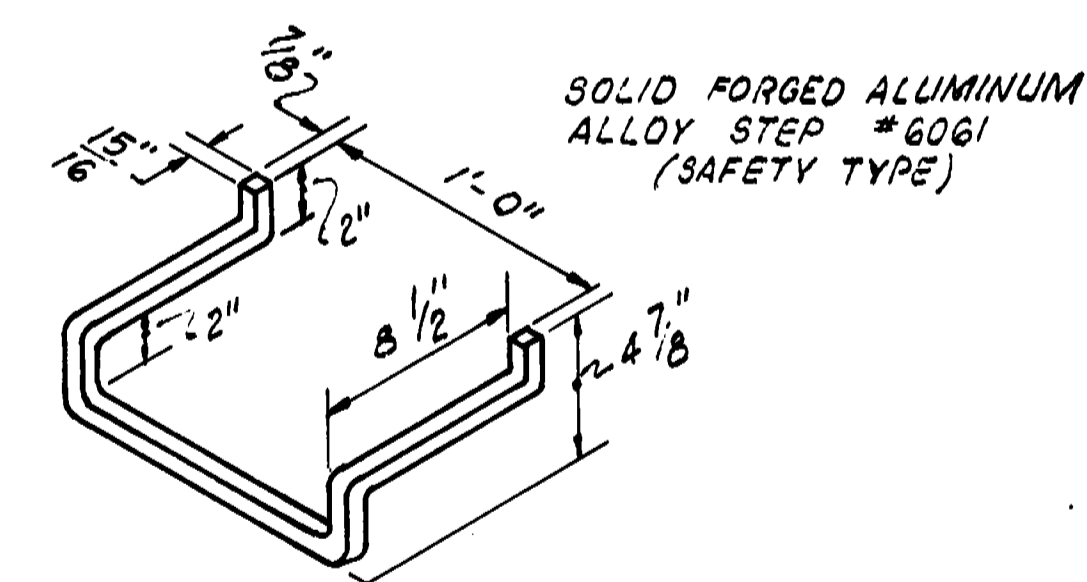
SCALE: 1/2" = 1'-0"

NOTE: LOW OR SHALLOW PROFILE TOPS ARE USED IN AREAS THAT DO NOT PERMIT USE OF A CONE SECTION OR IF DIRECTED BY THE ENGINEER OR OWNER.

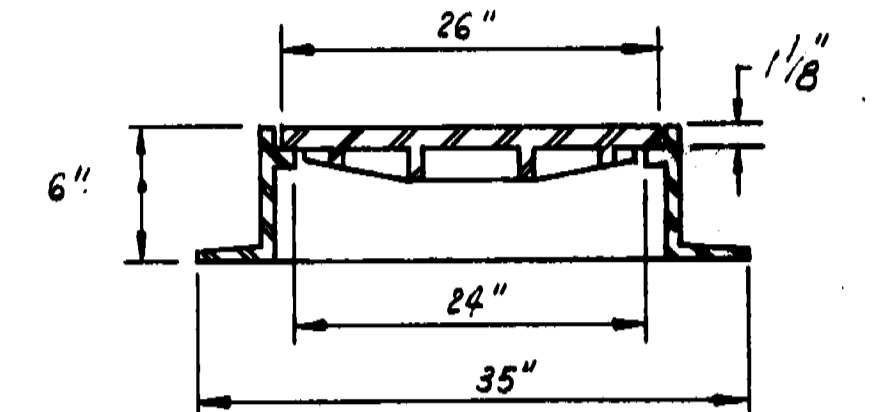


SECTION DROP MANHOLE

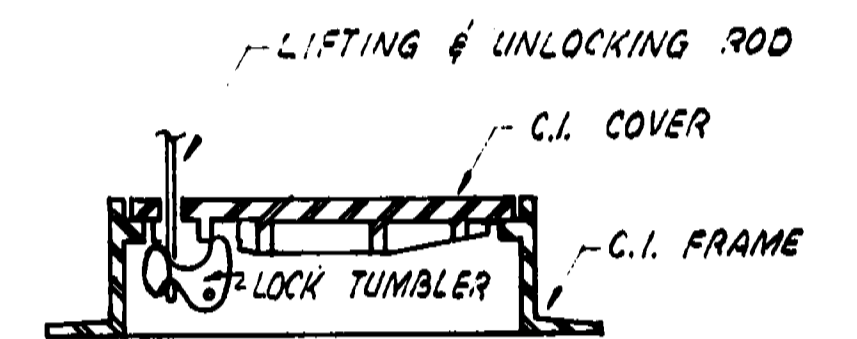
SCALE: 1/2" = 1'-0" (ITEMS NO. 68 & 69)



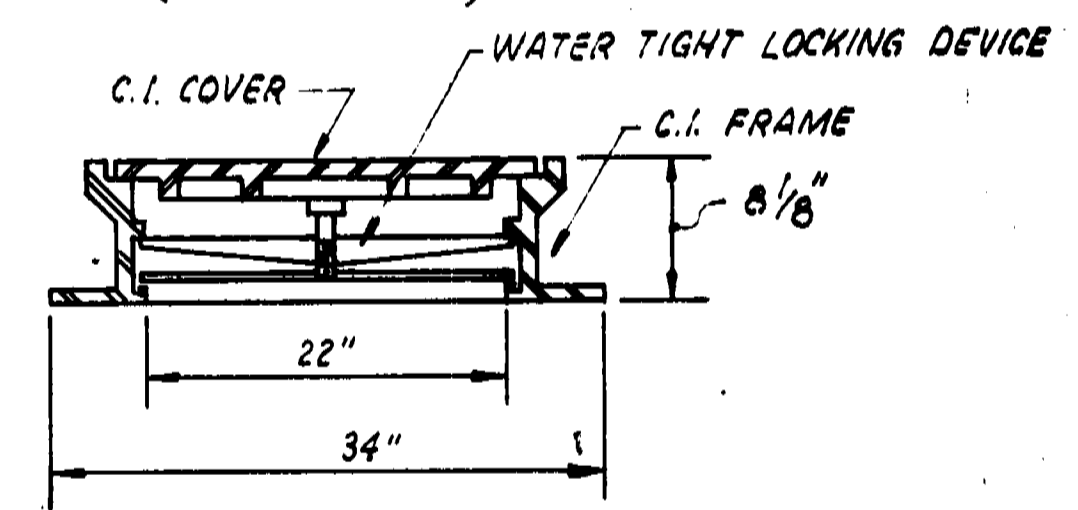
ALUMINUM MANHOLE STEP DETAIL NOT TO SCALE



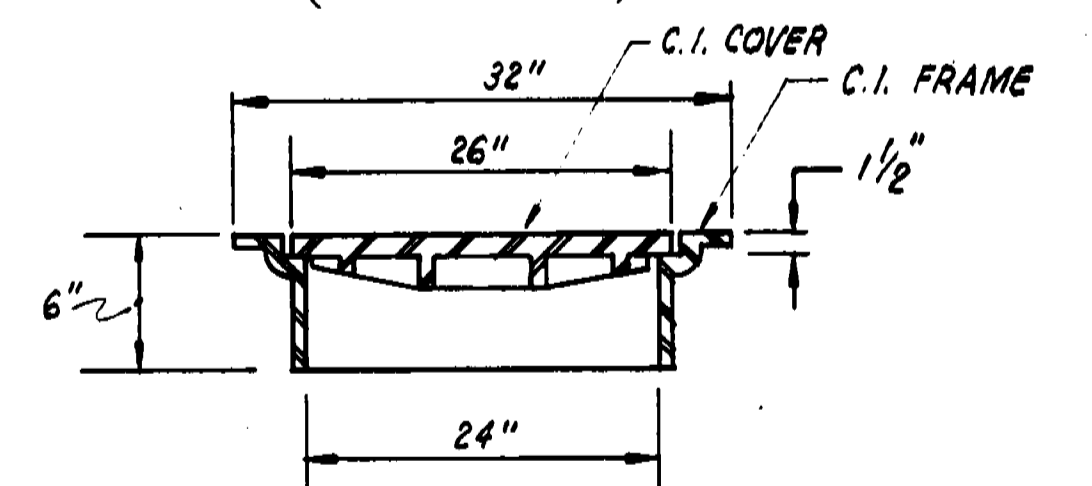
STANDARD COVER (ITEMS NO. 22 & 60)



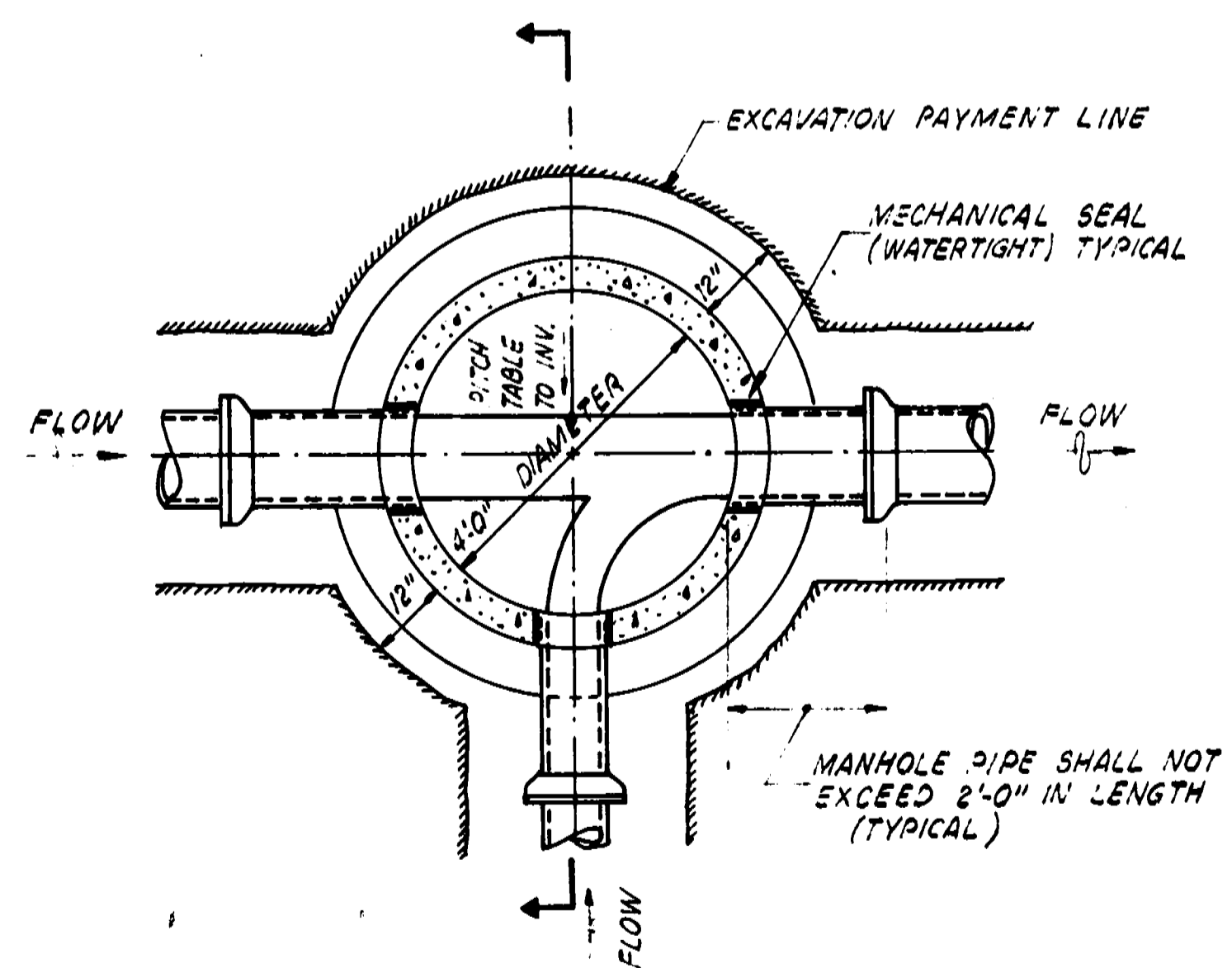
LOCKING COVER (ITEM NO. 23)



WATERTIGHT COVER (ITEM NO. 59)



SHALLOW PROFILE COVER NOT TO SCALE



INVERT TABLE

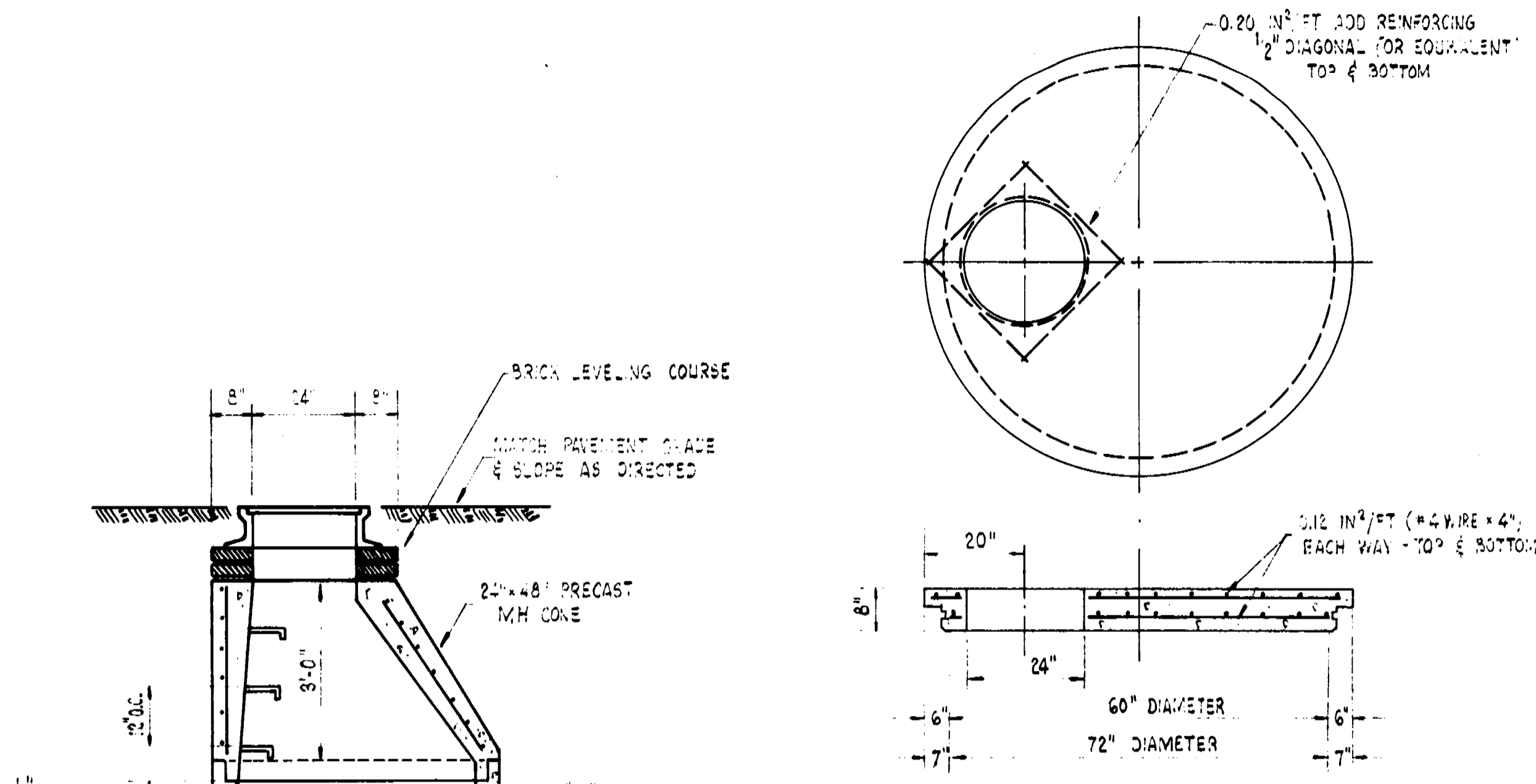
STANDARD MANHOLE SCALE: 1/2" = 1'-0"

NOTES

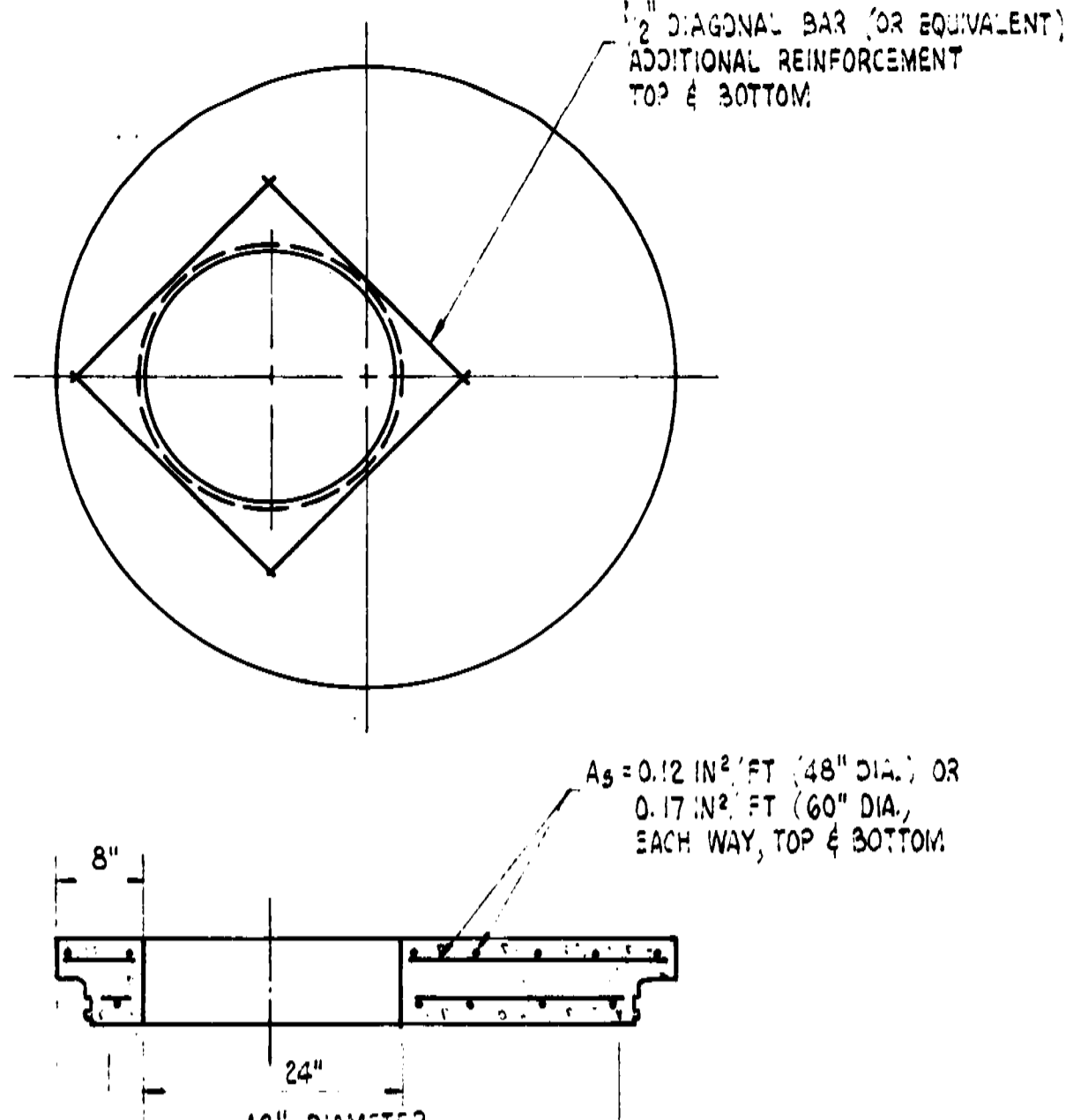
1. IN UNDEVELOPED LOCATIONS TOP OF MANHOLE COVER ELEVATION SHALL BE 1'-0" ABOVE EXISTING GROUND AND BERMED AS INDICATED OR AS OTHERWISE DIRECTED BY THE OWNER.
2. FOR THE TYPE OF MANHOLE FRAME AND COVER TO BE USED ON EACH MANHOLE SEE PLAN & PROFILE SHEETS. THE DESIGNATION OF THE FRAME AND COVER TYPE IS AS FOLLOWS AND APPEARS AT EACH CALLOUT ON THE PLAN & PROFILE SHEETS.

- (WT) WATERTIGHT FRAME & COVER
- (L) LOCKING FRAME & COVER
- (S) STANDARD FRAME COVER SEE DETAILS THIS SHEET.

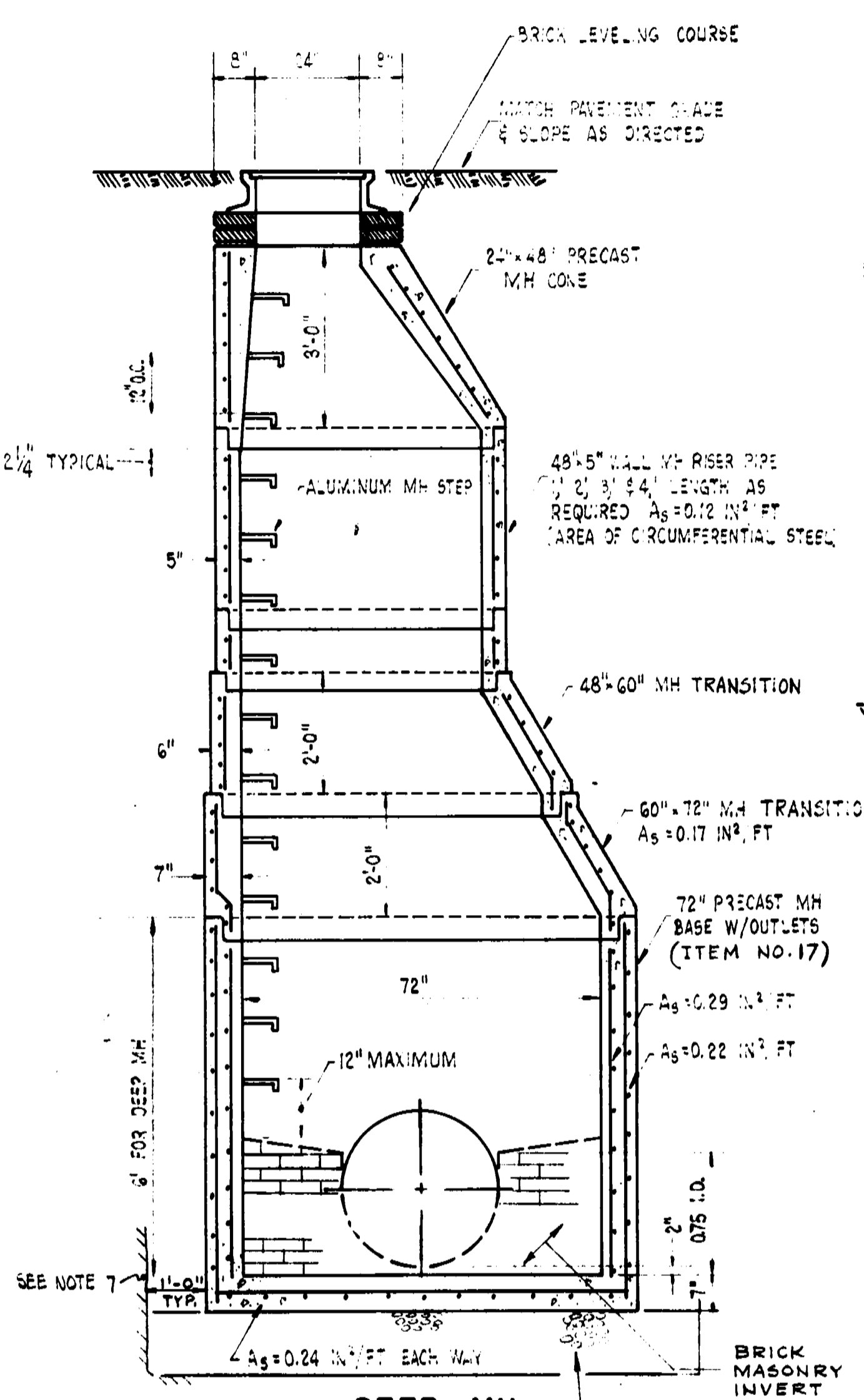
DRAWN <i>H.E. Stepanovich</i>		CITY OF WARWICK, RHODE ISLAND	
CHECKED <i>V.L.</i>		WARWICK SEWER AUTHORITY	
APPROVED <i>E.C.H.</i>		SYSTEM OF SEWERS	
DATE 1978		CONTRACT NO. 29	
SCALE AS NOTED		GENERAL	
JOB NO. 2746		TYPICAL MANHOLE DETAILS	
DWG. NO. 2		CE MAGUIRE, INC.	
WARWICK SEWER AUTHORITY		ENGINEERS	
FILE NO.		PROVIDENCE, R.I. WETHERFIELD, CONN. WALTHAM, MASS.	



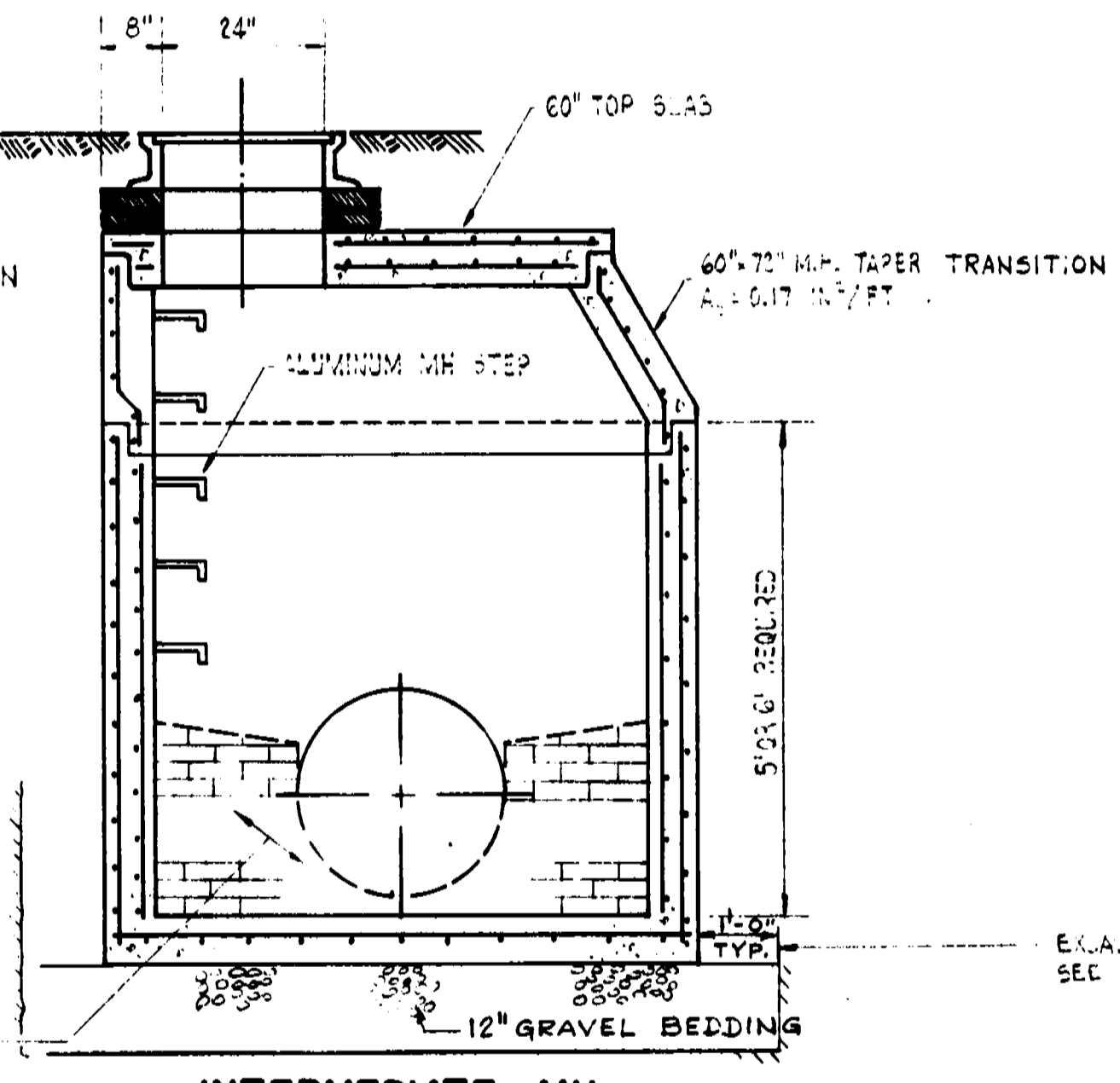
FLAT TOP SLAB



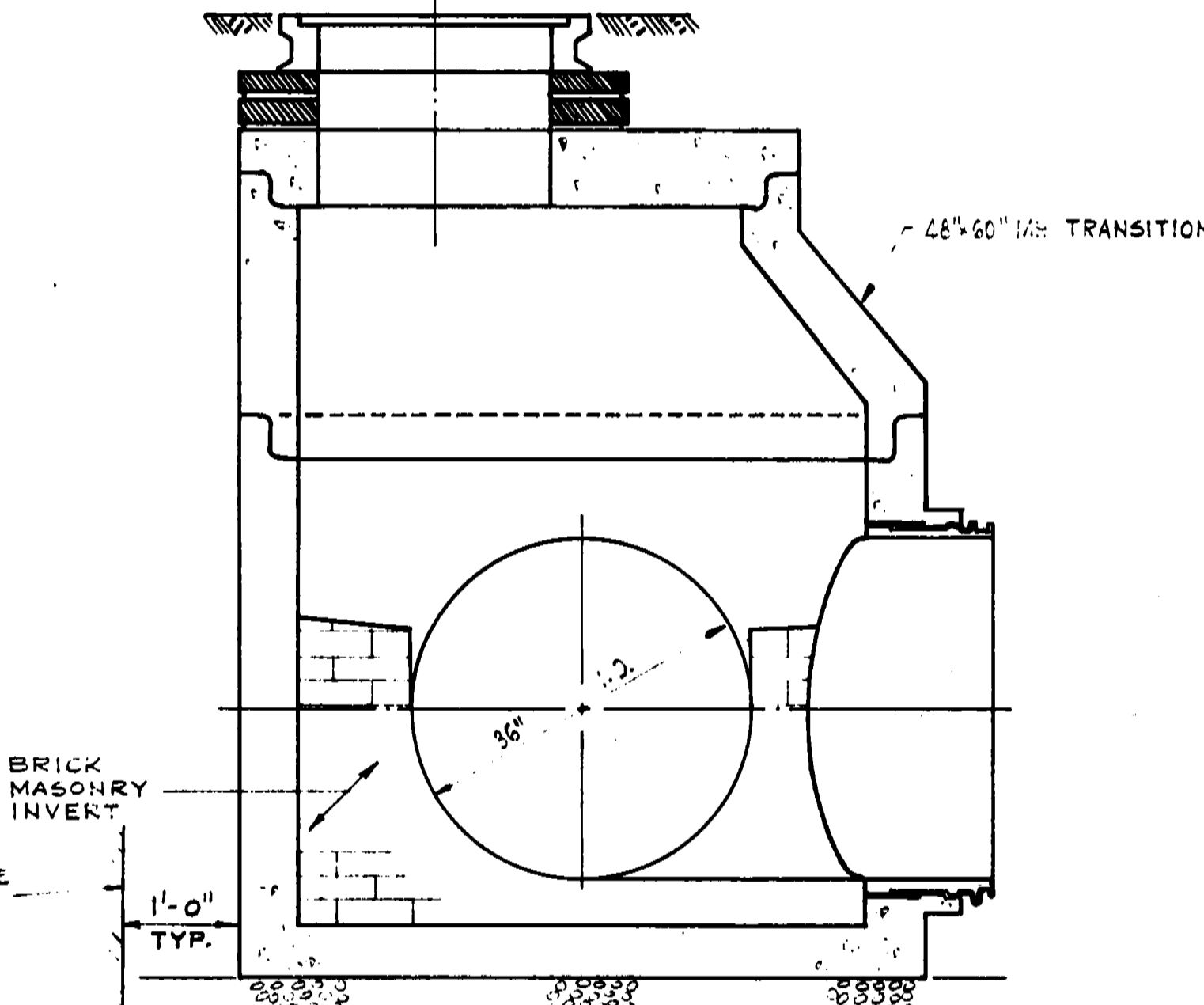
FLAT TOP SLAB



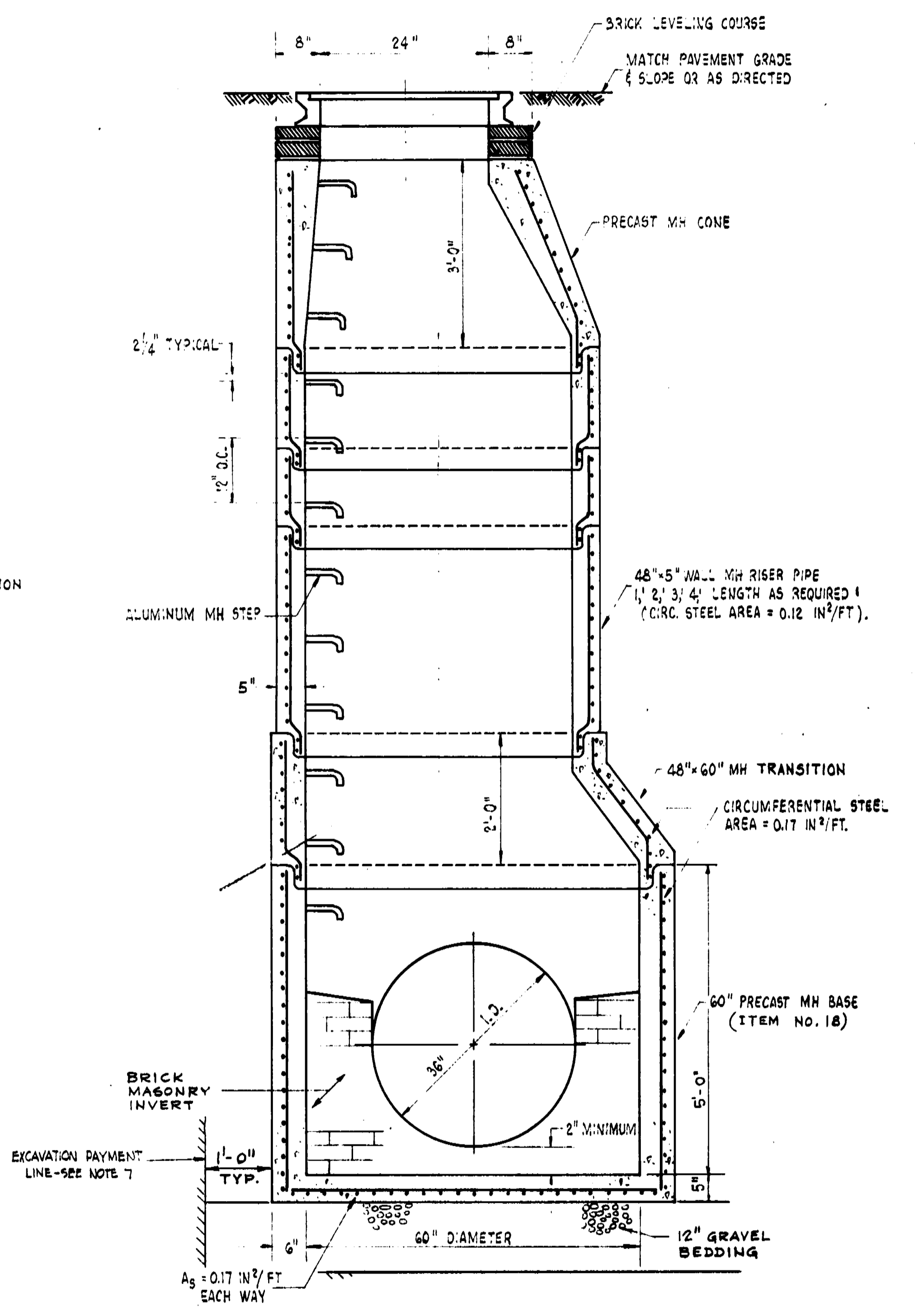
DEEP MH
NO. 33 DWG. NO. 16



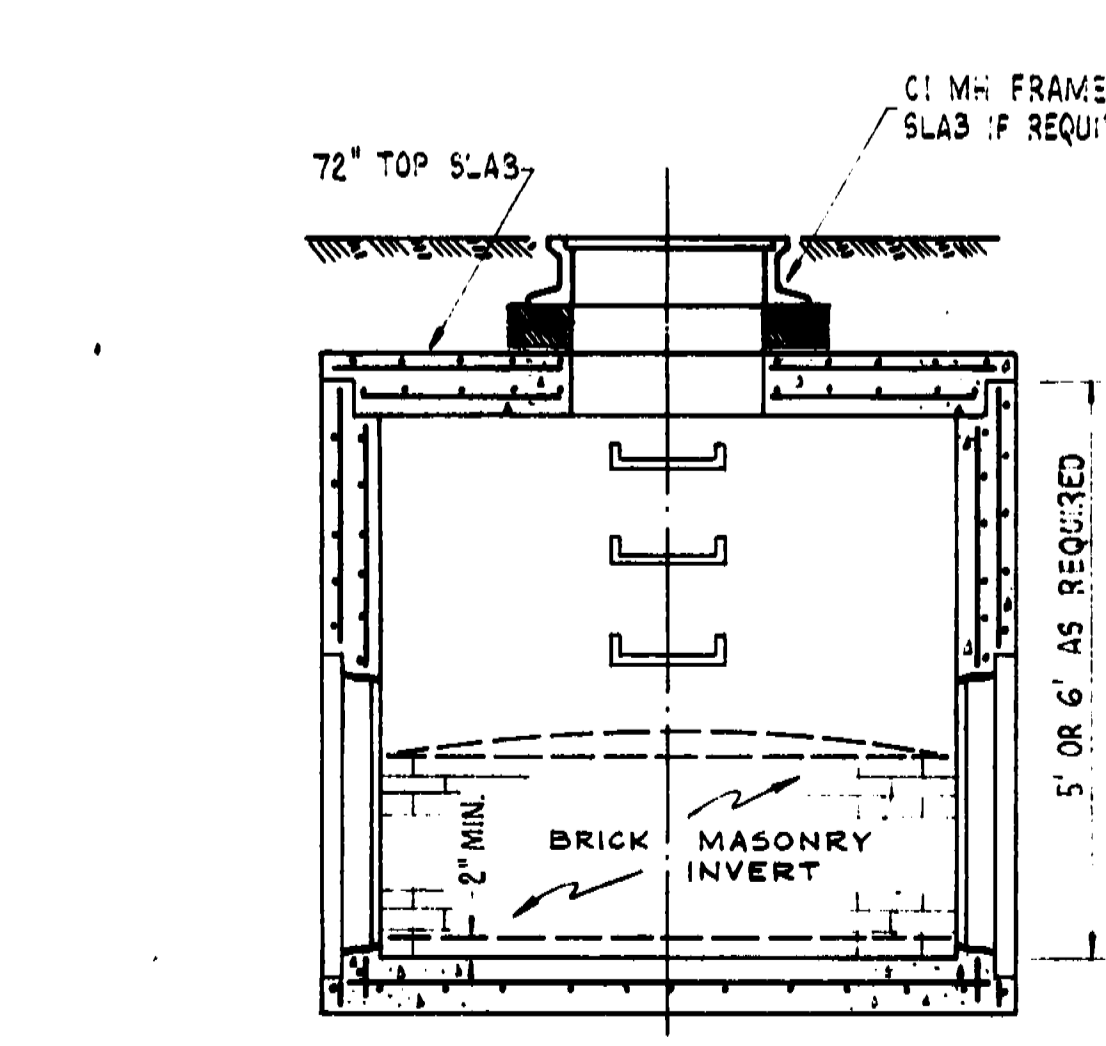
INTERMEDIATE MH



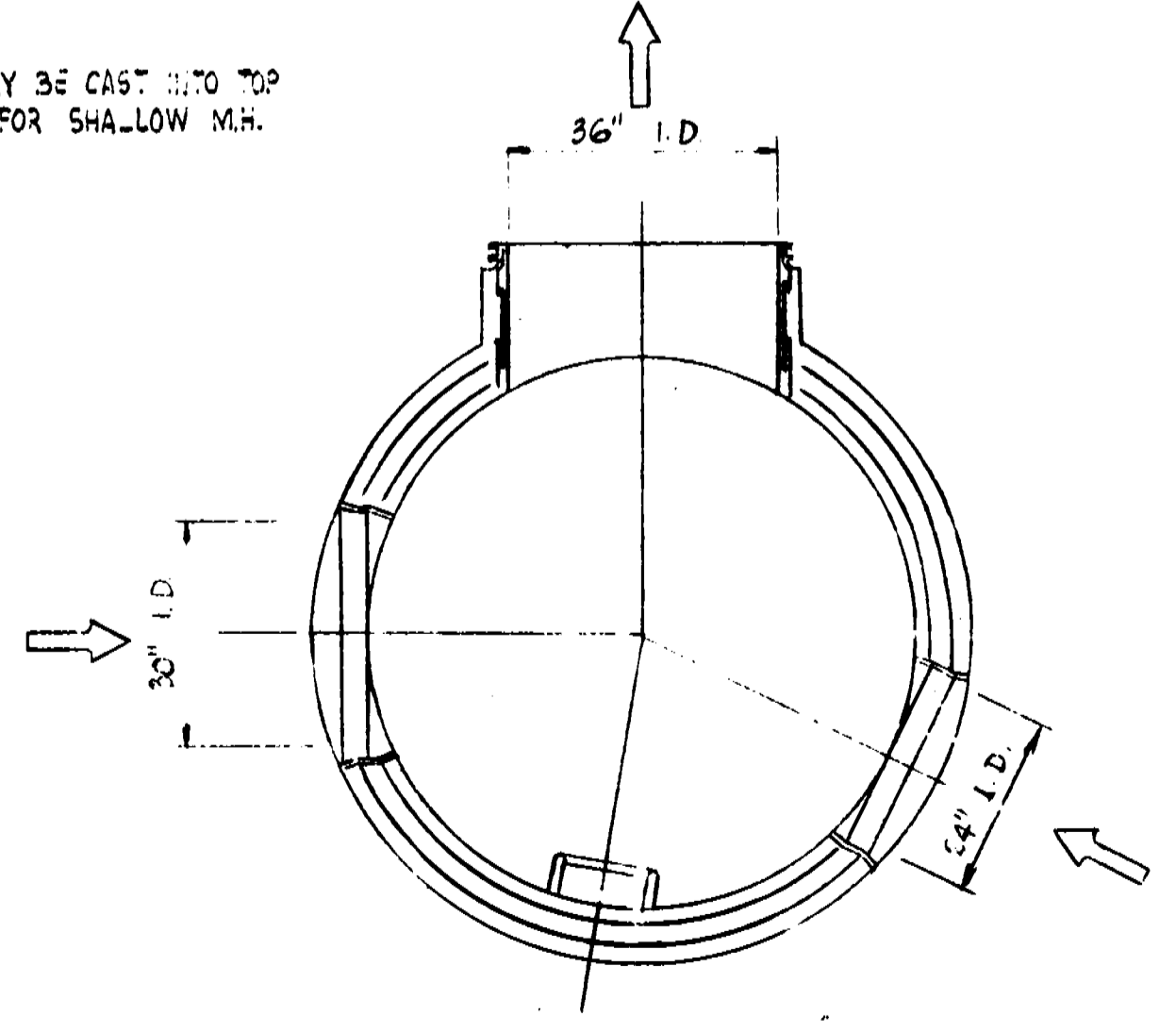
SECTION



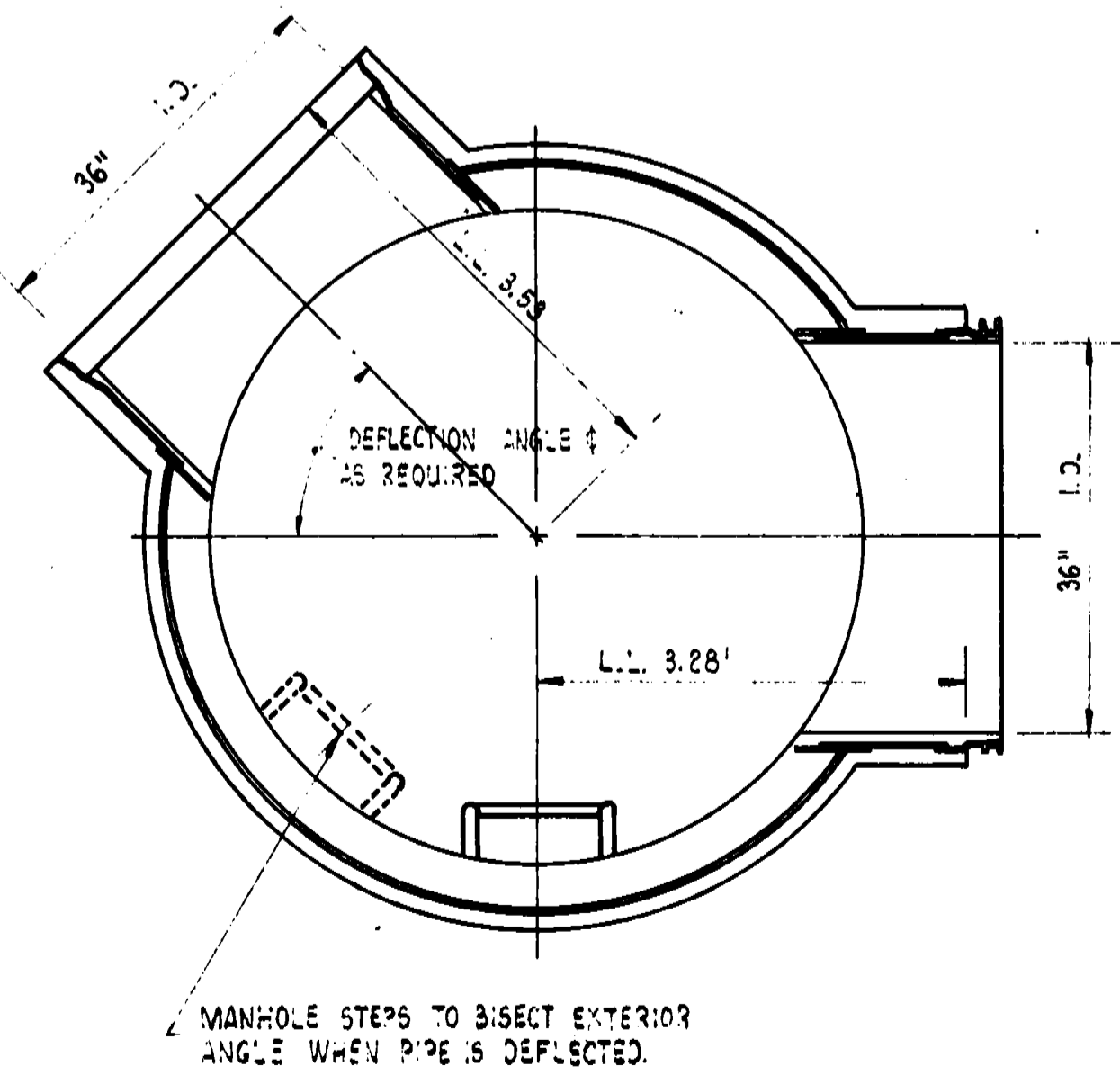
60" REINFORCED CONCRETE MH ASSEMBLY W/R & S JOINT CONNECTIONS
SCALE 3/4"=1'-0"



SHALLOW MH



MH BASE



PLAN

- NOTES**
1. RUBBER & CONCRETE JOINTS IN ACCORDANCE WITH ASTM C-361.
 2. RISER, CONES & SLABS IN ACCORDANCE WITH ASTM C-478.
 3. PROVIDE LIFTING HOLES IN BASES, RISERS, CONES, AND LIFTING HOOKS IN SLABS TO FACILITATE INSTALLATION.
 4. INLETS & OUTLETS TO BE CAST WITH REQUIRED ELEVATION DIFFERENCE AND PROPER DEFLECTION.
 5. MANHOLE STEPS TO BE ALUMINUM TYPE 6061-T6 DROP FRONT DESIGN.
 6. ABSORPTION NOT TO EXCEED 8% IN ACCORDANCE WITH ASTM C-76.
 7. PAYMENT FOR EXCAVATION SHALL BE AN ADDITIONAL 1'-0" AROUND THE OUTSIDE CIRCUMFERENCE OF THE MANHOLE BASE

72" RC MH ASSEMBLY WITH DOUBLE R & S BELL CONNECTIONS
SCALE 1/2"=1'-0"

DRAWN H.E.S.		CITY OF WARWICK, RHODE ISLAND WARWICK SEWER AUTHORITY SYSTEM OF SEWERS CONTRACT NO. 29
CHECKED R.F.A.		
APPROVED F.C.H.		
DATE 1978		GENERAL
SCALE AS NOTED		MANHOLE DETAILS
REV. NO.	DESCRIPTION	DATE
APPROVED		
JOB NO. 2746		CE MADURE, INC. ARCHITECTS - ENGINEERS - PLANNERS PROVIDENCE - WALTHAM - WASHINGTON, D.C.
DWG. NO. 3		
TOWN OF SOUTH KINGSTOWN		FILE NO.

- NOTES**
- RUBBER & CONCRETE JOINTS IN ACCORDANCE WITH ASTM C-361.
 - RISER, CONES & SLABS IN ACCORDANCE WITH ASTM C-478.
 - PROVIDE LIFTING HOLES IN BASES, RISERS, CONES, AND LIFTING HOOKS IN SLABS TO FACILITATE INSTALLATION.
 - INLETS & OUTLETS TO BE CAST WITH REQUIRED ELEVATION AND PROPER DEFLECTION.
 - MANHOLE STEPS TO BE ALUMINUM TYPE 6061-T6 DROP FRONT DESIGN
 - ABSORPTION NOT TO EXCEED 8% IN ACCORDANCE WITH ASTM C-6
 - PAYMENT FOR EXCAVATION SHALL BE AN ADDITIONAL 1'-0" AROUND THE OUTSIDE CIRCUMFERENCE OF THE MANHOLE BASE

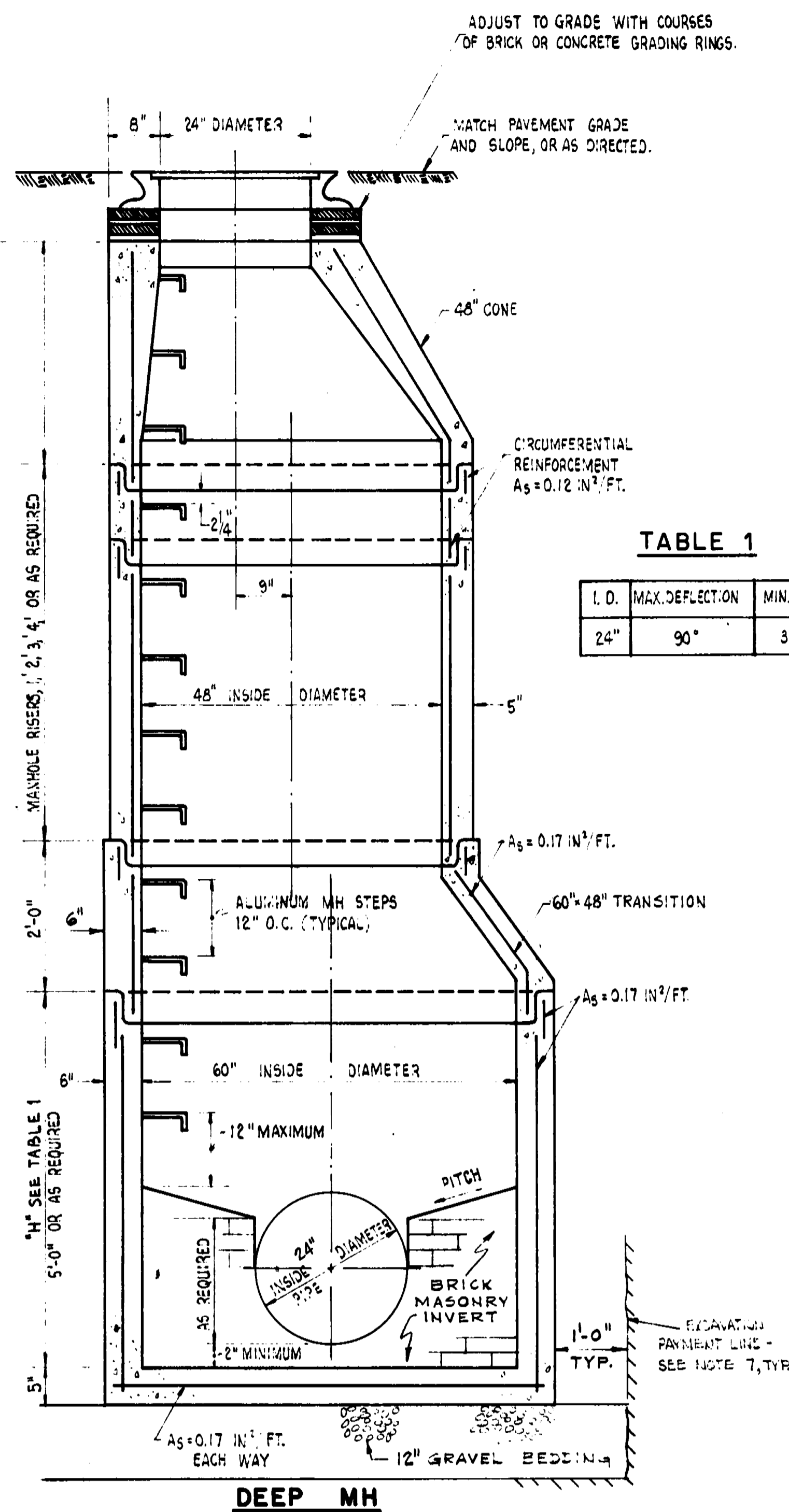
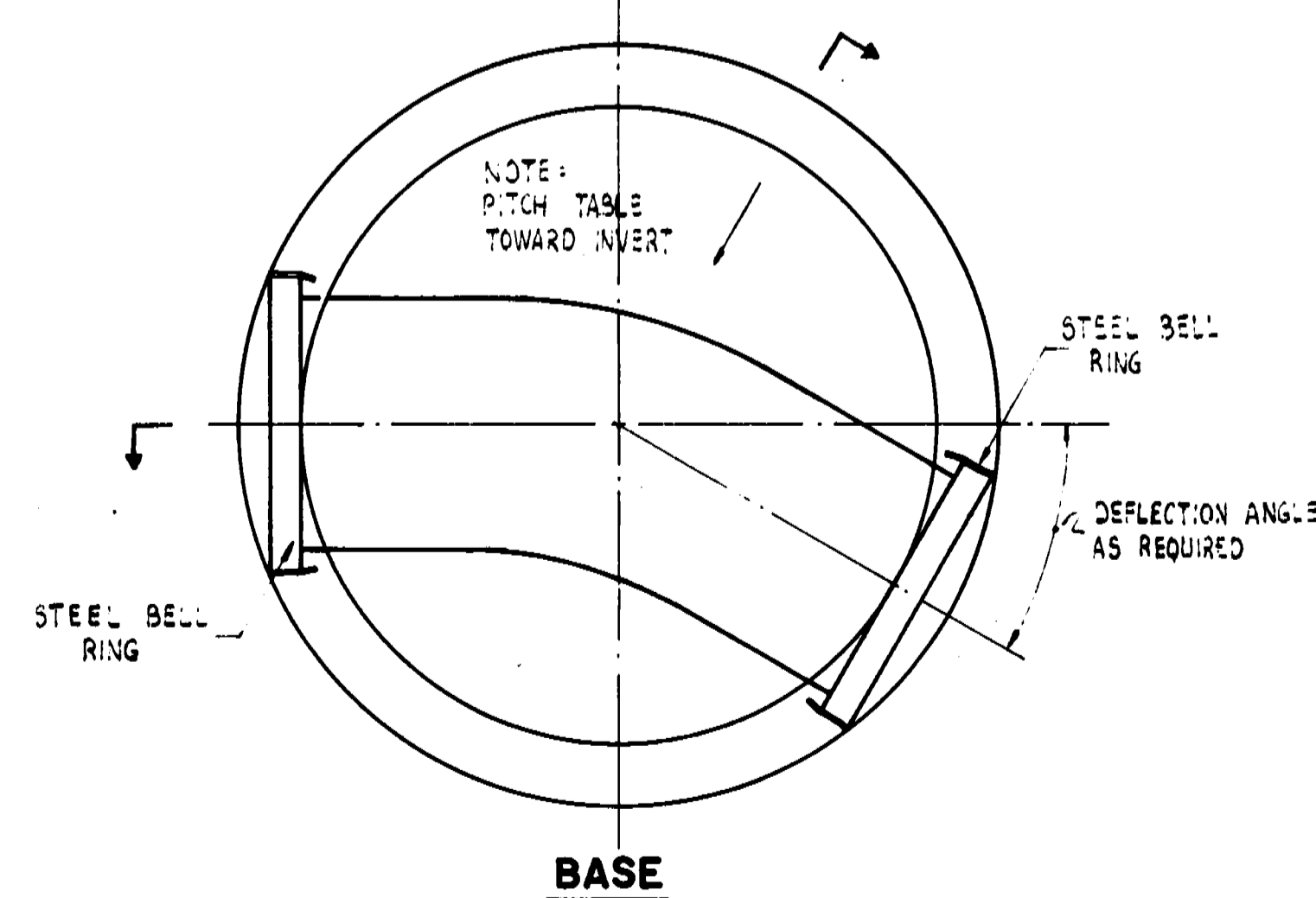
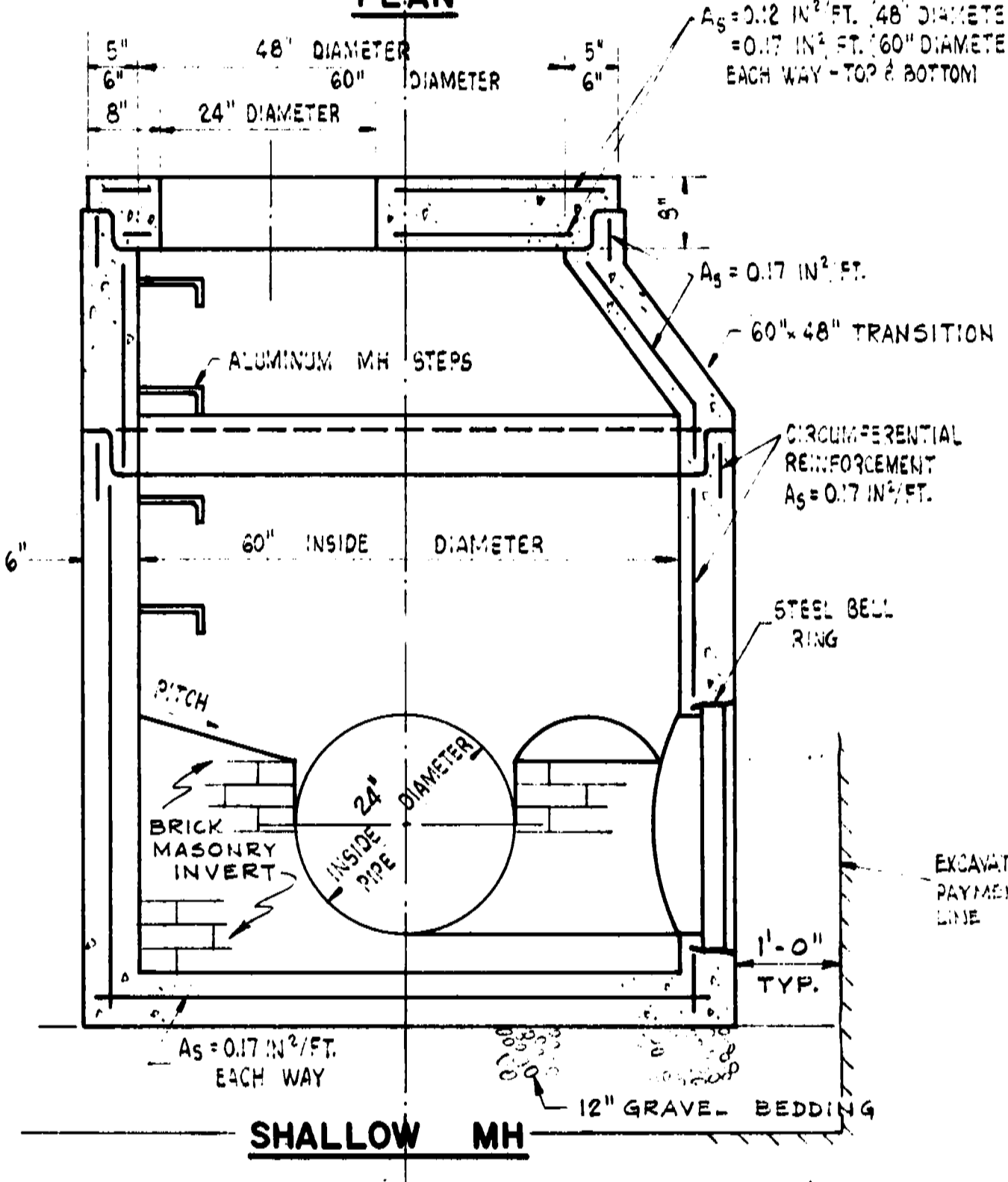
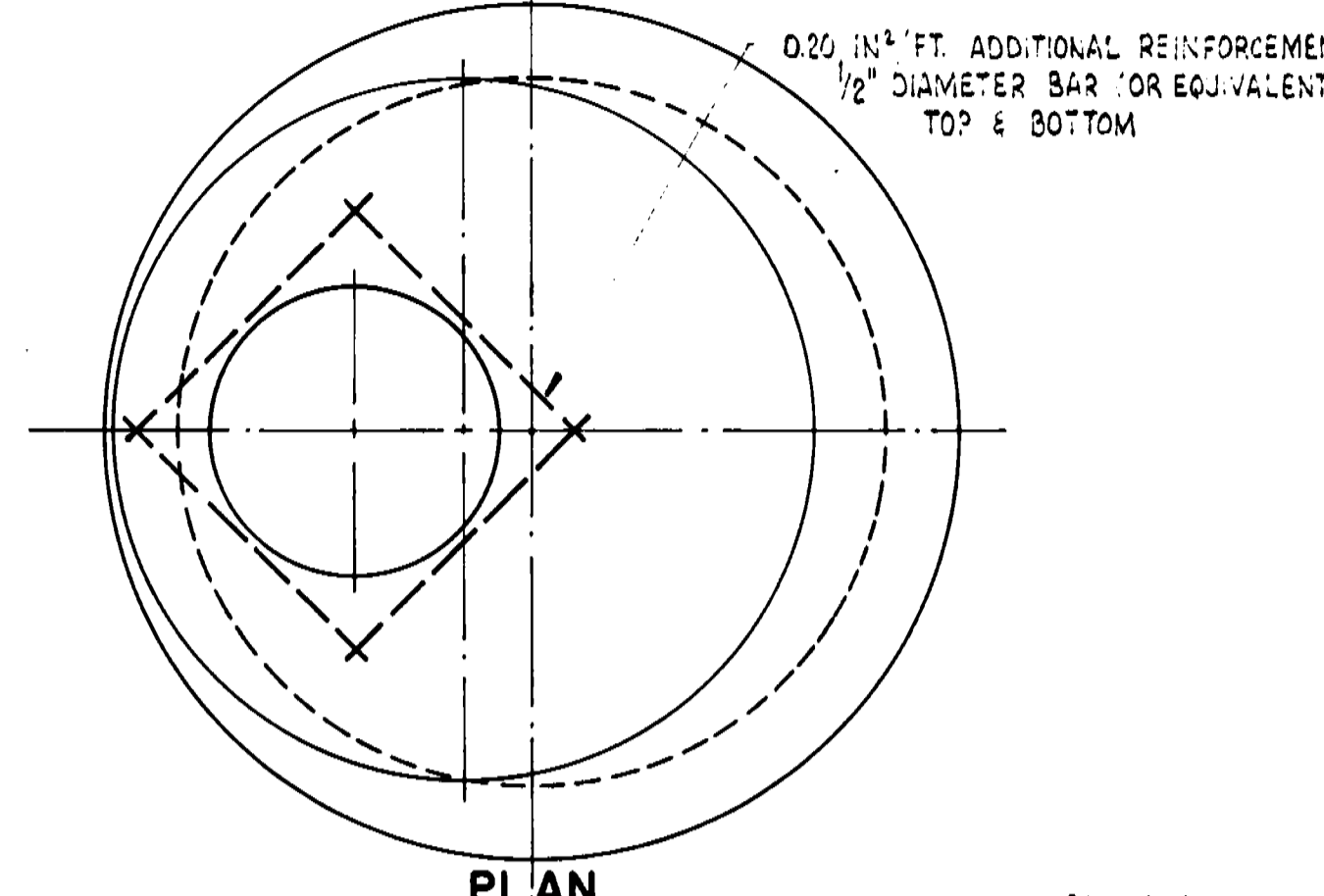


TABLE 1

I. D.	MAX. DEFLECTION	MIN. "H"
24"	90°	3'



60" R.C.M.H. ASSEMBLY WITH DOUBLE R & S BELL CONNECTIONS
SCALE 3/4" = 1'-0"

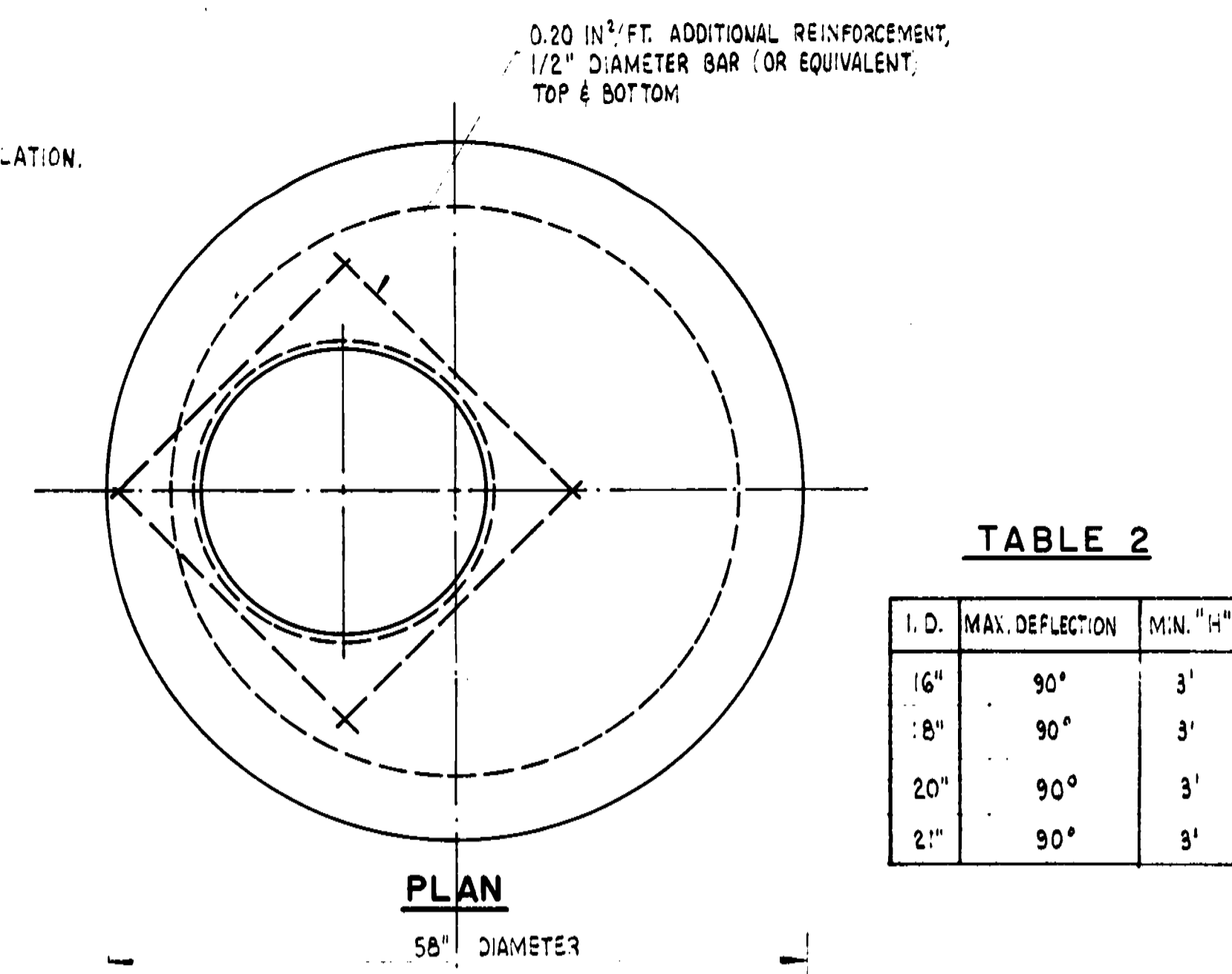
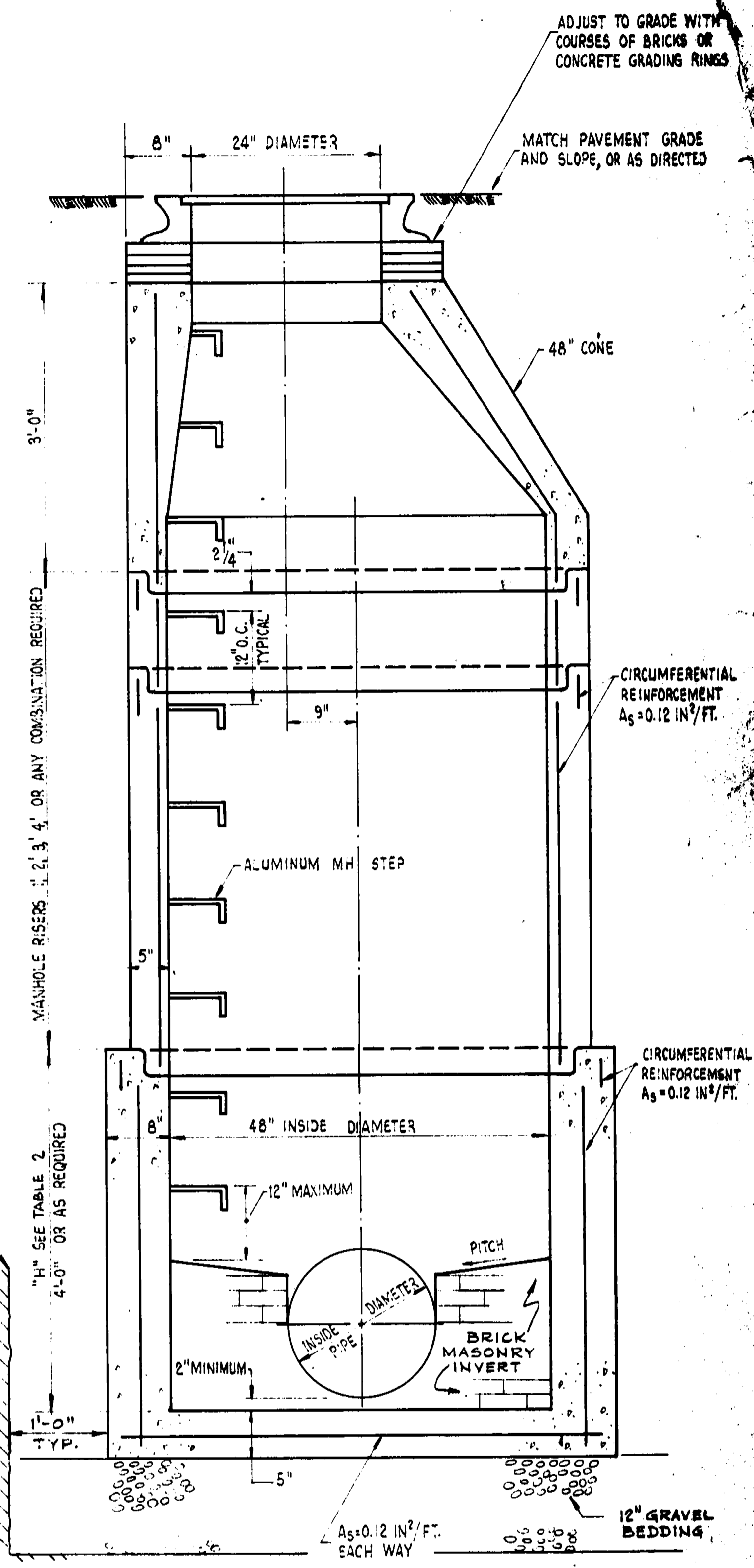
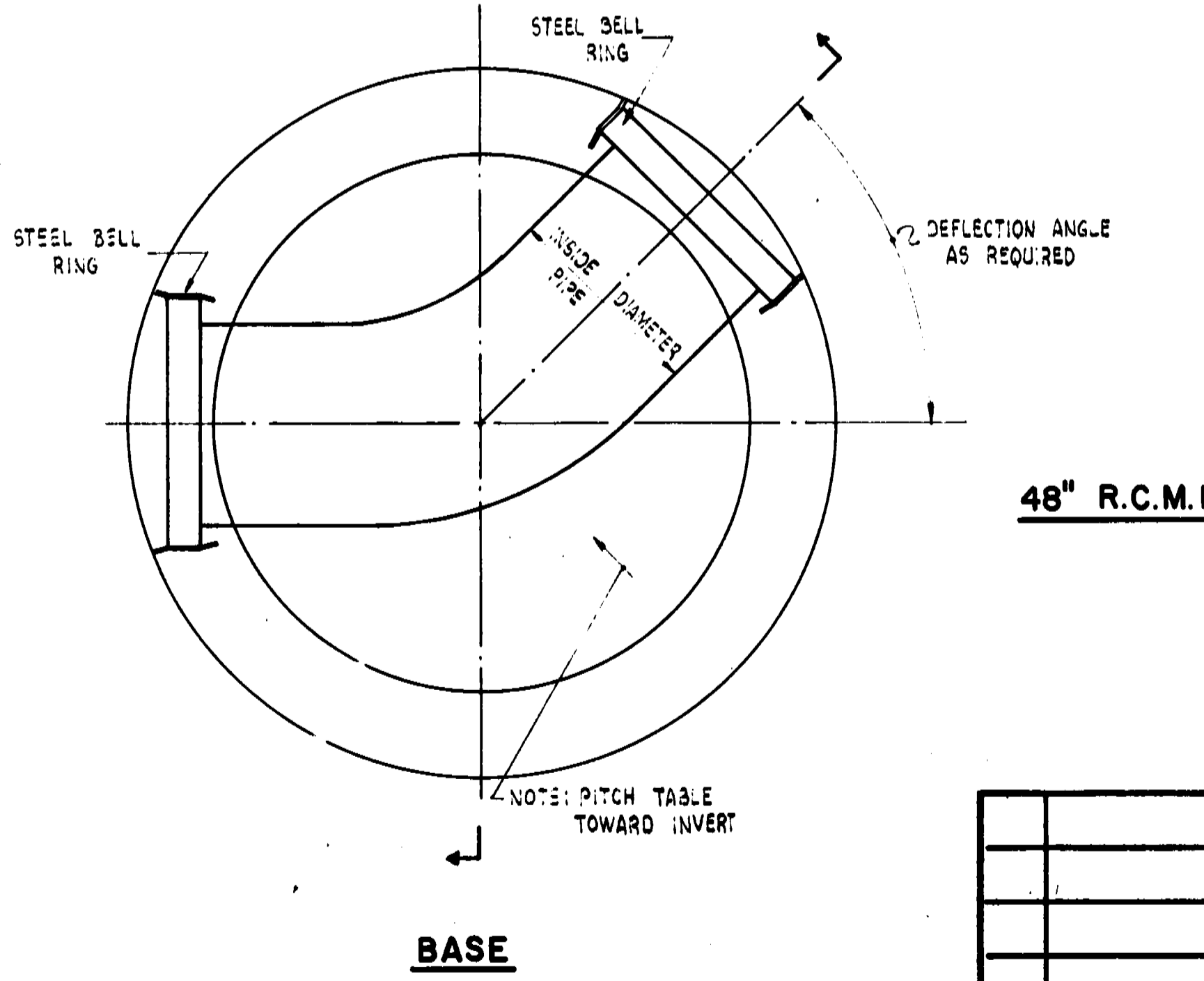
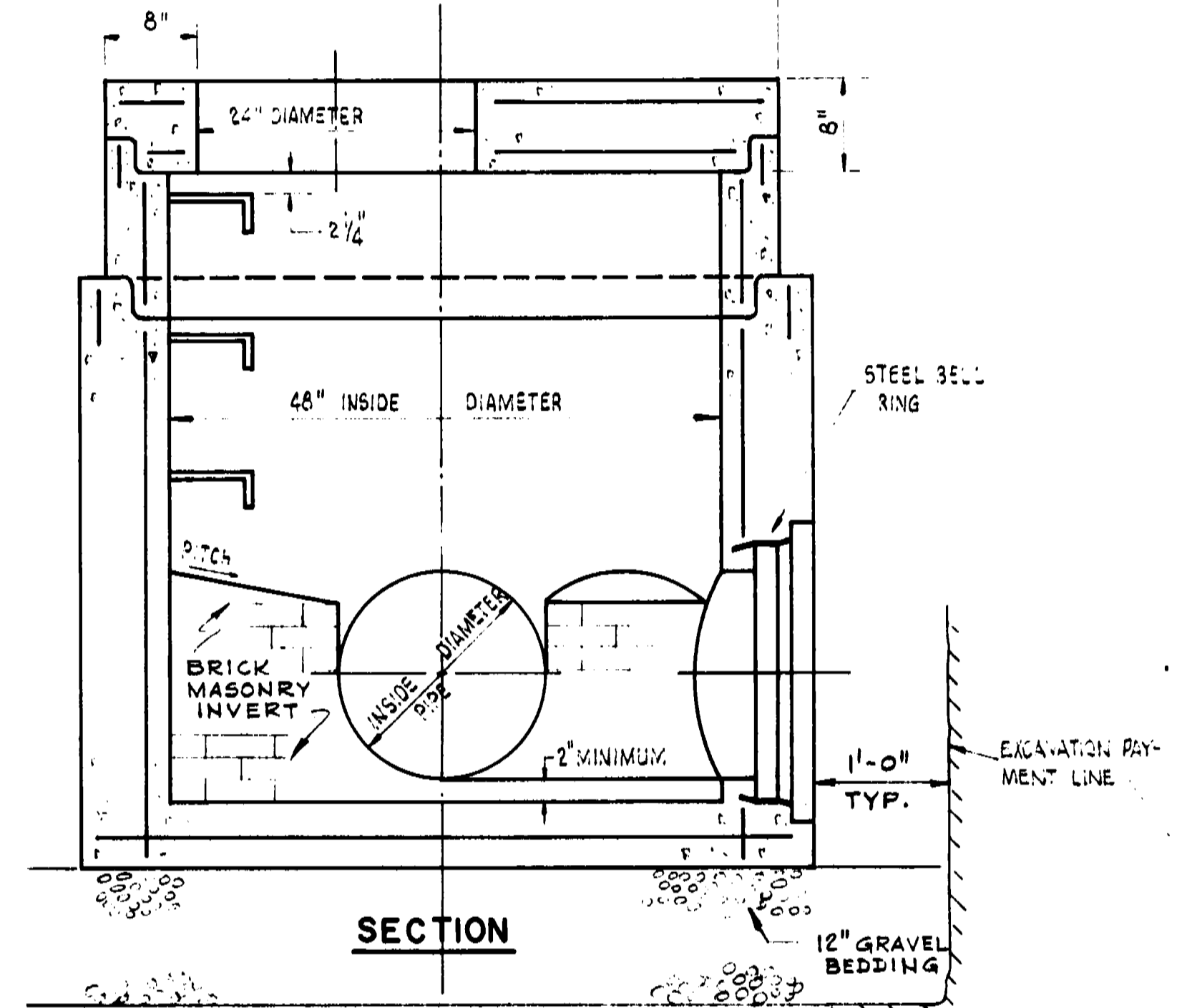
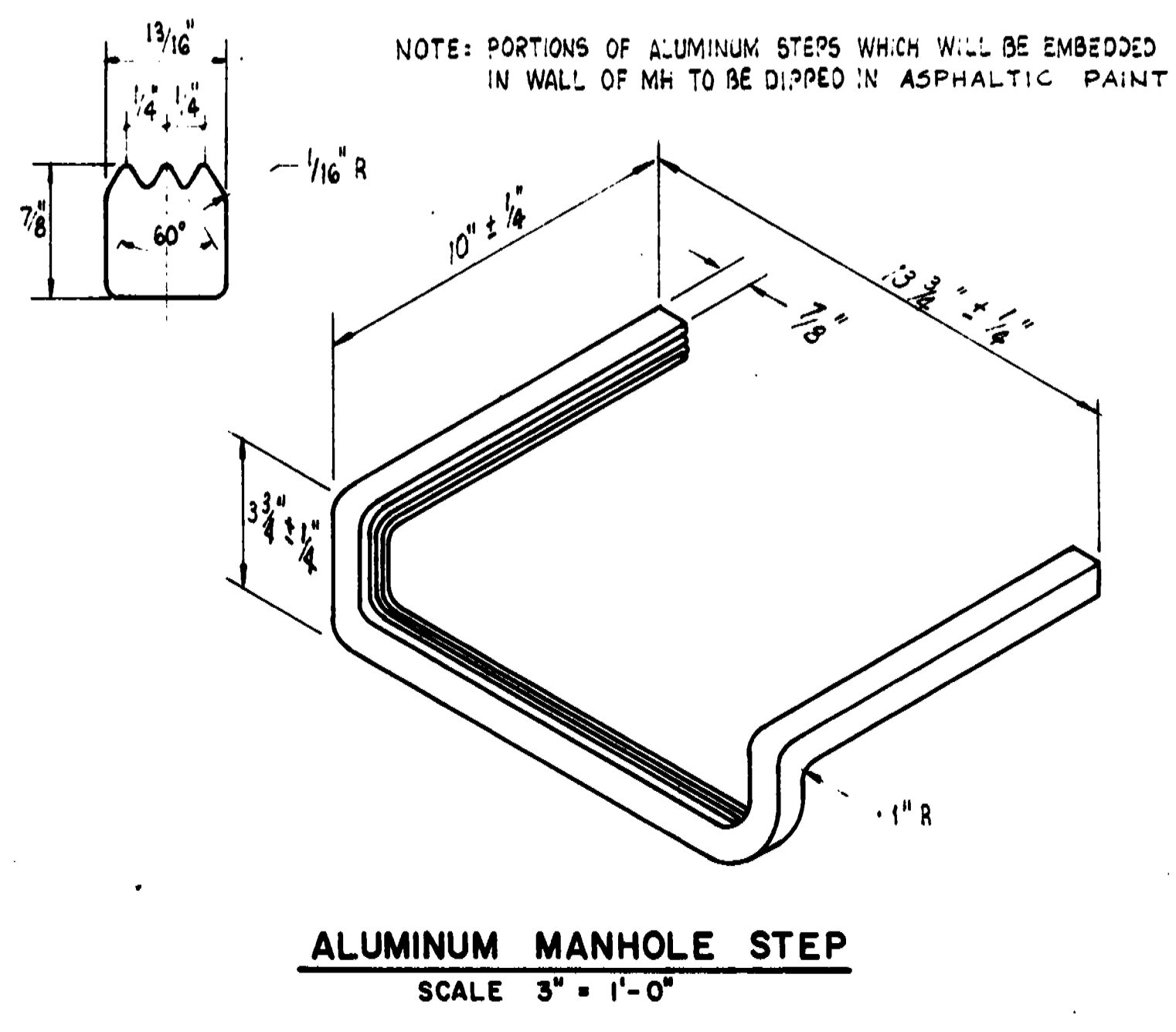


TABLE 2

I. D.	MAX. DEFLECTION	MIN. "H"
16"	90°	3'
18"	90°	3'
20"	90°	3'
21"	90°	3'

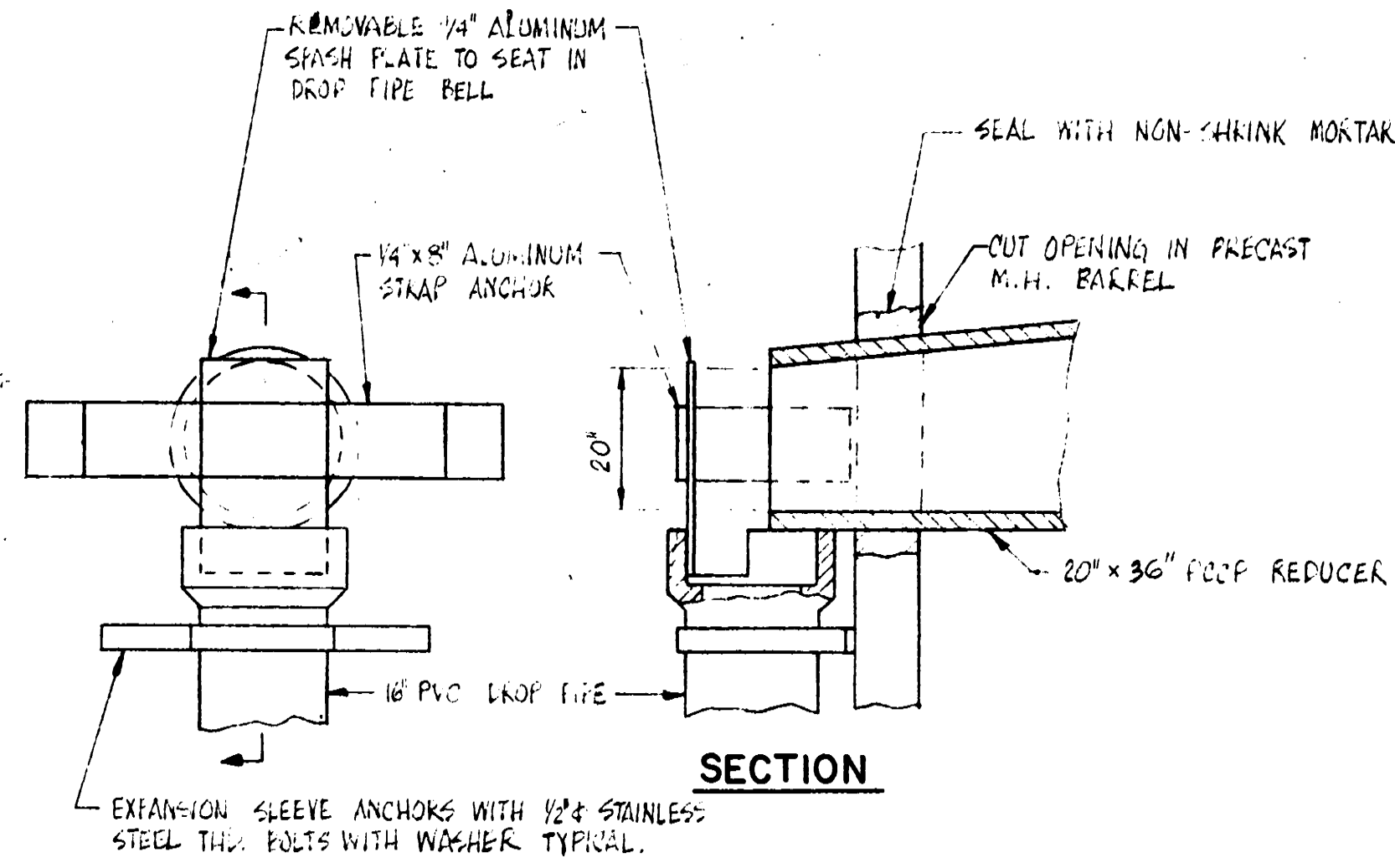


48" R.C.M.H. ASSEMBLY WITH DOUBLE R & S BELL CONNECTIONS
SCALE 1" = 1'-0"

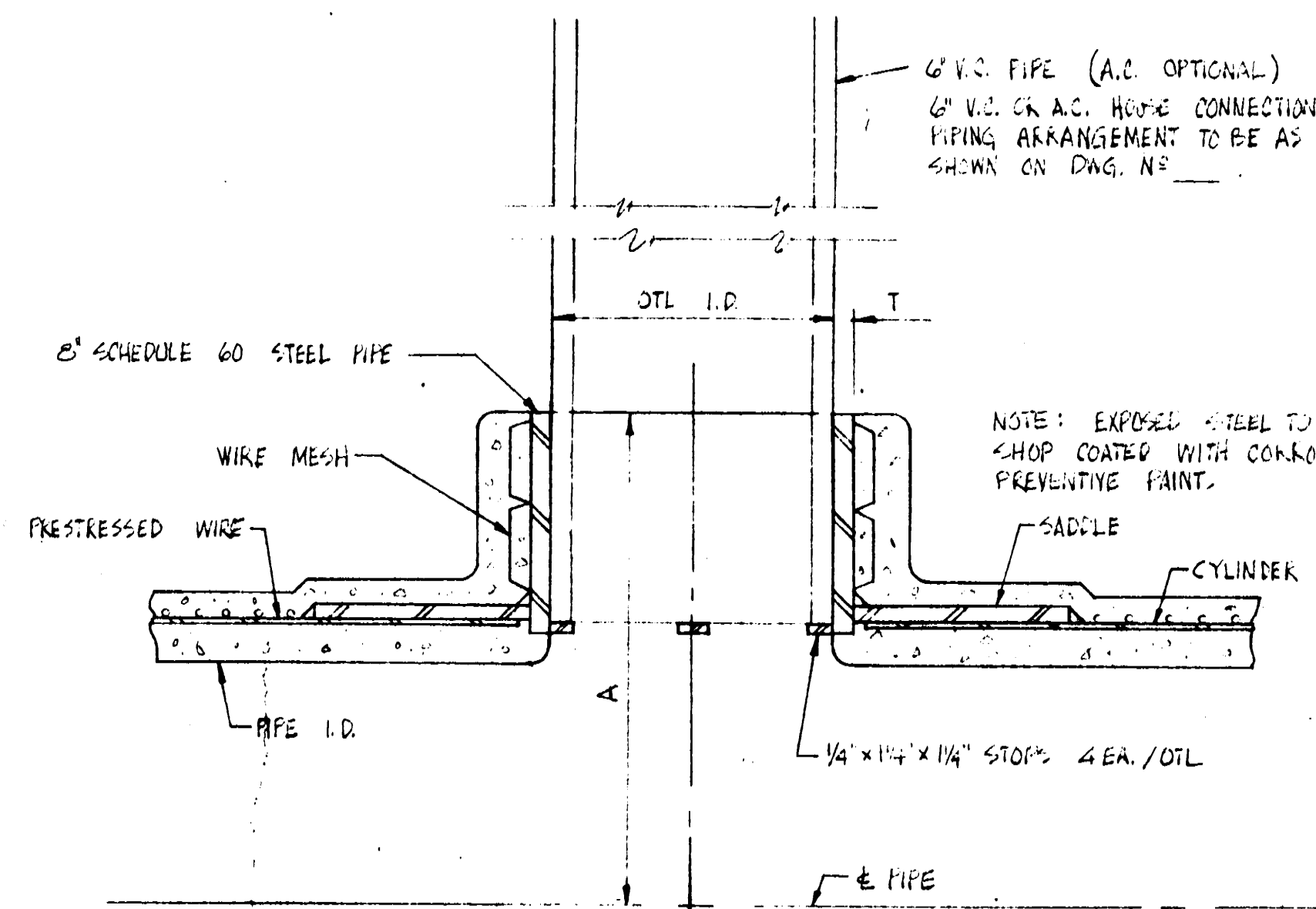


ALUMINUM MANHOLE STEP
SCALE 3" = 1'-0"

REV. NO.	DESCRIPTION	DATE	INT.	DRAWN H.E.S. CHECKED R.F.A. APPROVED F.C.H. DATE 1978	JOB NO. 2246 DWG. NO. 4	CITY OF WARWICK, RHODE ISLAND WARWICK SEWER AUTHORITY SYSTEM OF SEWERS CONTRACT NO. 29
APPROVED						
TOWN OF SOUTH KINGSTOWN				FILE NO.	CE MADURE, INC. ARCHITECTS - ENGINEERS - PLANNERS PROVIDENCE • WALTHAM • WESTFIELD • NEW YORK	

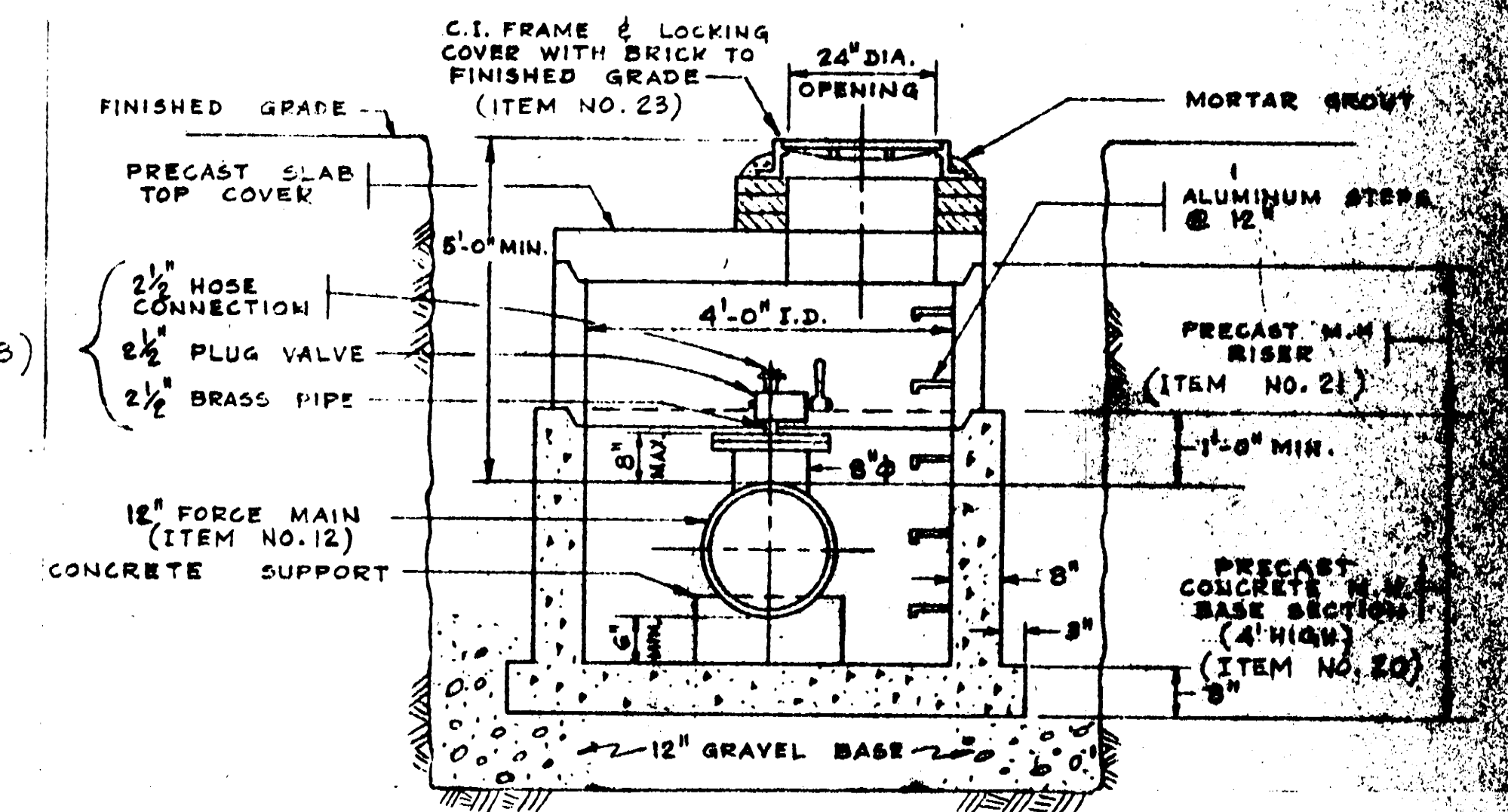


**NEW SPLASH PLATE
DETAIL**
NOT TO SCALE

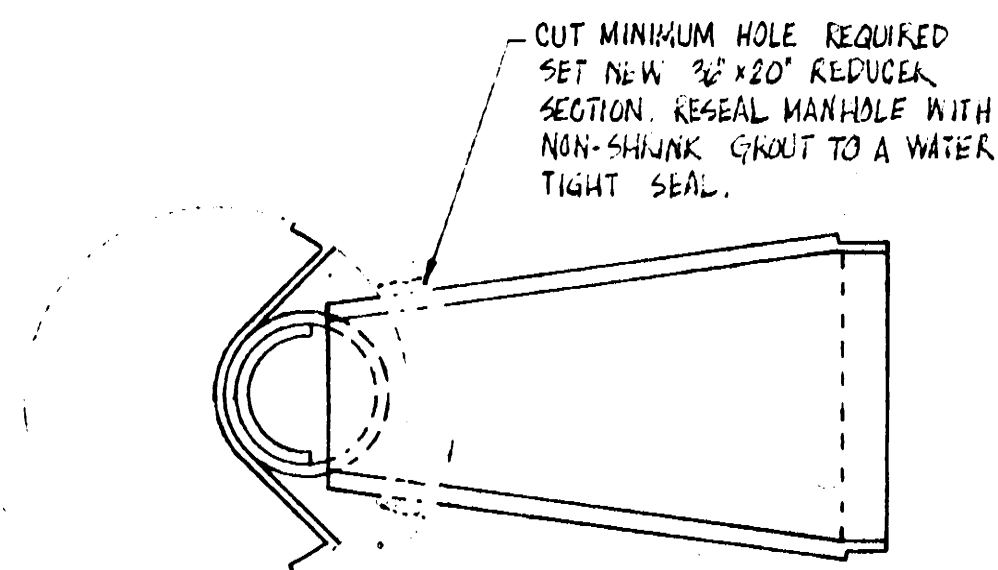


**HOUSE CONNECTION
PRESTRESSED CONCRETE CYLINDER PIPE**
NOT TO SCALE

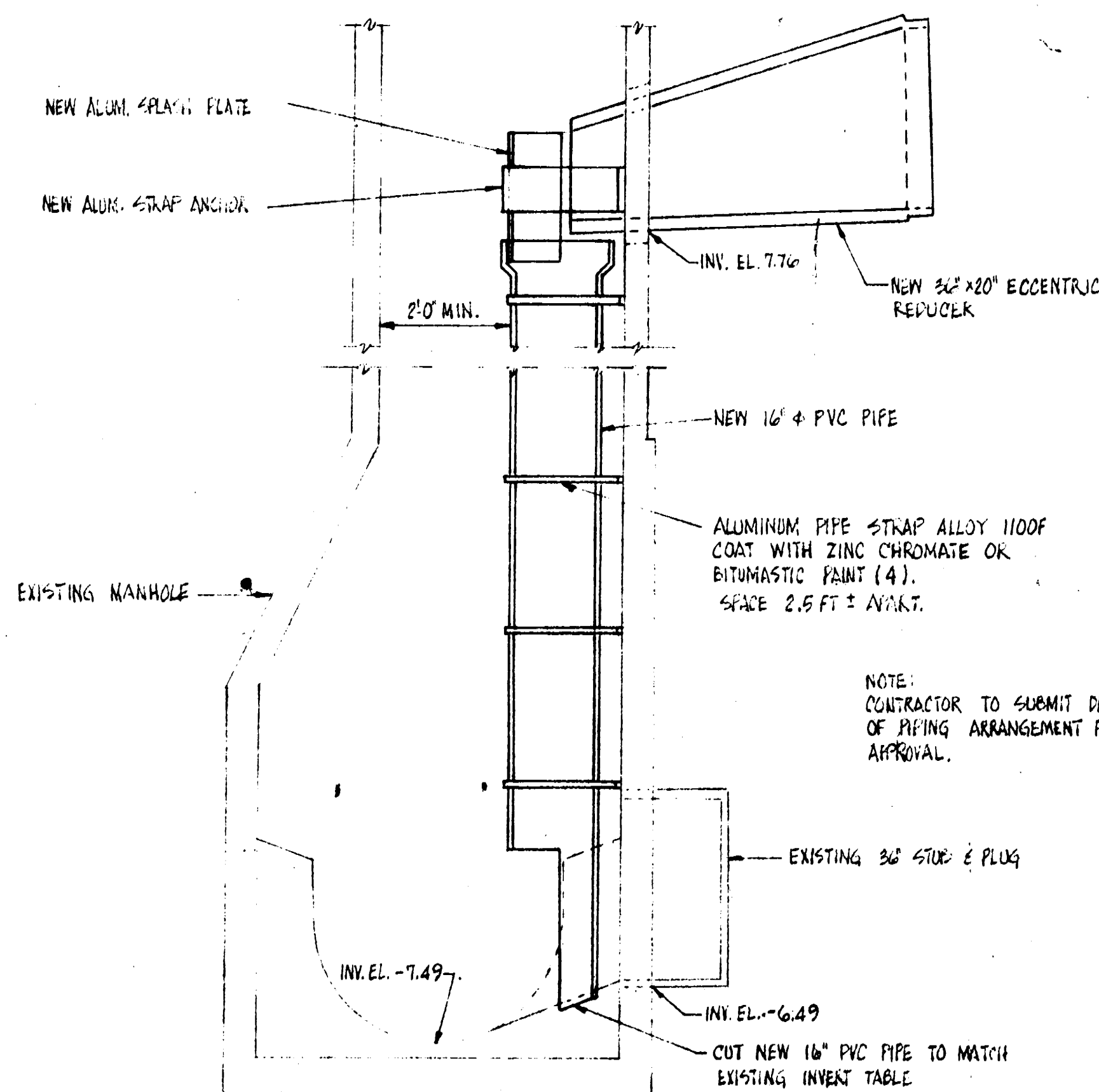
INCHES				
PIPE I.D.	NOM. O.T.L.	O.T.L. I.D.	T	A
20	6	7.819	0.406	16.25
24	6	7.516	0.406	18.50
36	6	7.819	0.406	25.25



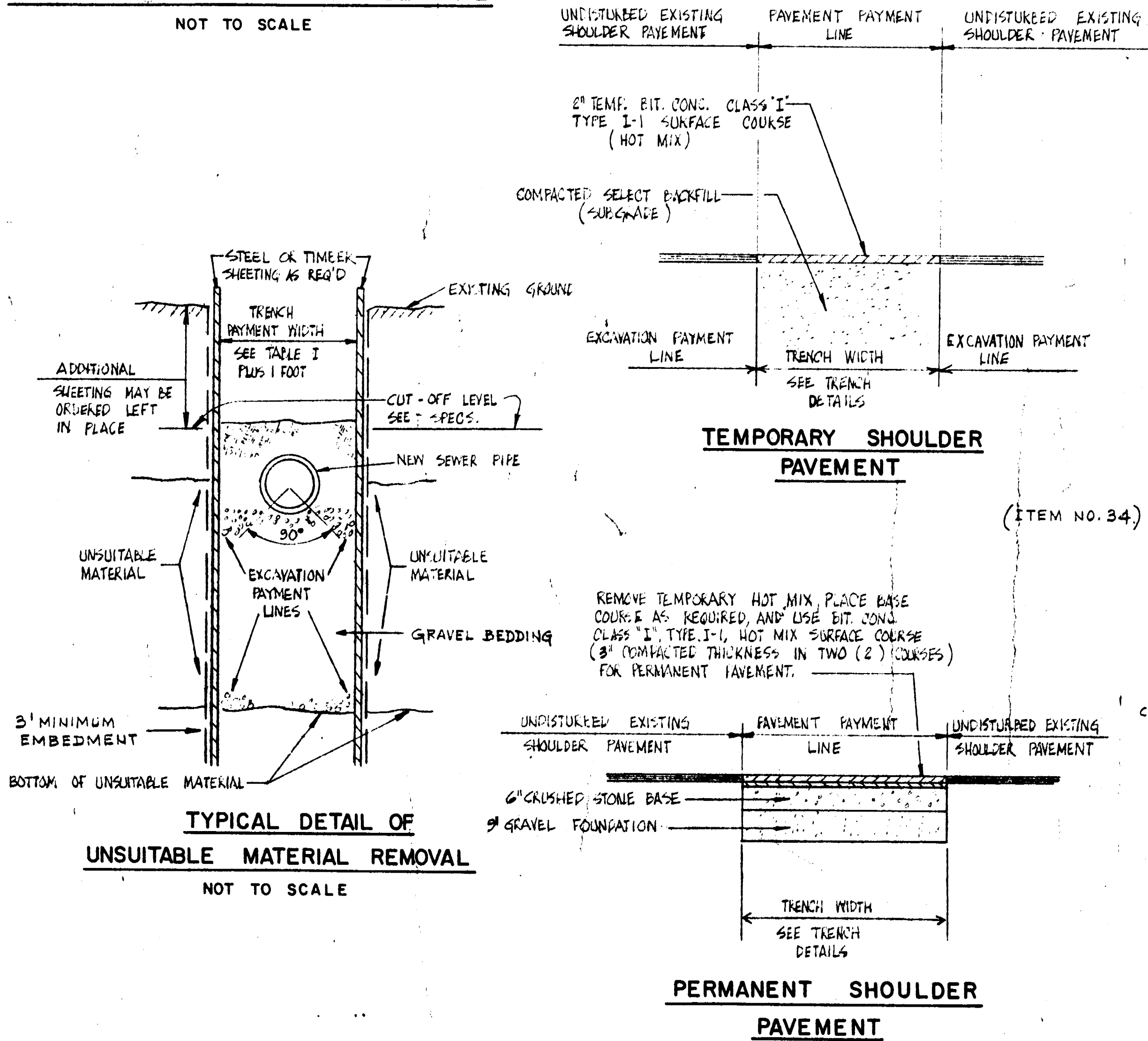
CLEANOUT MANHOLE
NOT TO SCALE



PLAN



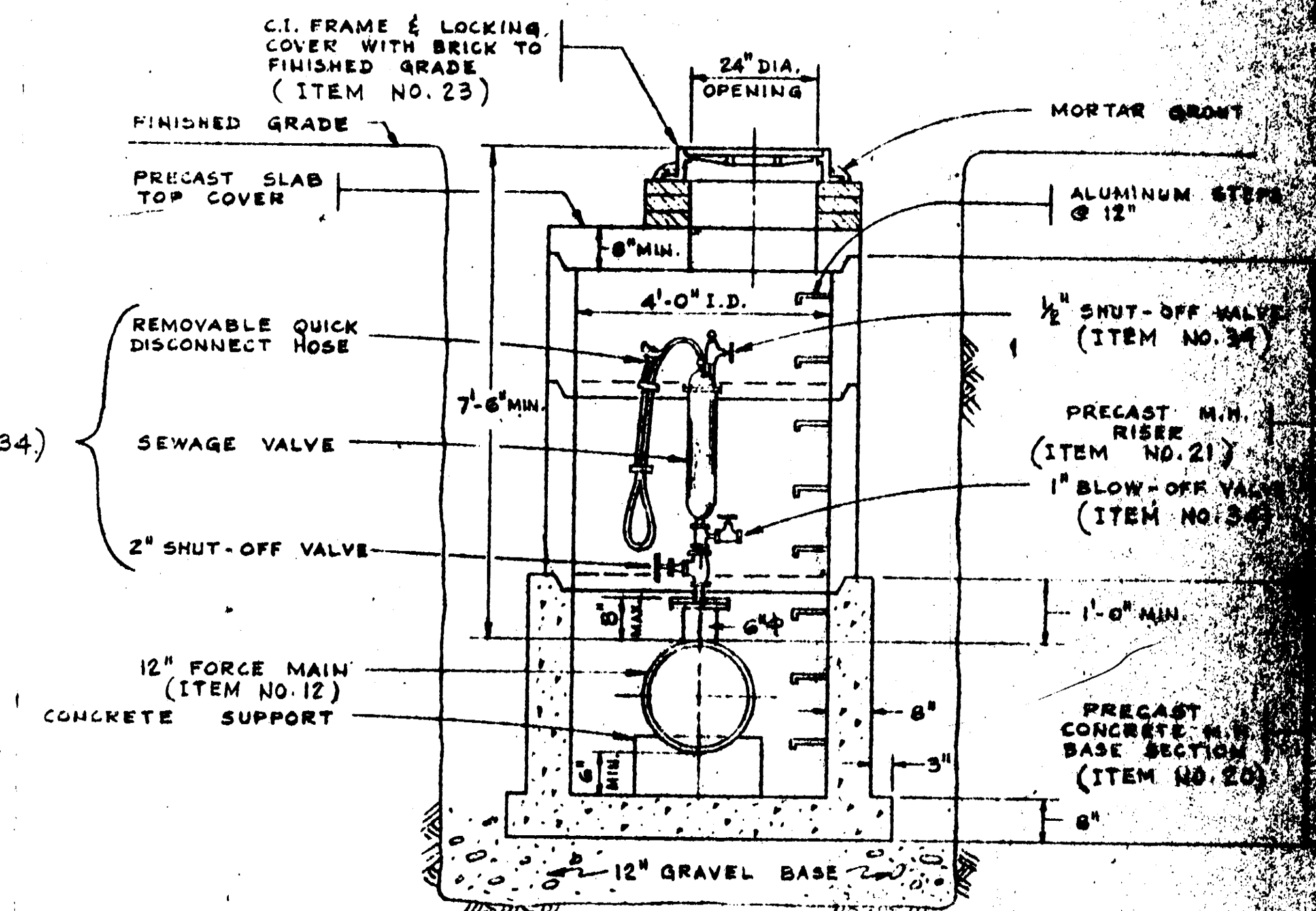
SECTION ALTERATIONS TO EXISTING M.H. NO. 1 (Contract No. 17)
SCALE 1/2"=1'-0"
(ITEM NO. 35)



TEMPORARY SHOULDER PAVEMENT
(ITEM NO. 34)

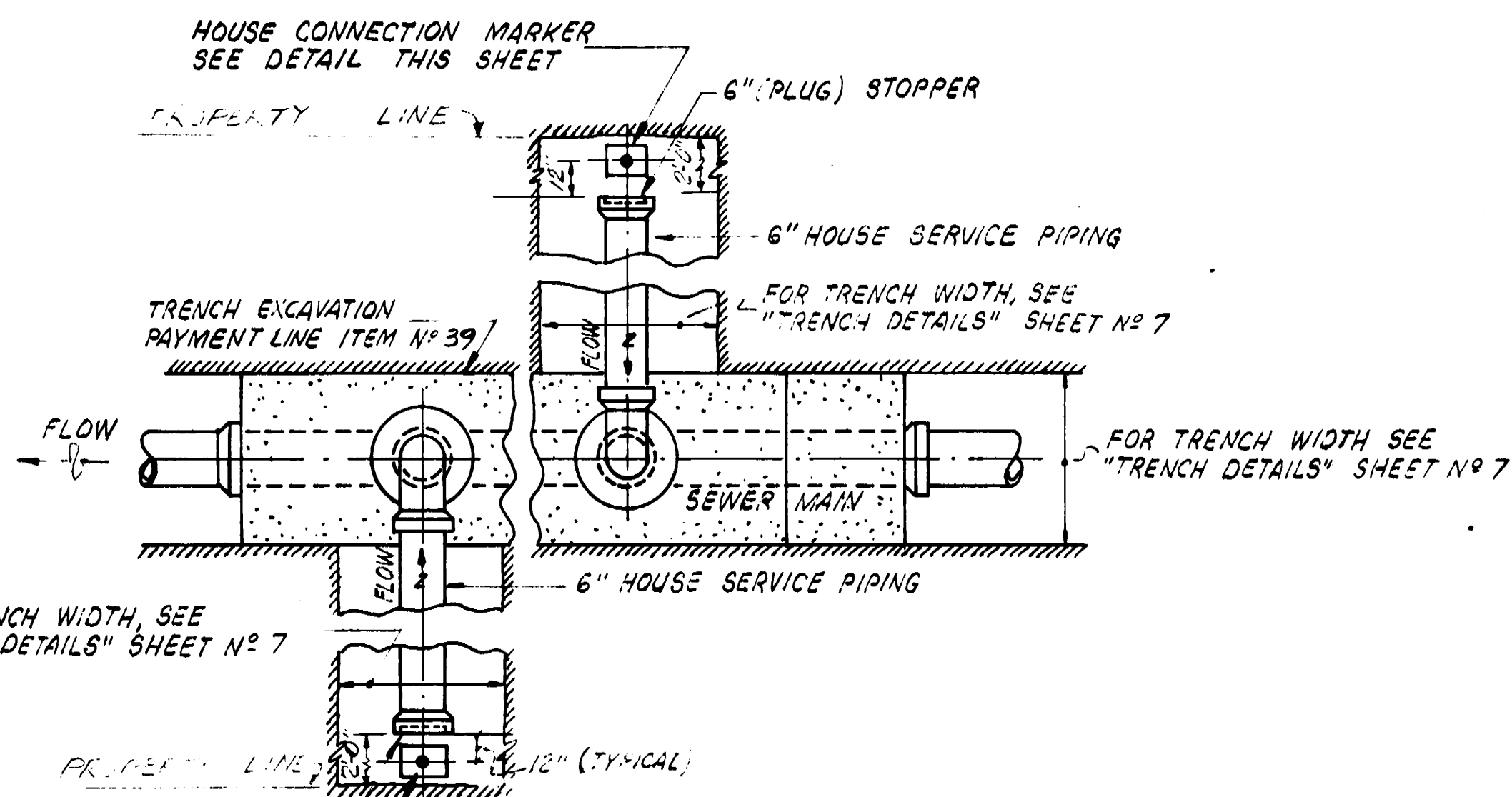
PERMANENT SHOULDER PAVEMENT

STATE ROAD - WEST SHORE ROAD SHOULDER
NOT TO SCALE

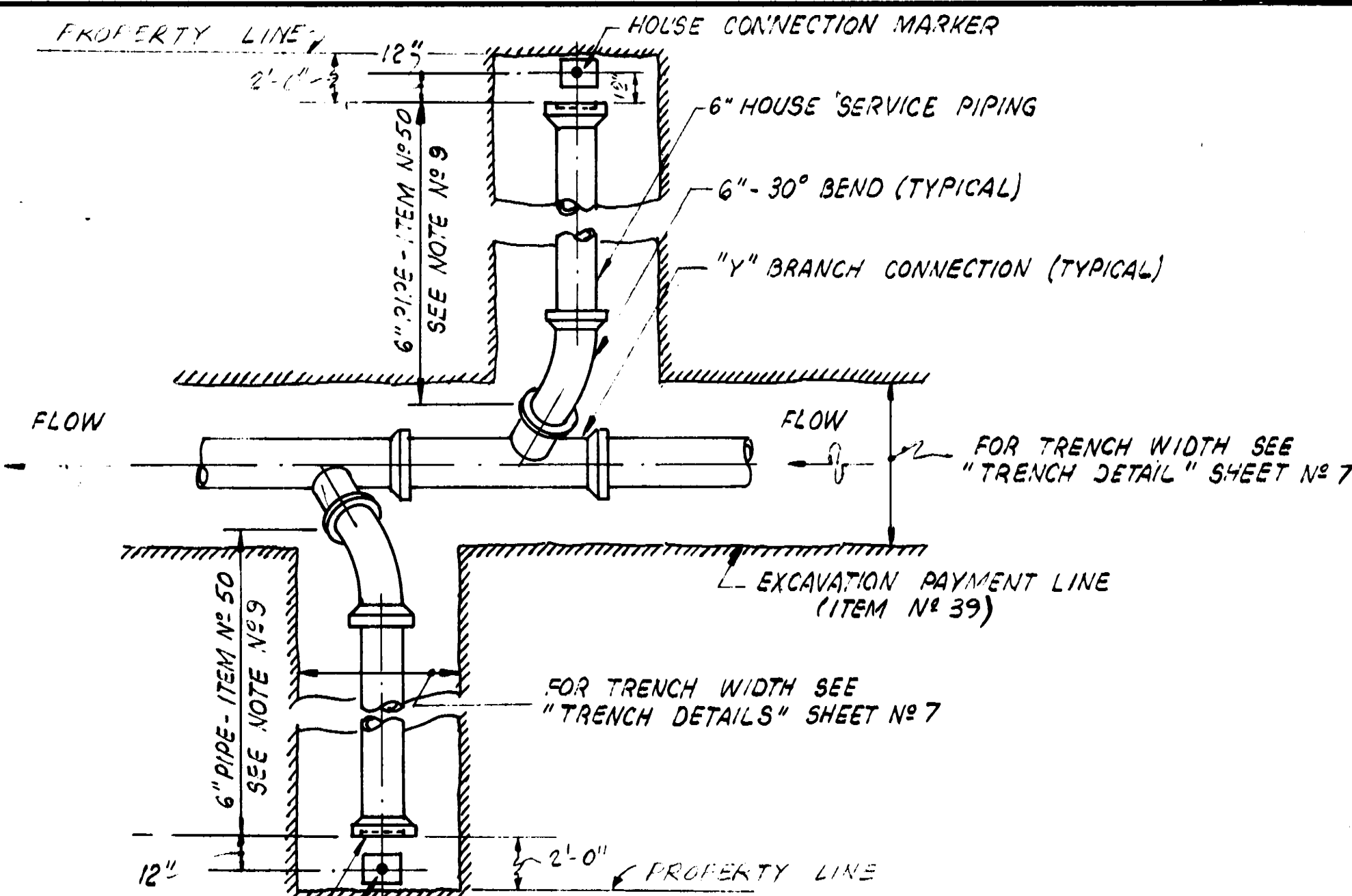


AIR RELEASE MANHOLE
NOT TO SCALE

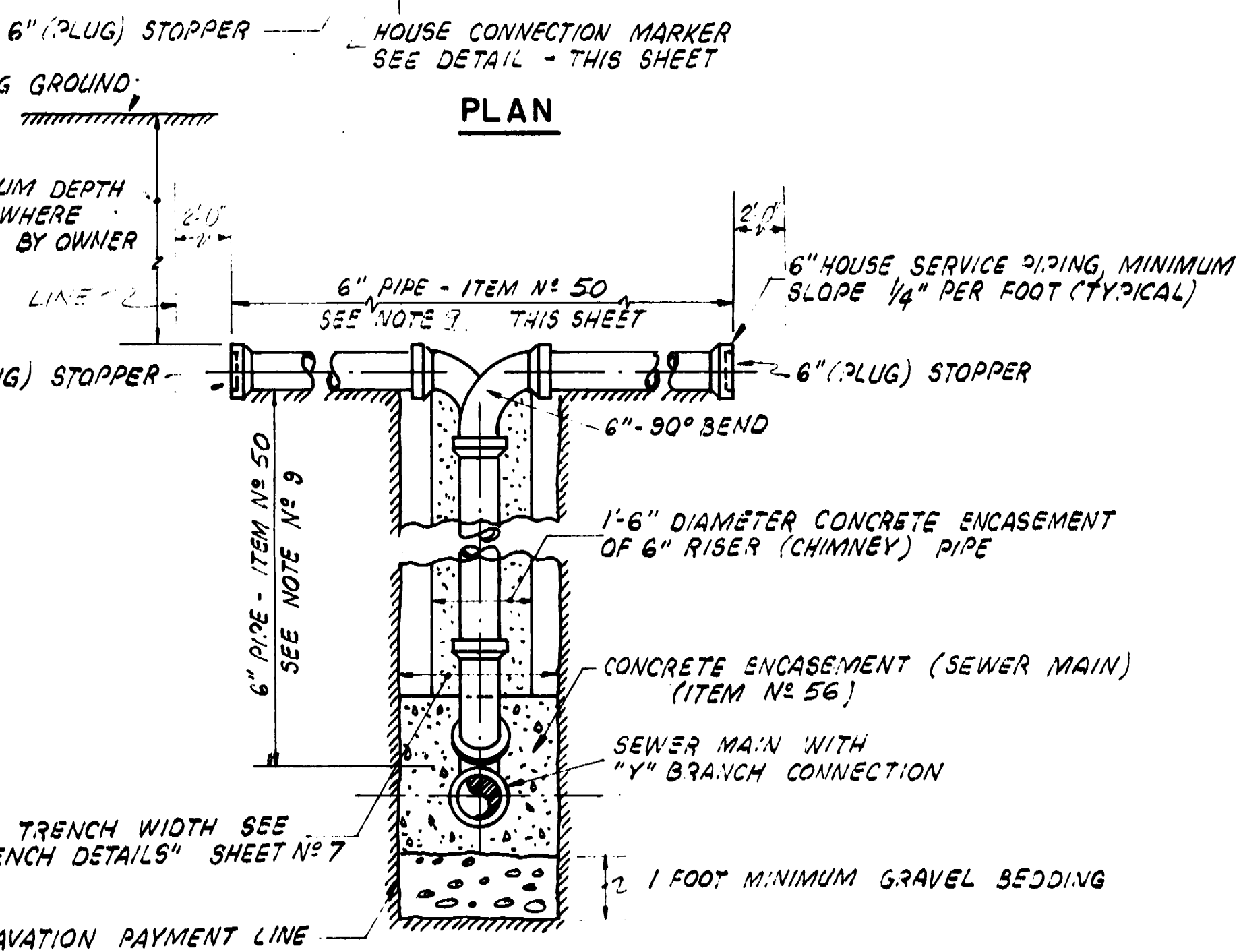
<table border="1"> <tr><td>REV. NO.</td><td>DESCRIPTION</td><td>DATE</td><td>BY</td></tr> <tr><td>APPROVED</td><td></td><td></td><td></td></tr> <tr><td>LM</td><td></td><td></td><td></td></tr> </table>	REV. NO.	DESCRIPTION	DATE	BY	APPROVED				LM				DRAWN RRS CHECKED WAJ APPROVED FCH DATE 1978 SCALE AS NOTED JOB NO. 2746 DWG. NO. 5	CITY OF WARWICK, RHODE ISLAND WARWICK SEWER AUTHORITY SYSTEM OF SEWERS CONTRACT NO. 29 SPECIAL MANHOLE DETAILS CE MADURE, INC. ENGINEERS PROVIDENCE, R.I.
REV. NO.	DESCRIPTION	DATE	BY											
APPROVED														
LM														



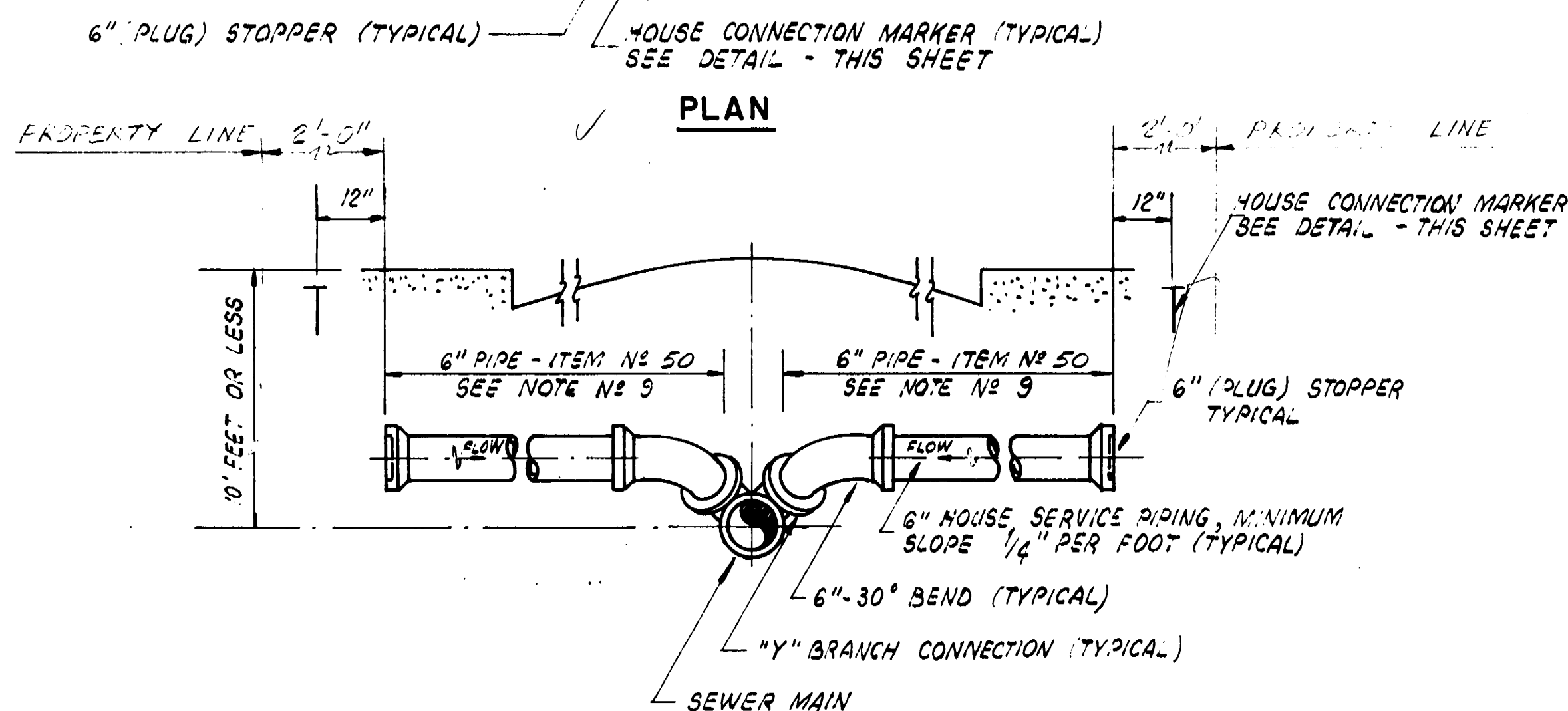
PLAN



PLAN

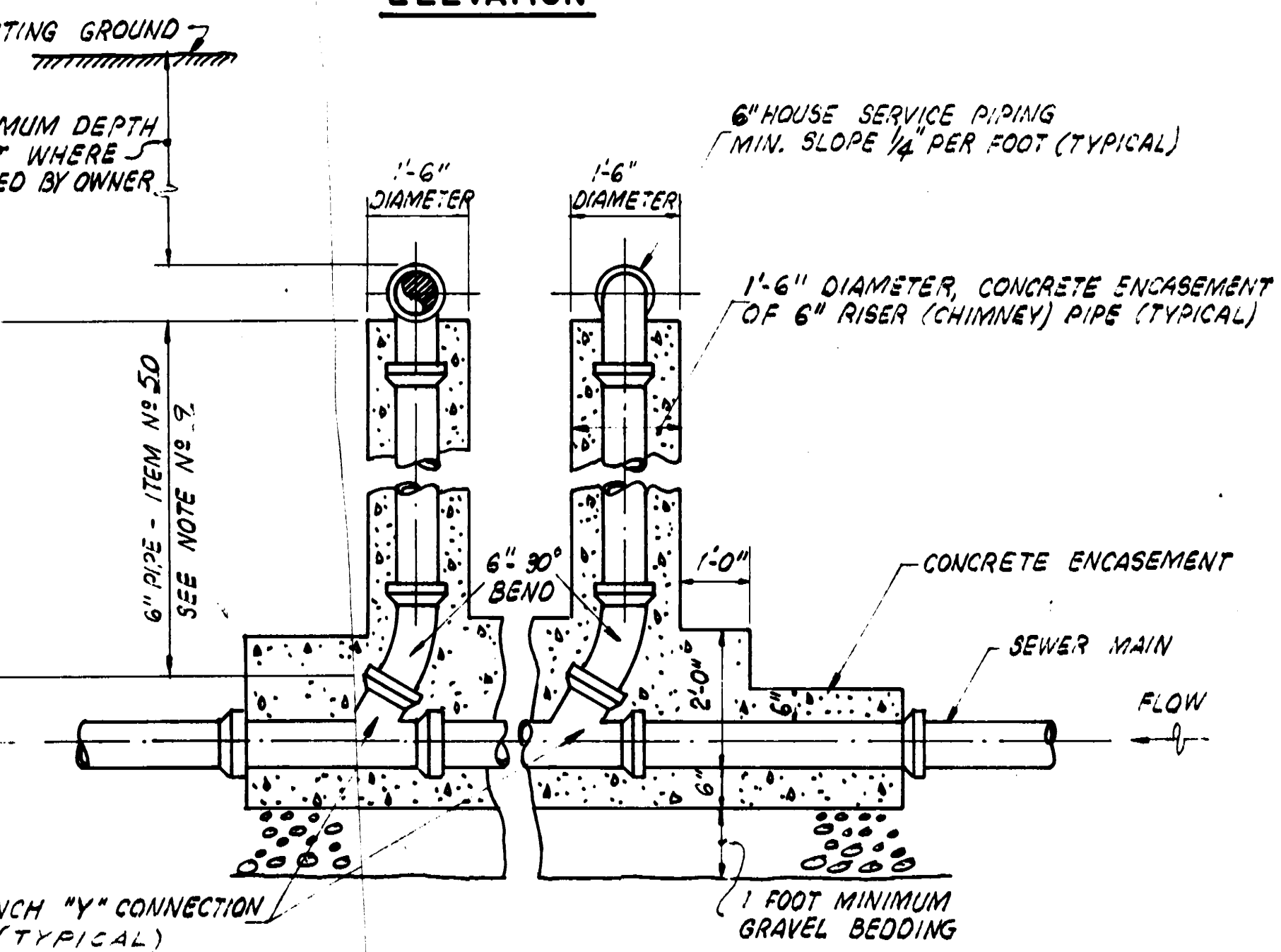


ELEVATION



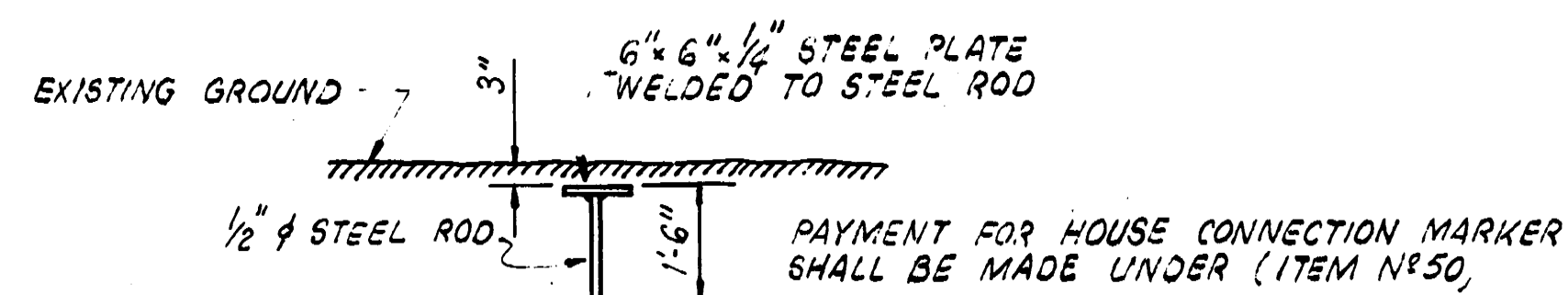
ELEVATION

HOUSE CONNECTION - 10 FEET AND UNDER



LONGITUDINAL SECTION

HOUSE CONNECTION (CHIMNEY) OVER 10 FEET



HOUSE CONNECTION MARKER DETAIL

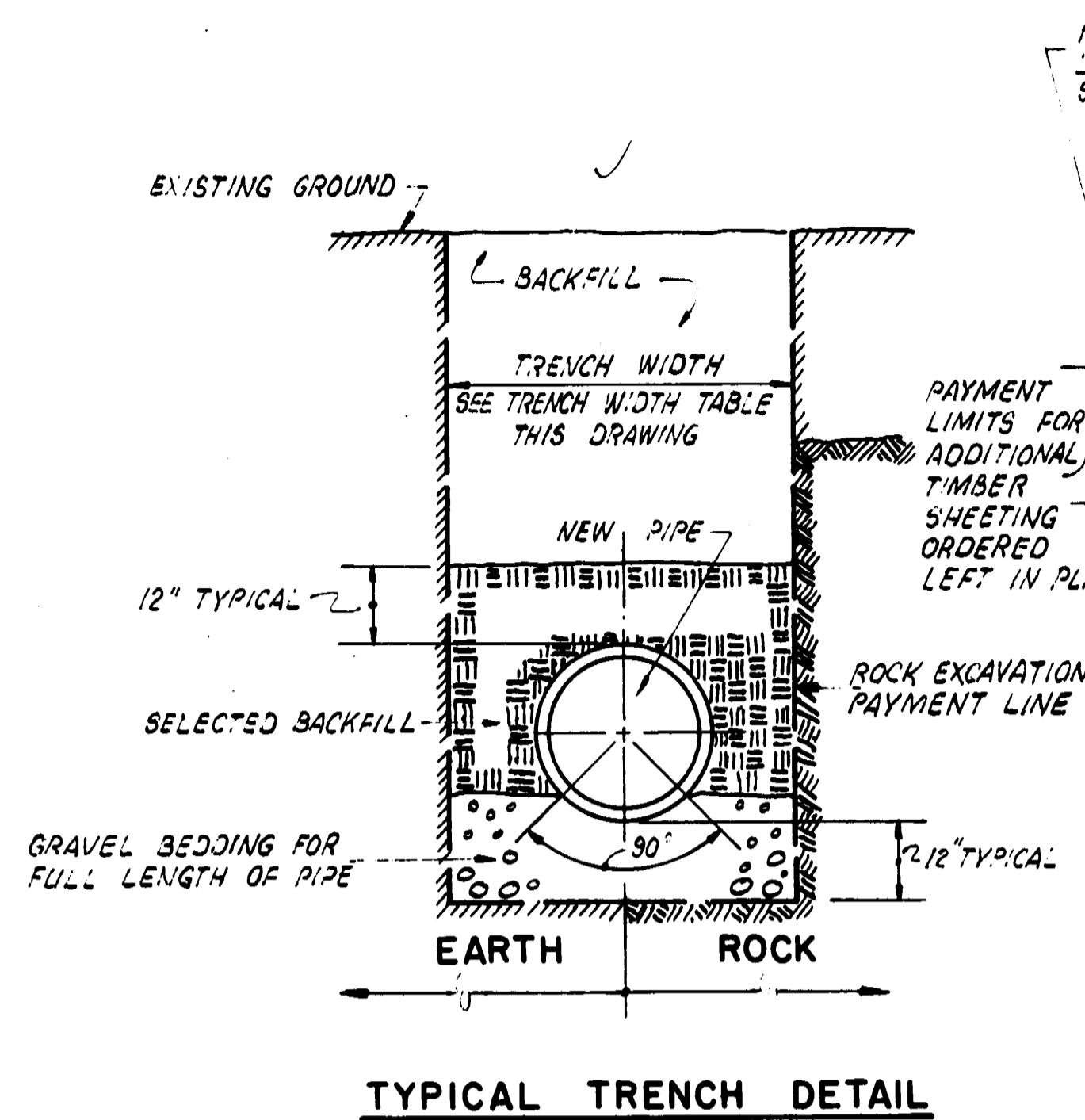
LEGEND

- CURB LINE & DRIVEWAY
- PROPERTY LINE
- EDGE OF ROAD OR PAVEMENT
- GAS MAIN
- TELEPHONE DUCT WITH MANHOLE
- STORM DRAIN, MANHOLE & DIRECTION OF FLOW
- STORM DRAIN, WITH CATCH BASIN
- WATER GATE VALVE IN LINE
- HYDRANT & GATE VALVE
- CHAIN LINK OR WIRE FENCE
- HEDGES
- TREES
- BUILDING OR STRUCTURE
- RETAINING WALL
- WOODED AREA
- RAILROAD TRACKS
- SWAMP OR MARSH-AREA
- RIVERS, BROOKS, OR STREAMS
- DIRECTION FLOW ARROW OF RIVERS, BROOKS, OR STREAMS
- UTILITY POLE & NUMBER
- BORING LOCATION & NUMBER
- PROBE LOCATION & NUMBER
- NEW SEWER AND MANHOLE WITH STUB & PLUG
- DIRECTION OF FLOW ARROW (SEWER)
- BENCH MARK

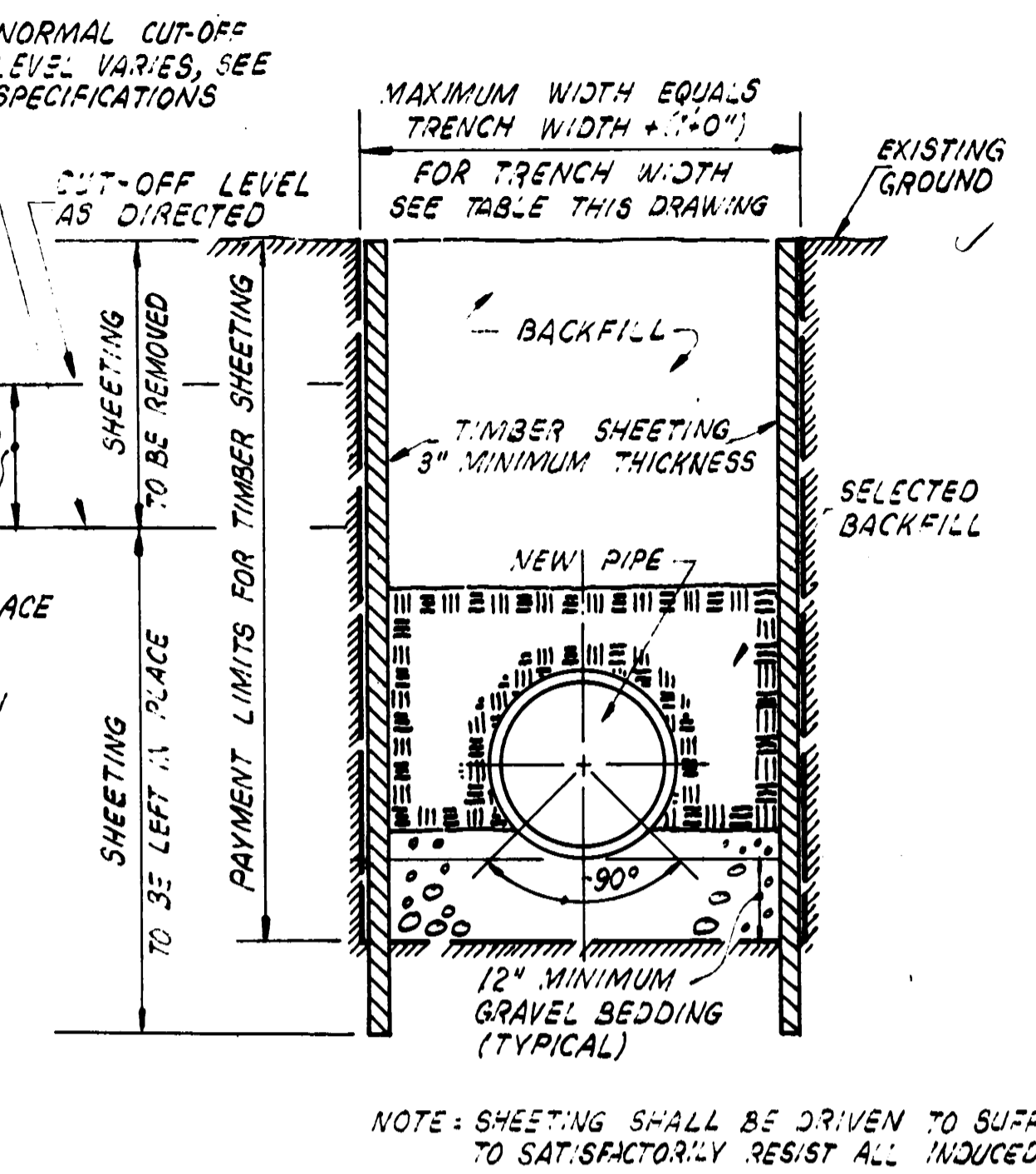
GENERAL NOTES

1. EXISTING UTILITIES HAVE BEEN PLOTTED FROM BEST AVAILABLE DATA AND ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES AND NOTIFY APPROPRIATE UTILITY AUTHORITY OR COMPANY (SEE SPECIFICATIONS).
2. THE CONTRACTOR SHALL CONFINE HIS OPERATIONS AND ACTIVITIES FOR CONSTRUCTION PURPOSES WITHIN THE STREET LINES, EASEMENTS, AND RIGHT-OF-WAY ACROSS PRIVATE PROPERTY AS SHOWN ON THE DRAWINGS.
3. ALL GRASSED AREAS DISTURBED BY CONSTRUCTION SHALL BE LOAMED AND SEEDDED.
4. ALL CURBING DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE REPLACED AND RESTORED AT NO ADDITIONAL EXPENSE TO THE OWNER.
5. CONTINUOUS DUST CONTROL USING CALCIUM CHLORIDE SHALL BE PROVIDED FOR ALL EARTH STOCK PILES, EARTH PILED ALONG EXCAVATIONS AND SURFACES OF REFILLED TRENCHES (SEE SPECIAL CONDITIONS OF SPECIFICATIONS).
6. WHERE EXISTING MATERIALS ARE ENCOUNTERED WHICH, IN THE OPINION OF THE OWNER ARE UNSUITABLE FOR BEDDING OR OTHER INTENDED USE, SUCH MATERIALS SHALL BE REMOVED AS DIRECTED AND REPLACED WITH COMPACTED FINE GRAVEL.
7. WHERE EXISTING IN-SITU SOILS ARE FOUND UPON EXCAVATION TO BE SATISFACTORY FOR PIPE BEDDING, THE OWNER MAY ORDER THE DELETION OF GRAVEL BEDDING.
8. TRENCHES SHALL BE SHEETED WHERE INDICATED ON DRAWINGS, OR AS DIRECTED, PORTIONS SHALL BE LEFT IN PLACE, FOR SHEETING DETAILS SEE DRAWINGS # 5 & 7.
9. A HOUSE CONNECTION SHALL BE PROVIDED FOR EVERY HOUSE ALONG THE SEWER LINE, AND ALSO WHERE DIRECTED BY THE OWNER. EXACT LOCATION OF HOUSE CONNECTIONS SHALL BE DETERMINED IN THE FIELD.
10. A HOUSE CONNECTION MARKER SHALL BE PROVIDED FOR EACH HOUSE CONNECTION, SEE DETAIL THIS DRAWING.
11. NUMBERS (201) INDICATED ON DRAWINGS REFER TO LOT NOS AS SHOWN ON CITY OF WARWICK ASSESSOR'S PLAT.
12. NUMBERS (*16) INDICATED ON DRAWINGS REFER TO HOUSE NUMBERS.
13. ITEM NUMBERS INDICATED ON DRAWINGS REFER TO BID ITEMS OF THE PROPOSAL.
14. FOR MANHOLE DETAILS, SEE DRAWINGS # 2, 3, 4, & 5.
15. FOR BORING LOGS, SEE APPENDIX OF SPECIFICATIONS.
16. DATUM - MEAN SEA LEVEL, ELEVATION 0.00, FOR BENCH MARK SEE DRAWING # 1.

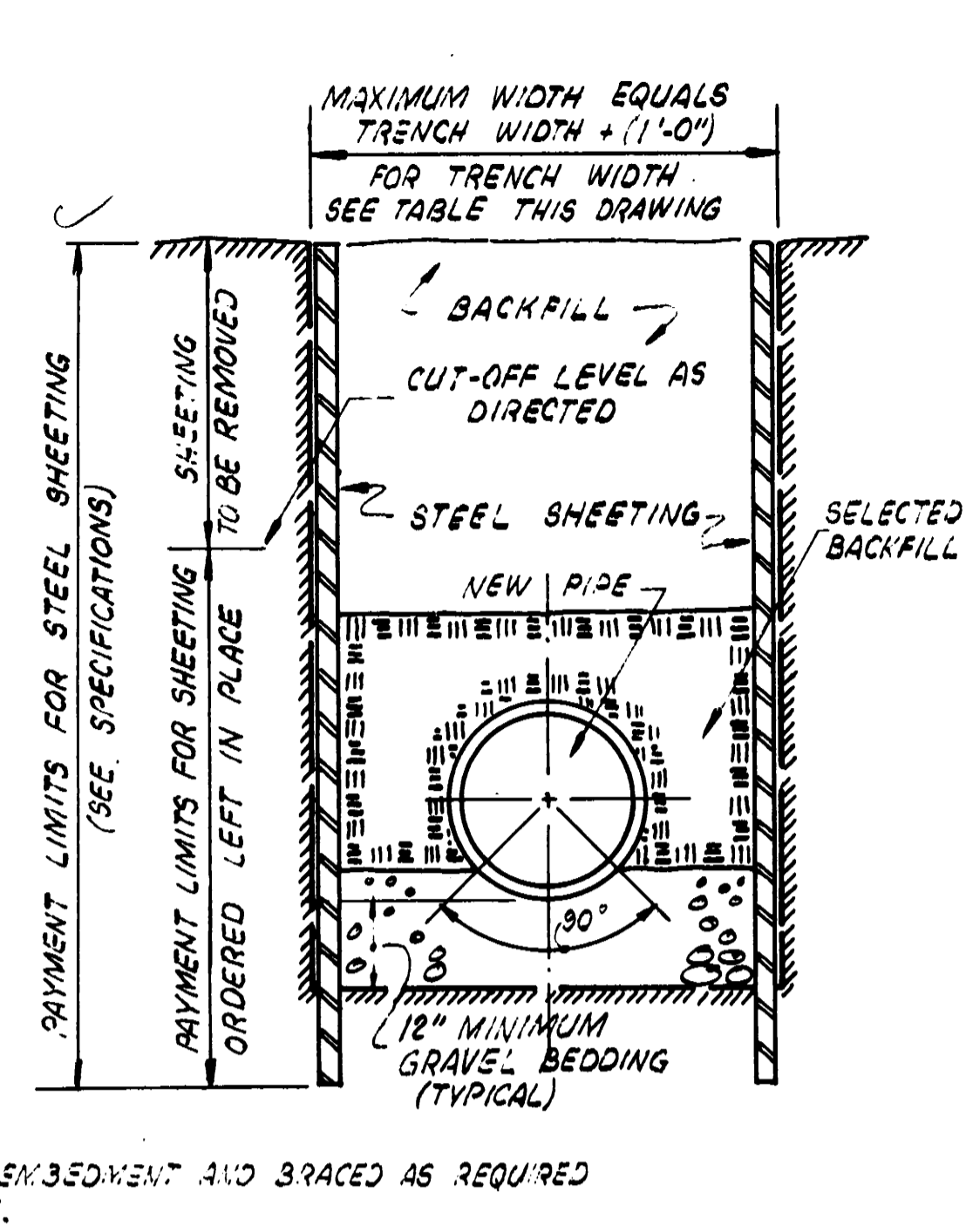
DRAWN <i>H.E. Stapanovich</i>		CITY OF WARWICK, RHODE ISLAND WARWICK SEWER AUTHORITY SYSTEM OF SEWERS CONTRACT NO. 29	
CHECKED <i>V.L.</i>		GENERAL	
APPROVED <i>F.C.H.</i>		LEGEND, GENERAL NOTES & HOUSE CONNECTION DETAILS	
DATE 1978		CE MAGUIRE, INC. ENGINEERS	
SCALE NOT TO SCALE		PROVIDENCE, R.I. WETHERSFIELD, CONN. WALTHAM, MASS.	
JOB NO. 2746		DWG. NO. 6	
APPROVED <i>LM</i>		FILE NO.	
WARWICK SEWER AUTHORITY			



TYPICAL TRENCH DETAIL



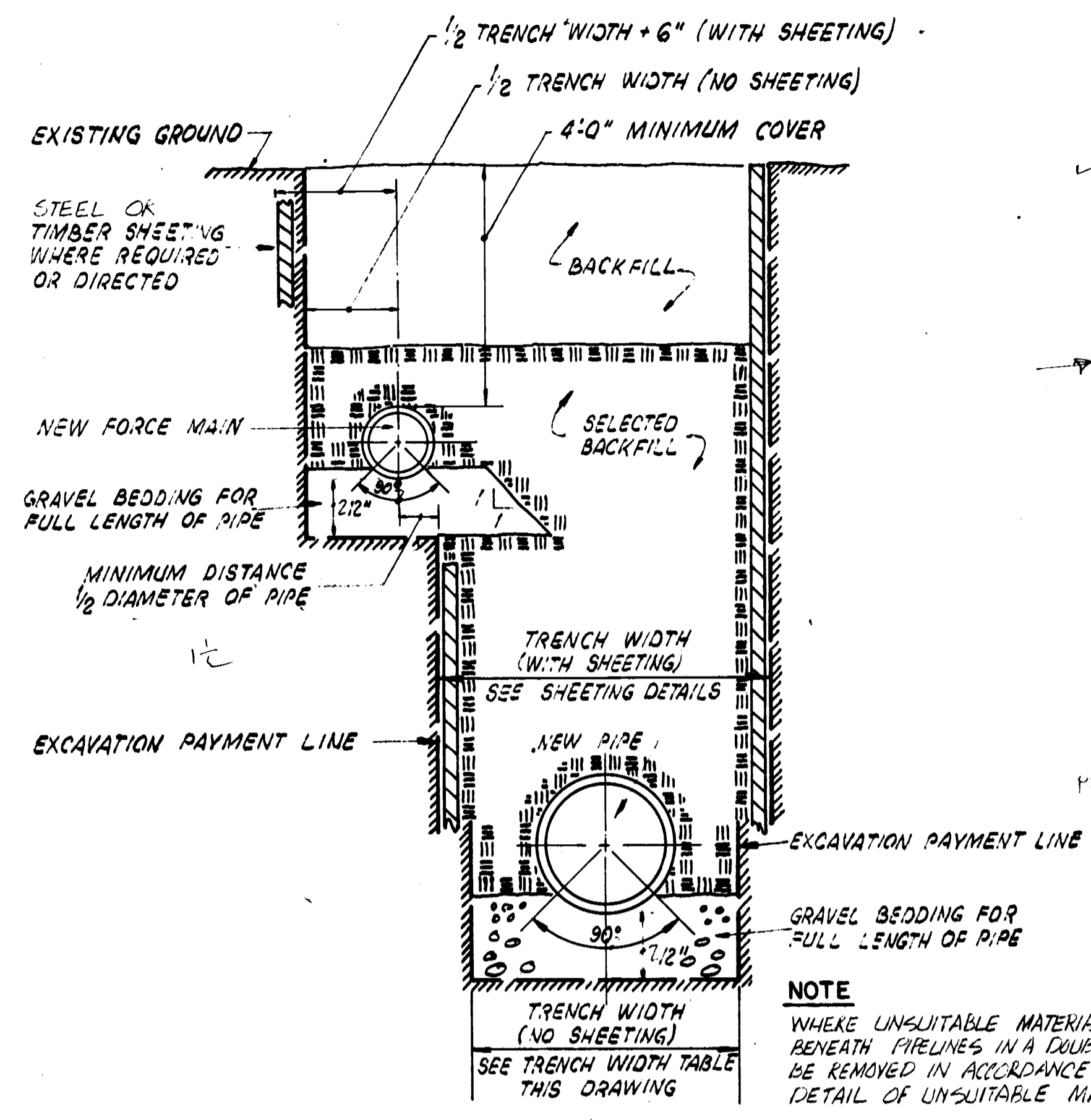
TIMBER SHEETING



STEEL SHEETING

SHEETING DETAILS

NOTE: SHEETING SHALL BE DRIVEN TO SUFFICIENT EMBEDMENT AND BRACED AS REQUIRED TO SATISFACTORILY RESIST ALL INDUCED LOADS.

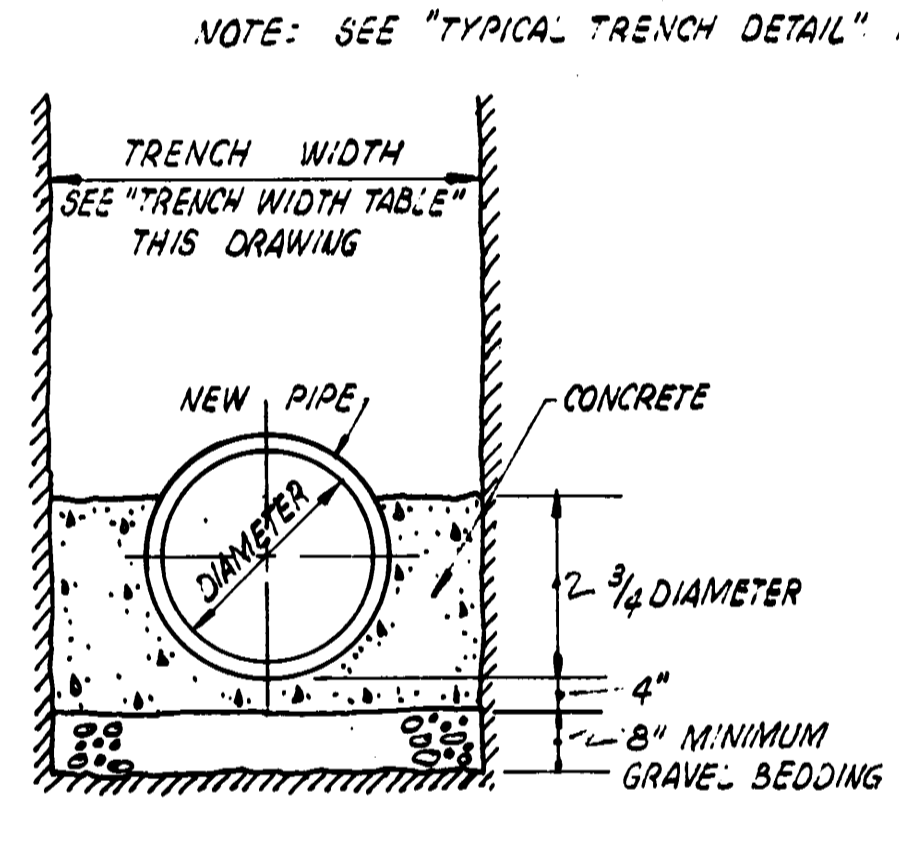


TYPICAL DOUBLE TRENCH DETAIL

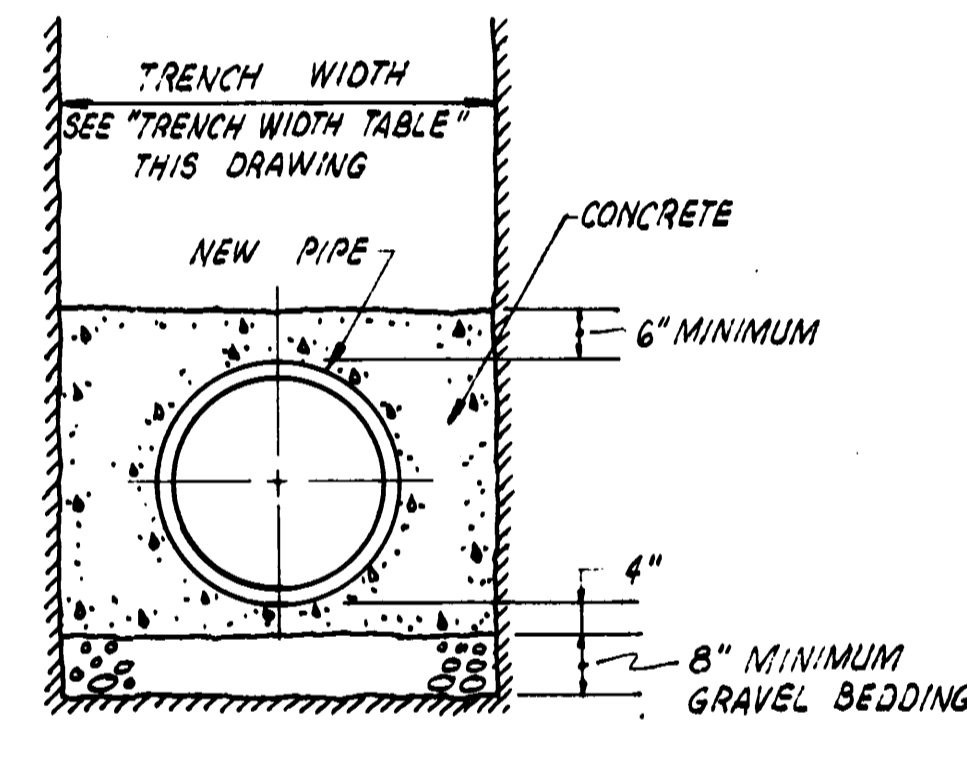
PIPE DIAMETER	TRENCH WIDTH
6"	2'-6"
8"	3'-0"
10"	3'-0"
12"	3'-0"
15"	3'-6"
18"	3'-6"
20"	4'-0"
24"	4'-6"
36"	6'-0"

TRENCH WIDTH TABLE FOR PERMANENT PAYMENT LIMITS PERMANENT PAYMENT LIMITS

NOTE: WHERE UNSUITABLE MATERIAL IS ENCOUNTERED BENEATH PIPELINES IN A DOUBLE TRENCH, IT SHALL BE REMOVED IN ACCORDANCE WITH THE "TYPICAL DETAIL OF UNSUITABLE MATERIAL REMOVAL", DWG. NO. 5

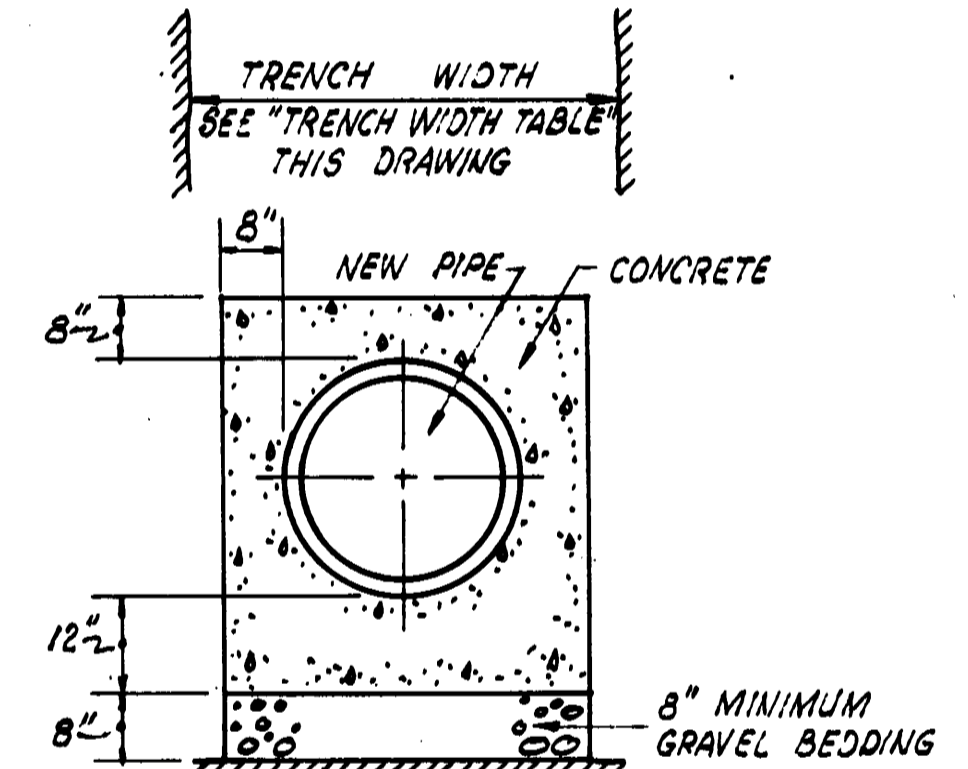


HALF CRADLE

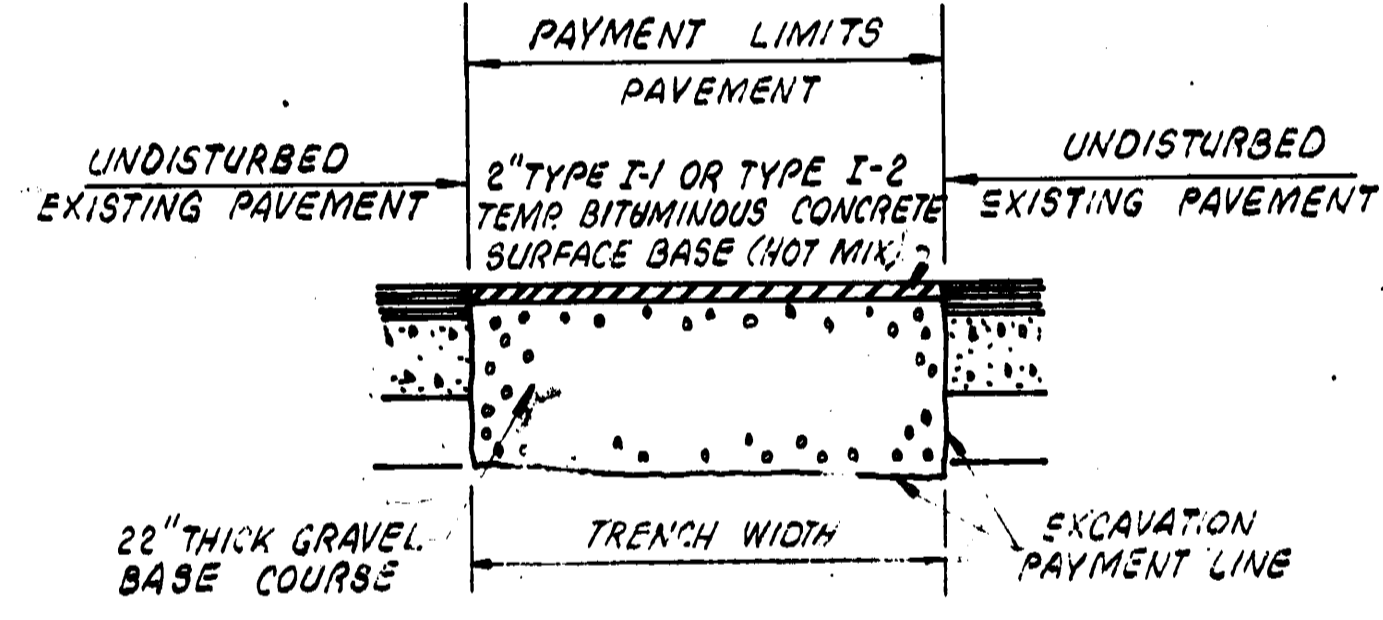


FULL CRADLE

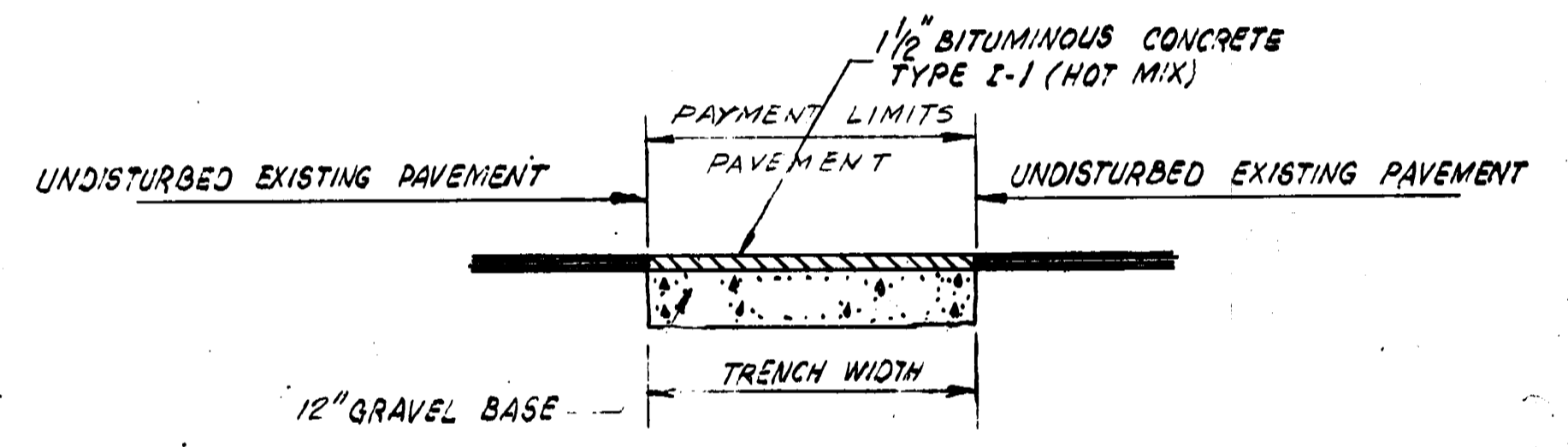
CRADLE DETAILS



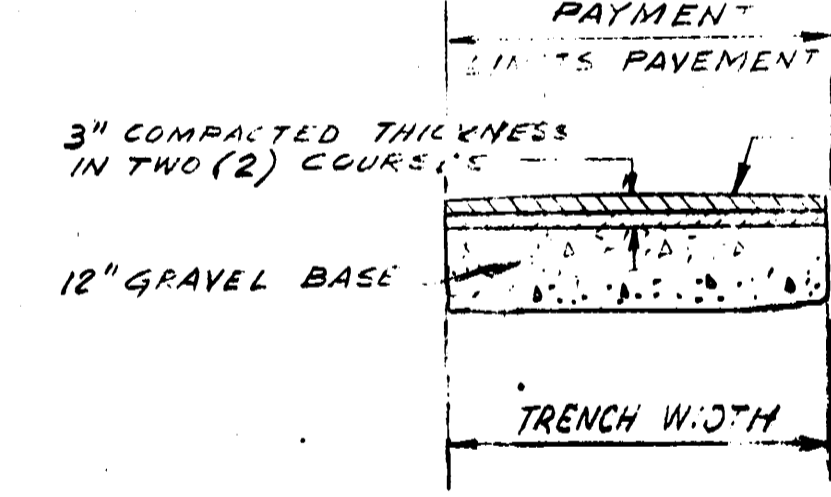
CONCRETE ENCASEMENT DETAIL



TEMPORARY SURFACE COURSE WEST SHORE ROAD



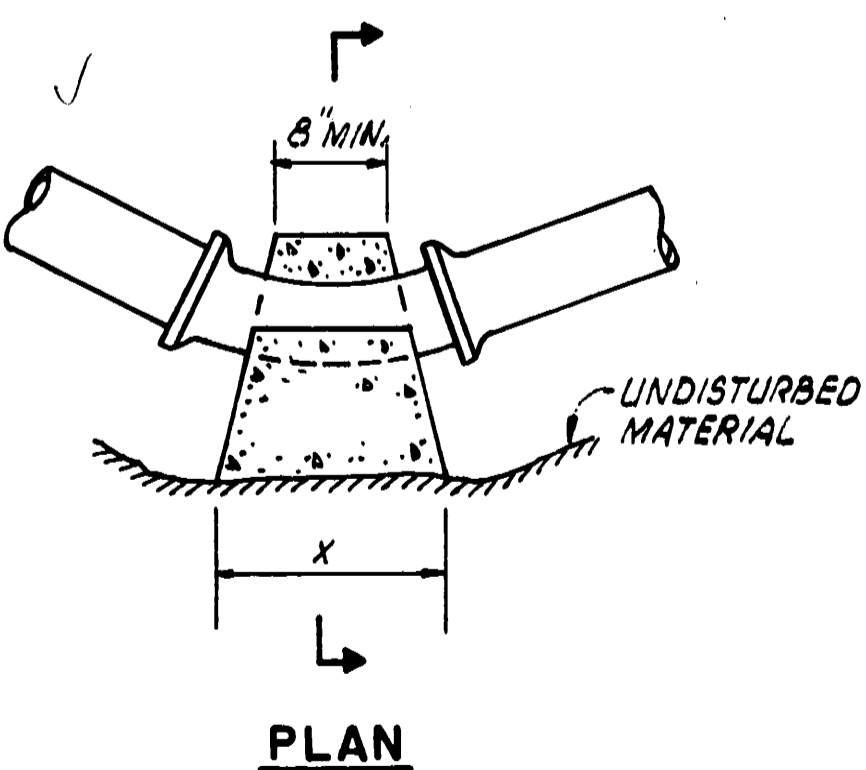
TEMPORARY SURFACE COURSE



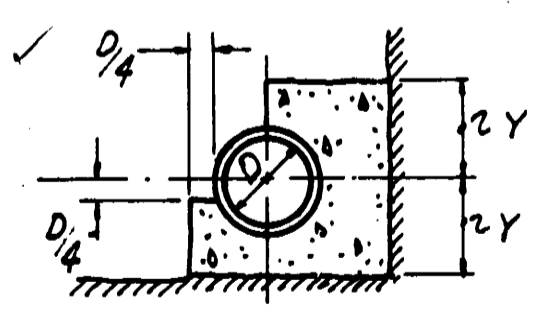
PERMANENT SURFACE COURSE

NOTE: Contractor shall remove temporary bituminous concrete (hot mix) pavement surface course and a sufficient depth of gravel base course for construction of permanent pavement. Furnish and place 3\"/>

PAVEMENT DETAILS



PLAN



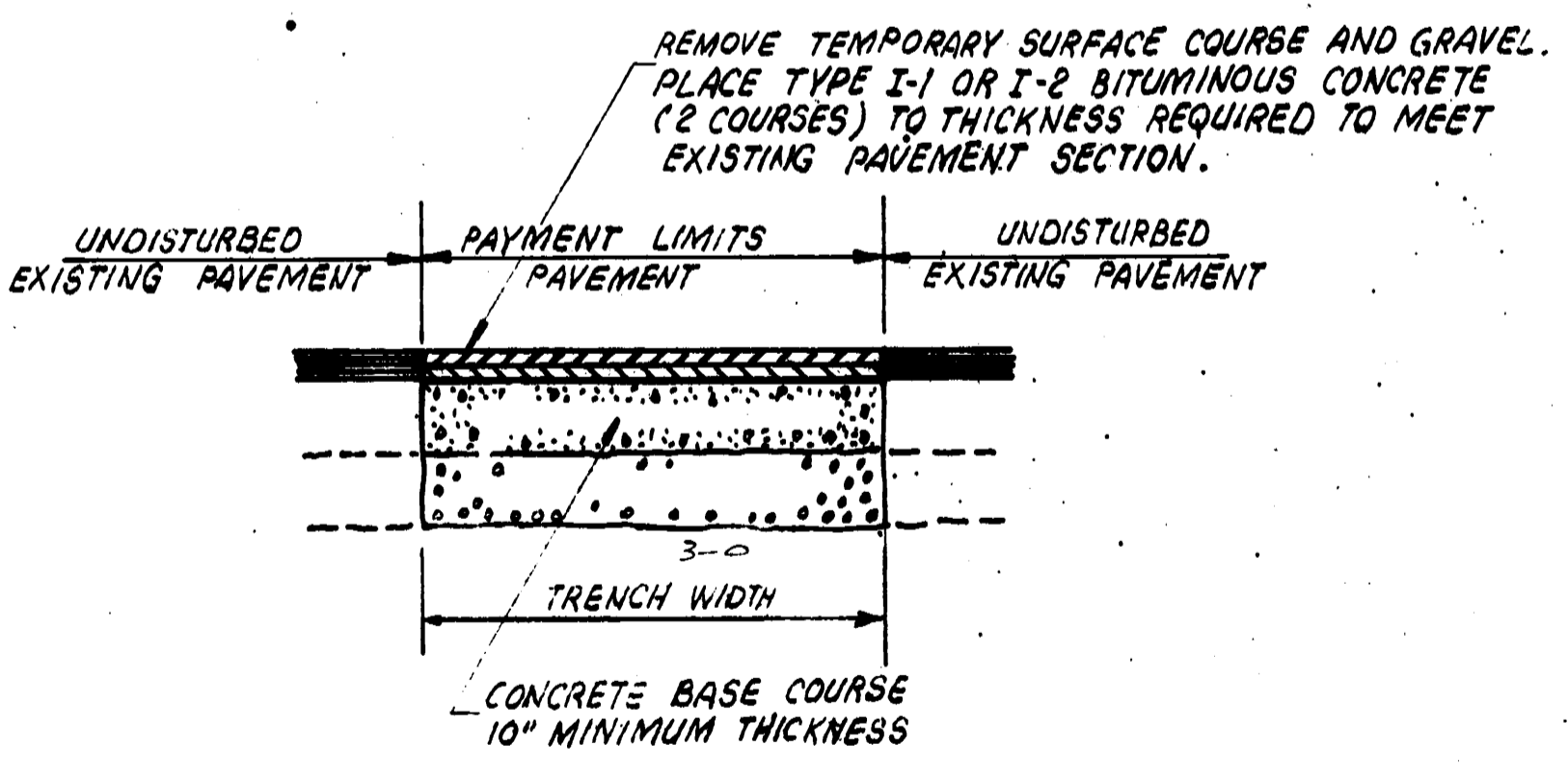
SECTION

BENDS AND SIZE OF MAINS			
	1/32 BEND	1/16 BEND	1/8 BEND
D	6" 8" 12"	6" 8" 12"	6" 8" 12"
X	1'-0" 1'-8" 2'-2"	1'-0" 1'-6" 2'-0"	1'-0" 1'-4" 1'-10"
Y	1'-0" 1'-2" 1'-6"	1'-0" 1'-4" 1'-0"	1'-0" 1'-0" 1'-4"

THRUST BLOCK TABLE

THRUST BLOCK DETAILS

NOTE: 1. DIMENSIONS FOR THRUST BLOCKS ARE MINIMUM.
2. CONCRETE THRUST BLOCKS SHALL BEAR AGAINST UNDISTURBED EARTH.
3. ALL CONCRETE SHALL BE CLASS 3500 PSI IN 28 DAYS.

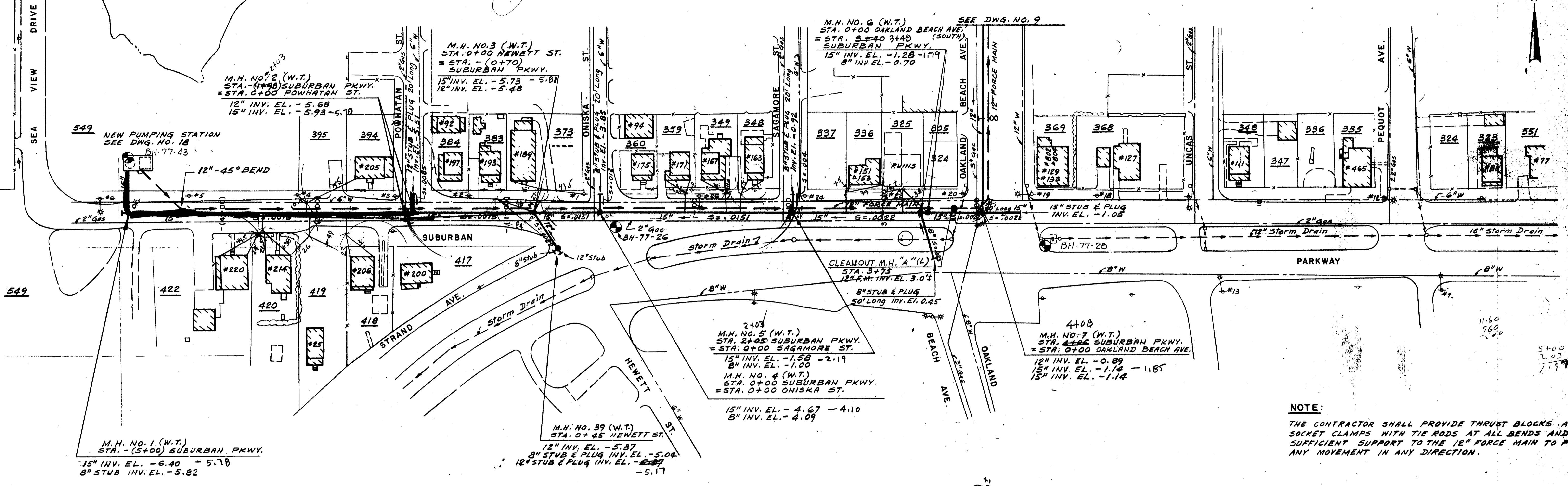


PERMANENT SURFACE COURSE WEST SHORE ROAD

REV. NO.	DESCRIPTION	DATE	BY
APPROVED	L.M.		
WARWICK SEWER AUTHORITY			
DRAWN H.E. Sigonovitch		FILE NO.	
CHECKED R.A.B.		JOB NO. 2746	
APPROVED F.C.H.		DWG. NO. 7	
DATE 1978		SCALE NOT TO SCALE	

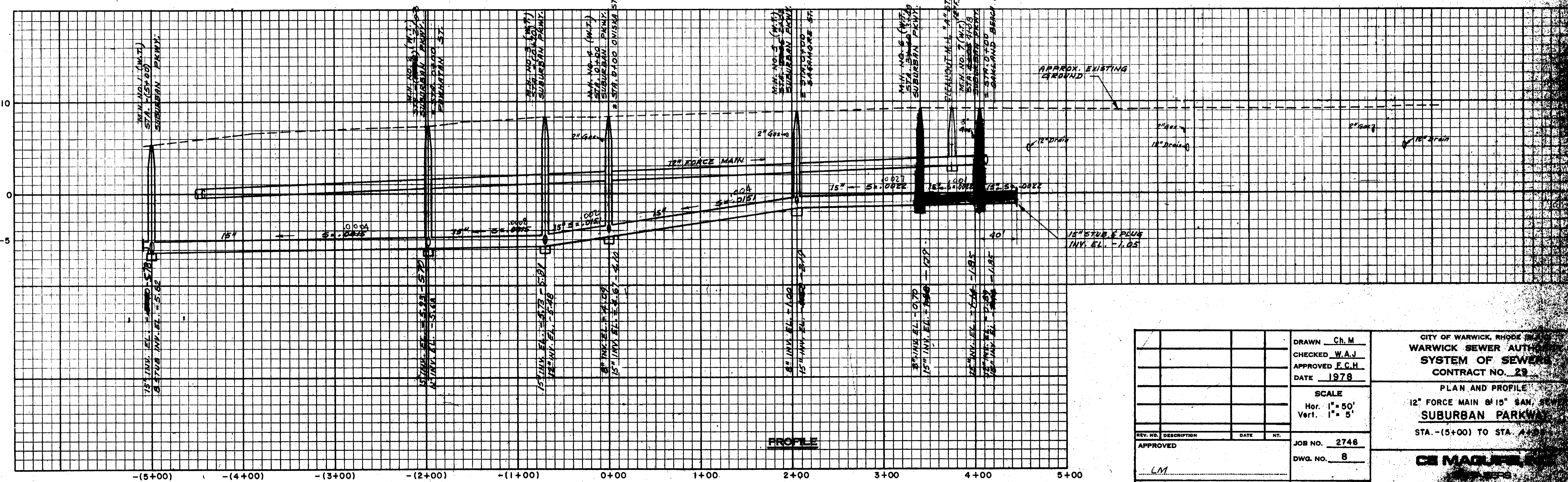
CITY OF WARWICK, RHODE ISLAND
WARWICK SEWER AUTHORITY
SYSTEM OF SEWERS
CONTRACT NO. 29
GENERAL
TRENCH DETAILS
CE MAGUIRE, INC.
ENGINEERS
PROVIDENCE, R.I. WETHERFIELD, CONN. WILMINGTON, MASS.

NOTE: UNSUITABLE MATERIAL BENEATH THE PROPOSED PIPE IS KNOWN TO EXIST AT THE PROPOSED PUMPING STATION AND POSSIBLY IN SUBURBAN PARKWAY. SUCH UNSUITABLE MATERIAL SHALL BE REMOVED IN ACCORDANCE WITH THE DETAILS ON DRAWINGS NO. 5 AND 7



NOTE: THE CONTRACTOR SHALL PROVIDE THRUST BLOCKS AND SOCKET CLAMPS WITH TIE RODS AT ALL BENDS AND SUFFICIENT SUPPORT TO THE 12" FORCE MAIN TO PREVENT ANY MOVEMENT IN ANY DIRECTION.

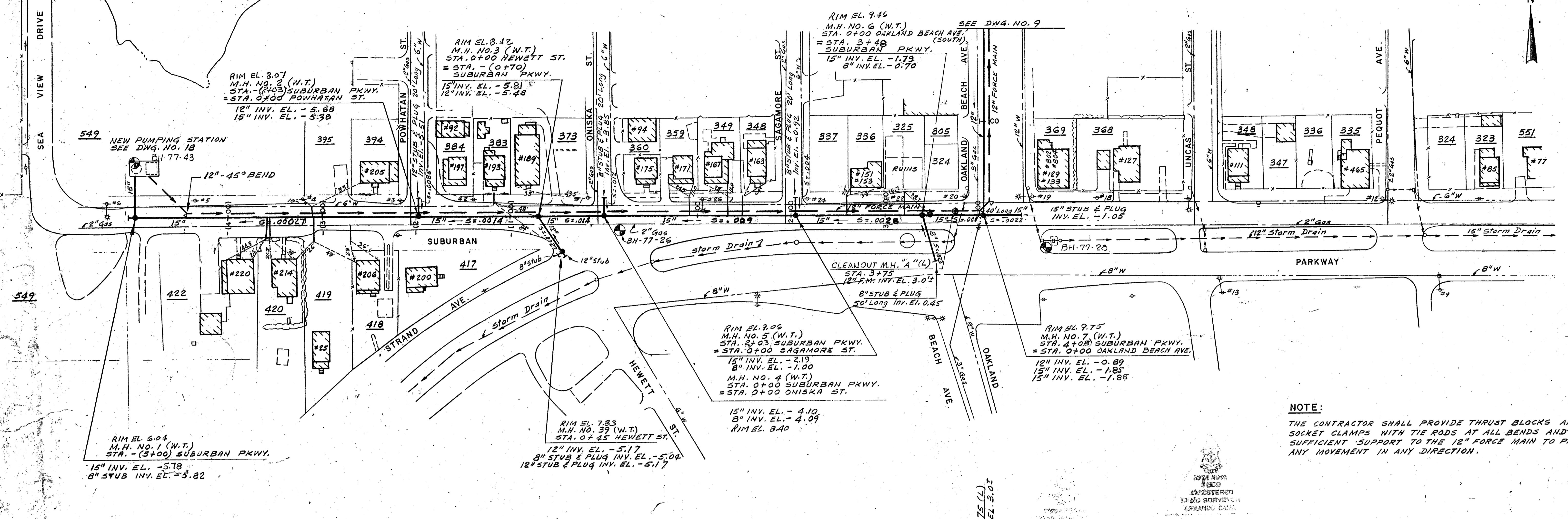
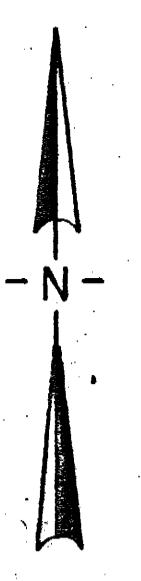
PLAN



PROFILE

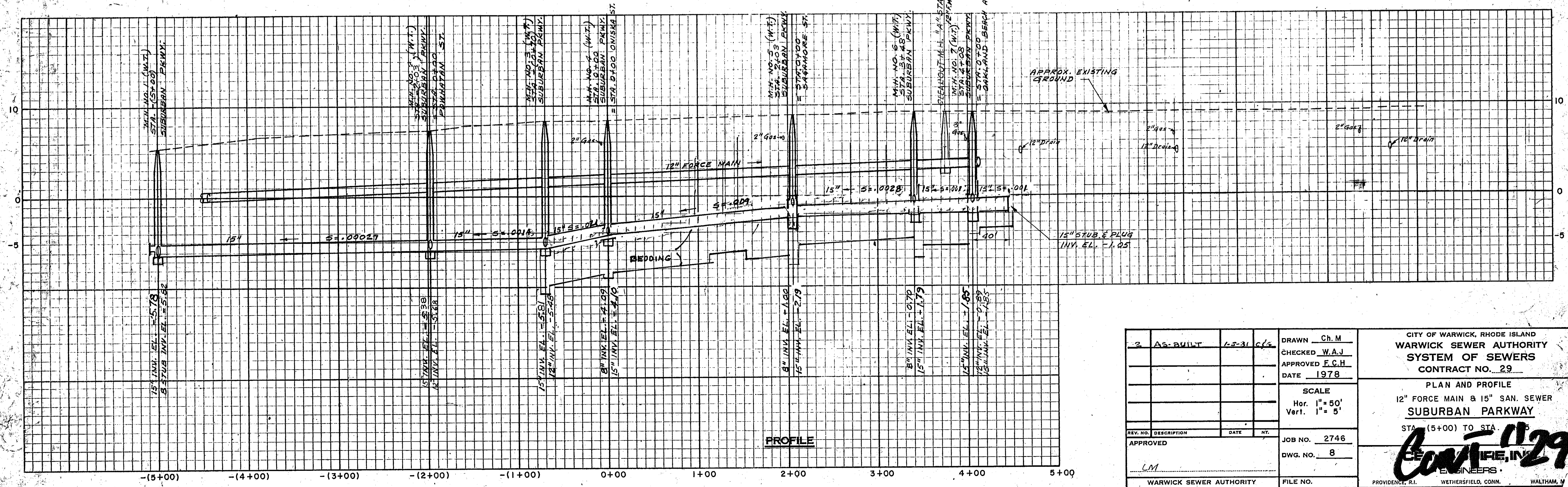
DRAWN Ch.M. CHECKED W.A.J. APPROVED F.C.H. DATE 1978	CITY OF WARWICK, RHODE ISLAND WARWICK SEWER AUTHORITY SYSTEM OF SEWERS CONTRACT NO. 29
SCALE Hor. 1" = 50' Vert. 1" = 5'	PLAN AND PROFILE 12" FORCE MAIN @ 15" SAN. SUBURBAN PARKWAY STA. (-5+00) TO STA. (+5+00)
REV. NO. DESCRIPTION DATE NT. APPROVED CM	JOB NO. 2746 DWG. NO. 8 FILE NO.
WARWICK SEWER AUTHORITY	PROVIDENCE, RI.

NOTE. UNSUITABLE MATERIAL BENEATH THE PROPOSED PIPE IS KNOWN TO EXIST AT THE PROPOSED PUMPING STATION AND POSSIBLY IN SUBURBAN PARKWAY. SUCH UNSUITABLE MATERIAL SHALL BE REMOVED IN ACCORDANCE WITH THE DETAILS ON DRAWINGS NO. 5 AND 7.



NOTE:
THE CONTRACTOR SHALL PROVIDE THRUST BLOCKS AND/OR SOCKET CLAMPS WITH TIE RODS AT ALL BENDS AND SUPPLY SUFFICIENT SUPPORT TO THE 12" FORCE MAIN TO PREVENT ANY MOVEMENT IN ANY DIRECTION.

PLAN



PROFILE

2	AS-BUILT	1-5-31	C/S
DRAWN Ch.M			
CHECKED W.A.J			
APPROVED F.C.H			
DATE 1978			
SCALE			
Hor. 1" = 50'			
Vert. 1" = 5'			
REV. NO.	DESCRIPTION	DATE	BY
APPROVED			
JOB NO. 2746		DWG. NO. 8	
WARWICK SEWER AUTHORITY		FILE NO.	

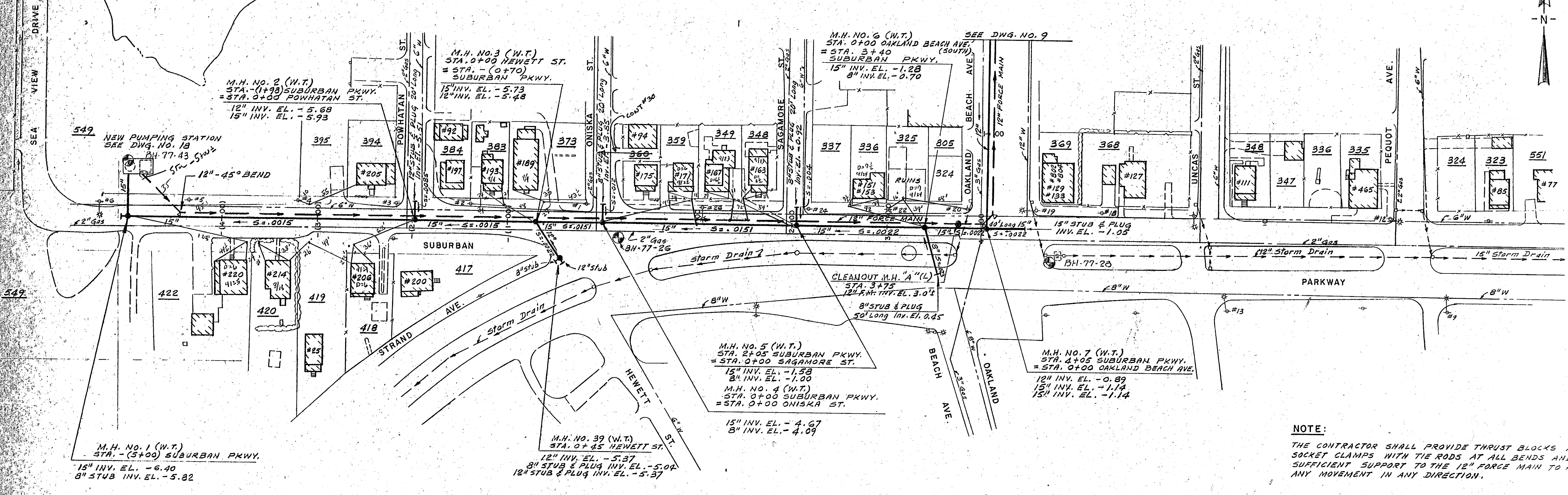
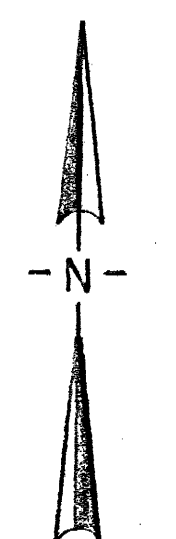
CITY OF WARWICK, RHODE ISLAND
WARWICK SEWER AUTHORITY
SYSTEM OF SEWERS
CONTRACT NO. 29

PLAN AND PROFILE
12" FORCE MAIN & 15" SAN. SEWER
SUBURBAN PARKWAY
STA. (5+00) TO STA. 5+00

WARWICK SEWER AUTHORITY
PROVIDENCE, R.I. WETHERSFIELD, CONN. WALTHAM, MA

Contract 29

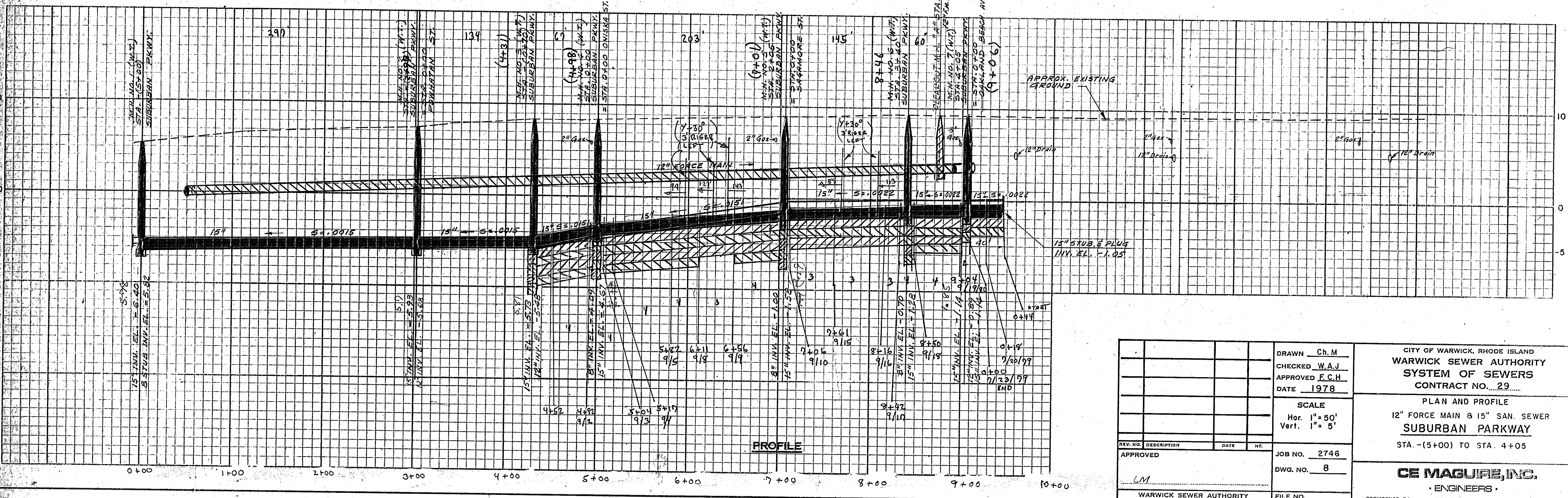
NOTE. UNSUITABLE MATERIAL BENEATH THE PROPOSED PIPE IS KNOWN TO EXIST AT THE PROPOSED PUMPING STATION AND POSSIBLY IN SUBURBAN PARKWAY. SUCH UNSUITABLE MATERIAL SHALL BE REMOVED IN ACCORDANCE WITH THE DETAILS ON DRAWINGS NO. 5 AND 7



PLAT 395

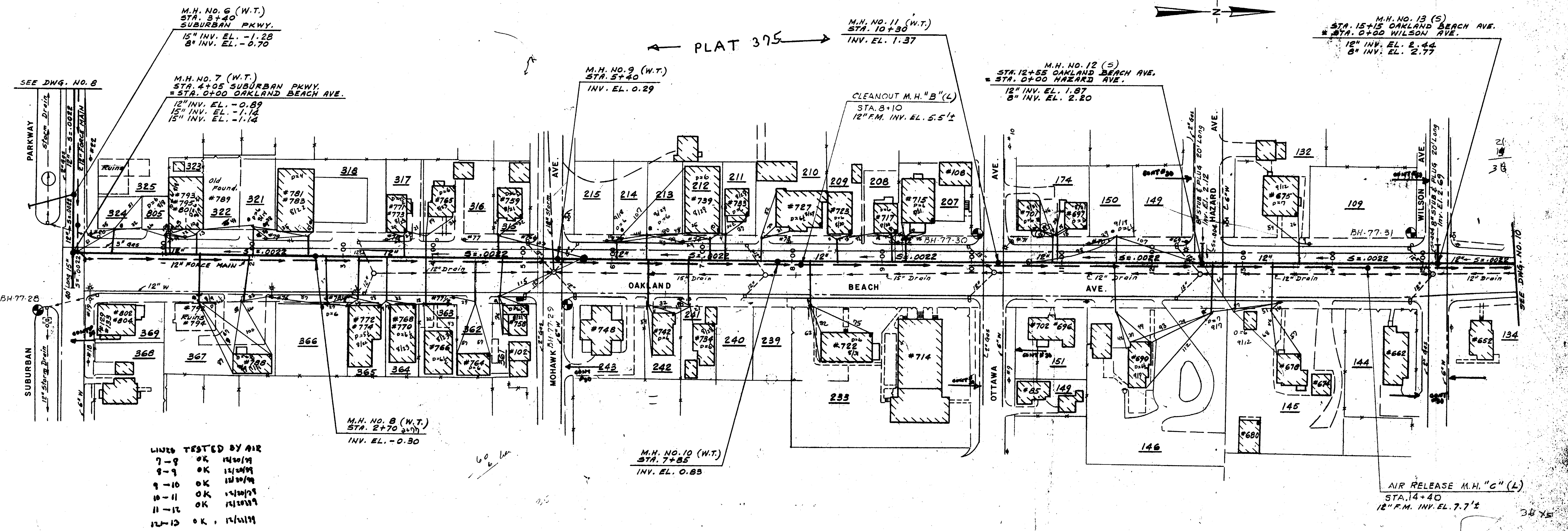
PLAN

NOTE: THE CONTRACTOR SHALL PROVIDE THRUST BLOCKS AND/OR SOCKET CLAMPS WITH TIE RODS AT ALL BENDS AND SUPPLY SUFFICIENT SUPPORT TO THE 12" FORCE MAIN TO PREVENT ANY MOVEMENT IN ANY DIRECTION.



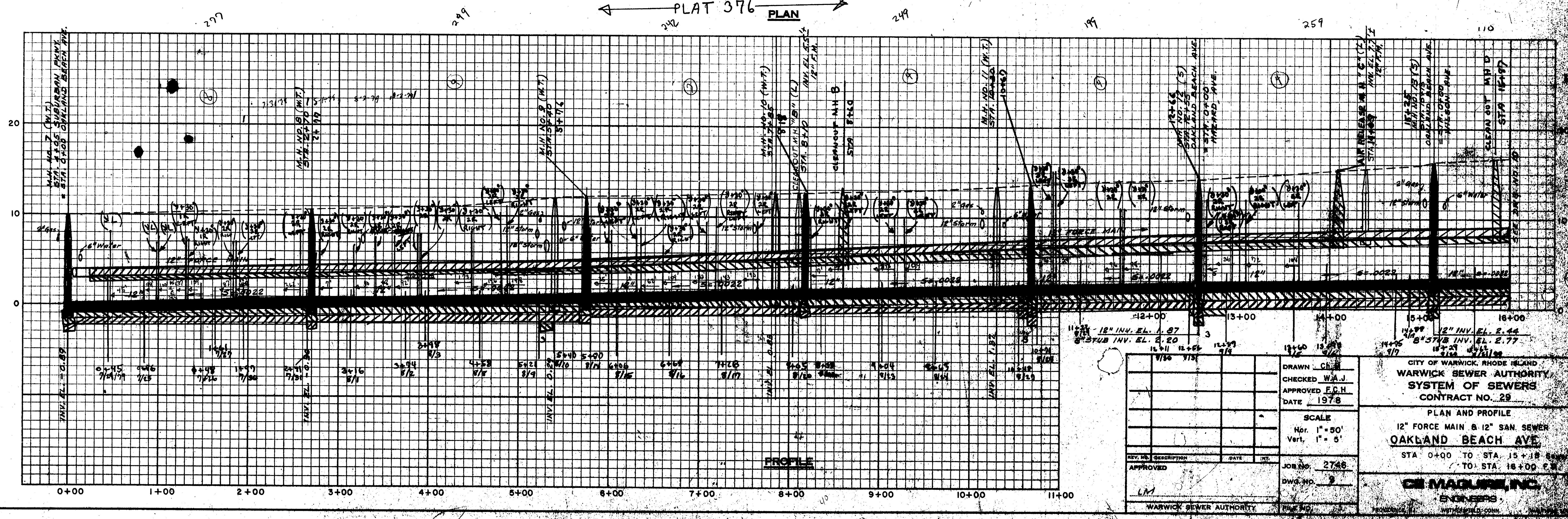
PROFILE

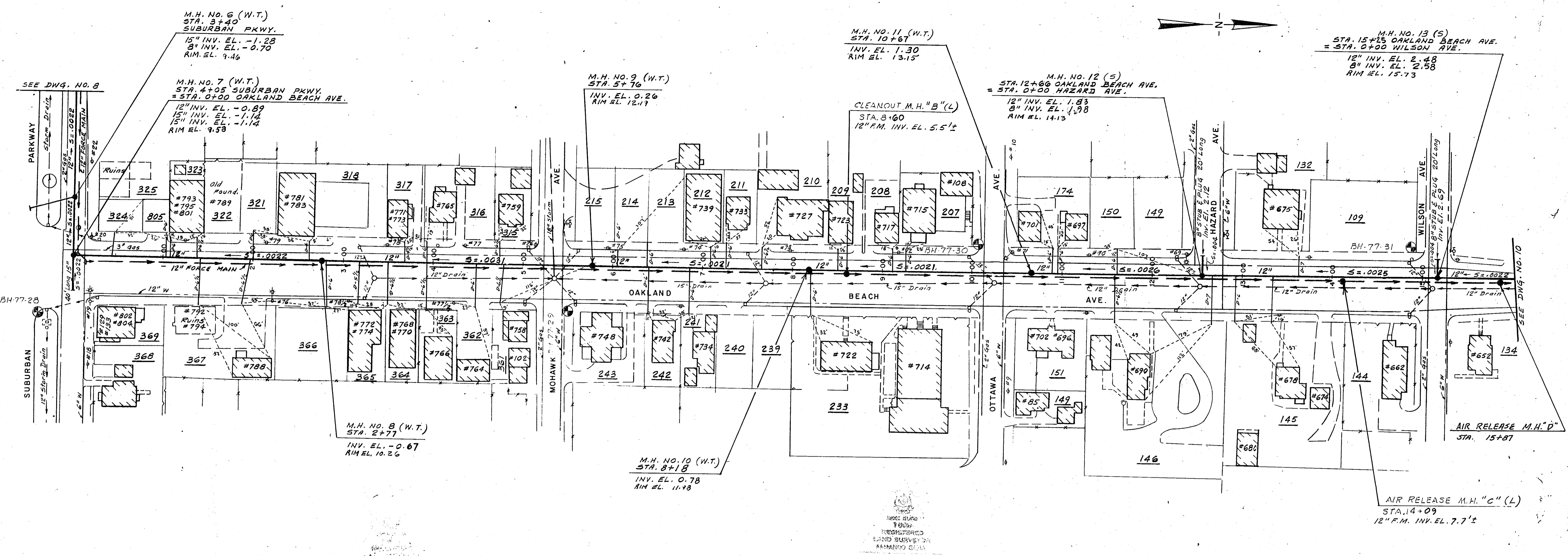
REV. NO.	DESCRIPTION	DATE	BY
APPROVED			
<p>WARWICK SEWER AUTHORITY</p>			
<p>DRAWN Ch. M</p> <p>CHECKED W.A.J</p> <p>APPROVED F.C.H</p> <p>DATE 1978</p>		<p>CITY OF WARWICK, RHODE ISLAND</p> <p>WARWICK SEWER AUTHORITY</p> <p>SYSTEM OF SEWERS</p> <p>CONTRACT NO. 29</p>	
<p>SCALE</p> <p>Hor. 1" = 50'</p> <p>Vert. 1" = 5'</p>		<p>PLAN AND PROFILE</p> <p>12" FORCE MAIN & 15" SAN. SEWER</p> <p>SUBURBAN PARKWAY</p> <p>STA. -(5+00) TO STA. 4+05</p>	
<p>JOB NO. 2746</p> <p>DWG. NO. 8</p>		<p>CE MAGUIRE, INC.</p> <p>ENGINEERS</p> <p>PROVIDENCE, R.I. WETHERSFIELD, CONN. WALTHAM, MASS.</p>	
<p>FILE NO.</p>			



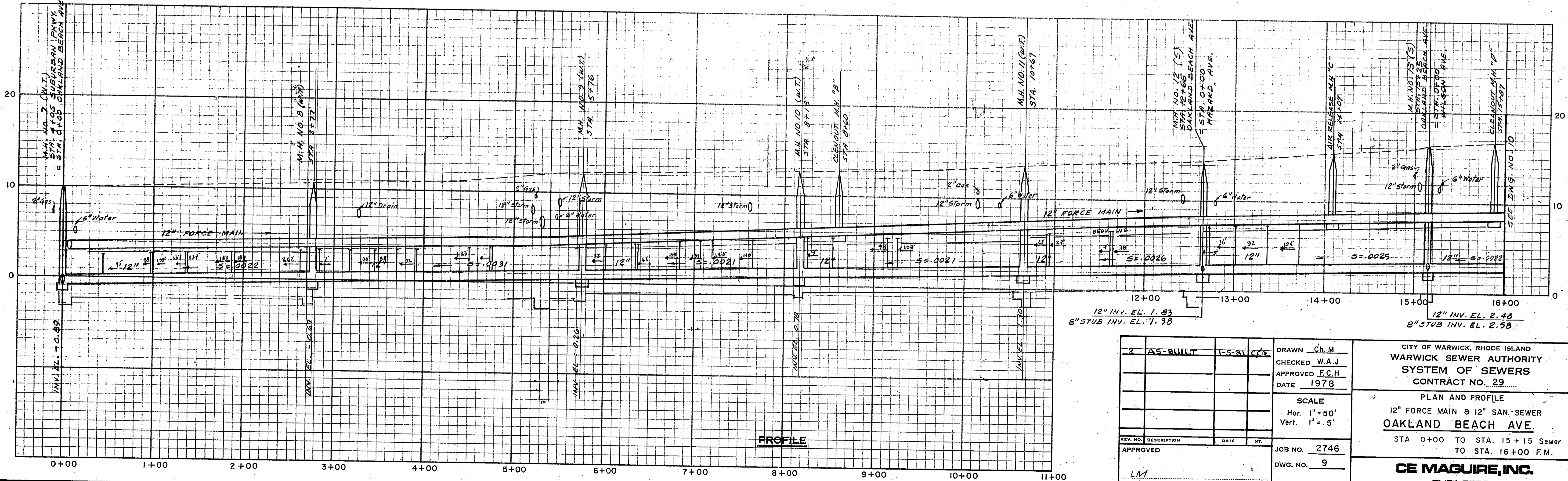
LINES TESTED BY AIR

7-8	OK	12/10/79
8-9	OK	12/10/79
9-10	OK	12/10/79
10-11	OK	12/10/79
11-12	OK	12/10/79
12-13	OK	12/10/79



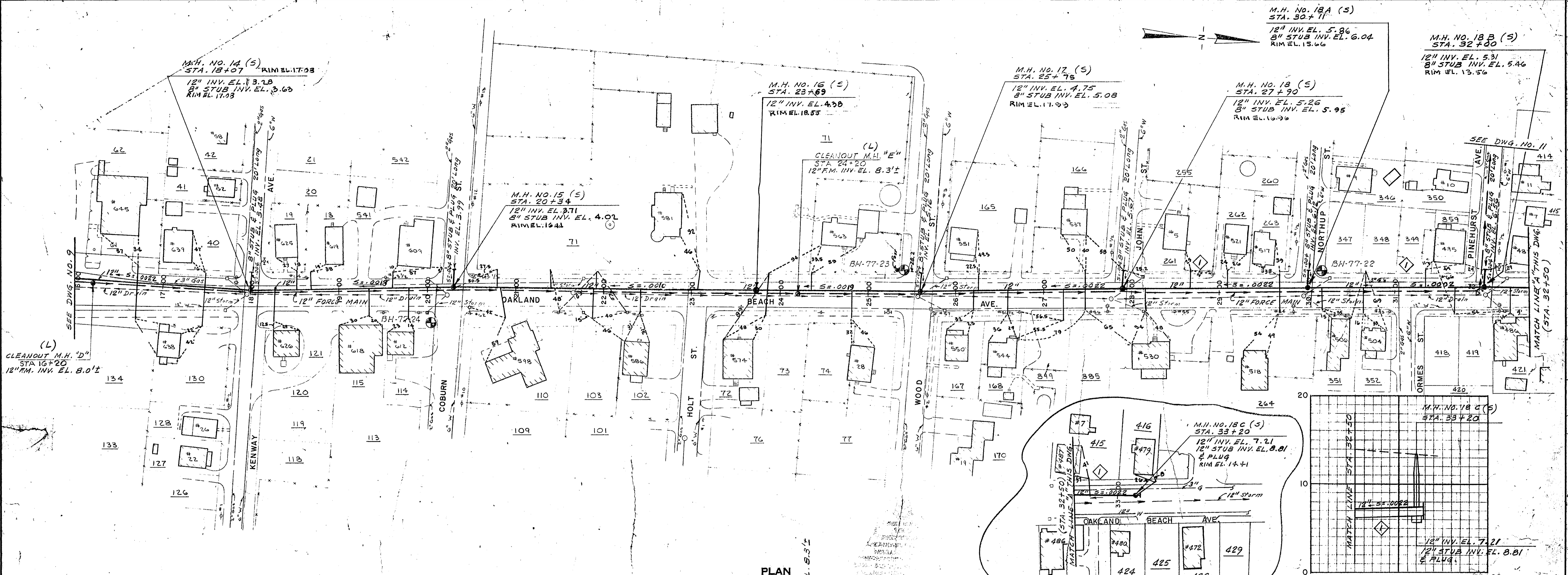


PLAN

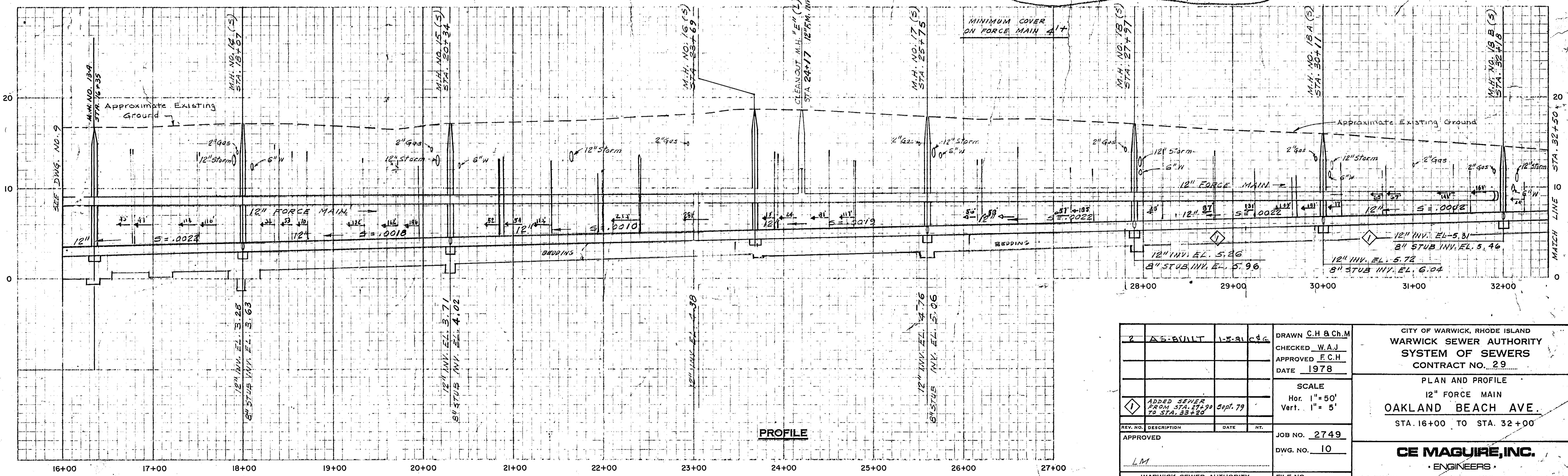


PROFILE

2	AS-BUILT	CS-AT/CS	DRAWN Ch.M CHECKED W.A.J APPROVED F.C.H DATE 1978	CITY OF WARWICK, RHODE ISLAND WARWICK SEWER AUTHORITY SYSTEM OF SEWERS CONTRACT NO. 29 PLAN AND PROFILE 12" FORCE MAIN & 12" SAN-SEWER OAKLAND BEACH AVE. STA 0+00 TO STA. 15+15 Sewer TO STA. 16+00 F.M.
SCALE Hor. 1" = 50' Vert. 1" = 5'			JOB NO. 2746 DWG. NO. 9	
REV. NO. DESCRIPTION DATE BY.		FILE NO.		CE MAGUIRE, INC. ENGINEERS PROVIDENCE, R.I. WETHERFIELD, CONN. WALTHAM, MASS.
APPROVED LM		WARWICK SEWER AUTHORITY		



PLAN



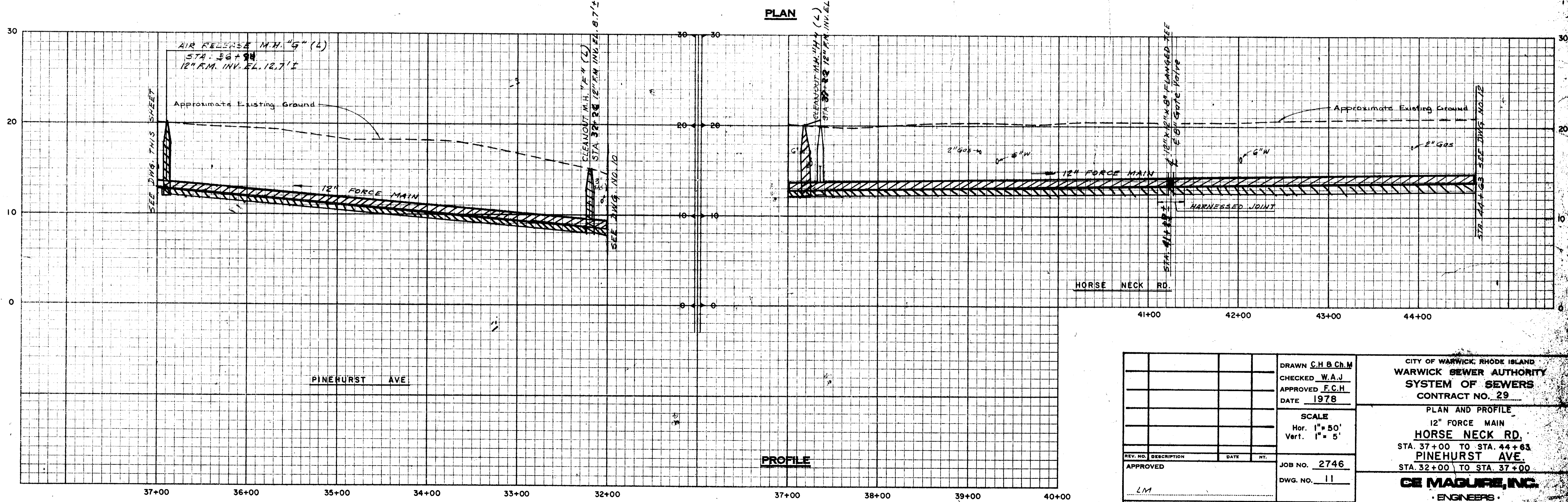
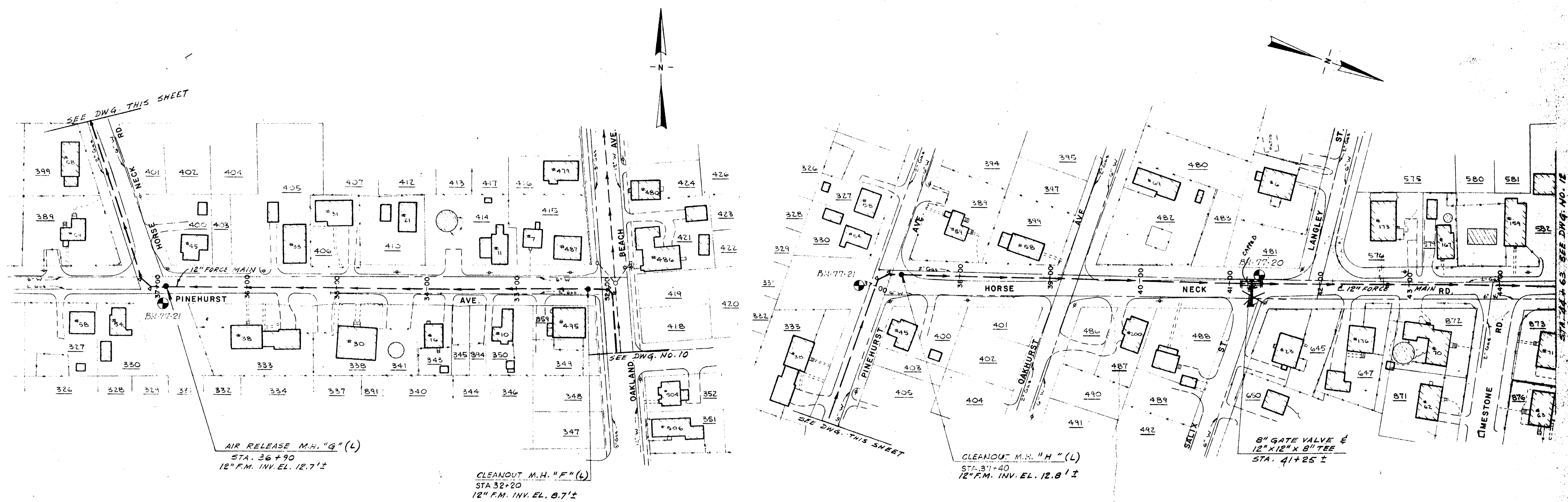
PROFILE

2	AS-BUILT	1-5-81	C&G
DRAWN C.H. & C.H.M.			
CHECKED W.A.J.			
APPROVED F.C.H.			
DATE 1978			
SCALE			
Hor. 1" = 50'			
Vert. 1" = 5'			
JOB NO. 2749			
DWG. NO. 10			
REV. NO.	DESCRIPTION	DATE	BY
1	ADDED SEWER FROM STA. 24+99 TO STA. 33+20	Sept. 79	
APPROVED			
L.M.			
WARWICK SEWER AUTHORITY			
FILE NO.			

CITY OF WARWICK, RHODE ISLAND
WARWICK SEWER AUTHORITY
SYSTEM OF SEWERS
CONTRACT NO. 29

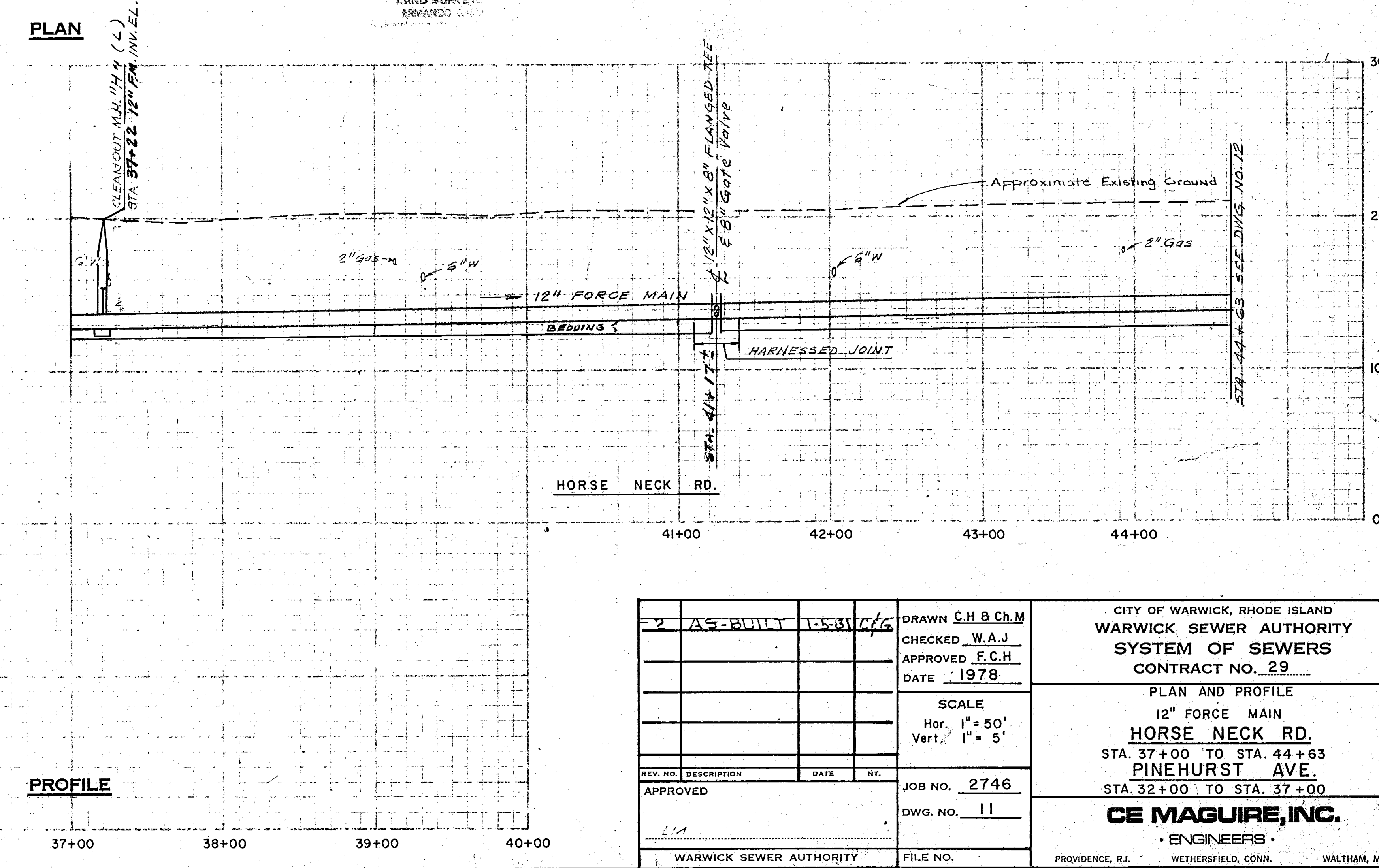
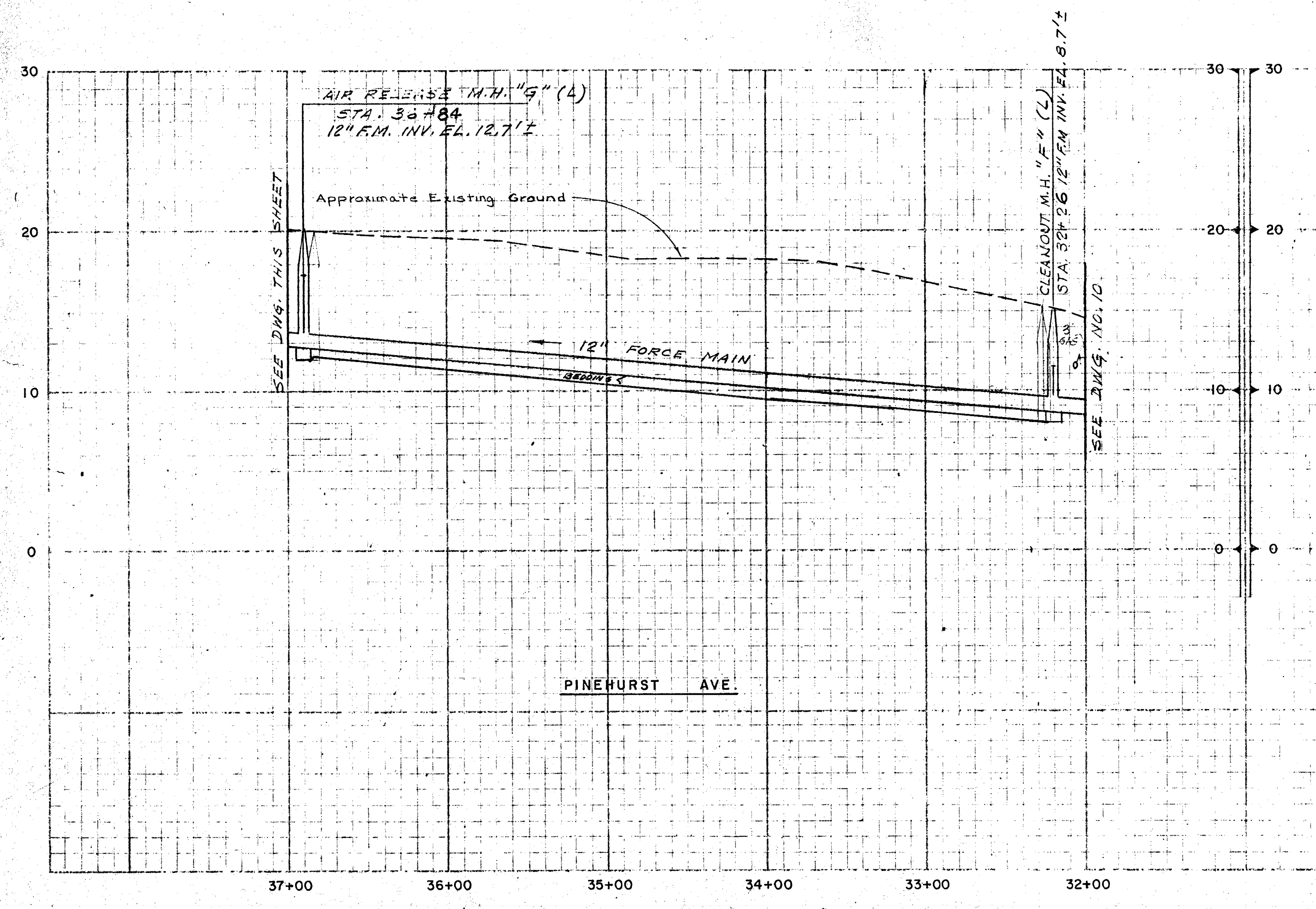
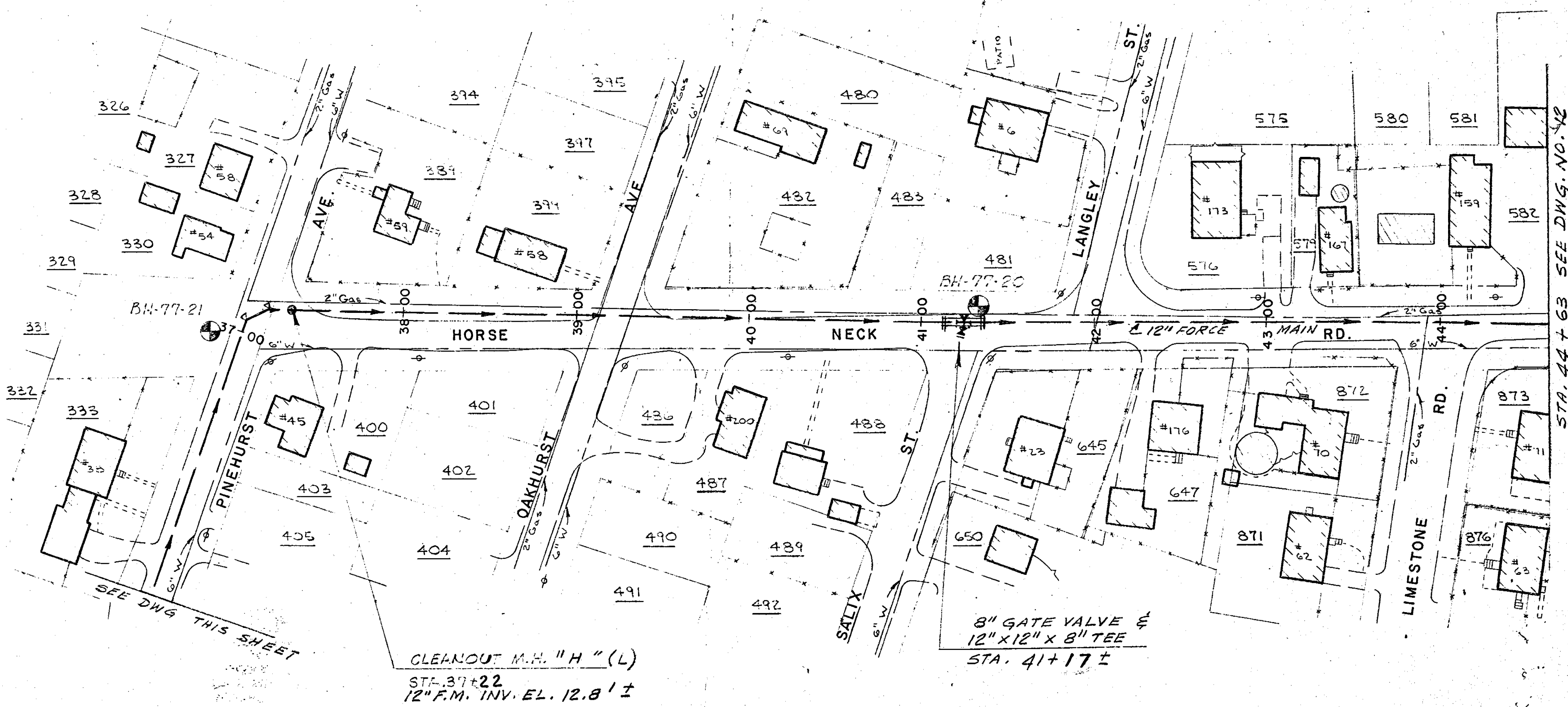
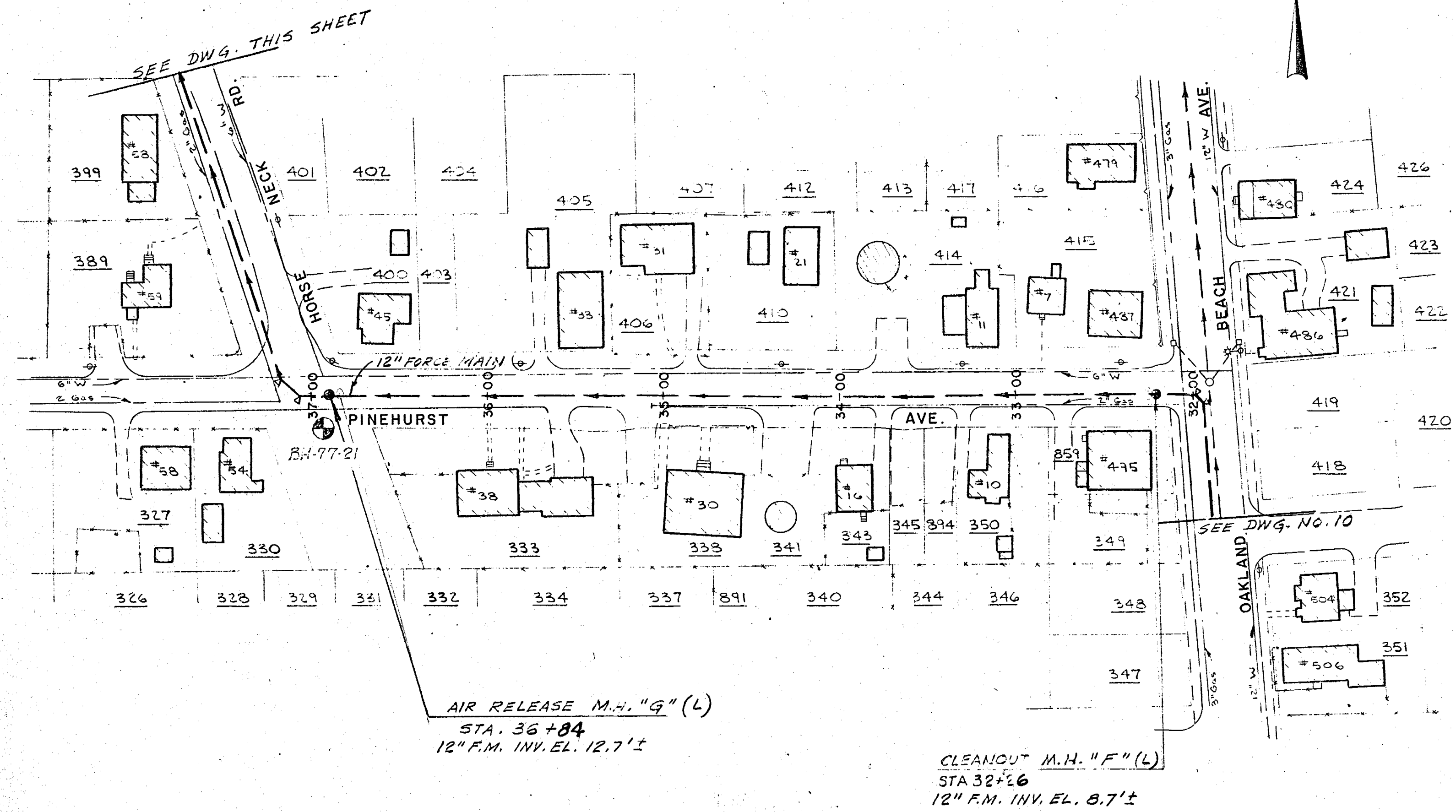
PLAN AND PROFILE
12" FORCE MAIN
OAKLAND BEACH AVE.
STA. 16+00 TO STA. 32+00

CE MAGUIRE, INC.
 ENGINEERS
 PROVIDENCE, R.I. WETHERFIELD, CONN. WALTHAM, MASS.



REV. NO.	DESCRIPTION	DATE	BY
APPROVED			
LM			
WARWICK SEWER AUTHORITY			

DRAWN C.H. & Ch.M.	CITY OF WARWICK, RHODE ISLAND
CHECKED W.A.J.	WARWICK SEWER AUTHORITY
APPROVED F.C.H.	SYSTEM OF SEWERS
DATE 1978	CONTRACT NO. 29
SCALE	PLAN AND PROFILE
Hor. 1" = 50'	12" FORCE MAIN
Vert. 1" = 5'	HORSE NECK RD.
JOB NO. 2746	STA. 37+00 TO STA. 44+63
DWG. NO. 11	PINEHURST AVE.
FILE NO.	STA. 32+00 TO STA. 37+00
	CE MAGUIRE, INC.
	ENGINEERS
	PROVIDENCE, R.I. WETHERSFIELD, CONN.



SEE PLAN
REGISTERED
LAND SURVEYOR
RHODE ISLAND

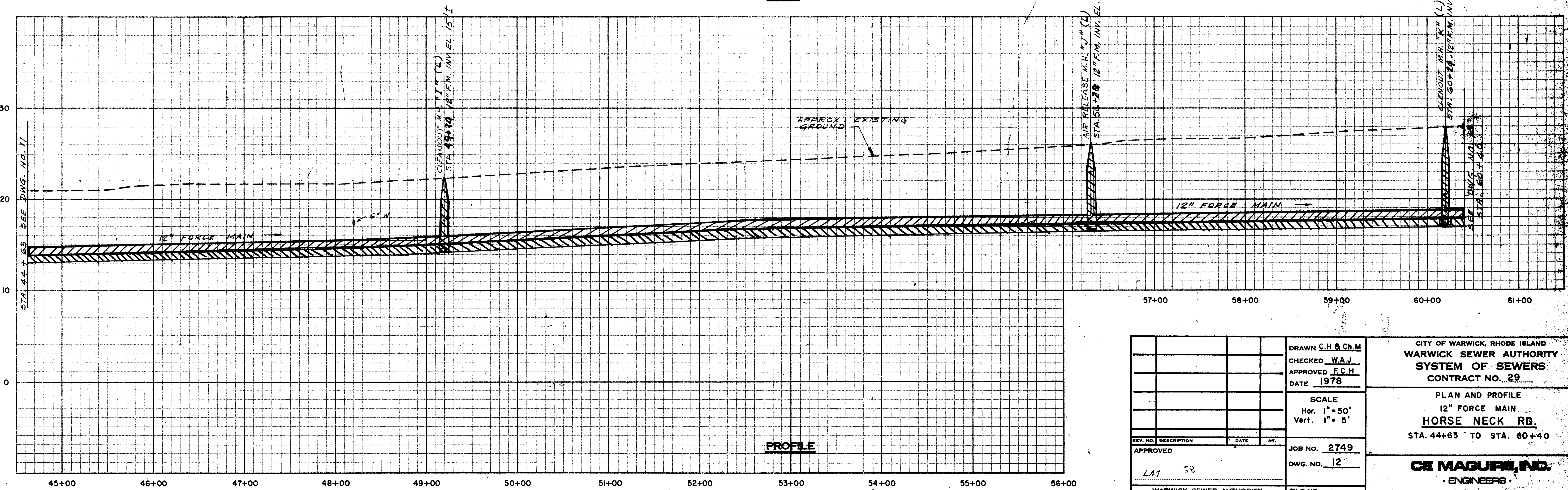
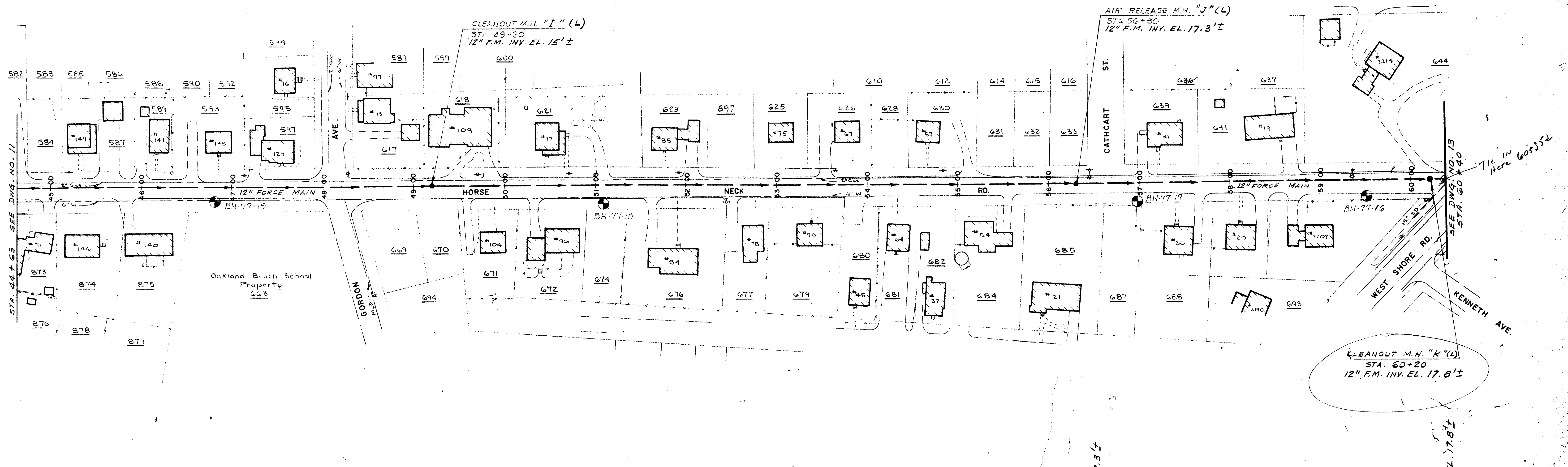
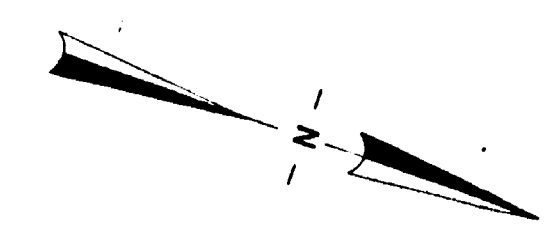
2	AS-BUILT	1-5-81	ctg
DRAWN C.H.B.Ch.M.			
CHECKED W.A.J.			
APPROVED F.C.H.			
DATE 1978			
SCALE			
Hor. 1" = 50'			
Vert. 1" = 5'			
REV. NO.	DESCRIPTION	DATE	BY
APPROVED			
JOB NO. 2746		DWG. NO. 11	
WARWICK SEWER AUTHORITY		FILE NO.	

CITY OF WARWICK, RHODE ISLAND
WARWICK SEWER AUTHORITY
SYSTEM OF SEWERS
CONTRACT NO. 29

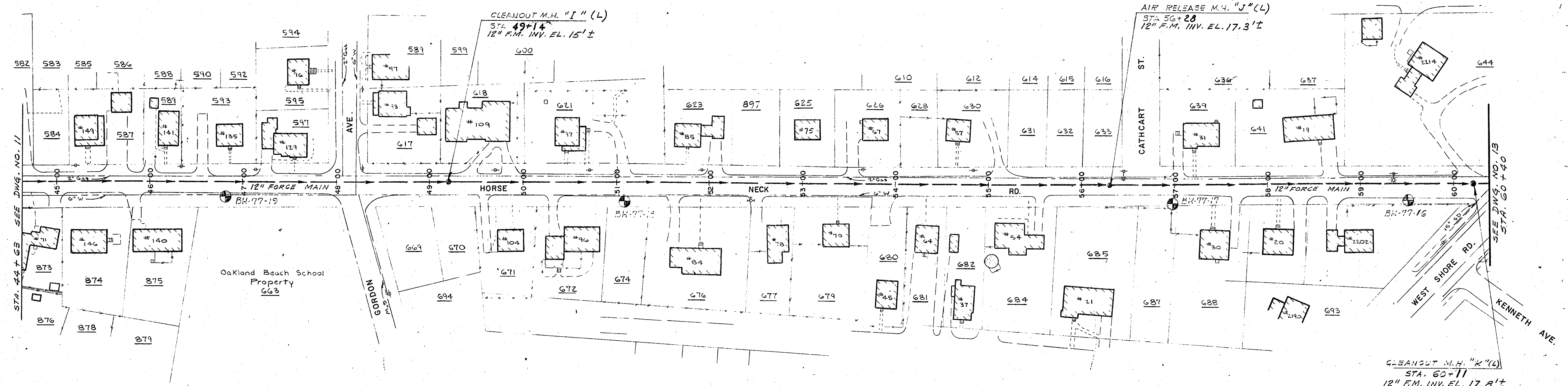
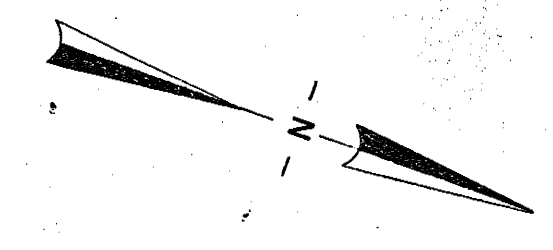
PLAN AND PROFILE
12" FORCE MAIN
HORSE NECK RD.
STA. 37+00 TO STA. 44+63
PINEHURST AVE.
STA. 32+00 TO STA. 37+00

CE MAGUIRE, INC.
ENGINEERS

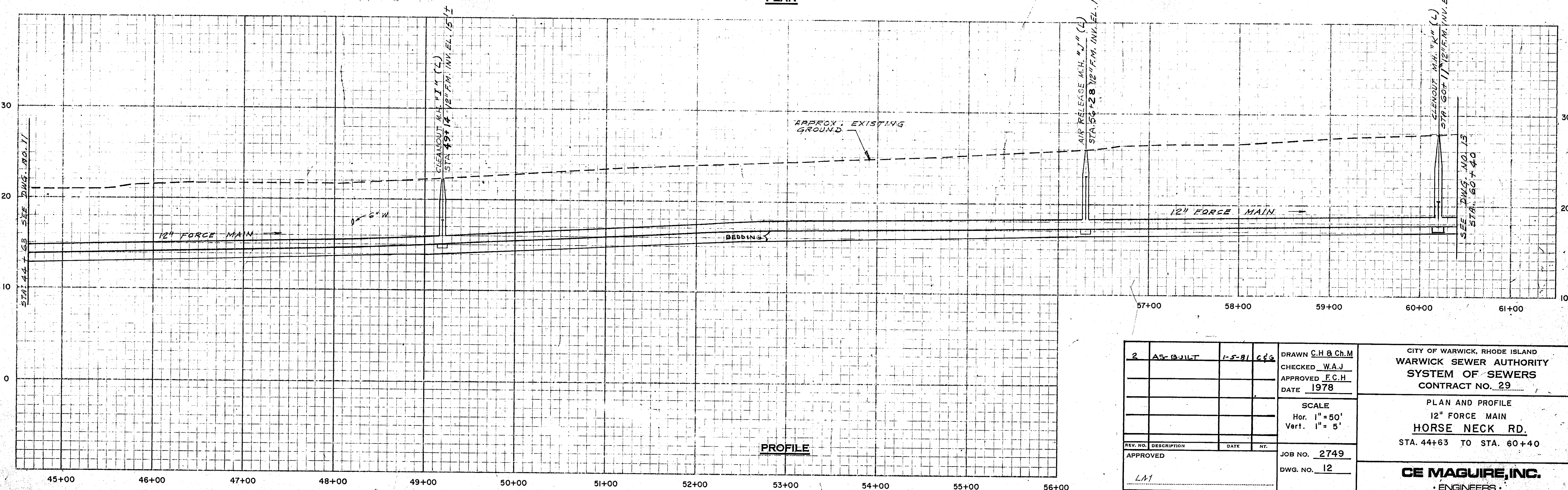
PROVIDENCE, R.I. WETHERSFIELD, CONN. WALTHAM, MASS.



DRAWN C.H. & Ch.M.		CITY OF WARWICK, RHODE ISLAND WARWICK SEWER AUTHORITY SYSTEM OF SEWERS CONTRACT NO. 29
CHECKED W.A.J.		
APPROVED F.C.H.		PLAN AND PROFILE 12" FORCE MAIN HORSE NECK RD. STA. 44+63 TO STA. 60+40
DATE 1978		
SCALE Hor. 1" = 50' Vert. 1" = 5'		CE MAGUIRE, INC. ENGINEERS
JOB NO. 2749		
DWG. NO. 12		PROVIDENCE, R.I. WETHERSFIELD, CONN. WALTHAM, MASS.
WARWICK SEWER AUTHORITY		
FILE NO.		

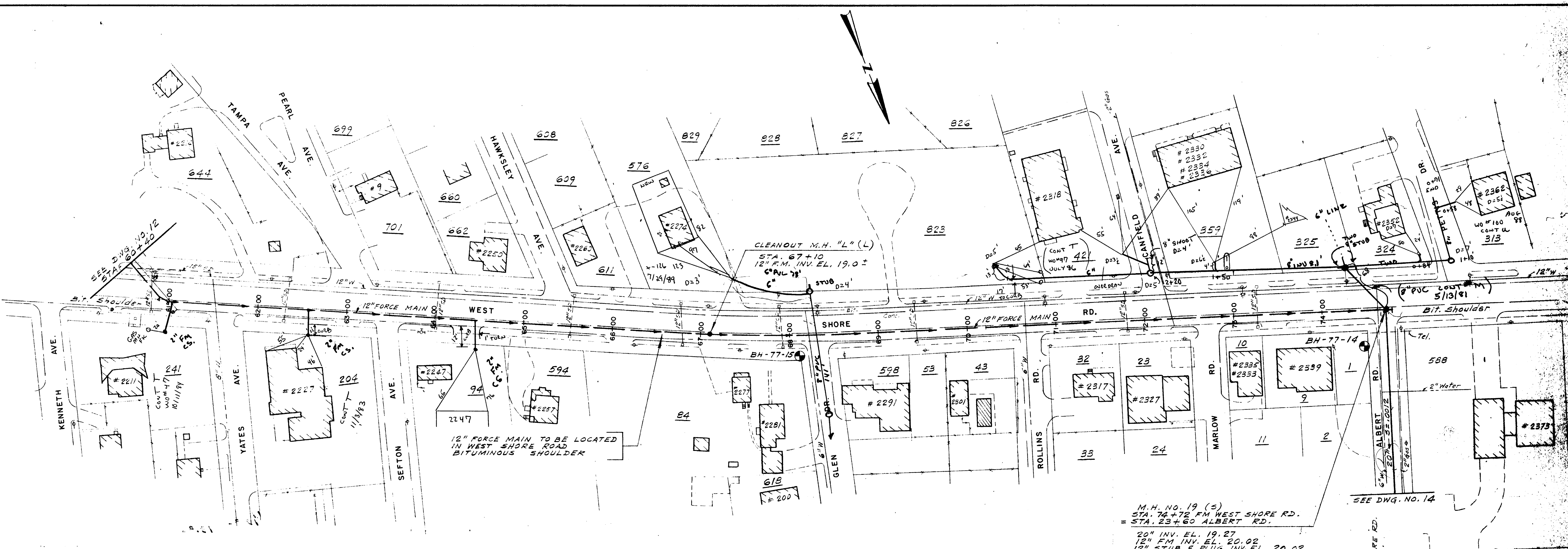


PLAN

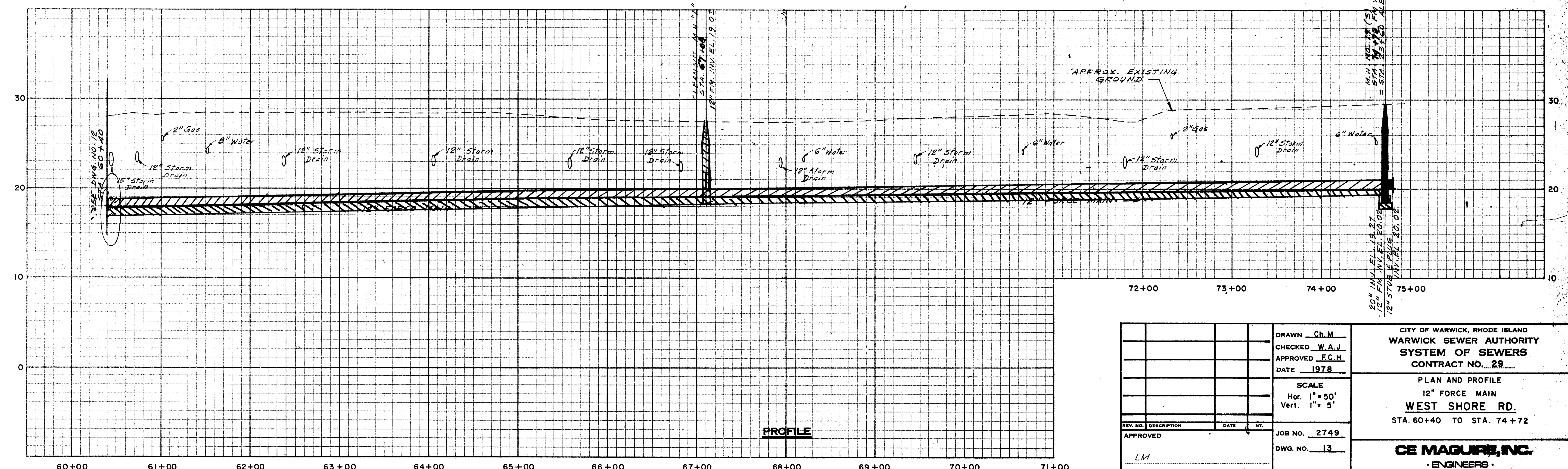


PROFILE

2	AS-BUILT	1-5-81	C.C.G.	DRAWN C.H.B. & Ch.M.	CITY OF WARWICK, RHODE ISLAND WARWICK SEWER AUTHORITY SYSTEM OF SEWERS CONTRACT NO. 29
				CHECKED W.A.J.	
				APPROVED E.C.H. DATE 1978	
				SCALE Hor. 1" = 50' Vert. 1" = 5'	PLAN AND PROFILE 12" FORCE MAIN HORSE NECK RD. STA. 44+63 TO STA. 60+40
APPROVED LM1				JOB NO. 2749 DWG. NO. 12	
WARWICK SEWER AUTHORITY				FILE NO.	CE MAGUIRE, INC. ENGINEERS
				PROVIDENCE, R.I.	WALTHAM, MASS.



PLAN



PROFILE

M.H. NO. 19 (S)
 STA. 74+72 FM WEST SHORE RD.
 = STA. 23+60 ALBERT RD.
 20" INV. EL. 19.27
 12" FM INV. EL. 20.02
 12" STUB & PLUG INV. EL. 20.02

SEE DWG. NO. 14

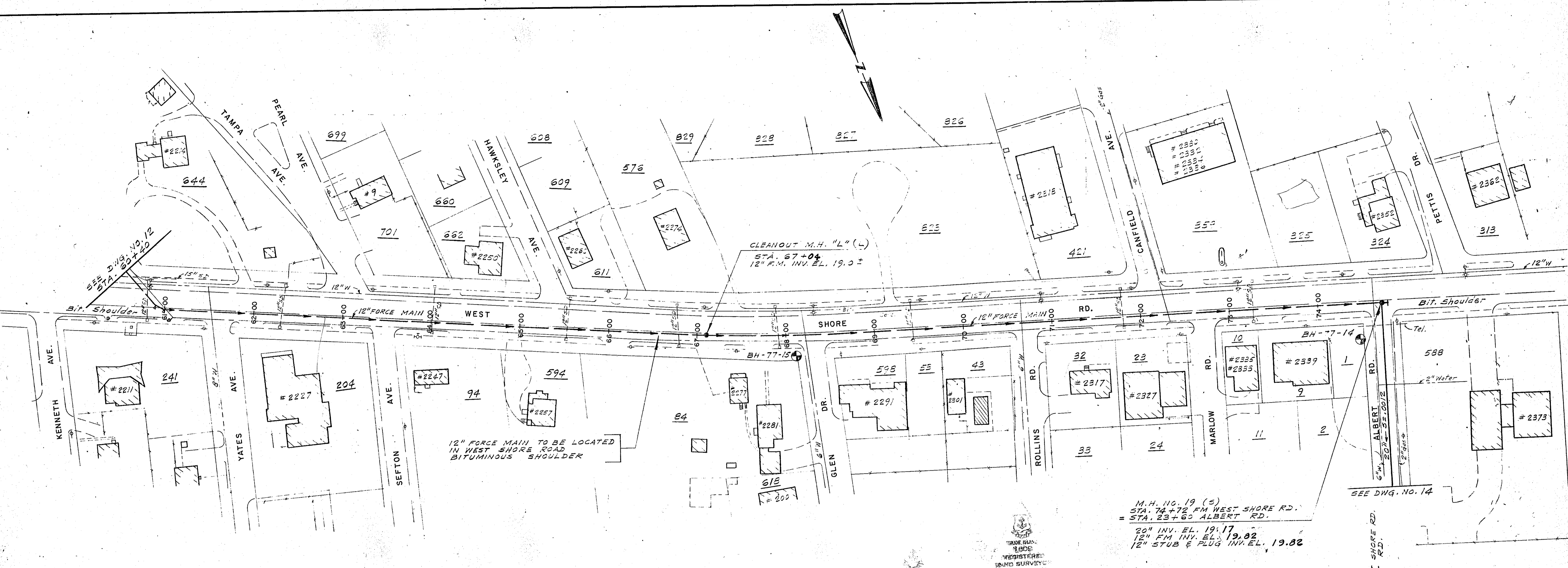
M.H. NO. 19 (S)
 STA. 74+72 FM WEST SHORE RD.
 = STA. 23+60 ALBERT RD.
 20" INV. EL. 19.27
 12" FM INV. EL. 20.02
 12" STUB & PLUG INV. EL. 20.02

REV. NO.	DESCRIPTION	DATE	BY
APPROVED			
LM			
WARWICK SEWER AUTHORITY			
DRAWN Ch.M		CHECKED W.A.J	
APPROVED F.C.H		DATE 1978	
SCALE			
Hor. 1" = 50'			
Vert. 1" = 5'			
JOB NO. 2749		DWG. NO. 13	
FILE NO.			

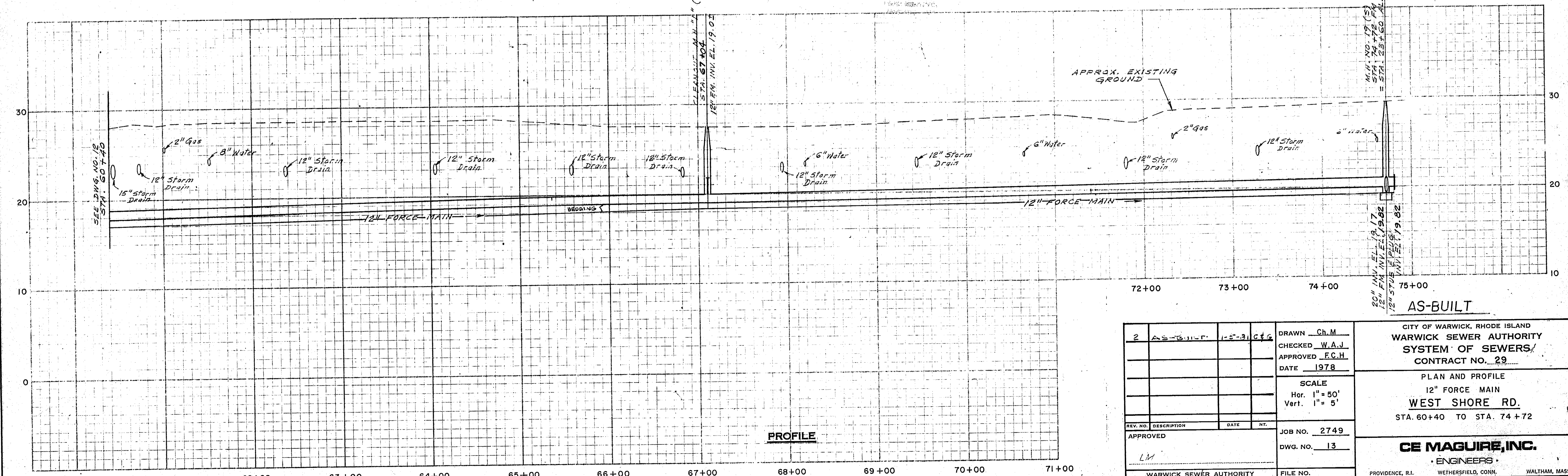
CITY OF WARWICK, RHODE ISLAND
 WARWICK SEWER AUTHORITY
 SYSTEM OF SEWERS
 CONTRACT NO. 29

PLAN AND PROFILE
 12" FORCE MAIN
 WEST SHORE RD.
 STA. 60+40 TO STA. 74+72

CE MAGUIRE, INC.
 ENGINEERS
 PROVIDENCE, R.I. WETHERFIELD, CONN. WALTHAM, MASS.



PLAN



PROFILE

M.H. NO. 19 (S)
 STA. 74+72 FM WEST SHORE RD.
 STA. 23+60 ALBERT RD.
 20" INV. EL. 19.17
 12" FM INV. EL. 19.82
 12" STUB & PLUG INV. EL. 19.82

SEE DWG. NO. 14

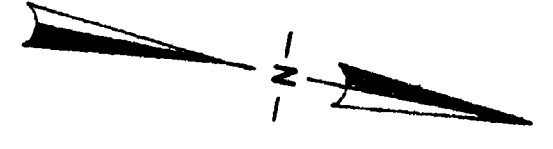
AS-BUILT

2	AS-BUILT	1-5-81	C.F.G.
DRAWN Ch.M.			
CHECKED W.A.J.			
APPROVED F.C.H.			
DATE 1978			
SCALE			
Hor. 1" = 50'			
Vert. 1" = 5'			
JOB NO. 2749			
DWG. NO. 13			
WARWICK SEWER AUTHORITY			
FILE NO.			

CITY OF WARWICK, RHODE ISLAND
WARWICK SEWER AUTHORITY
SYSTEM OF SEWERS
 CONTRACT NO. 29

PLAN AND PROFILE
 12" FORCE MAIN
 WEST SHORE RD.
 STA. 60+40 TO STA. 74+72

CE MAGUIRE, INC.
 ENGINEERS
 PROVIDENCE, R.I. WETHERFIELD, CONN. WALTHAM, MASS.



M.H. NO. 23 (L)
 STA. 11+85
 20" INV. EL. 17.87
 8" STUBS INV. EL. 18.87

11+54

M.H. NO. 24 (S)
 STA. 9+65
 INV. EL. 17.61
 9x84

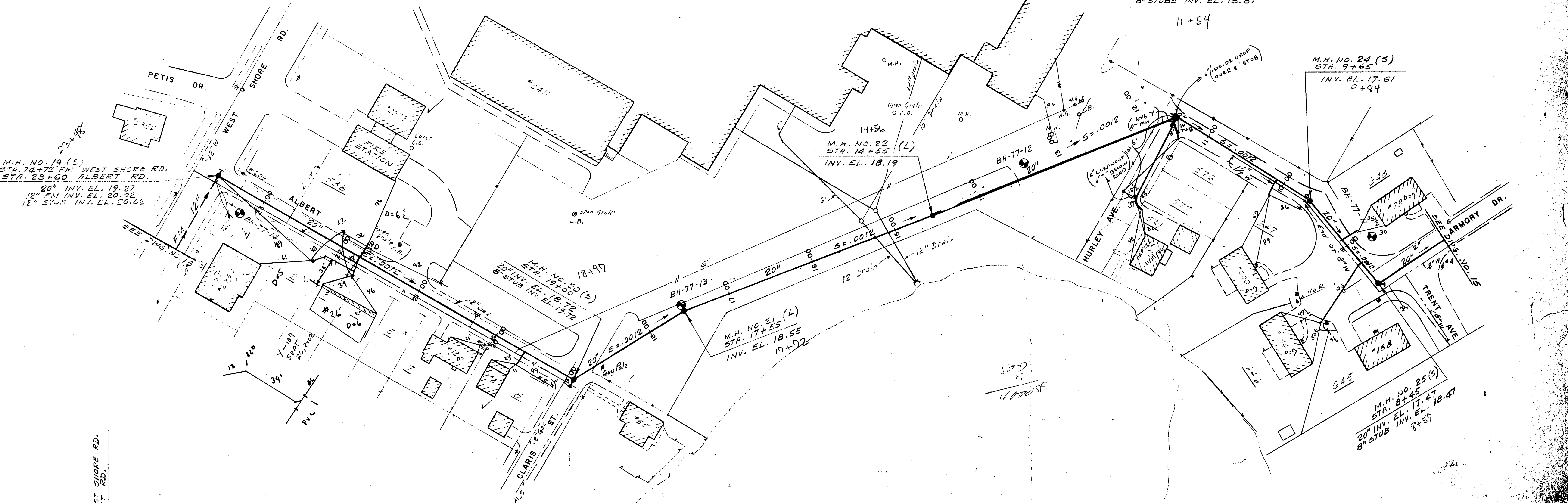
M.H. NO. 25 (S)
 STA. 8+25
 INV. EL. 17.47
 8" STUB INV. EL. 18.47
 8x57

M.H. NO. 21 (L)
 STA. 17+55
 INV. EL. 18.55
 17+72

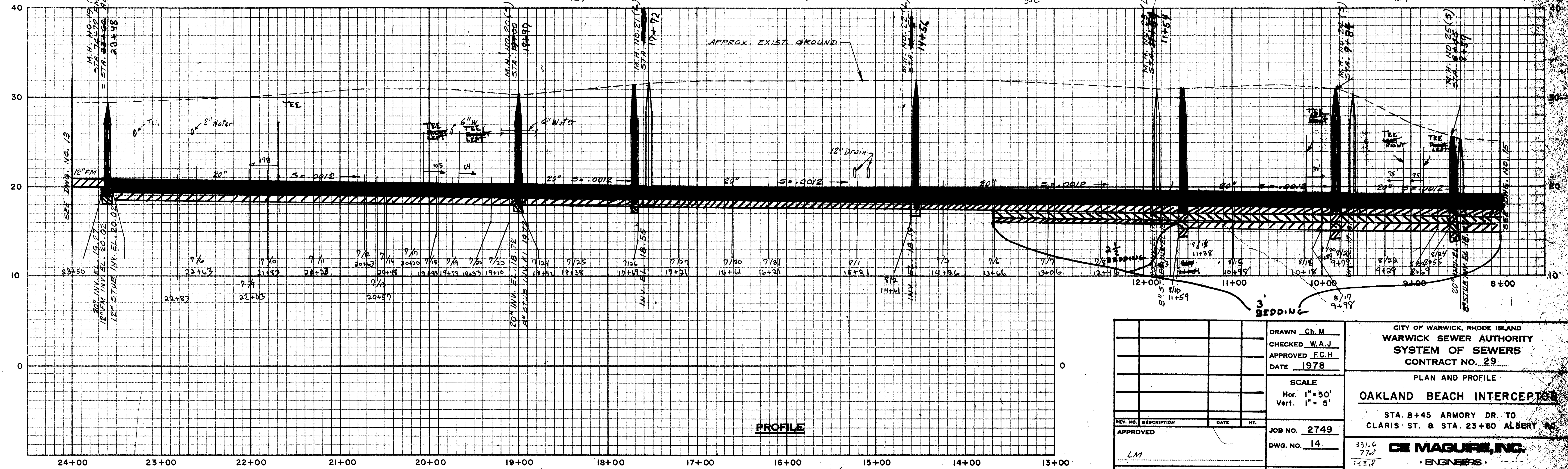
M.H. NO. 22 (L)
 STA. 14+55
 INV. EL. 18.19

M.H. NO. 19 (S)
 STA. 74+72 FM WEST SHORE RD.
 = STA. 23+60 ALBERT RD.
 20" INV. EL. 19.27
 12" FM INV. EL. 20.32
 12" STUB INV. EL. 20.02

M.H. NO. 19 (S)
 STA. 74+72 FM WEST SHORE RD.
 = STA. 23+60 ALBERT RD.
 20" INV. EL. 19.27
 12" FM INV. EL. 20.32
 12" STUB INV. EL. 20.02

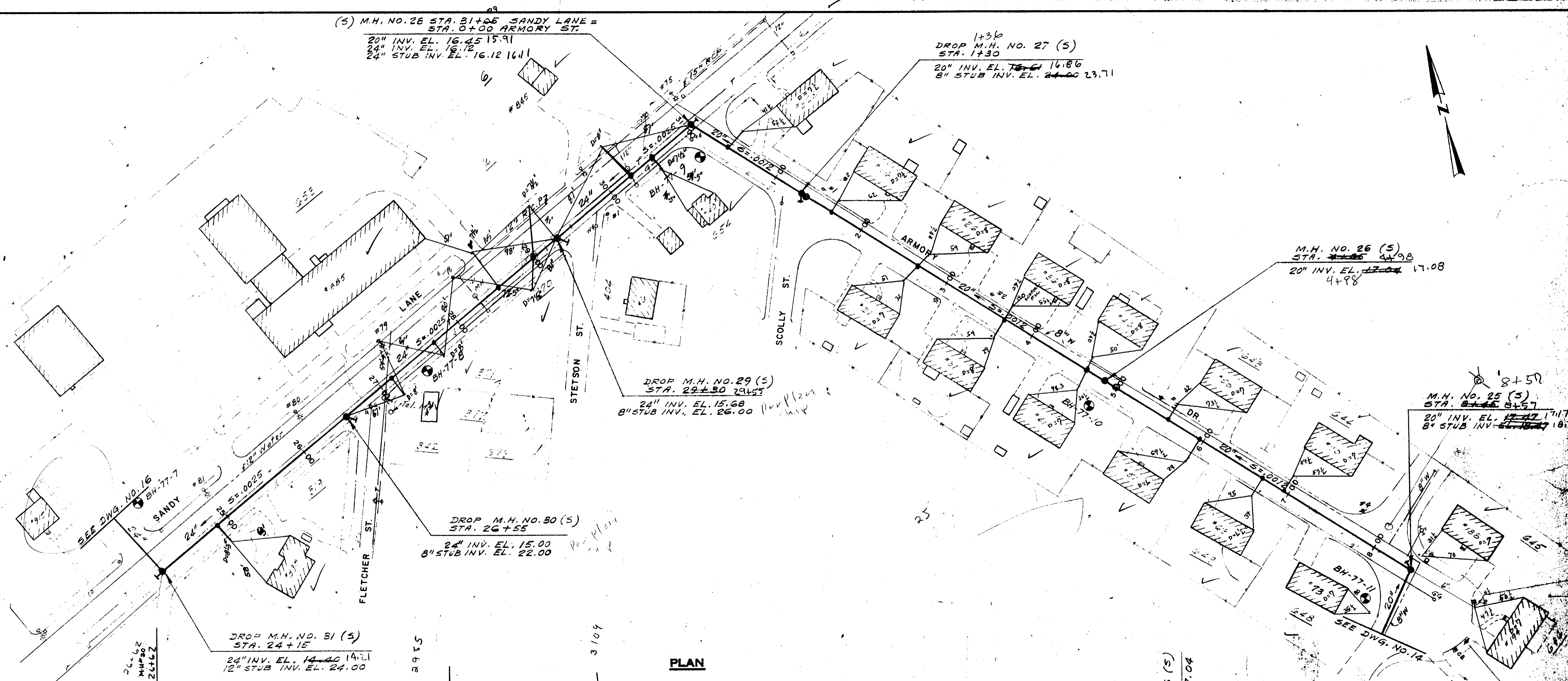


PLAN

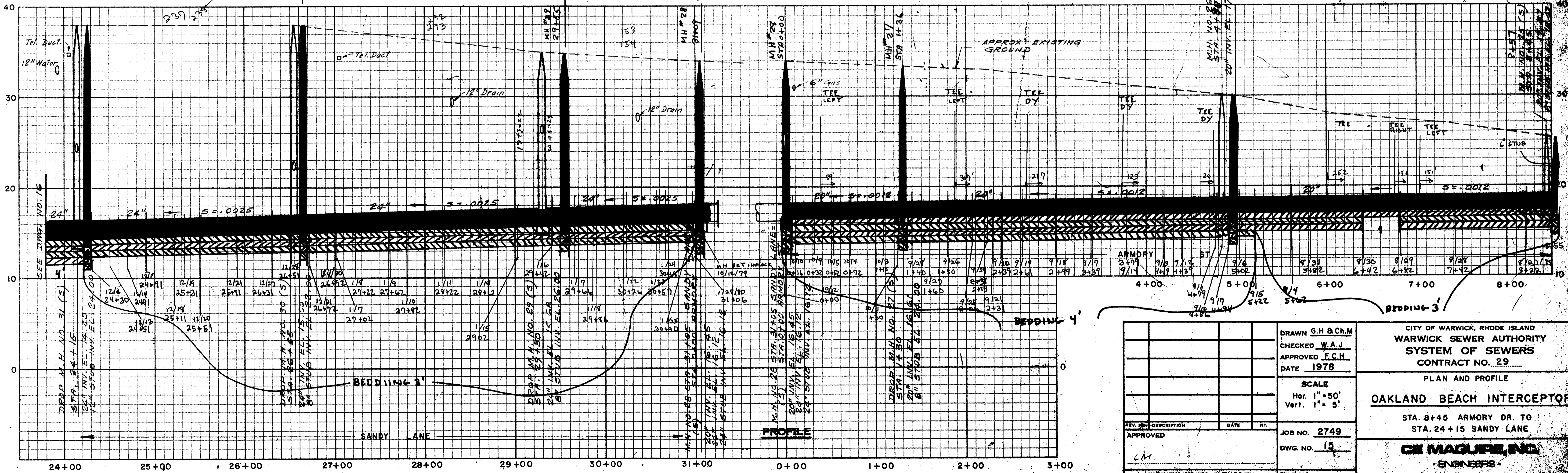


PROFILE

DRAWN Ch.M.		CITY OF WARWICK, RHODE ISLAND	
CHECKED W.A.J.		WARWICK SEWER AUTHORITY	
APPROVED F.C.H.		SYSTEM OF SEWERS	
DATE 1978		CONTRACT NO. 29	
SCALE		PLAN AND PROFILE	
Hor. 1" = 50'		OAKLAND BEACH INTERCEPTOR	
Vert. 1" = 5'		STA. 8+25 ARMORY DR. TO	
JOB NO. 2749		CLARIS ST. & STA. 23+60 ALBERT RD.	
DWG. NO. 14		CE MAGUIRE, INC.	
FILE NO.		ENGINEERS	
WARWICK SEWER AUTHORITY		PROVIDENCE, R.I. WETHERSFIELD, CONN. WALTHAM, MASS.	

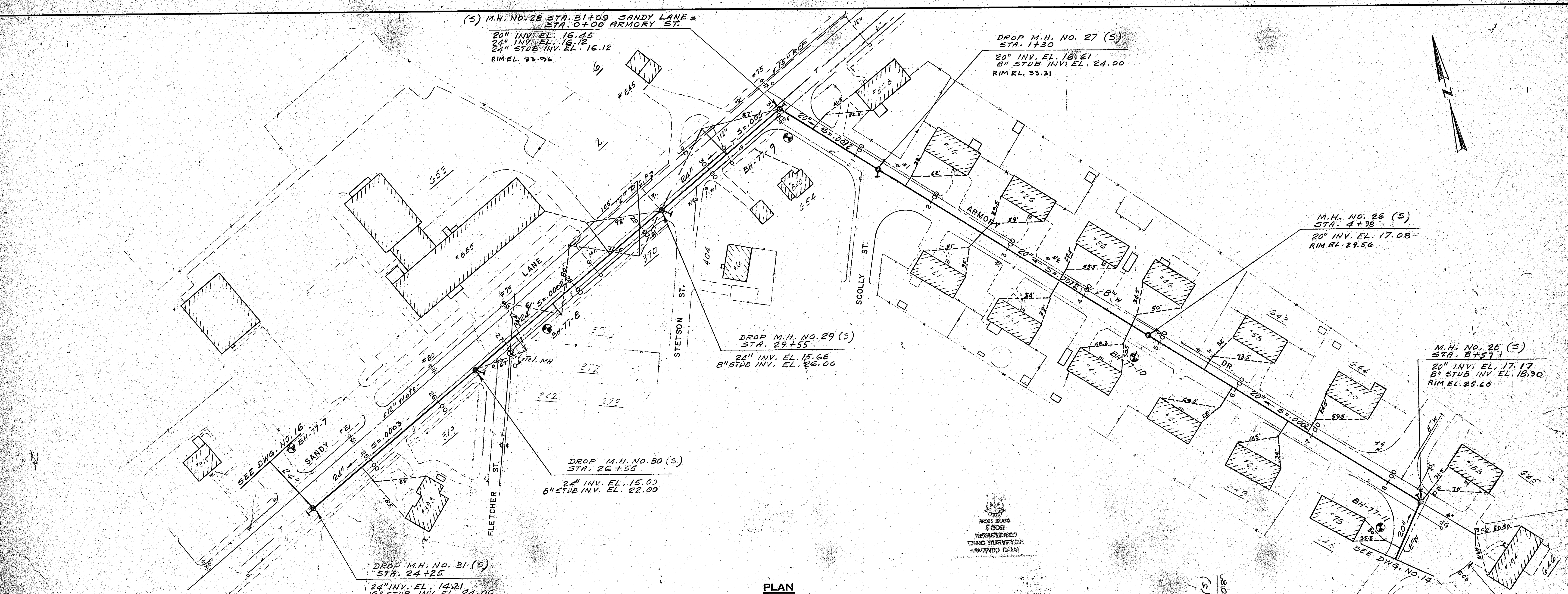


PLAN

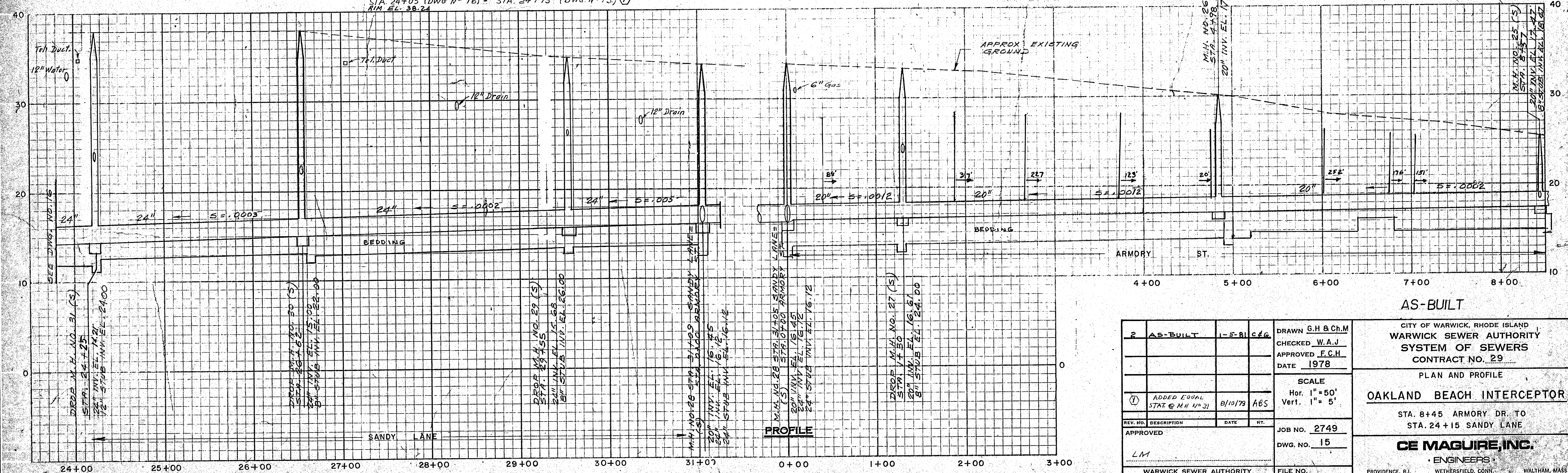


PROFILE

DRAWN G.H. & Ch.M.		CITY OF WARWICK, RHODE ISLAND WARWICK SEWER AUTHORITY SYSTEM OF SEWERS CONTRACT NO. 29
CHECKED W.A.J.		
APPROVED F.C.H.		
DATE 1978		PLAN AND PROFILE OAKLAND BEACH INTERCEPTOR STA. 8+45 ARMORY DR. TO STA. 24+15 SANDY LANE
SCALE Hor. 1" = 50' Vert. 1" = 5'		
JOB NO. 2749		CE MAGUIRE, INC. ENGINEERS PROVIDENCE, R.I. WETHERFIELD, CONN.
DWG. NO. 15		
WARWICK SEWER AUTHORITY		FILE NO.

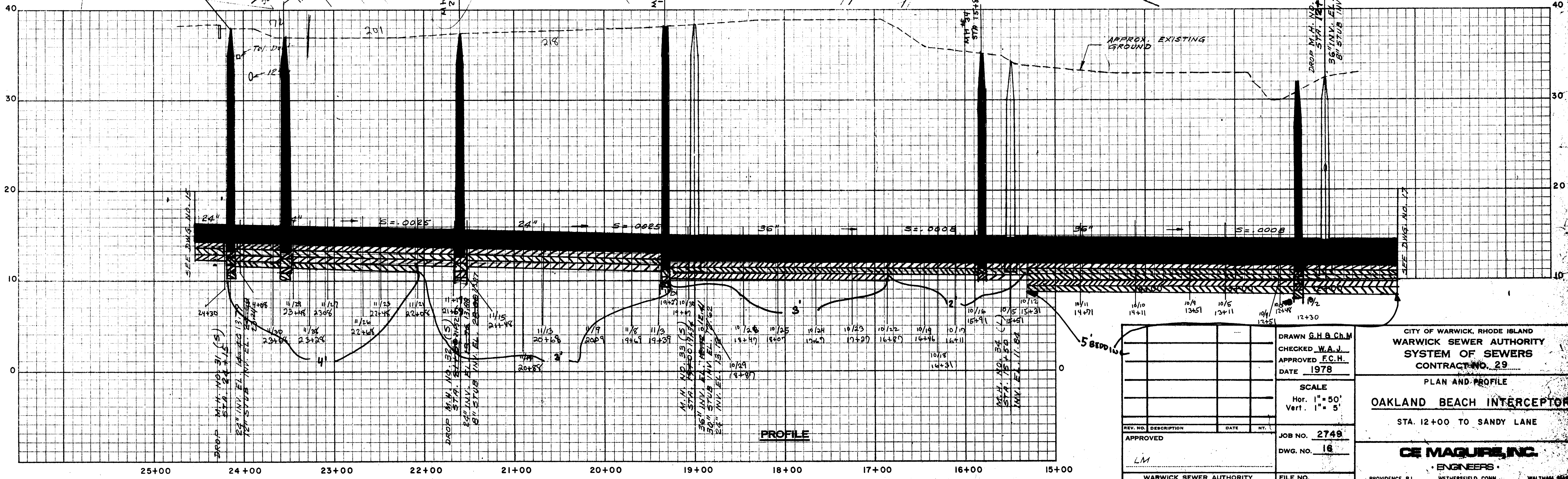
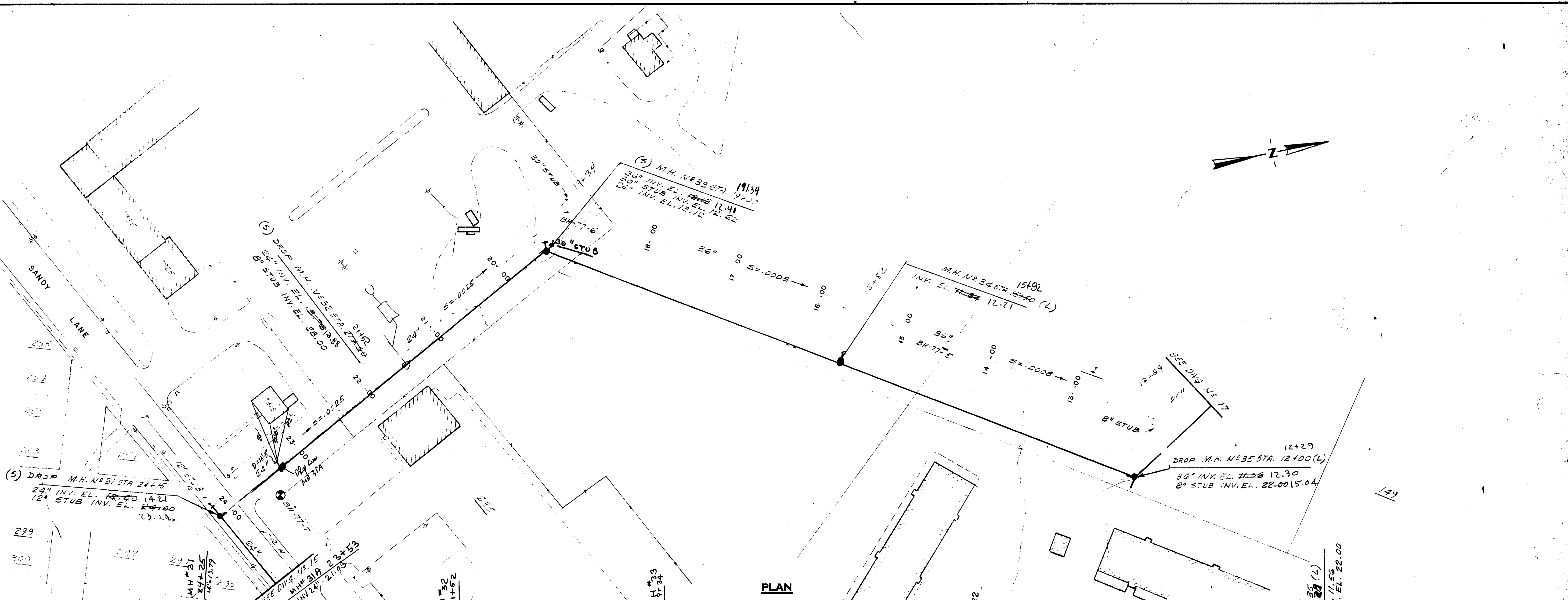


PLAN

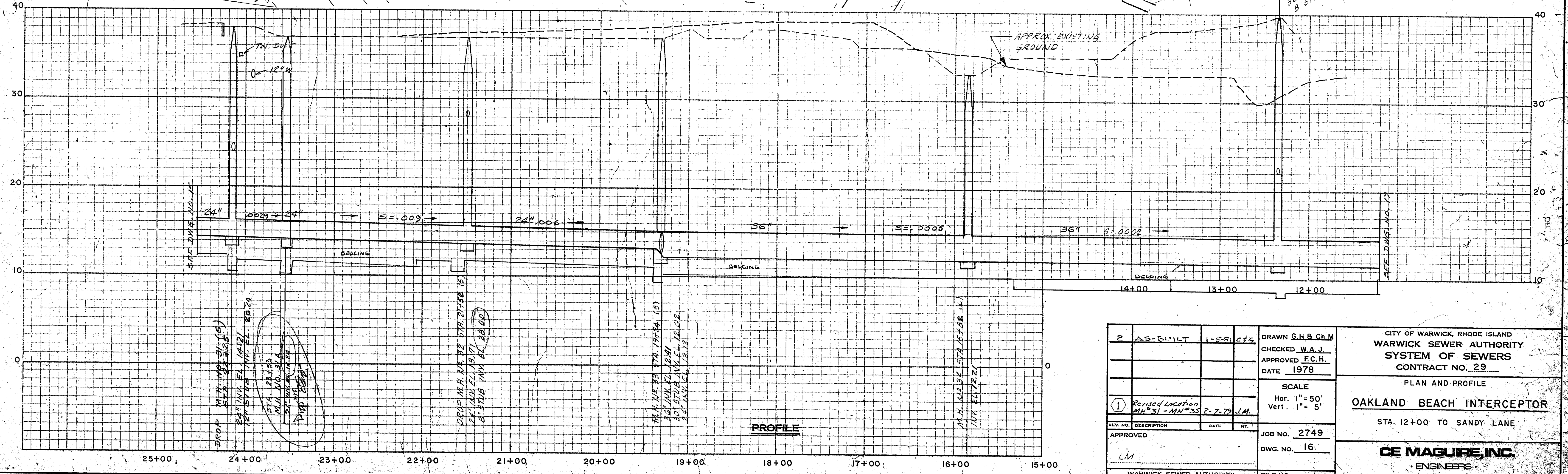
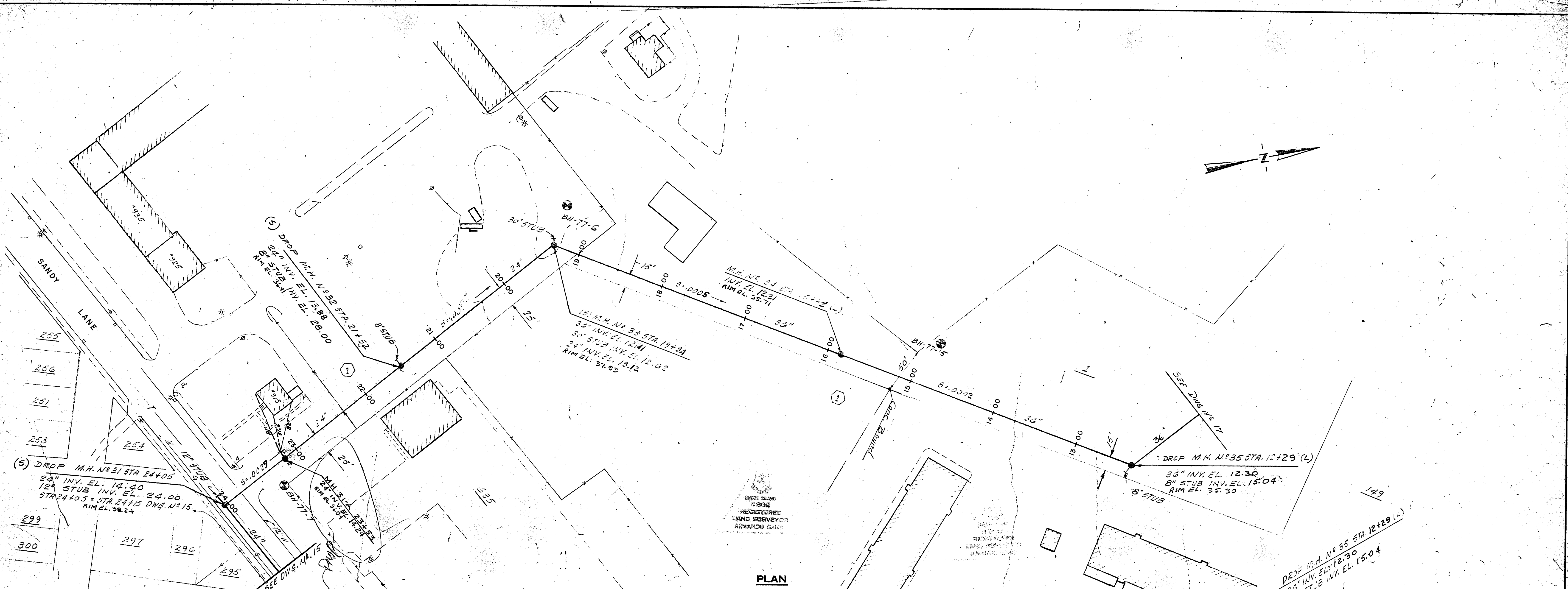


PROFILE

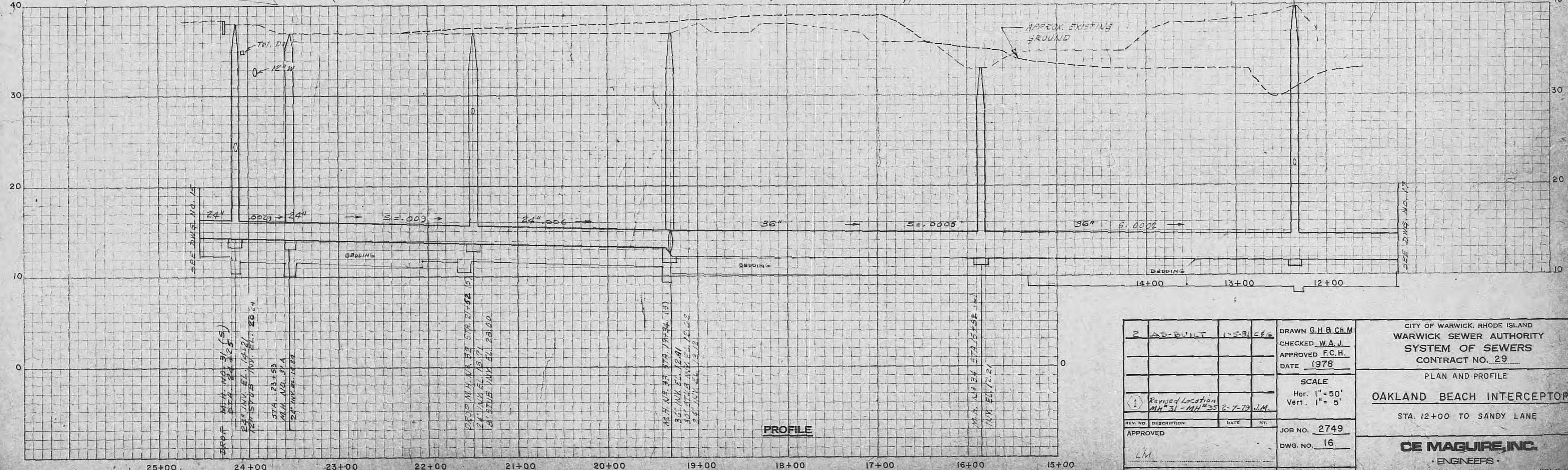
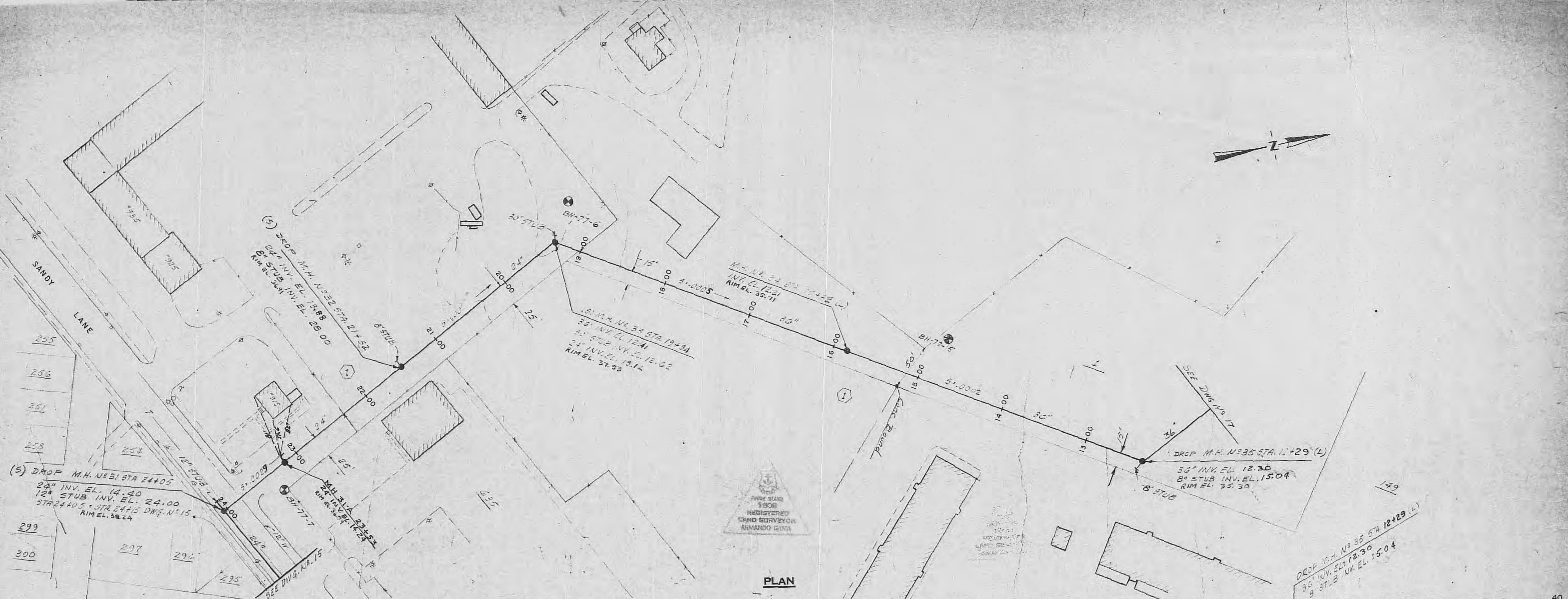
2 AS-BUILT		1-5-RICGG	DRAWN G.H. & Ch.M.	CITY OF WARWICK, RHODE ISLAND WARWICK SEWER AUTHORITY SYSTEM OF SEWERS CONTRACT NO. 29
			CHECKED W.A.J.	
			APPROVED F.C.H.	
			DATE 1978	PLAN AND PROFILE
			SCALE Hor. 1" = 50' Vert. 1" = 5'	OAKLAND BEACH INTERCEPTOR
			JOB NO. 2749	STA. 8+45 ARMORY DR. TO STA. 24+15 SANDY LANE
			DWG. NO. 15	CE MAGUIRE, INC. ENGINEERS
			WARWICK SEWER AUTHORITY	PROVIDENCE, R.I. WETHERSFIELD, CONN. WALTHAM, MASS.



DRAWN G.H.B.C.H.M. CHECKED W.A.J. APPROVED F.C.H. DATE 1978		CITY OF WARWICK, RHODE ISLAND WARWICK SEWER AUTHORITY SYSTEM OF SEWERS CONTRACT NO. 29 PLAN AND PROFILE OAKLAND BEACH INTERCEPTOR STA. 12+00 TO SANDY LANE
SCALE Hor. 1" = 50' Vert. 1" = 5'		
REV. NO. DESCRIPTION DATE BY APPROVED LM		JOB NO. 2748 DWG. NO. 16 FILE NO.
WARWICK SEWER AUTHORITY		CE MAGUIRE, INC. ENGINEERS PROVIDENCE, R.I. WETHERSFIELD, CONN. WALTHAM, MASS.



2	AS-BUILT	1-2-81	CEG	DRAWN G.H.B.C.M.	CITY OF WARWICK, RHODE ISLAND WARWICK SEWER AUTHORITY SYSTEM OF SEWERS CONTRACT NO. 29
				CHECKED W.A.J.	
				APPROVED F.C.H.	
				DATE 1978	PLAN AND PROFILE
				SCALE Hor. 1" = 50' Vert. 1" = 5'	OAKLAND BEACH INTERCEPTOR
				JOB NO. 2749	STA. 12+00 TO SANDY LANE
				DWG. NO. 16	CE MAGUIRE, INC.
				FILE NO.	ENGINEERS
					PROVIDENCE, R.I. WETHERSFIELD, CONN. WALTHAM, MASS.

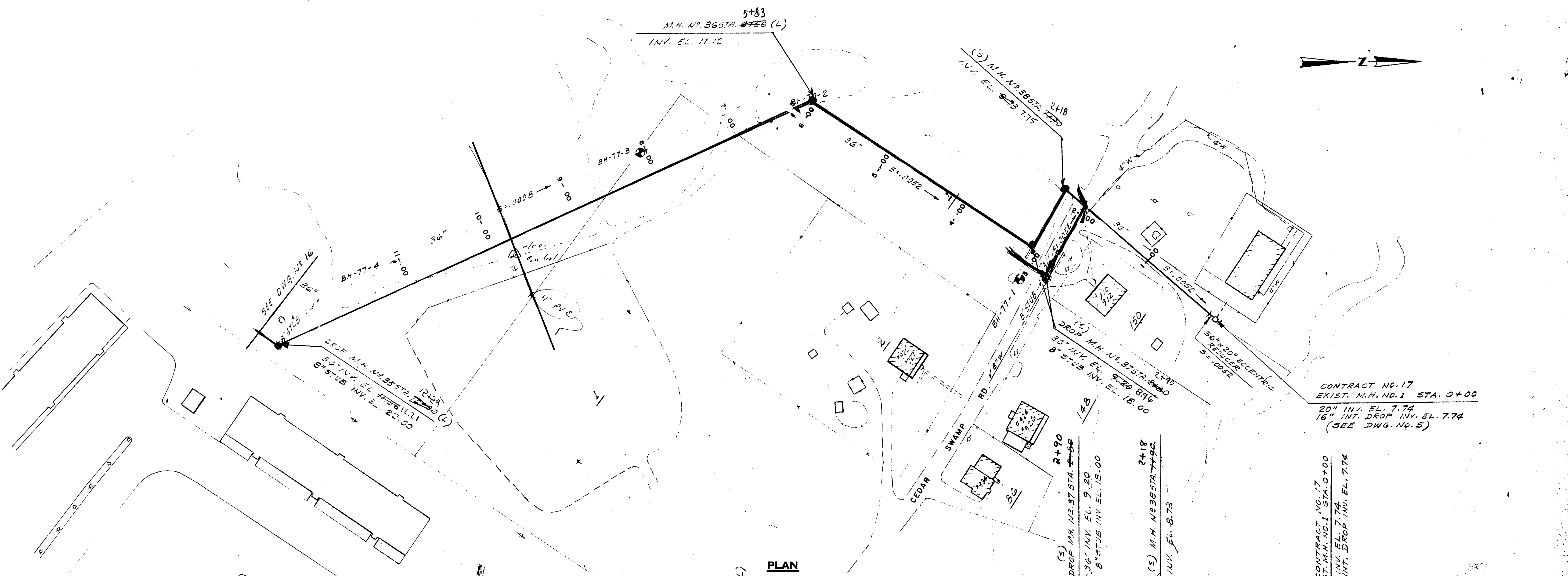
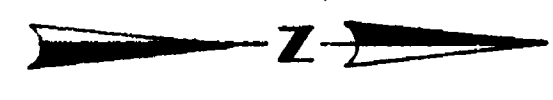


2	AS-BUILT	1-5-81	CEG
DRAWN G.H.B.C.M.			
CHECKED W.A.J.			
APPROVED F.C.H.			
DATE 1978			
SCALE			
Hor. 1" = 50'			
Vert. 1" = 5'			
JOB NO. 2749			
DWG. NO. 16			
FILE NO.			
WARWICK SEWER AUTHORITY			

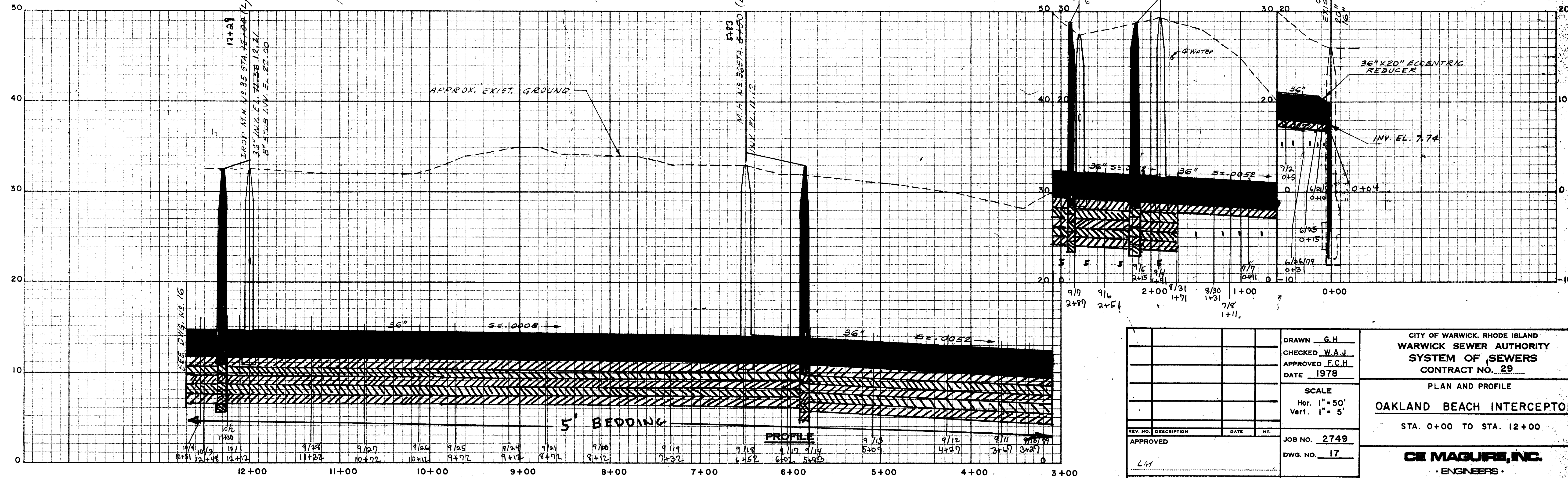
CITY OF WARWICK, RHODE ISLAND
WARWICK SEWER AUTHORITY
SYSTEM OF SEWERS
CONTRACT NO. 29

PLAN AND PROFILE
OAKLAND BEACH INTERCEPTOR
 STA. 12+00 TO SANDY LANE

CE MAGUIRE, INC.
 ENGINEERS
 PROVIDENCE, R.I. WETHERFIELD, CONN. WALHAM, MASS.



PLAN



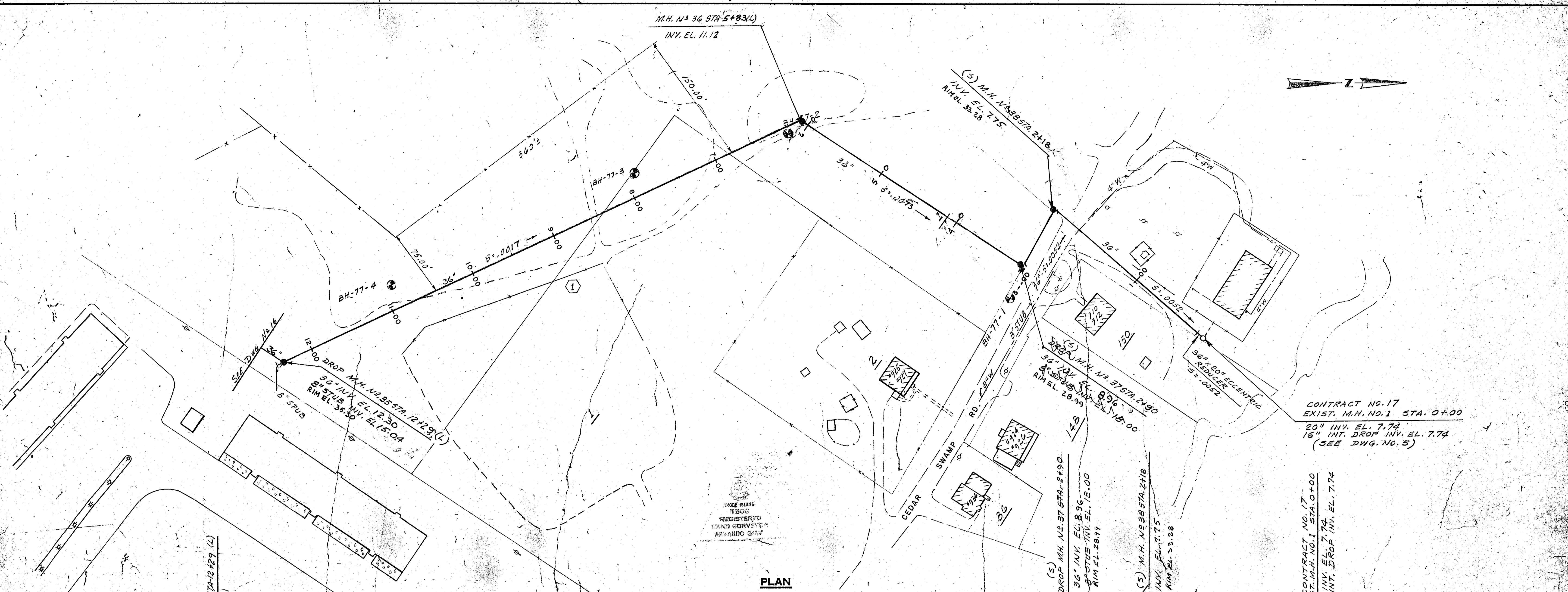
PROFILE

REV. NO.	DESCRIPTION	DATE	BY
APPROVED			
DRAWN <u>G.H.</u> CHECKED <u>W.A.J.</u> APPROVED <u>F.C.H.</u> DATE <u>1978</u>			
SCALE Hor. 1" = 50' Vert. 1" = 5'			
JOB NO. <u>2749</u> DWG. NO. <u>17</u>			
FILE NO.			

CITY OF WARWICK, RHODE ISLAND
 WARWICK SEWER AUTHORITY
 SYSTEM OF SEWERS
 CONTRACT NO. 29

PLAN AND PROFILE
 OAKLAND BEACH INTERCEPTOR
 STA. 0+00 TO STA. 12+00

CE MAGUIRE, INC.
 ENGINEERS
 PROVIDENCE, R.I. WETHERSFIELD, CONN. WALTHAM, MASS.



PLAN



PROFILE

CONTRACT NO. 17
 EXIST. M.H. NO. 1 STA. 0+00
 20" INV. EL. 7.74
 16" INT. DROP INV. EL. 7.74
 (SEE DWG. NO. 5)

CONTRACT NO. 17
 EXIST. M.H. NO. 1 STA. 0+00
 20" INV. EL. 7.74
 16" INT. DROP INV. EL. 7.74

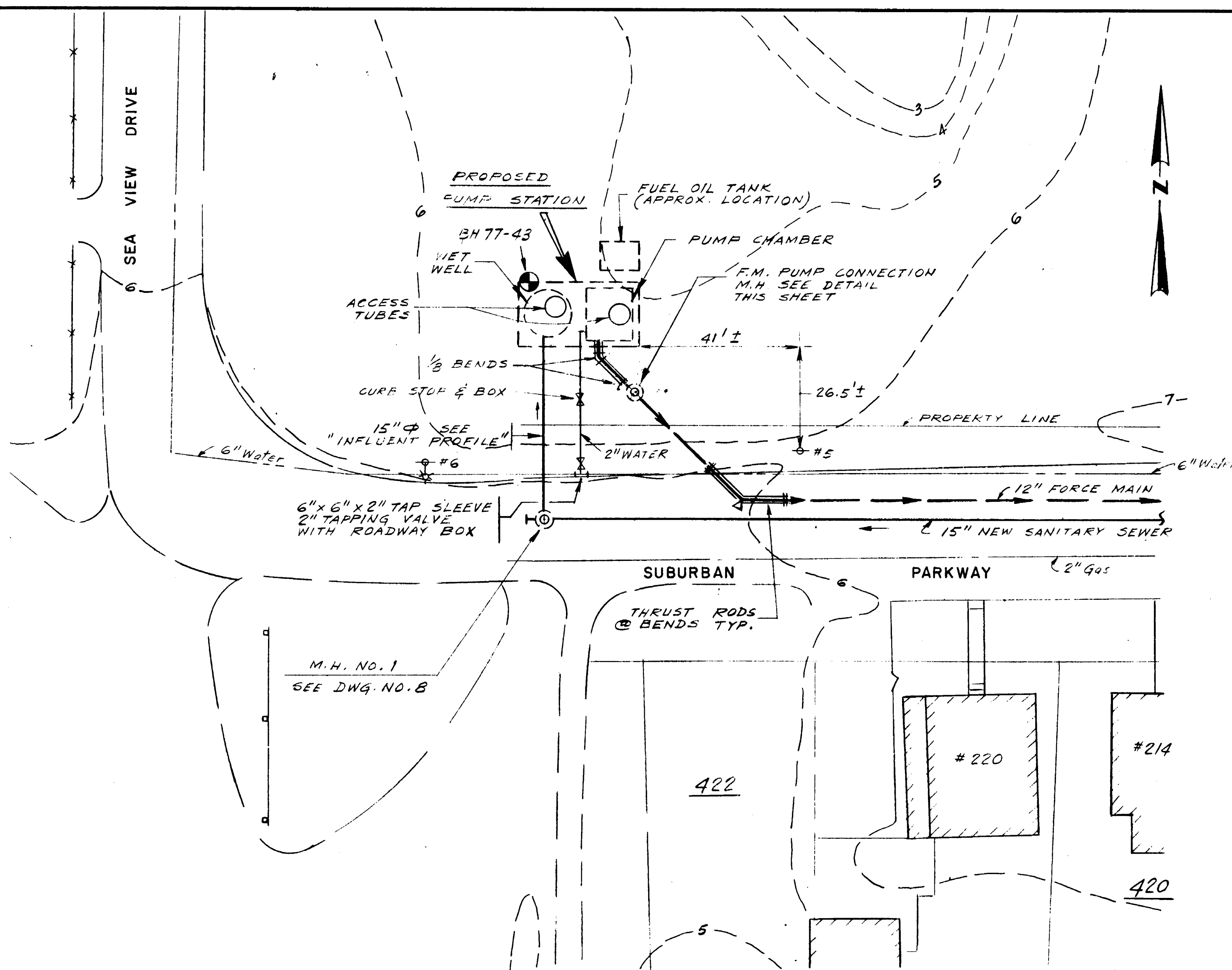
REV. NO.	DESCRIPTION	DATE	BY
1	Revised location M.H. 35 - M.H. 36	2/7/78	JM
APPROVED			
LM			
WARWICK SEWER AUTHORITY			

DRAWN	G.H.
CHECKED	W.A.J.
APPROVED	F.C.H.
DATE	1978
SCALE	
Hor.	1" = 50'
Vert.	1" = 5'
JOB NO.	2749
DWG. NO.	17
FILE NO.	

CITY OF WARWICK, RHODE ISLAND
 WARWICK SEWER AUTHORITY
 SYSTEM OF SEWERS
 CONTRACT NO. 29

PLAN AND PROFILE
 OAKLAND BEACH INTERCEPTOR
 STA. 0+00 TO STA. 12+00

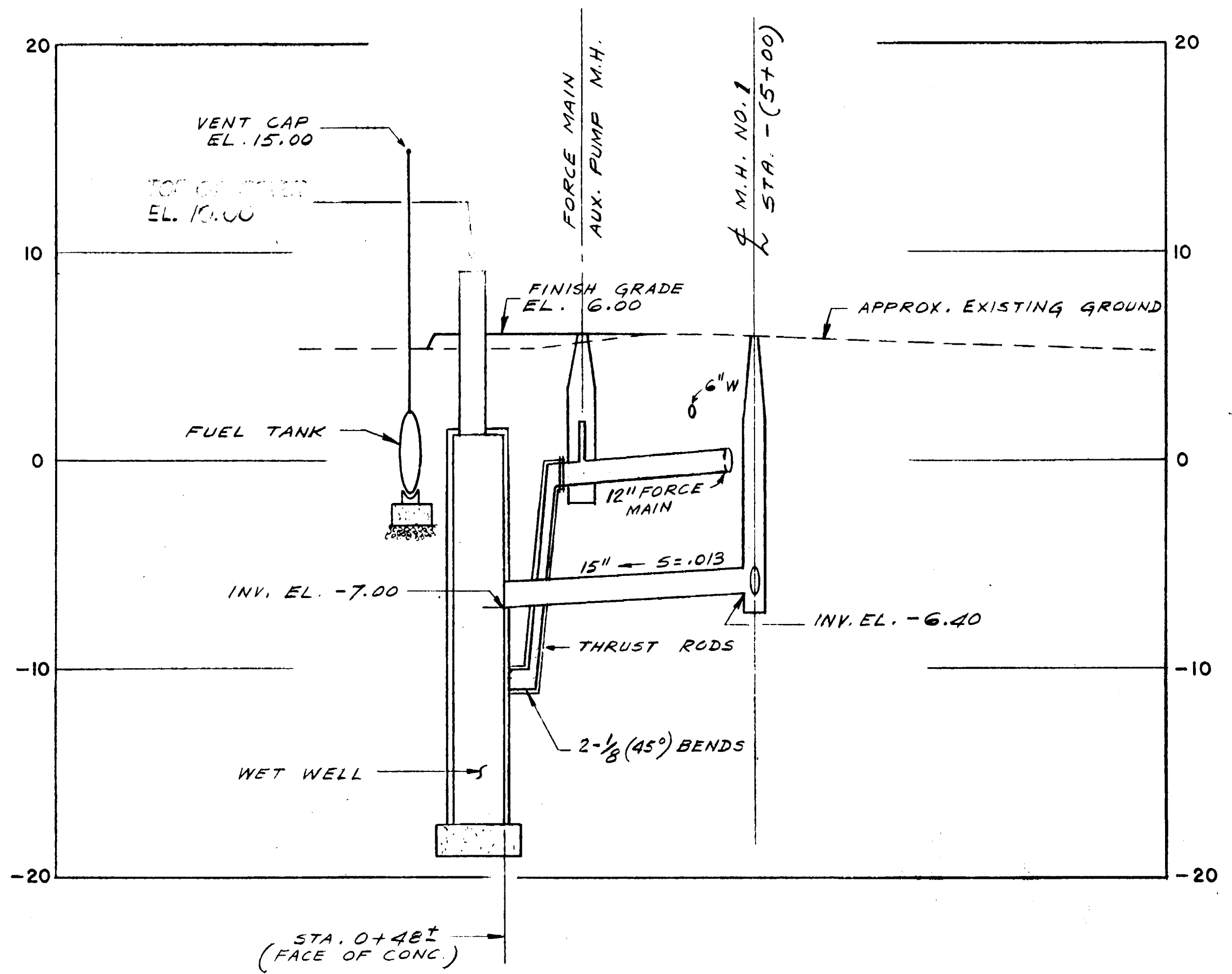
CE MAGUIRE, INC.
 ENGINEERS
 PROVIDENCE, R.I. WETHERFIELD, CONN. WALTHAM, MASS.



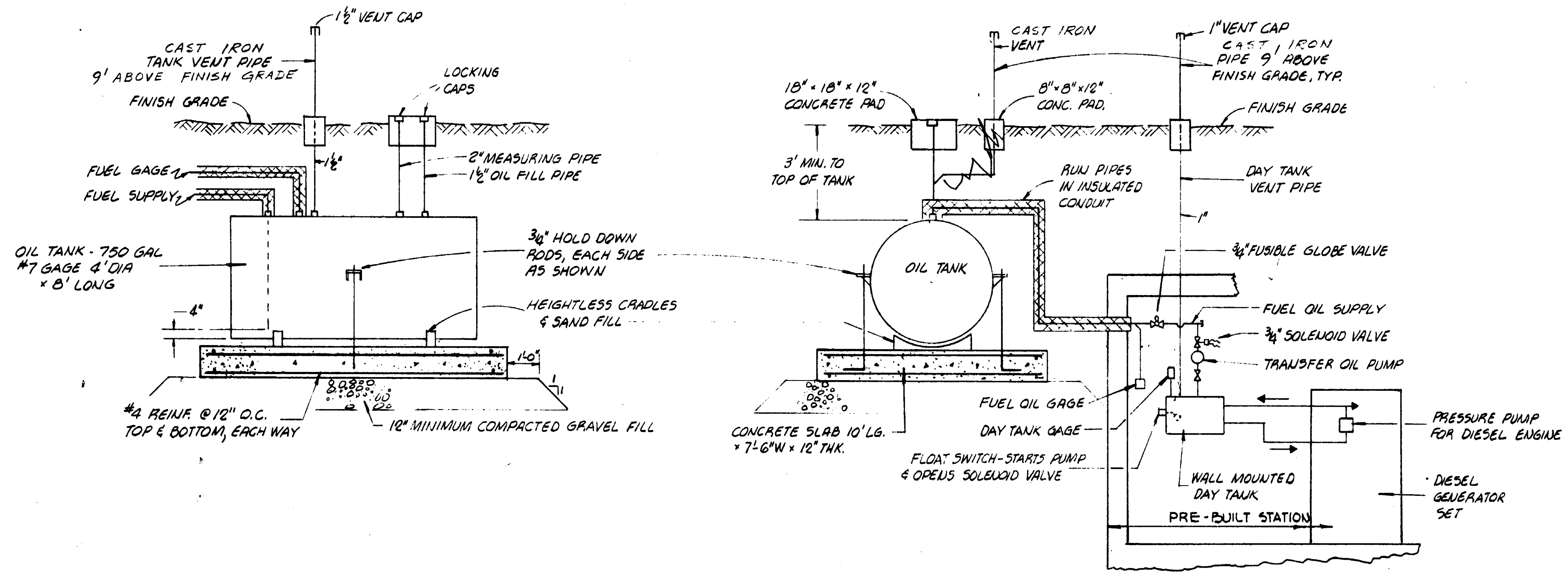
SITE PLAN
SCALE 1" = 20'

NOTES

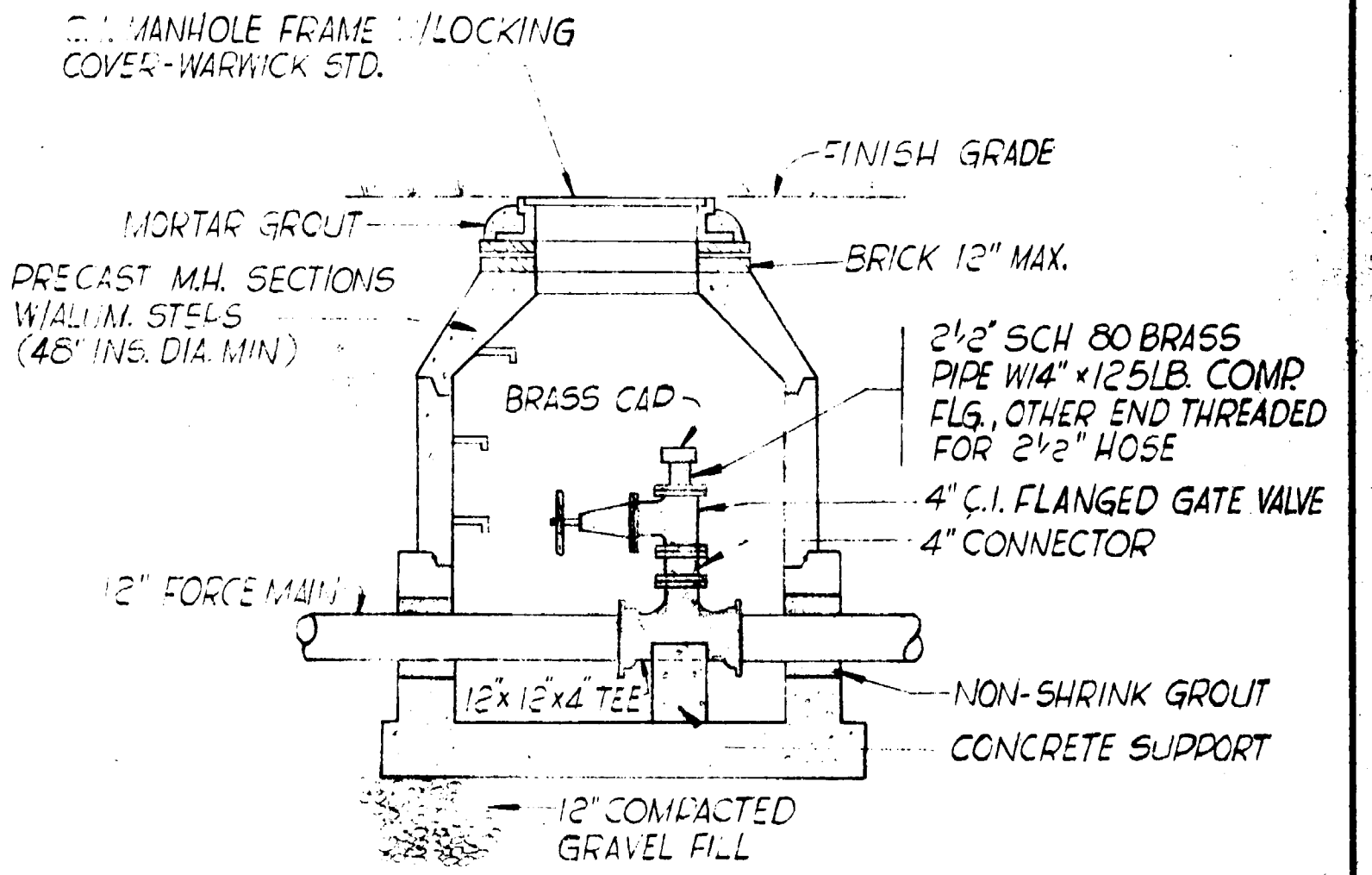
1. FOR LEGEND AND GENERAL NOTES SEE DWG. NO. 6
2. FOR TRENCH DETAILS SEE DWGS. NO. 5 & 7
3. PLANTING AROUND THIS STATION BY STATED ALLOWANCE (SEE SPECIFICATION SECTION 483)



INFLUENT PROFILE
HORIZ. 1" = 20'
SCALE VERT. 1" = 5'

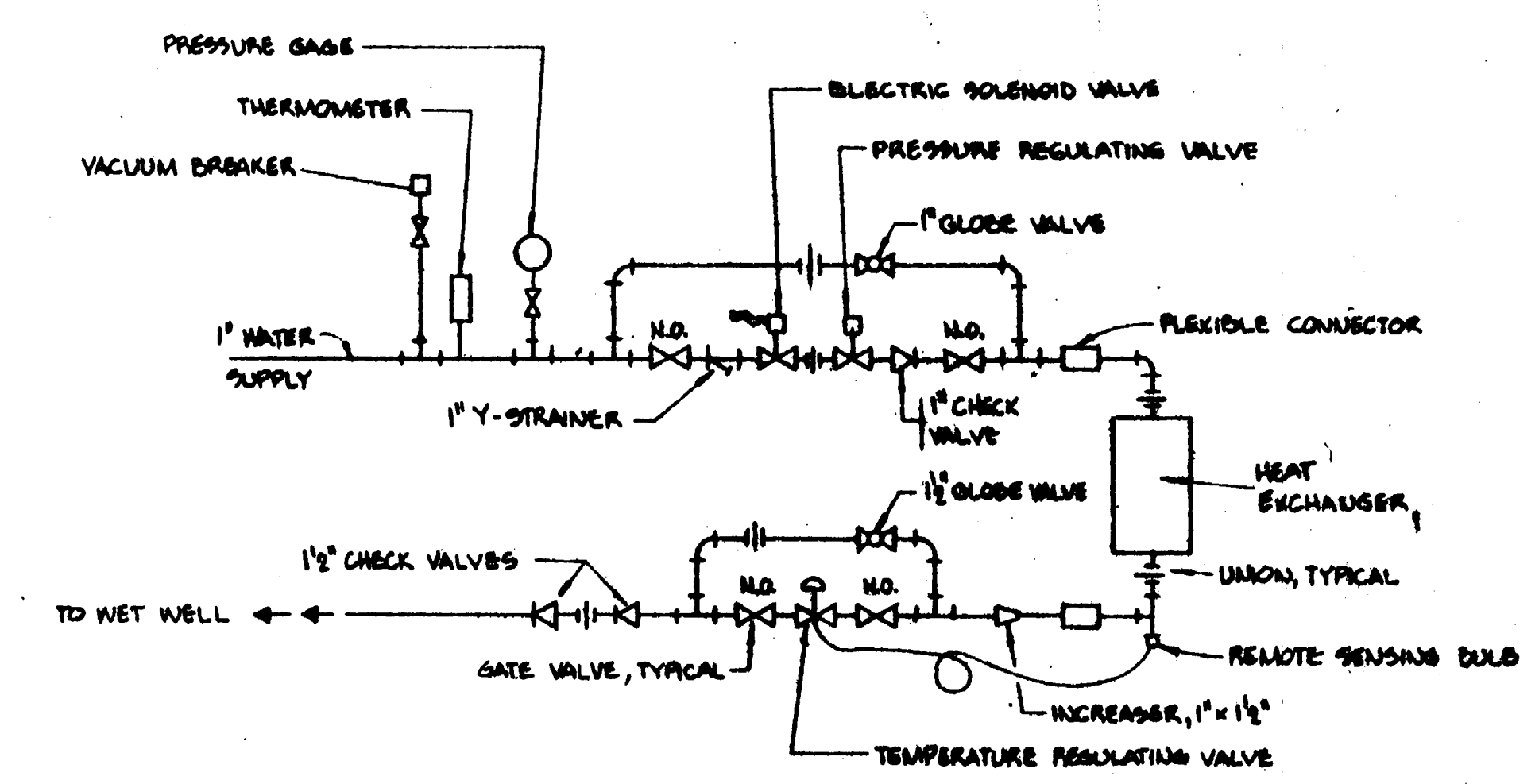
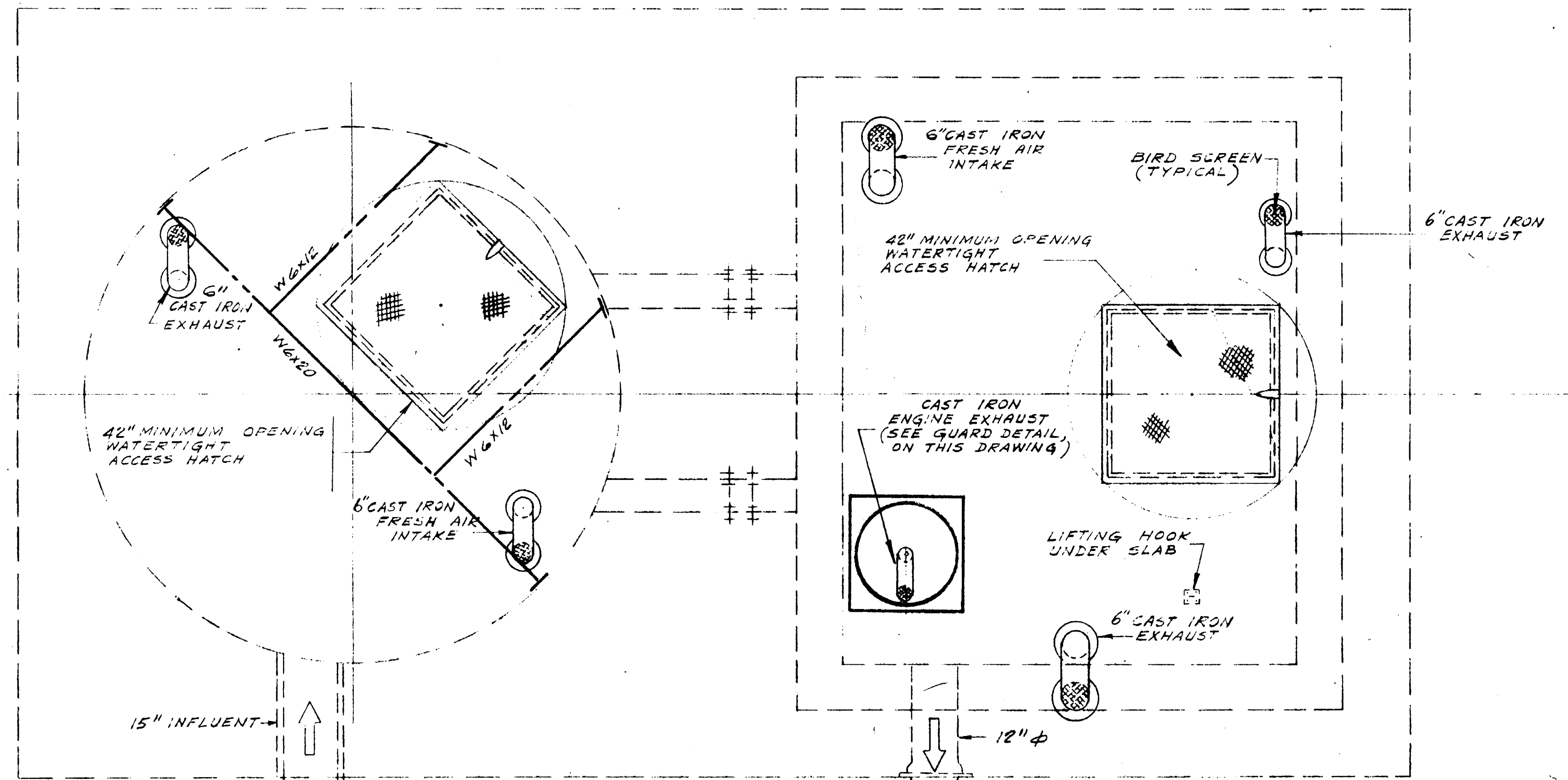


FUEL OIL TANK DETAILS
NOT TO SCALE

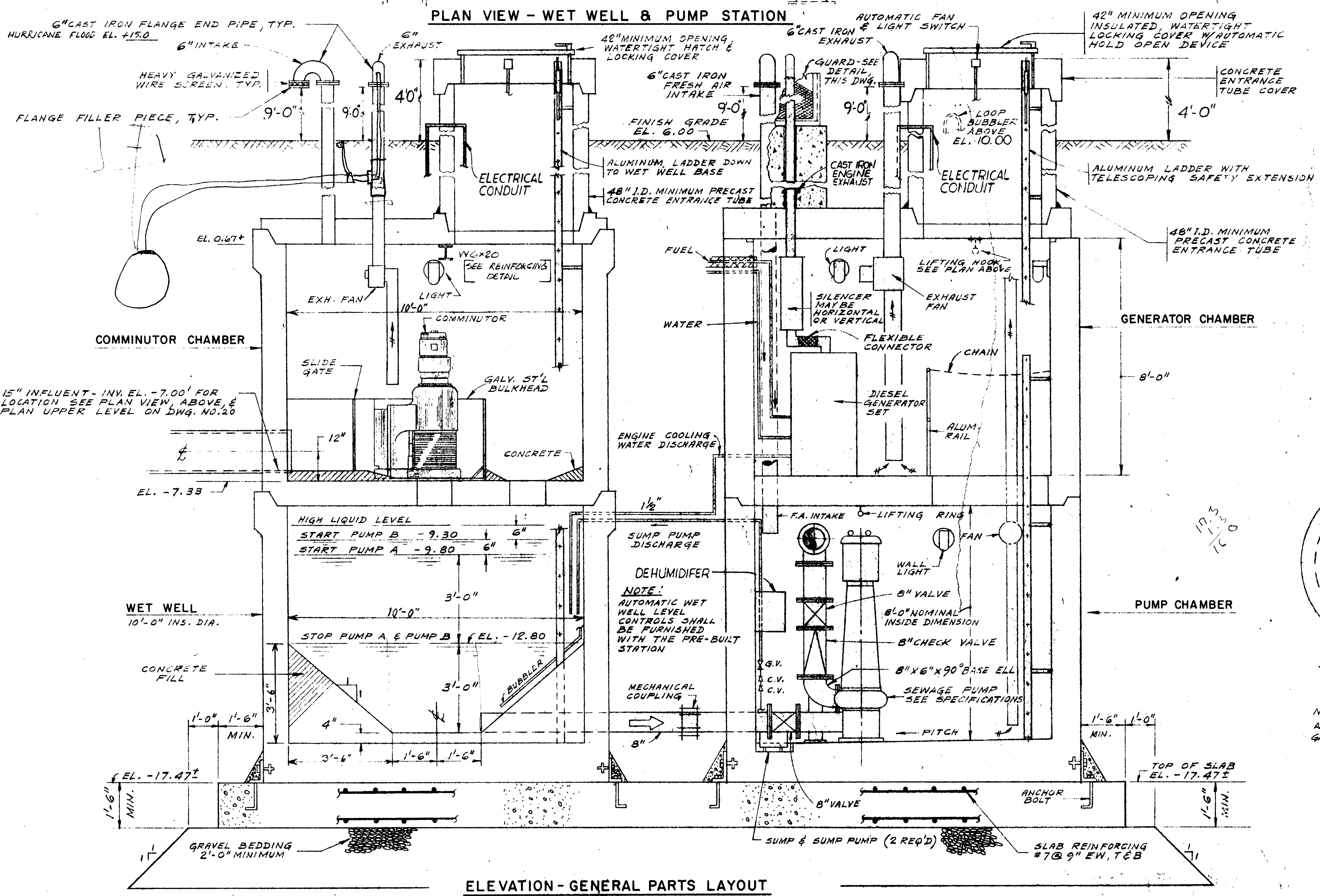


FORCE MAIN PUMP CONNECTION MANHOLE
SCALE 1/2" = 1'-0"

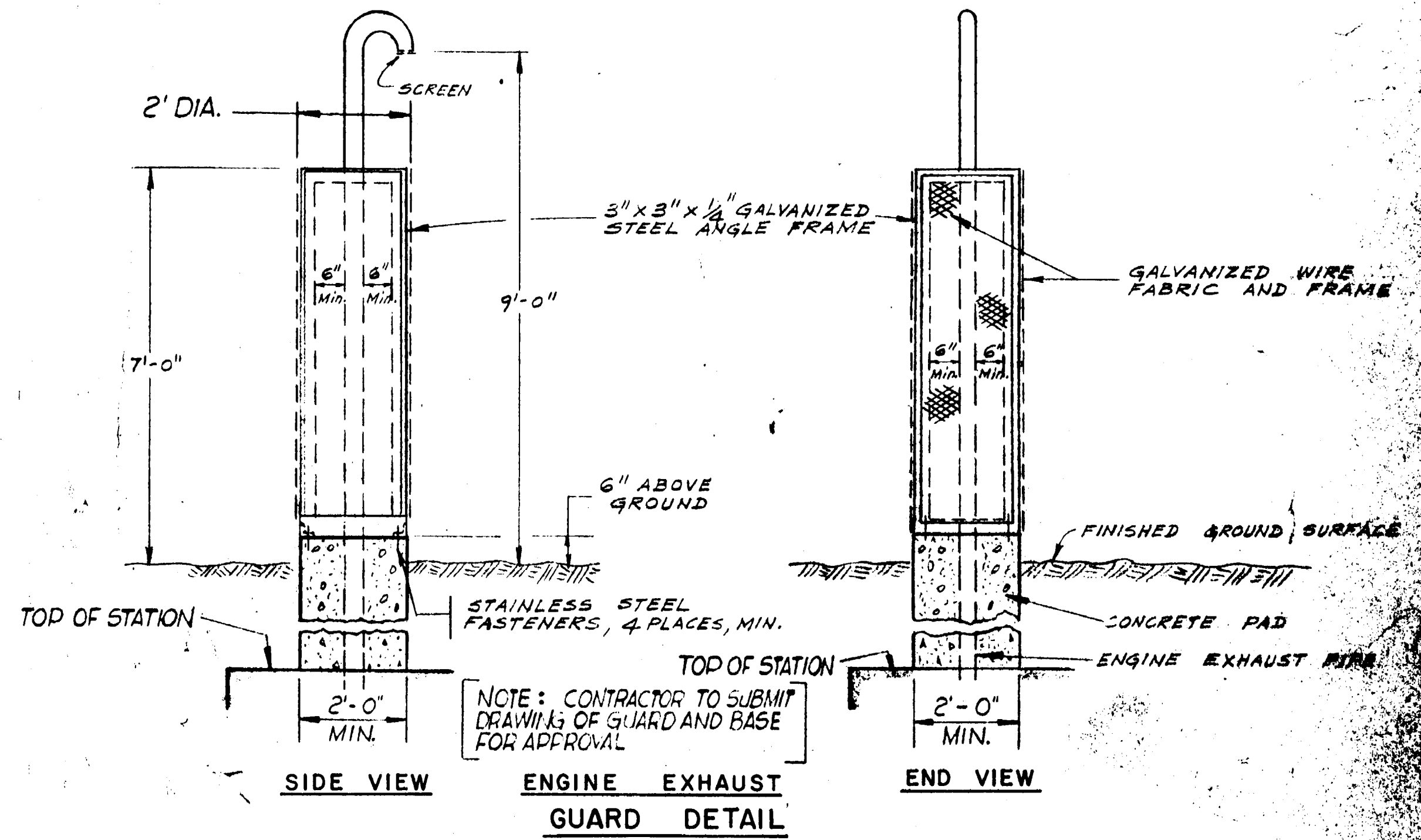
DRAWN <u>Ch.M</u>		CITY OF WARWICK, RHODE ISLAND	
CHECKED <u>W.A.J.</u>		WARWICK SEWER AUTHORITY	
APPROVED <u>F.C.H.</u>		SYSTEM OF SEWERS	
DATE <u>1978</u>		CONTRACT NO. <u>29</u>	
SCALE		SUBURBAN PARKWAY PUMP STATION	
AS SHOWN		SITE PLAN & PROFILE	
REV. NO.	DESCRIPTION	DATE	BY
APPROVED		JOB NO. <u>2746</u>	
<u>LM</u>		DWG. NO. <u>18</u>	
WARWICK SEWER AUTHORITY		FILE NO.	
		CE MAGUIRE, INC.	
		ENGINEERS	
		PROVIDENCE, R.I. WETHERSFIELD, CONN. WALTHAM, MASS.	



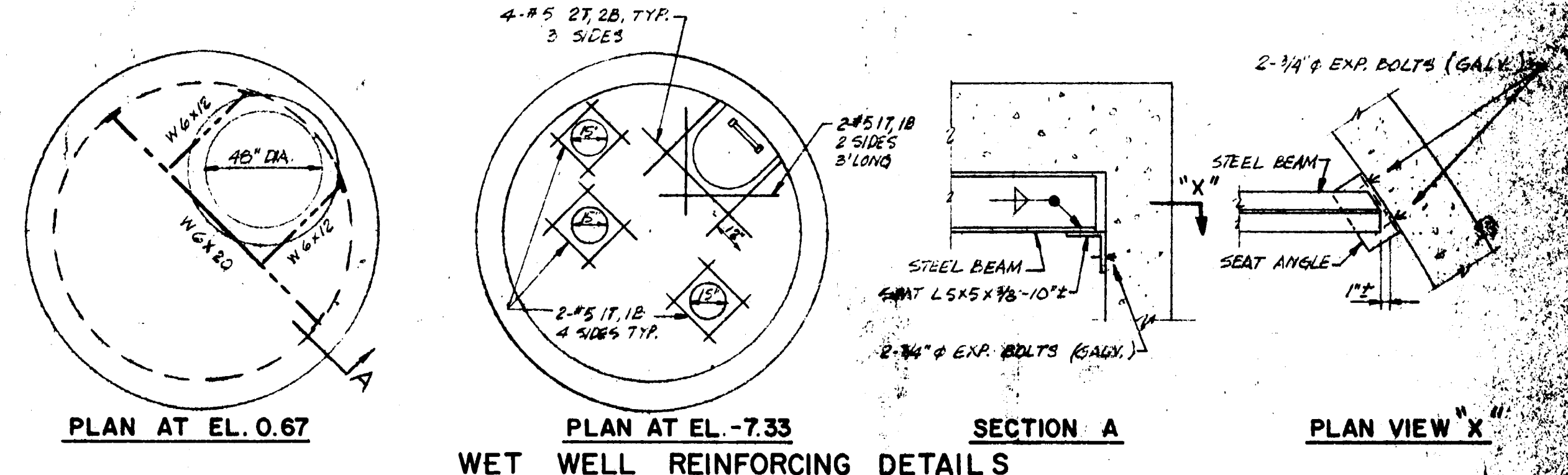
TYPICAL WATER PIPING AT DIESEL GENERATOR
NOT TO SCALE



ELEVATION - GENERAL PARTS LAYOUT



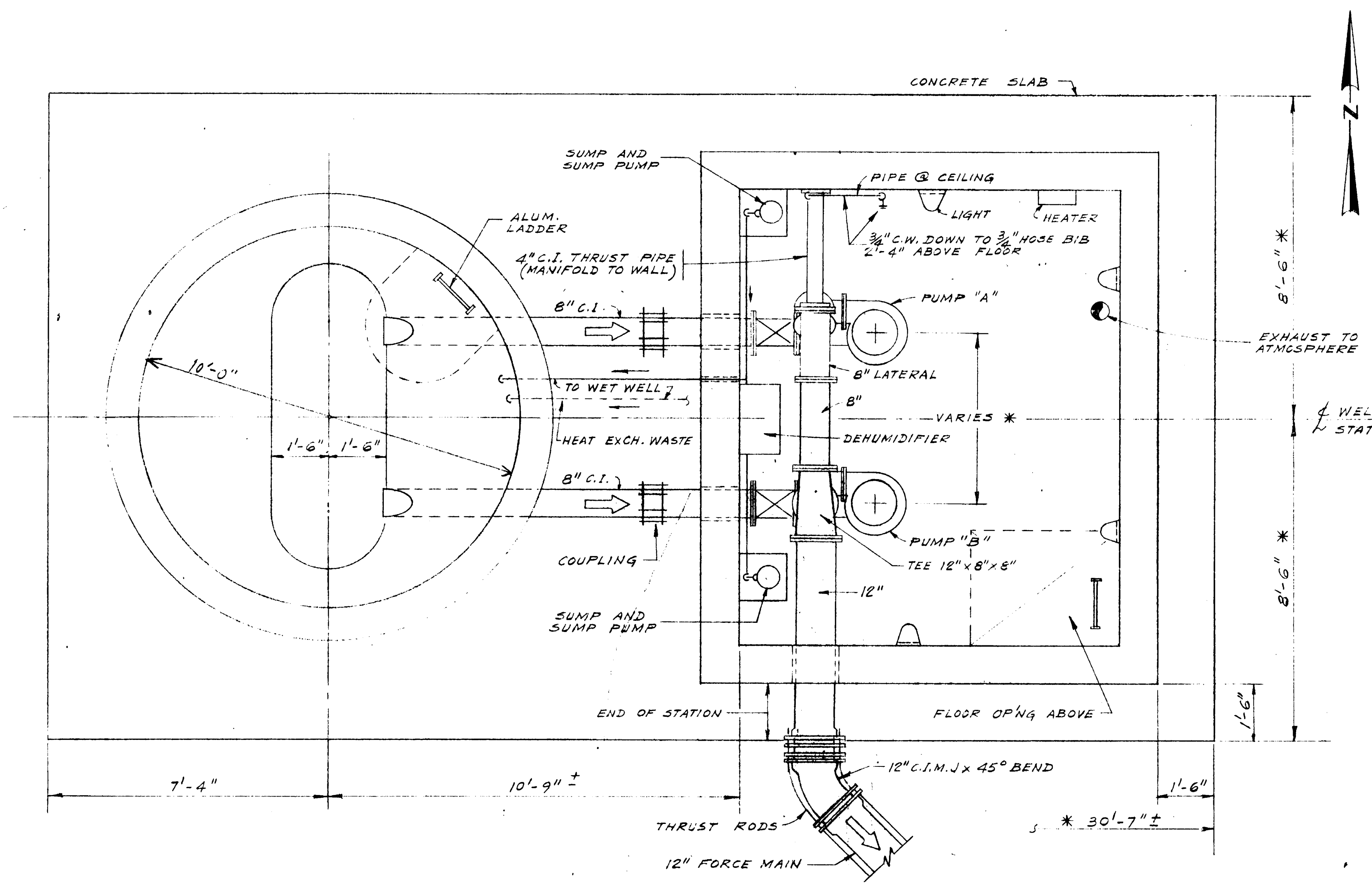
ENGINE EXHAUST GUARD DETAIL



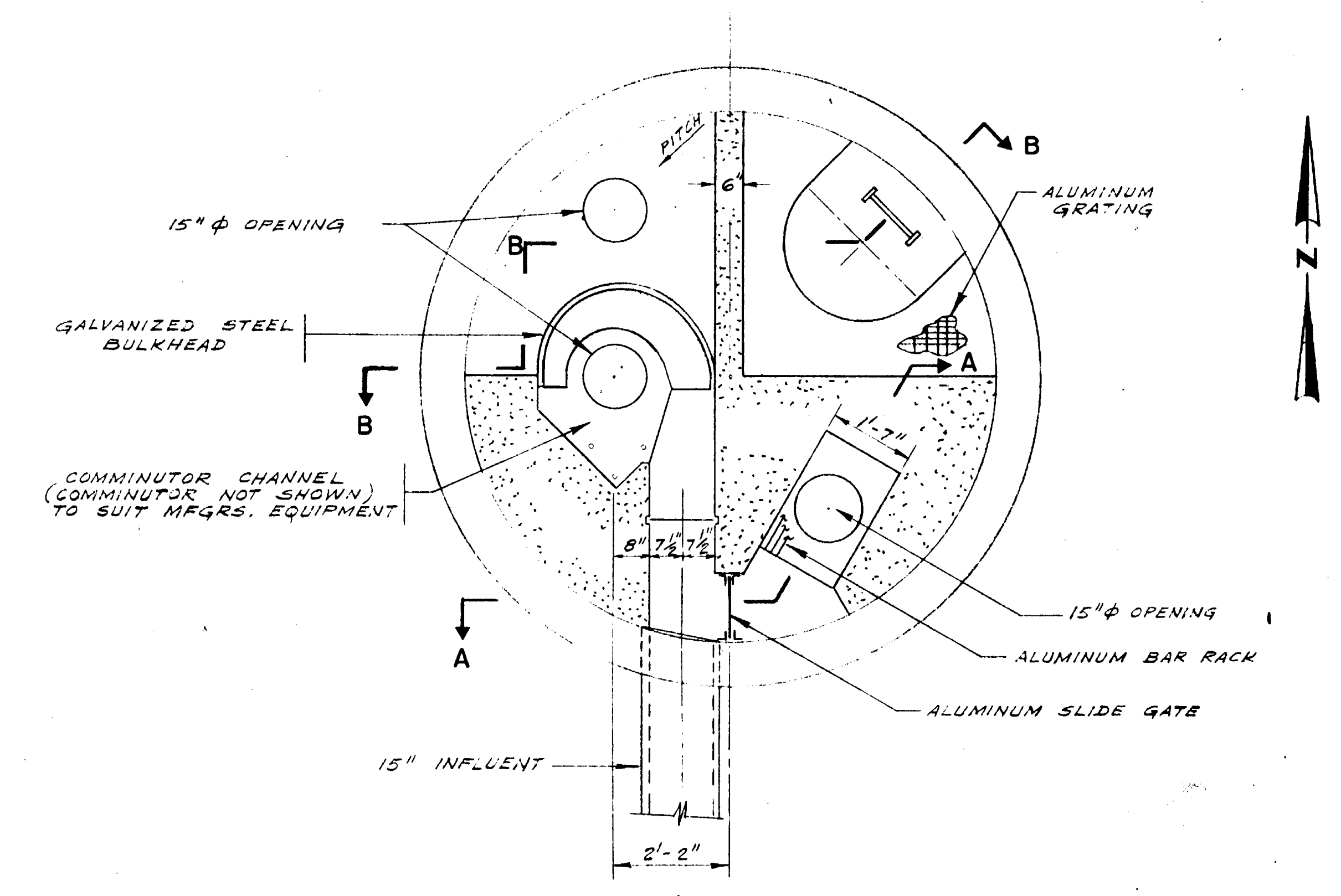
WET WELL REINFORCING DETAILS
NOT TO SCALE

NOTE:
ALL MATERIAL TO BE GALVANIZED.

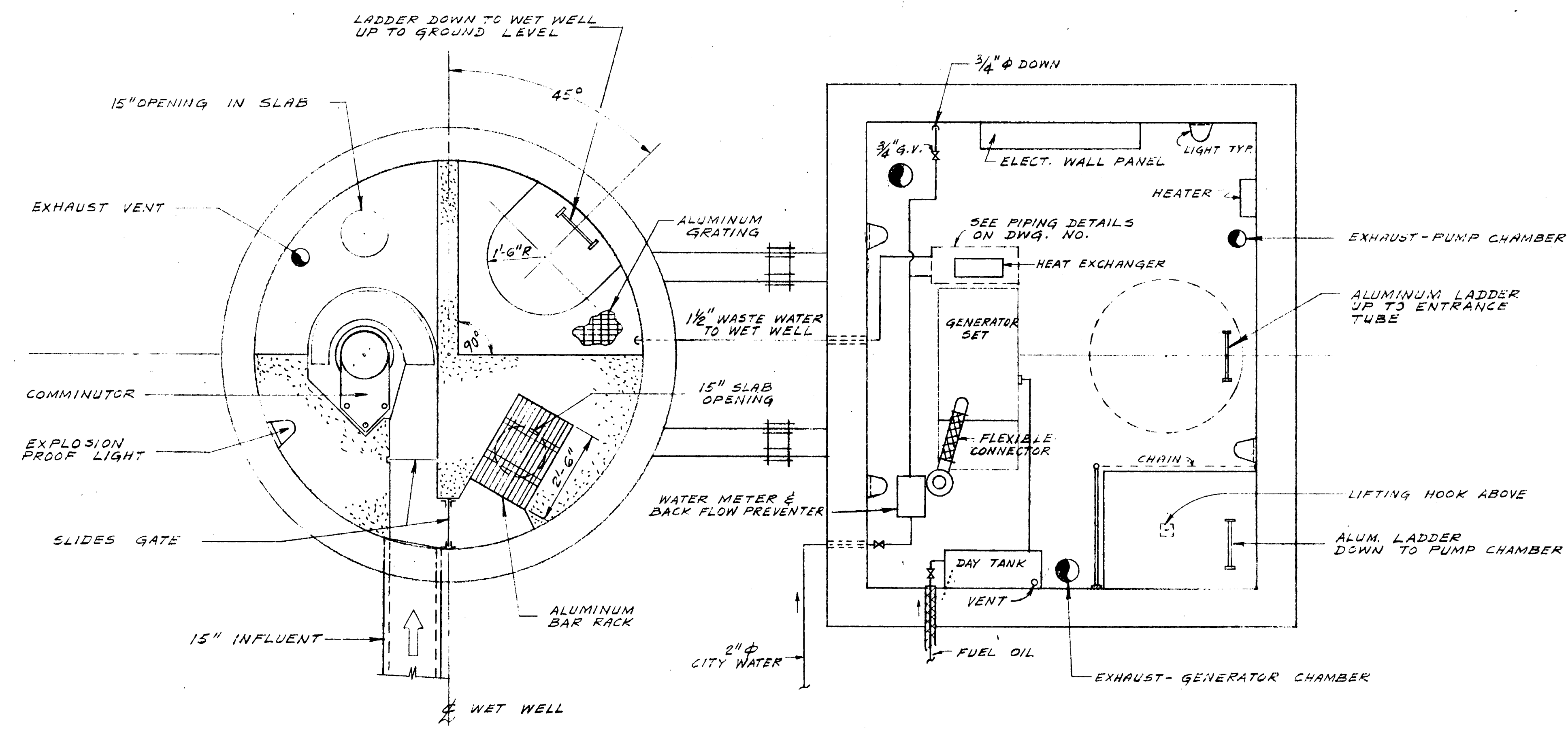
DRAWN Ch.M		CITY OF WARWICK, RHODE ISLAND	
CHECKED W.A.J		WARWICK SEWER AUTHORITY	
APPROVED F.C.H		SYSTEM OF SEWERS	
DATE 1978		CONTRACT NO. 29	
SCALE		SUBURBAN PARKWAY PUMP STATION	
1/2" = 1'-0"		PLAN & ELEVATION	
REV. NO.	DESCRIPTION	DATE	NT.
APPROVED			
JOB NO. 2746		DWG. NO. 19	
WARWICK SEWER AUTHORITY		CE MAGUIRE, INC.	
FILE NO.		ENGINEERS	
		PROVIDENCE, R.I. WETHERFIELD, CONN. WALTHAM, MASS.	



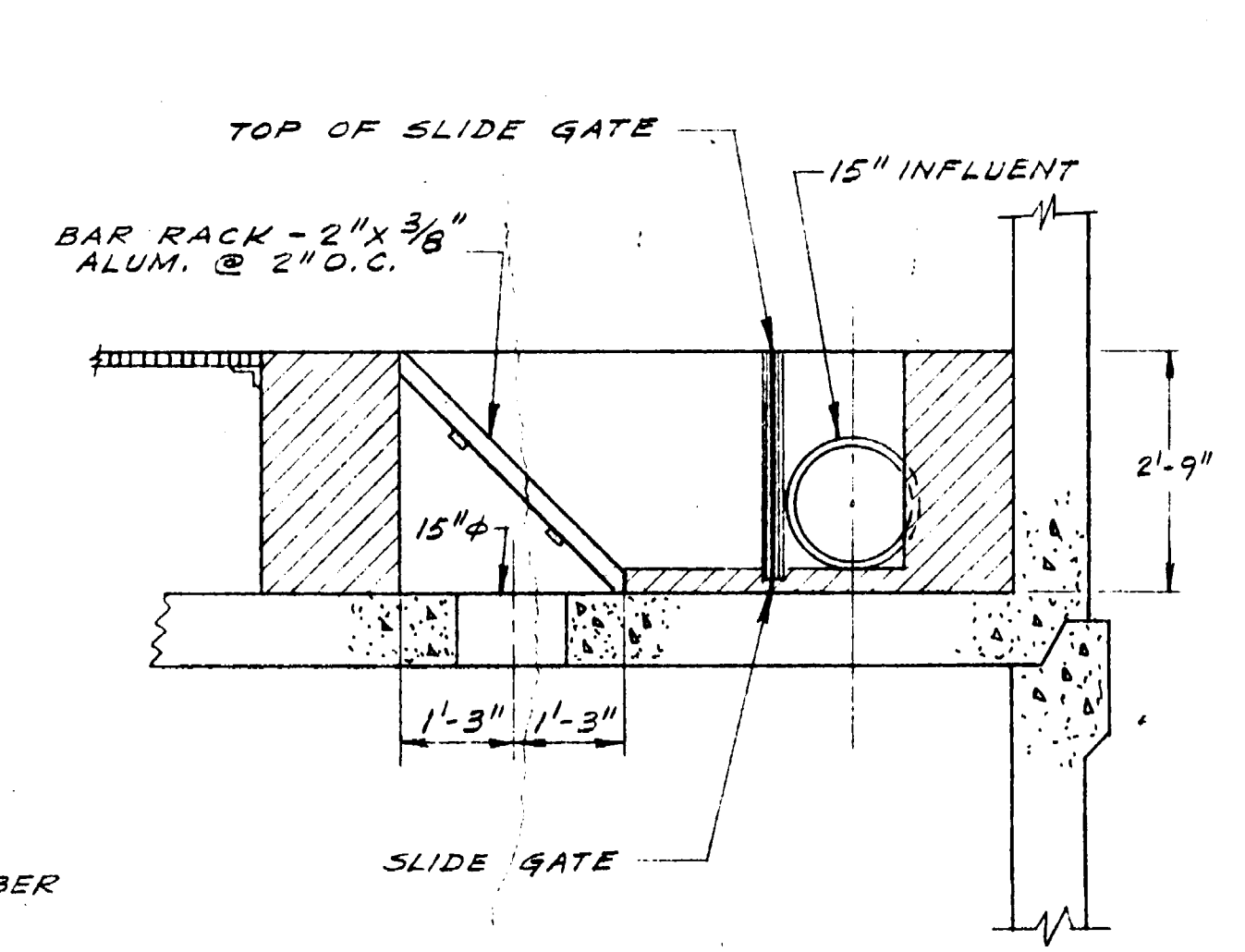
PLAN VIEW - PUMP LEVEL



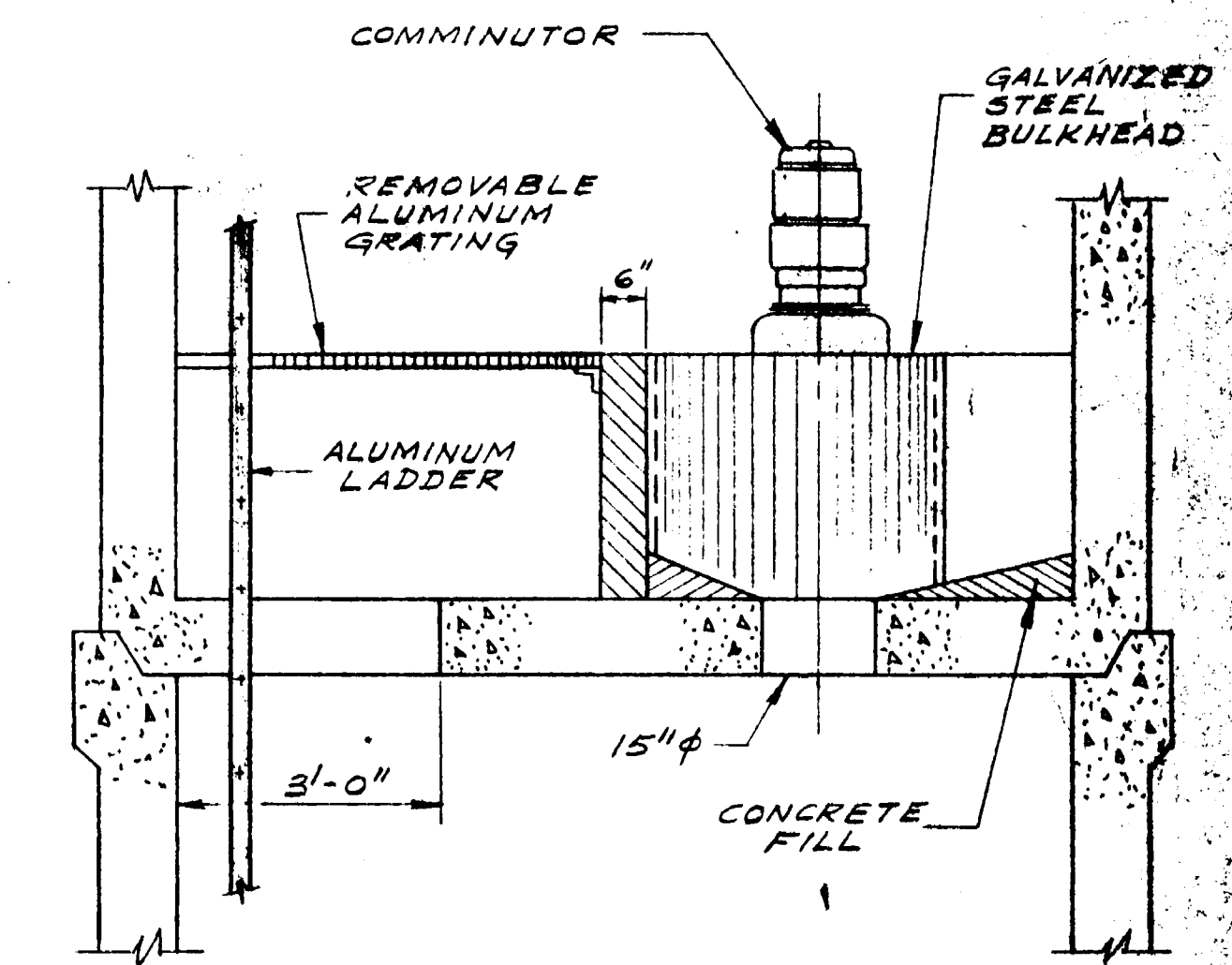
SECTION ABOVE COMMINUTOR



PLAN VIEW - UPPER LEVEL

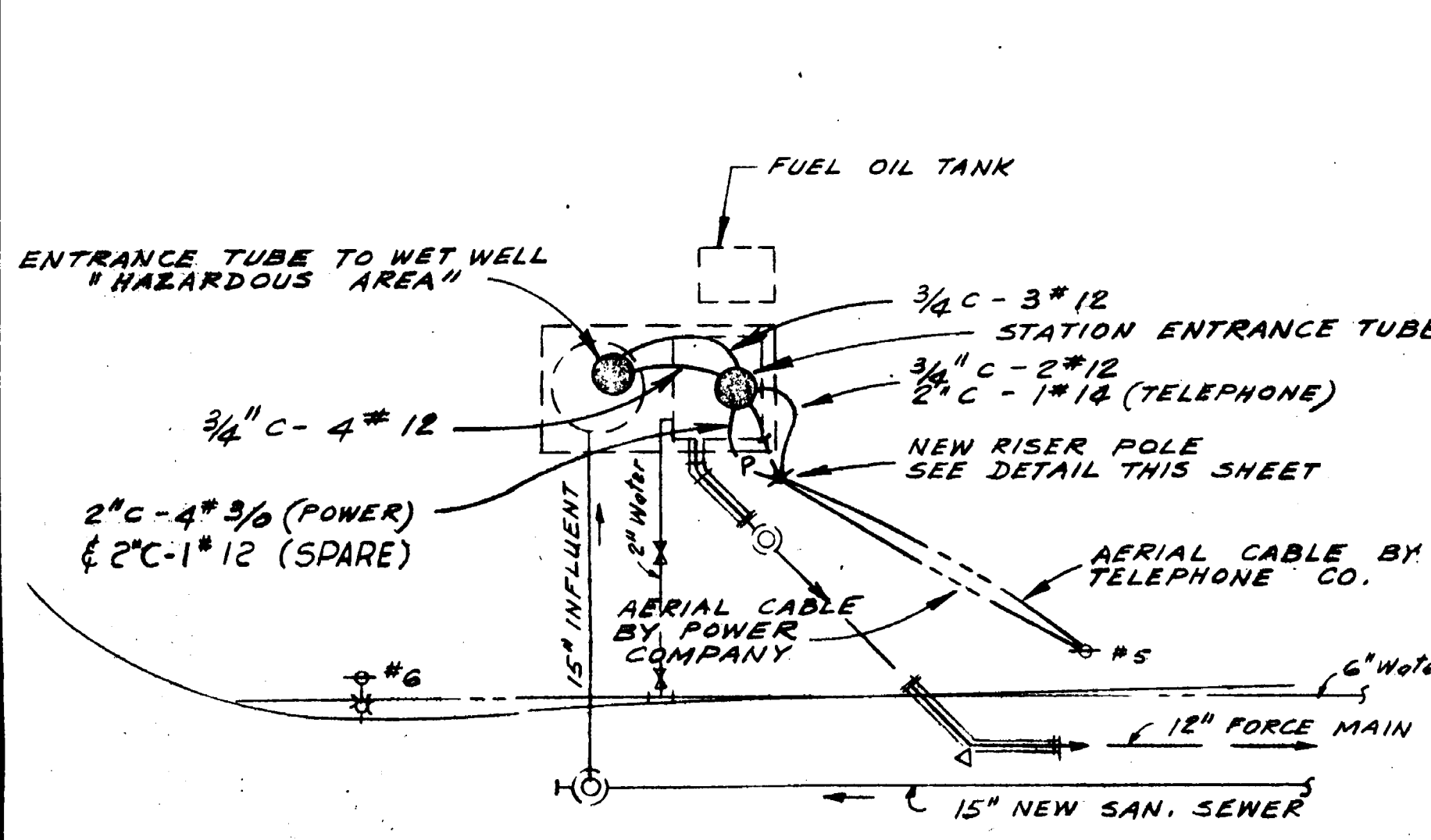


SECTION A-A



SECTION B-B

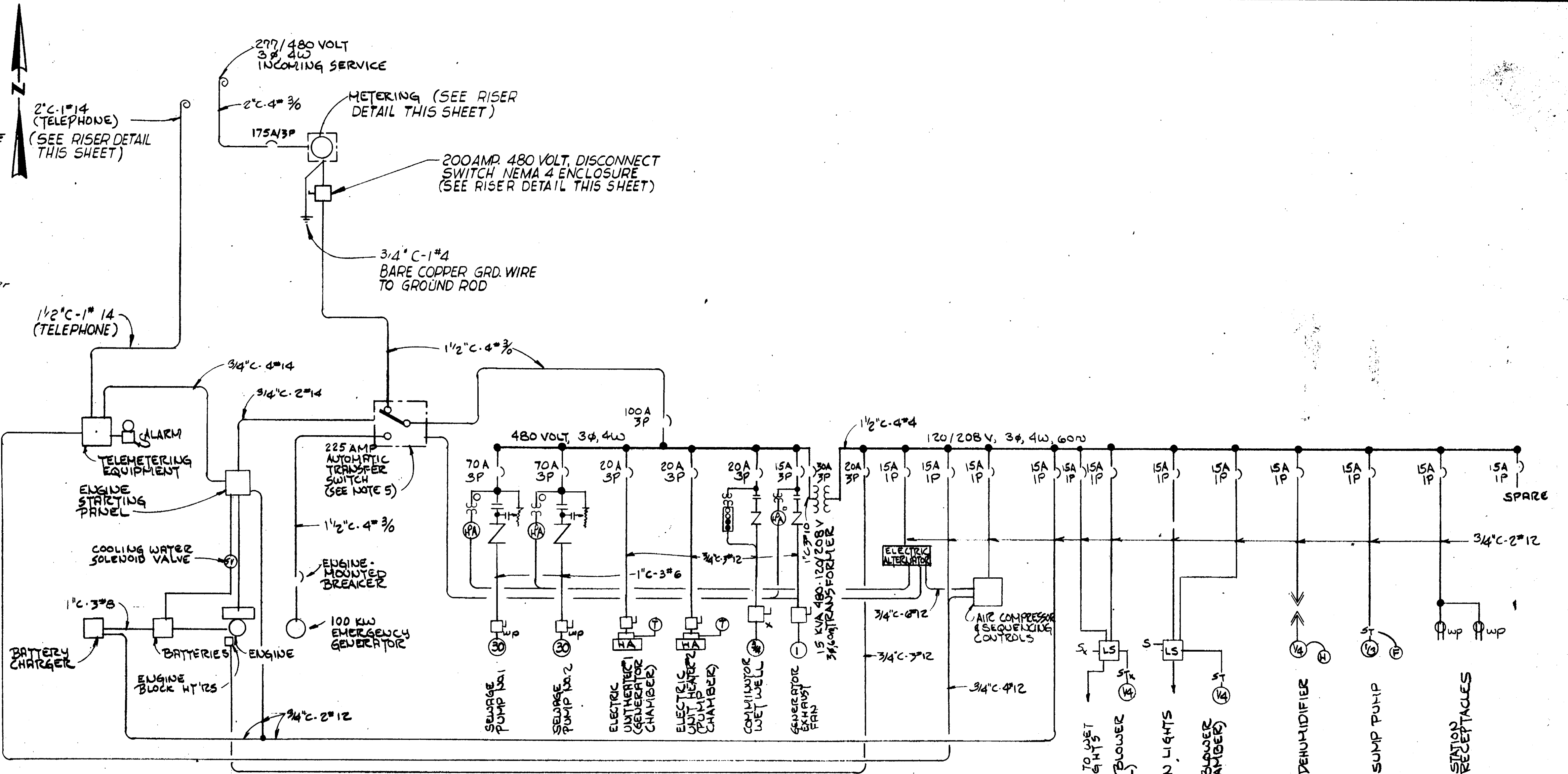
DRAWN Ch.M.		CITY OF WARWICK, RHODE ISLAND	
CHECKED W.A.J.		WARWICK SEWER AUTHORITY	
APPROVED F.C.H.		SYSTEM OF SEWERS	
DATE 1978		CONTRACT NO. 29	
SCALE		SUBURBAN PARKWAY PUMP STATION	
1/2" = 1'-0"		PLANS & SECTIONS	
REV. NO.	DESCRIPTION	DATE	NT.
APPROVED			
JOB NO. 2746		DWG. NO. 20	
FILE NO.		CE MAGUIRE, INC.	
WARWICK SEWER AUTHORITY		ENGINEERS	
		PROVIDENCE, R.I. WETHERFIELD, CONN. WALTHAM, MASS.	



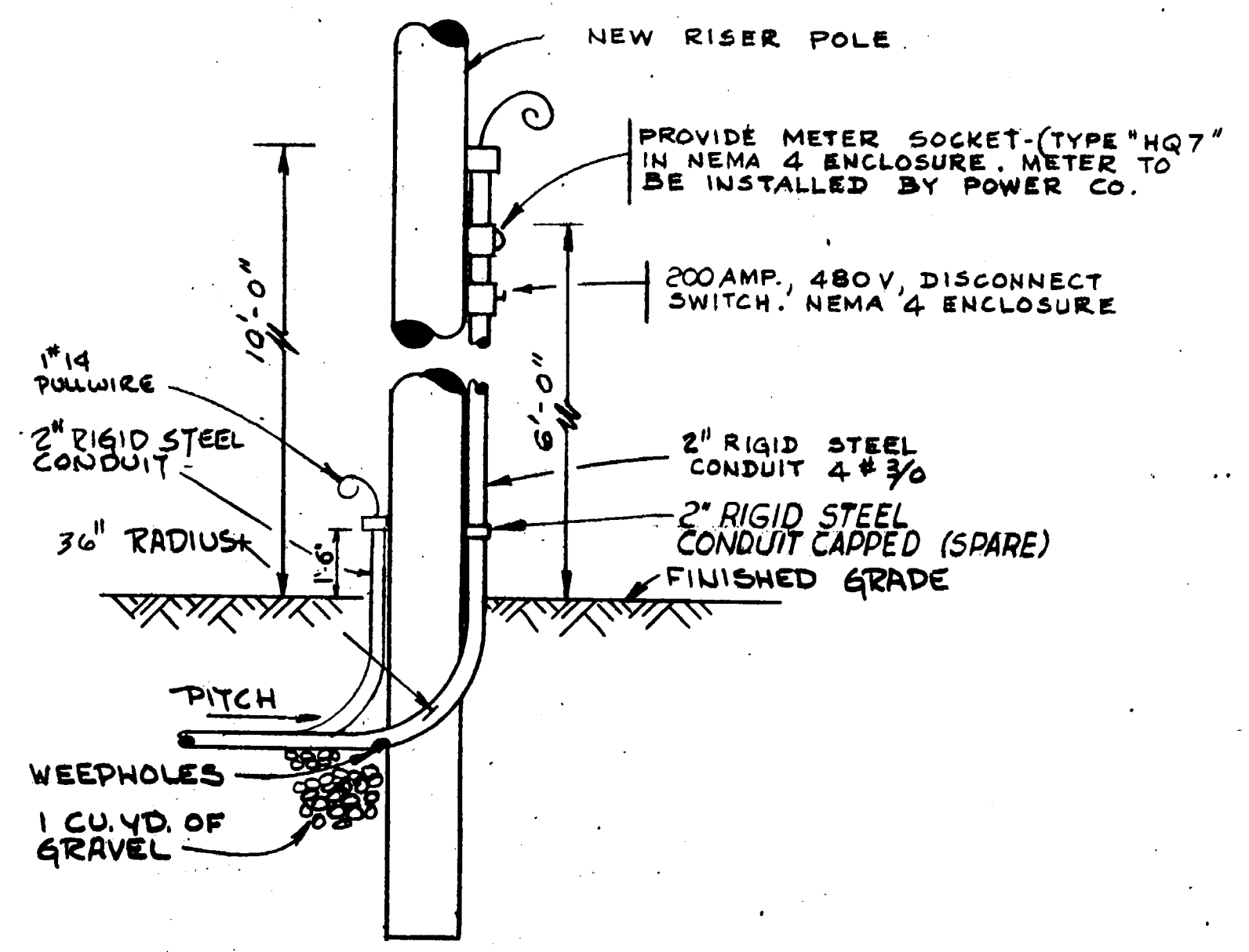
SITE PLAN
SCALE: 1"=10'-0"

- NOTES:**
1. LOCATIONS OF ALL UTILITIES IS APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR BEFORE COMMENCING WORK.
 2. METER TROUGH SHALL CONFORM TO THE REQUIREMENTS OF THE POWER COMPANY.
 3. FOR MECHANICAL AND STRUCTURAL DETAILS SEE DMG. NO.
 4. ALL CONDUITS PENETRATING WALLS OF THE "HAZARDOUS AREA" SHALL BE FURNISHED WITH SEALING FITTINGS AND SEALING COMPOUND IN CONFORMANCE WITH ARTICLE 500 FOR CLASS I, DIVISION 1, GROUP "D" AREAS.
 5. AUTOMATIC TRANSFER SWITCH TO BE SUPPLIED WITH CONTACTOR INTERLOCKED WITH THE ALTERNATOR TO LOCK-OUT ONE SEWAGE PUMP WHEN EMERGENCY GENERATOR IS IN OPERATION.
 6. CONTRACTOR TO PROVIDE WIRE FABRICATED FENCE ENCLOSURE SIMILAR TO DIESEL GENERATOR FENCE DETAILED ON DMG. NO.

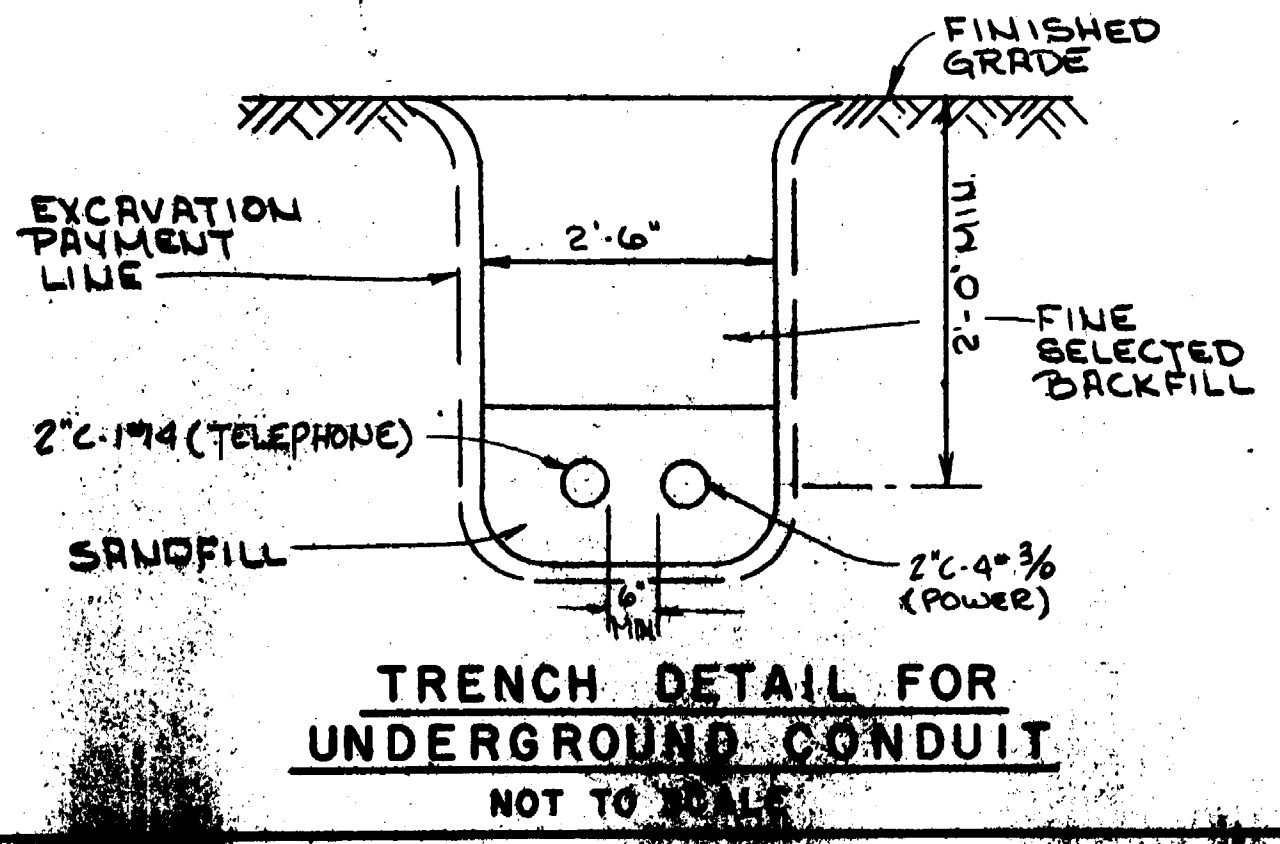
- LEGEND**
- NEW RISER POLE
 - UTILITY CO. POLE
 - CIRCUIT BREAKER
 - ⊗ HAND-OFF-AUTOMATIC SELECTOR SWITCH
 - CONDUIT RUN BELOW GRADE
 - POWER CONDUIT
 - TELEPHONE CONDUIT
 - ⊗ LIMIT SWITCH LOCATED ON HATCH
 - ⊗ ELECTRIC UNIT HEATER
 - ⊗ THERMOSTAT
 - ⊗ THERMAL TOGGLE SWITCH
 - ⊗ HUMIDISTAT
 - ⊗ FLOAT SWITCH
 - ⊗ POLARIZED GROUNDED CONVENIENCE OUTLET
 - ⊗ DISCONNECT SWITCH
 - ⊗ DUPLEX OUTLET, WEATHER PROOF



POWER - SINGLE LINE DIAGRAM
NOT TO SCALE



RISER POLE DETAIL
NOT TO SCALE



TRENCH DETAIL FOR UNDERGROUND CONDUIT
NOT TO SCALE

- LEGEND (CONT.)**
- ⊗ MOTOR NUMERAL DENOTES HORSEPOWER
 - ⊗ DISCONNECT SWITCH, EXPLOSIONPROOF
 - ⊗ DISCONNECT SWITCH, WEATHERPROOF, STAINLESS STEEL
 - ⊗ THERMAL TOGGLE SWITCH, EXPLOSIONPROOF
 - ⊗ STOP-START PUSHBUTTON STATION, MAINTAINED CONTACT WITH GREEN "ON" AND RED "OFF" PILOT LIGHTS
 - ⊗ COMBINATION CIRCUIT BREAKER MAGNETIC MOTOR STARTER, REDUCED VOLTAGE, AUTO-TRANSFORMER CLOSED TRANSITION TYPE WITH CONTROL TRANSFORMER AND GREEN "ON" AND RED "OFF" PILOT LIGHTS
 - 3/4" x 8'-0" LONG COPPERMELED GROUND ROD

DRAWN Ch. M			CITY OF WARWICK, RHODE ISLAND	
CHECKED A. C.			WARWICK SEWER AUTHORITY	
APPROVED F.C.H.			SYSTEM OF SEWERS	
DATE 1978			CONTRACT NO. 29	
SCALE AS NOTED			SUBURBAN PARKWAY PUMP STATION	
JOB NO. 2746			ELECTRICAL	
DWG. NO. 21			CE MAQUIRE, INC.	
FILE NO.			ENGINEERS	
			PROVIDENCE, R.I. WETHEFIELD, CONN.	