BOARD OF CONTRACT AND SUPPLY
CITY OF PROVIDENCE, RHODE ISLAND

REQUEST FOR PROPOSALS

Item Description: CITY OF PROVIDENCE – 2024, HURRICANE BARRIER STREET GATE REPAIRS

Procurement/MinuteTraq #: 46322

Date to be opened: 9/23/2024

Issuing Department: Department of Public Works

QUESTIONS

- Please direct questions related to the bidding process, how to fill out forms, and how to submit a bid (Pages 1-10) to the Purchasing Department.
    - Email: purchasing@providenceri.gov
        - Please use the subject line "**Solicitation Question**"
- Please direct questions relative to the Minority and Women-owned Business Enterprise (M/WBE) Program and the corresponding forms (Pages 11-12) to the MBE/WBE Outreach Director for the City of Providence, Grace Diaz
    - Email: gdiaz@providenceri.gov
        - Please use subject line "**MBE WBE Forms**"
- Please direct questions relative to the specifications outlined (beginning on page 13) to the issuing department's subject matter expert:
    - Name: Roger Biron
    - Title: Assistant Chief Engineer
    - Email Address: rbiron@providenceri.gov

Pre-bid Conference

There will be a Mandatory Pre-Bid Conference.

A Mandatory Pre-bid conference will be held on Wednesday, September 4, 2024, at 9:00 a.m. at the Allens Avenue Vehicular Gate, located at the intersection of Henderson Street and Allens Avenue.

Deadline for questions submissions:

All questions or comments concerning this RFP must be submitted via email by Tuesday, September 10, 2024, at 12:00 PM. Bidders are responsible to monitor the website for addendum. An addendum acknowledgment page is included in the FORM OF BID.

BOARD OF CONTRACT AND SUPPLY
CITY OF PROVIDENCE, RHODE ISLAND

INSTRUCTIONS FOR SUBMISSION

Meeting Date: 9/23/2024

Bids may be submitted up to **2:15 P.M.** on the above meeting date at the **Department of the City Clerk. Room 311, City Hall. 25 Dorrance Street, Providence.** At 2:15 P.M. all bids will be publicly opened and read at the Board of Contract Meeting in Conference Room 305, on the 3rd floor of City Hall.

- Bidders must submit **2 copies** of their bid in sealed envelopes or packages labeled with the captioned **Item Description** and the **City Department to which the solicitation and bid are related and must include the company name and address on the envelope as well**. (On page 1).
- If required by the Department, please keep the original bid bond and check in only one of the envelopes.
- Communications to the Board of Contract and Supply that are not competitive sealed bids (i.e. product information/samples) should have "**NOT A BID**" written on the envelope or wrapper.
- Only use form versions and templates included in this solicitation. If you have an old version of a form do not recycle it for use in this bid.
- The bid envelope and information relative to the bid must be addressed to:

Board of Contract and Supply
Department of the City Clerk – City Hall, Room 311
25 Dorrance Street
Providence, RI 02903

****PLEASE NOTE: This bid may include details regarding information that you will need to provide (such as proof of licenses) to the issuing department before the formalization of an award.**

This information is NOT requested to be provided in your initial bid by design.

All bids submitted to the City Clerk become public record. Failure to follow instructions could result in information considered private being posted to the city's Open Meetings Portal and made available as a public record. The City has made a conscious effort to avoid the posting of sensitive information on the City's Open Meetings Portal, by requesting that such sensitive information be submitted to the issuing department only at their request.

BOARD OF CONTRACT AND SUPPLY
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BID PACKAGE CHECKLIST

Digital forms are available in the City of Providence Purchasing Department Office or online at **http://www.providenceri.gov/purchasing/how-to-submit-a-bid/**

The bid package **MUST** include the following, in this order:

- Bid Form 1: Bidder's Blank as the cover page/ 1st page (*see page **6** of this document*)
- Bid Form 2: Certification of Bidder as 2nd page (*see page **7** of this document*)
- Bid Form 3: Certificate Regarding Public Records (*see page **8** of this document)*
- Bid Form 4: Affidavit of City Vendor (*see pages **9 and 10** of this document*)
- Forms from the Minority and Women-owned Business Enterprise (M/WBE) Program: Based on Bidder Category. *See forms and instructions enclosed (pages **11-12**) or on: https://www.providenceri.gov/purchasing/minority-women-owned-business-mbewbe-procurement-program/*

***Please note: MBE/WBE forms must be completed for EVERY bid submitted and must be inclusive of ALL required signatures. Forms without all required signatures will be considered incomplete.**

- Bidder's Proposal/Packet: Formal response to the specifications outlined in this RFP, including pricing information and details related to the good(s) or service(s) being provided. Please be mindful of formatting responses as requested to ensure clarity.
- Financial Assurance, *if requested* (as *indicated on page 5 of this document under "Bid Terms")*

All of the above listed documents are REQUIRED. (With the exception of financial assurances, which are only required if specified on page 5.)

******Failure to meet specified deadlines, follow specific submission instructions, or enclose all required documents with all applicable signatures will result in disqualification, or in an inability to appropriately evaluate bids.***

BOARD OF CONTRACT AND SUPPLY
CITY OF PROVIDENCE, RHODE ISLAND

NOTICE TO VENDORS

1. The Board of Contract and Supply will make the award to the lowest qualified and responsible bidder.
2. In determining the lowest responsible bidder, cash discounts based on preferable payment terms will not be considered.
3. Where prices are the same, the Board of Contract and Supply reserves the right to award to one bidder, or to split the award.
4. No proposal will be accepted if the bid is made in collusion with any other bidder.
5. Bids may be submitted on an "equal in quality" basis. The City reserves the right to decide equality. Bidders must indicate brand or the make being offered and submit detailed specifications if other than brand requested.
6. A bidder who is an out-of-state corporation shall qualify or register to transact business in this State, in accordance with the Rhode Island Business Corporation Act, RIGL Sec. 7-1.2-1401, et seq.
7. The Board of Contract and Supply reserves the right to reject any and all bids.
8. Competing bids may be viewed in person at the Department of the City Clerk, City Hall, Providence, immediately upon the conclusion of the formal Board of Contract and Supply meeting during which the bids were unsealed/opened. Bids may also be accessed electronically on the internet via the City's Open Meetings Portal.
9. As the City of Providence is exempt from the payment of Federal Excise Taxes and Rhode Island Sales Tax, prices quoted are not to include these taxes.
10. In case of error in the extension of prices quoted, the unit price will govern.
11. The contractor will **NOT** be permitted to: a) assign or underlet the contract, or b) assign either legally or equitably any monies or any claim thereto without the previous written consent of the City Purchasing Director.
12. Delivery dates must be shown in the bid. If no delivery date is specified, it will be assumed that an immediate delivery from stock will be made.
13. A certificate of insurance will normally be required of a successful vendor.
14. For many contracts involving construction, alteration and/or repair work, State law provisions concerning payment of prevailing wage rates apply (RIGL Sec. 37-13-1 et seq.)
15. No goods should be delivered, or work started without a Purchase Order.
16. **Submit 2 copies of the bid to the City Clerk, unless the specification section of this document indicates otherwise.**
17. Bidder must certify that it does not unlawfully discriminate on the basis of race, color, national origin, gender, gender identity or expression, sexual orientation and/or religion in its business and hiring practices and that all of its employees are lawfully employed under all applicable federal, state and local laws, rules and regulations. (See Bid Form 2.)

BOARD OF CONTRACT AND SUPPLY
CITY OF PROVIDENCE, RHODE ISLAND

BID TERMS

1. Financial assurances may be required in order to be a successful bidder for Commodity or Construction and Service contracts. If either of the first two checkboxes below is checked, the specified assurance **must accompany** a bid, or the bid will not be considered by the Board of Contract and Supply. The third checkbox indicates the lowest responsible bidder will be contacted and required to post a bond to be awarded the contract.

   a) ☐ A certified check for **$**_____ must be deposited with the City Clerk as a guarantee that the Contract will be signed and delivered by the bidder.

   b) ☒ A bid bond in the amount of **five (5)** per centum (%) of the proposed total price, must be deposited with the City Clerk as a guarantee that the contract will be signed and delivered by the bidder; and the amount of such bid bond shall be retained for the use of the City as liquidated damages in case of default. Any person signing a bid bond as an attorney-in-fact shall include with the bid bond an original, or a photocopy or facsimile of an original, power of attorney.

   c) ☒ A performance and payment bond with a satisfactory surety company will be posted by the bidder in a sum equal to one hundred per centum (100%) of the awarded contract.

   d) ☐ No financial assurance is necessary for this item.

2. Awards will be made within **nighty (90) days of bid opening**. All bid prices will be considered firm, unless qualified otherwise. Requests for price increases will not be honored.
3. Failure to deliver within the time quoted or failure to meet specifications may result in default in accordance with the general specifications. It is agreed that deliveries and/or completion are subject to strikes, lockouts, accidents, and Acts of God.

The following entry applies only for COMMODITY BID TERMS:

4. Payment for partial delivery will not be allowed except when provided for in blanket or term contracts.

The following entries apply only for CONSTRUCTION AND SERVICE BID TERMS:

5. Only one shipping charge will be applied in the event of partial deliveries for blanket or term contracts.
6. Prior to commencing performance under the contract, the successful bidder shall attest to compliance with the provisions of the Rhode Island Worker's Compensation Act, RIGL 28-29-1, et seq. If exempt from compliance, the successful bidder shall submit a sworn Affidavit by a corporate officer to that effect, which shall accompany the signed contract.
7. Prior to commencing performance under the contract, the successful bidder shall, submit a certificate of insurance, in a form and in an amount satisfactory to the City.

BOARD OF CONTRACT AND SUPPLY
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BID FORM 1: Bidders Blank

1. Bids must meet the attached specifications. Any exceptions or modifications must be noted and fully explained.
2. Bidder's responses must be in ink or typewritten, and all blanks on the bid form should be completed.
3. The price or prices proposed should be stated both in **WRITING** and in **FIGURES**, and any proposal not so stated may be rejected. **Contracts exceeding twelve months must specify annual costs for each year.**
4. Bids **SHOULD BE TOTALED** so that the final cost is clearly stated (unless submitting a unit price bid), however **each item should be priced individually**. Do not group items. Awards may be made on the basis of ***total*** bid or by ***individual items***.
5. All bids **MUST BE SIGNED IN INK.**

Name of Bidder (Firm or Individual): _____

Contact Name: _____

Business Address: _____

Business Phone #: _____

Contact Email Address: _____

Agrees to bid on (Write the "Item Description" here): _____

If the bidder's company is based in a state *other than Rhode Island*, list name and contact information for a local agent for service of process that ***is located within Rhode Island*** _____

Delivery Date (if applicable): _____

Name of Surety Company (if applicable): _____

Total Amount in Writing: _____

Total Amount in Figures: _____

Use additional pages if necessary for additional bidding details.

_____
Signature of Representation

_____
Title

BOARD OF CONTRACT AND SUPPLY
CITY OF PROVIDENCE, RHODE ISLAND

BID FORM 2: Certification of Bidder
(Non-Discrimination/Hiring)

Upon behalf of_____ (Firm or Individual Bidding),

I,_____(Name of Person Making Certification),

being its_____(Title or "Self"), hereby certify that:

1. Bidder does not unlawfully discriminate on the basis of race, color, national origin, gender, sexual orientation and/or religion in its business and hiring practices.
2. All of Bidder's employees have been hired in compliance with all applicable federal, state and local laws, rules and regulations.

I affirm by signing below that I am duly authorized on behalf of Bidder, on this_____day of_____20____.

_____
Signature of Representation

_____
Printed Name

BOARD OF CONTRACT AND SUPPLY
CITY OF PROVIDENCE, RHODE ISLAND

BID FORM 3: Certificate Regarding Public Records

Upon behalf of_____ (Firm or Individual Bidding),

I,_____(Name of Person Making Certification),

being its_____(Title or "Self"), hereby certify an

understanding that:

1. All bids submitted in response to Requests for Proposals (RFP's) and Requests for Qualification (RFQ's), documents contained within, and the details outlined on those documents become public record upon receipt by the City Clerk's office and opening at the corresponding Board of Contract and Supply (BOCS) meeting.
2. The Purchasing Department and the issuing department for this RFP/RFQ have made a conscious effort to request that sensitive/personal information be submitted directly to the issuing department and only at request if verification of specific details is critical the evaluation of a vendor's bid.
3. The requested supplemental information may be crucial to evaluating bids. Failure to provide such details may result in disqualification, or an inability to appropriately evaluate bids.
4. If sensitive information that has not been requested is enclosed or if a bidder opts to enclose the defined supplemental information prior to the issuing department's request in the bidding packet submitted to the City Clerk, the City of Providence has no obligation to redact those details and bears no liability associated with the information becoming public record.
5. The City of Providence observes a public and transparent bidding process. Information required in the bidding packet may not be submitted directly to the issuing department at the discretion of the bidder in order to protect other information, such as pricing terms, from becoming public. Bidders who make such an attempt will be disqualified.

I affirm by signing below that I am duly authorized on behalf of Bidder, on

this_____day of_____20____.

_____

Signature of Representation

_____

Printed Name

BOARD OF CONTRACT AND SUPPLY
CITY OF PROVIDENCE, RHODE ISLAND

BID FORM 4: Affidavit of City Vendor

Per our Code of Ordinances Sec. 21.-28.1 (e), this form applies to a) the business, b) any political action committee whose name includes the name of the business, c) all persons holding ten (10) percent or greater equity interest or five thousand dollars ($5,000.00) or greater cash value interest in the business at any time during the reporting period, d) all executive officers of the business entity, e) any spouse or dependent child of any individual identified in a) though d) above.

Executive officers who are not residents of the state of Rhode Island are exempted from this requirement.

Per R.I.G.L. § 36-14-2, "Business" means a sole proprietorship, partnership, firm, corporation, holding company, joint stock company, receivership, trust, or any other entity recognized in law through which business for profit or not for profit is conducted.

Name of the person making this affidavit: _____

Position in the "Business" _____

Name of Entity _____

Address: _____

Phone number: _____

The number of persons or entities in your entity that are required to report under Sec. 21.-28.1 (e): _____

Read the following paragraph and answer one of the options:

Within the 12 month period preceding the date of this bid submission with the City of Providence, or with respect to the contracts that are not in writing within the 12 month period preceding the date of notification that the contract has reached the $100,000 threshold, have you made campaign contributions within a calendar year to (please list all persons or entities required under Sec. 21.-28.1 (e)).

a. Members of the Providence City Council? ☐ Yes ☐ No
   - If Yes, please complete the following:
     Recipient(s) of the Contribution:
     Contribution Date(s): Contribution Amount(s):

b. Candidates for election or reelection to the Providence City Council? ☐ Yes ☐ No
   - If Yes, please complete the following:
     Recipient(s) of the Contribution:
     Contribution Date(s): Contribution Amount(s):

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c. The Mayor of Providence? ☐ Yes ☐ No
- If Yes, please complete the following:
  Recipient(s) of the Contribution:
  Contribution Date(s): Contribution Amount(s):

d. Candidates for election or reelection to the office of Mayor of Providence? ☐ Yes ☐ No
- If Yes, please complete the following:
  Recipient(s) of the Contribution:
  Contribution Date(s): Contribution Amount(s):

_____
Signed under the pains and penalties of perjury.

_____
Position

BOARD OF CONTRACT AND SUPPLY
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MBE/WBE Participation Plan

Please complete separate forms for each MBE/WBE subcontractor/supplier to be utilized on the solicitation.

Bidder's Name:	
Bidder's Address:	
Point of Contact:	
Telephone:	
Email:	
Procurement #:	
Project Name:	

Which one of the following describes your business' status in terms of Minority and/or Woman Owned Business Enterprise certification with the State of Rhode Island? (Check all that apply).	☐MBE ☐WBE ☐Neither MBE nor WBE

This form is intended to capture commitments between the prime contractor/vendor and MBE/WBE subcontractors and suppliers, including a description of the work to be performed and the percentage of the work as submitted to the prime contractor/vendor. Please note that all MBE/WBE subcontractors/suppliers must be certified by the Office of Diversity, Equity and Opportunity at the time of bid. The MBE/WBE Directory can be found here. Please visit, the City's MBE/WBE page for details of the program (e.g. instructions and requirements).

- **Nonprofit organizations are not required to complete the rest of this form.**
- **Construction projects unable to identify subcontractors prior to bid submission (e.g. Design Build) are required to provide updates to the MBE/WBE Outreach Office**

Name of Subcontractor/Supplier:					
Type of RI Certification:	☐MBE ☐WBE ☐Neither				
Address:					
Point of Contact:					
Telephone:					
Email:					
Detailed Description of Work to Be Performed by Subcontractor or Materials to be Supplied by Supplier Per the Scope of Work provided in the RFP					
Total Contract Value ($):		Subcontract Value ($):		Participation Rate (%):	
Anticipated Date of Performance:					

I certify under penalty of perjury that the forgoing statements are true and correct.

Prime Contractor/Vendor Signature	**Title**	**Date**
Subcontractor/Supplier Signature	**Title**	**Date**

***If you did not meet the 20% MBE/WBE combined participation goal, submit a Waiver Request Form.**

BOARD OF CONTRACT AND SUPPLY
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MBE/WBE Waiver Request Form

Fill out this form only if you did not meet the 20% MBE/WBE participation goal.
State-certified MBE or WBE Prime Bidders are NOT REQUIRED to fill out this form.

Submit this form to the City of Providence MBE/WBE Outreach Director, Grace Diaz, at gdiaz@providenceri.govmailto:mbe-wbe@providenceri.gov, for review **prior to bid submission.** This waiver applies only to the current bid which you are submitting to the City of Providence and does not apply to other bids your company may submit in the future. **In case a waiver is needed, City Department Directors should not** recommend a bidder for an award if this form is not included, absent or is not signed by the city of Providence MBE/WBE director**.**

Prime Bidder: _____ Contact Email and Phone_____
Company Name, Address: _____ Trade _____
Project /Item Description (as seen on RFP):
_____
_____

To receive a waiver, you must list the certified MBE and/or WBE companies you contacted, the name of the primary individual with whom you interacted, and the reason the MBE/WBE company could not participate on this project.

MBE/WBE Company Name	Individual's Name	Company Name	Why did you choose not to work with this company?

I acknowledge the City of Providence's goal of a combined MBE/WBE participation is 20% of the total bid value. I am requesting a waiver of _____ % MBE/WBE (20% minus the value of **Box F** on the Subcontractor Disclosure Form). If an opportunity is identified to subcontract any task associated with the fulfillment of this contract, a good faith effort will be made to select MBE/WBE certified businesses as partners.

_____	_____	_____
Signature of Prime Contractor / or Duly Authorized Representative	Printed Name	Date Signed
_____	_____	_____
Signature of City of Providence MBE/WBE Outreach Director / or Duly Authorized Representative	Printed Name of City of Providence MBE/WBE Outreach Director	Date Signed

BOARD OF CONTRACT AND SUPPLY
CITY OF PROVIDENCE, RHODE ISLAND

BID PACKAGE SPECIFICATIONS

Request for Proposal, CITY OF PROVIDENCE – 2024, HURRICANE BARRIER STREET GATE REPAIRS, prepared by Pare Corporation, 8 Blackstone Valley Pl, Lincoln, RI 02865 dated July 2024 (attached), beginning on Page 17.

BOARD OF CONTRACT AND SUPPLY
CITY OF PROVIDENCE, RHODE ISLAND

SUPPLEMENTAL INFORMATION

If the issuing department for this RFP determines that your firm's bid is best suited to accommodate their need, you will be asked to provide proof of the following prior to formalizing an award.

An inability to provide the outlined items at the request of the department may lead to the disqualification of your bid.

This information is <u>NOT</u> requested to be provided in your initial bid that you will submit to the City Clerk's office by the "date to be opened" noted on page 1. This list only serves as a list of items that your firm should be ready to provide on request.

<u>All bids submitted to the City Clerk become public record</u>. Failure to follow instructions could result in information considered private being posted to the city's Open Meetings Portal and made available as a public record.

You must be able to provide:

- Business Tax ID will be requested after an award is approved by the Board of Contract and Supply.
- Proof of Insurance complying with Section 5.30.F of the Contract Book.
- Certificate of Good Standing with the Rhode Island Secretary of State.

BOARD OF CONTRACT AND SUPPLY
CITY OF PROVIDENCE, RHODE ISLAND

CITY OF PROVIDENCE STANDARD TERMS & CONDITIONS

1. The terms "you" and "your" contained herein refer to the person or entity that is a party to the agreement with the City of Providence ("the City") and to such person's or entity's employees, officers, and agents.
2. The Request For Proposals ("RFP") and these Standard Terms and Conditions together constitute the entire agreement of the parties ("the Agreement") with regard to any and all matters. By your submission of a bid proposal or response to the City's RFP, you accept these Standard Terms & Conditions and agree that they supersede any conflicting provisions provided by bid or in any terms and conditions contained or linked within a bid and/or response. Changes in the terms and conditions of the Agreement, or the scope of work thereunder, may only be made by a writing signed by the parties.
3. You are an independent contractor and in no way does this Agreement render you an employee or agent of the City or entitle you to fringe benefits, workers' compensation, pension obligations, retirement or any other employment benefits. The City shall not deduct federal or state income taxes, social security or Medicare withholdings, or any other taxes required to be deducted by an employer, and this is your responsibility to yourself and your employees and agents.
4. You shall not assign your rights and obligations under this Agreement without the prior written consent of the City. Any assignment without prior written consent of the City shall be voidable at the election of the City. The City retains the right to refuse any and all assignments in the City's sole and absolute discretion.
5. Invoices submitted to the City shall be payable sixty (60) days from the time of receipt by the City. Invoices shall include support documentation necessary to evidence completion of the work being invoiced. The City may request any other reasonable documentation in support of an invoice. The time for payment shall not commence, and invoices shall not be processed for payment, until you provide reasonably sufficient support documentation. In no circumstances shall the City be obligated to pay or shall you be entitled to receive interest on any overdue invoice or payment. In no circumstances shall the City be obligated to pay any costs associated with your collection of an outstanding invoice.
6. For contracts involving construction, alteration, and/or repair work, the provisions of applicable state labor law concerning payment of prevailing wage rates (R.I. Gen. Laws §§ 37-13-1 et seq., as amended) and the City's First Source Ordinance (Providence Code of Ordinances §§ 21-91 et seq., as amended) apply.
7. With regard to any issues, claims, or controversies that may arise under this Agreement, the City shall not be required to submit to dispute resolution or mandatory/binding arbitration. Nothing prevents the parties from mutually agreeing to settle any disputes using mediation or non-binding arbitration.
8. To the fullest extent permitted by law, you shall indemnify, defend, and hold harmless the City, its employees, officers, agents, and assigns from and against any and all claims, damages, losses, allegations, demands, actions, causes of action, suits, obligations, fines, penalties, judgments, liabilities, costs and expenses, including but not limited to attorneys' fees, of any nature whatsoever arising out of, in connection with, or resulting from the performance of the work provided in the Agreement.
9. You shall maintain throughout the term of this Agreement the insurance coverage that is required by the RFP or, if none is required in the RFP, insurance coverage that is considered in your industry to be commercially reasonable, and you agree to name the City as an additional insured on your general liability policy and on any umbrella policy you carry.
10. The City shall not subject itself to any contractual limitations on liability. The City shall have the time permitted within the applicable statute of limitations, and no less, to bring or assert any and all causes of action, suits, claims or demands the City may have arising out of, in connection with, or resulting from the performance of the work provided in the Agreement, and in no event does the City agree to limit your liability to the price of the Agreement or any other monetary limit.
11. The City may terminate this Agreement upon five (5) days' written notice to you if you fail to observe any of the terms and conditions of this Agreement, or if the City believes your ability to perform the

terms and conditions of this Agreement has been materially impaired in any way, including but in no way limited to loss of insurance coverage, lapsing of a surety bond, if required, declaration of bankruptcy, or appointment of a receiver. In the event of termination by the City, you shall be entitled to just and equitable compensation for any satisfactory work completed and expenses incurred up to the date of termination.

12. Written notice hereunder shall be deemed to have been duly served if delivered in person to the individual or member of the firm or entity or to an officer of the entity for whom it was intended, or if delivered at or sent by registered or certified mail to the last business address known by the party providing notice.
13. In no event shall the Agreement automatically renew or be extended without a writing signed by the parties.
14. You agree that products produced or resulting from the performance of the Agreement are the sole property of the City and may not be used by you without the express written permission of the City.
15. For any Agreement involving the sharing or exchange of data involving potentially confidential and/or personal information, you shall comply with any and all state and/or federal laws or regulations applicable to confidential and/or personal information you receive from the City, including but not limited to the Rhode Island Identity Theft Protection Act, R.I. Gen. Laws § 11-49.3-1, during the term of the Agreement. You shall implement and maintain appropriate physical, technical, and administrative security measures for the protection of, and to prevent access to, use, or disclosure of, confidential and/or personal information. In the event of a breach of such information, you shall notify the City of such breach immediately, but in no event later than twenty-four (24) hours after discovery of such breach.
16. The Agreement is governed by the laws of the State of Rhode Island. You expressly submit yourself to and agree that any and all actions arising out of, in connection with, or resulting from the performance of the Agreement or relationship between the parties shall occur solely in the venue and jurisdiction of the State of Rhode Island or the federal court located in Rhode Island.
17. The failure of the City to require performance of any provision shall not affect the City's right to require performance at any time thereafter, nor shall a waiver of any breach or default of this Agreement constitute a waiver of any subsequent breach or default or a waiver of the provision itself.
18. If any term or provision of this Agreement, or the application thereof to any person or circumstance shall, in any extent, be invalid or unenforceable, the remainder of this Agreement shall not be affected thereby, and each term and provision shall be valid and enforceable to the fullest extent permitted by law.

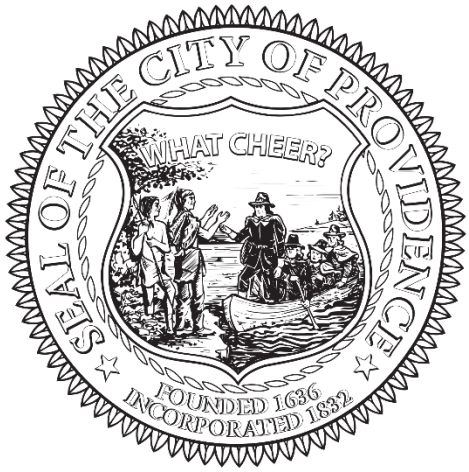
CITY OF

CONTRACT DOCUMENTS

CITY OF PROVIDENCE - 2024
HURRICANE BARRIER STREET GATE REPAIRS

PROVIDENCE, RHODE ISLAND

HONORABLE BRETT P. SMILEY
MAYOR, CITY OF PROVIDENCE



PREPARED BY:

DEPARTMENT OF PUBLIC WORKS
700 ALLENS AVENUE
PROVIDENCE, RI 02905
401-680-7500

PATRICIA A. COYNE-FAGUE, ESQ.
DIRECTOR

AUGUST, 2024

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1. INVITATION FOR BIDS

The City of Providence, Providence Public Buildings Authority (PPBA), Department of Public Works (City, PPBA, DPW, OWNER) is soliciting proposals from vendors (CONTRACTOR) with expertise in structural steel repair, concrete repair, and flood control. This Project involves the repairs to two vehicular hurricane barriers and associated abutments at two locations, the Allens Ave Gate and the Manchester Street Station gate. The project tasks will include: establishment of site controls, removal and off-site transport of the steel gates, removal and off-site transport of the recessed structures, sandblasting and repainting of steel members, removing and replacing of steel members with the associated welding required to complete the replacement, replacement and installation of rubber fiber seals, concrete crack repairs and sealing, miscellaneous steel fabrication, installation of an operational platform and ladder, and other repairs as detailed and specified in the contract documents.

The Owner is defined as the Providence Public Buildings Authority (PPBA), the City of Providence (City), and the City of Providence Department of Public Works (DPW). All work shall be performed in strict accordance with the Contract Documents and shall be completed in full by Friday, May 2, 2025, with both gates reinstalled and fully operational by April 1, 2025.

On Monday, August 26, 2024, the Bidding/Contract Documents will be available for download from the following website: https://www.providence ri.gov/purchasing.

All questions or comments concerning the bidding of this project must be submitted in writing as prescribed in Section 2 of the Instructions to Bidders by Tuesday, September 10, 2024 at 12:00 PM. Bidders are responsible to monitor the website for addendum. An addendum acknowledgment page is included in the Bid Instructions.

A satisfactory bid bond executed by the Bidder and an acceptable surety in an amount equal to **five (5%) percent of the total amount of the bid** shall accompany each proposal. The proposal guaranty will be furnished by surety companies licensed to do business in the State of Rhode Island. The City of Providence reserves the right to retain the surety of all bidders until the successful bidder enters into the Contract or until such time as the award or cancellation of the Contract is announced at which point Sureties will be returned to all bidders by the City of Providence.

A Statutory Bond for Complete Performance and Full Payment in the amount of One Hundred (100%) percent of the Contract Price with a satisfactory surety company will be required of the successful bidder. All surety companies must be listed with the Department of the Treasury, Fiscal Services, Circular 570 (Latest Revision published by the Federal Register). All bonds shall be in accordance with RIGL 37-12-1 and RIGL 37-13-14.

The Bidders' attention is called to the fact that this is a Prevailing Wage project, as set forth in the Bidding/Contract Documents and shall be paid on this project. Paid wages shall be at rates not less than those prevailing on the same type of work on similar construction in the immediate locality as determined by the United States Secretary of Labor, in accordance with the Act of August 30, 1935, known as the Davis-Bacon Act, under Decision Nos. 1 through 6 as applicable. Prevailing wage rates and Davis-Bacon Wage Determination Reference Materials are available online at https://beta.sam.gov/.

The Bidders' attention is called to the fact that the Contractor must ensure that employees and applicants for employment are not discriminated against because of their race, color, place of national origin, religion, sexual preference, or gender.

The Owner will not consider bids from prime bidders who do not prove at least 5 years construction experience (within the last 7 years) on structural steel repair, concrete repair, and flood control projects of similar size and complexity. Instructions on documenting this experience are included in the "Statement of Bidders Qualifications" bid form in the Contract Documents.

Bids may be held by the Owner for a period not to exceed ninety (90) days from the date of opening of bids, for the purpose of reviewing the bids and investigating the qualifications of bidders, all prior to award of the Contract. The Owner reserves the right to reject any or all bids either in part or in full. All bidders shall be available for a Pre-Bid Award Descope Meeting as may be required by the Owner. The Owner reserves the right to descope one or more bidders. Additionally, the meeting minutes of the Descope Meeting shall be enumerated as part of the signed contract agreement. The intent is NOT to renegotiate cost in any manner but to obtain clarifications and details of representations made by the Bidder to assure an understanding of the bid prior to final award.

After a thorough review, and descope as required, of bids, the Owner anticipate submitting their recommendation for award of contract to the lowest responsible bidder to the Board of Contract and Supply for its regular meeting of Monday, October 21, 2024. The Board of Contract and Supply may take up to sixty (60) days to formally award.

1.1. QUESTIONS

If there are any questions, please contact the appropriate person listed below:

A. Pease direct questions relative to the bidding process, how to fill out forms, and how to submit a bid to:

City of Providence, Purchasing Department
Phone: (401) 680-5264
Email: purchasing@providenceri.gov (Please use the subject line “Solicitation Question”)

B. Please direct questions relative to the Minority and Women’s Business Enterprise Program and the corresponding forms to:

Grace Diaz, MBE/WBE Outreach Director
Phone: (401) 680-5766
Email: gdiaz@providenceri.gov (Please use subject line “MBE WBE Forms”)

C. Please direct questions relative to the contract documents in writing to:

Roger Biron, Assistant Chief Engineer
Phone: (401) 680-7531
Email: rbiron@providenceri.gov (Please use the subject line “RFP Question - CITY OF PROVIDENCE – 2024, HURRICANE BARRIER STREET GATE REPAIRS”

All questions or comments concerning this RFP must be submitted via email by Tuesday, September 10, 2024, at 12:00 PM. Questions received after this time may not be considered.

2. INSTRUCTION TO BIDDERS

2.1. USE OF SEPARATE BID FORMS

The Contract Documents include a complete set of Bidding Documents such as, but not limited to Front End Documents, Specifications, Drawings, Addendum and Contract forms which are compiled for the convenience of Bidders and are not to be detached from the Contract Documents, filled out, or executed. Separate copies of the Bid Forms are furnished for this purpose and can be found in this document.

2.2. INTERPRETATIONS OR ADDENDA

No oral interpretation will be made to any Bidder as to the meaning of the Contract Documents or any part thereof. Every request for such an interpretation shall be made in writing to the Owner. Any inquiry received seven or more days prior to the date fixed for opening of Bids will be given consideration. Every interpretation made to a bidder will be in the form of an Addendum to the Contract Documents when issued and will be on file with the City of Providence Purchasing Department. In addition, all Addenda will be emailed to each person registered as holding Contract Documents, but it shall be the Bidder's responsibility to make inquiry as to the Addenda issued. All such addenda shall become part of the Contract and all Bidders shall be bound by such Addenda, whether or not received by the Bidder.

2.3. INSPECTION OF SITE

A. Each Bidder should visit the site in person and not rely on digital street and overhead views provided by mediums such as, but not limited to, Google and Bing to review areas of the proposed work and fully acquaint himself with the existing conditions there, relating to construction and labor, and should fully inform himself as to the facilities involved, the difficulties and restrictions attending the performance of the Contract. The Bidder should thoroughly examine and familiarize himself with the Drawings, Technical Specifications and all other Contract Documents and supporting information. The Contractor, by the execution of the Contract, shall in no way be relieved of any obligation under it due to his failure to receive or examine any form or legal instrument or to visit the site and acquaint himself with the conditions there existing, and the Owner will be justified in rejecting any claim based on facts regarding which, he should have been on notice as a result thereof.

B. 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 Contract Documents (including all addenda). The failure or omission of any Bidder to examine any form, instrument or document or to inspect the site, shall in no way relieve any Bidder from any obligation in respect to his Bid.

C. The Contractor shall study the drawings and compare the same with the information gathered during his examination of the sites, as no extra compensation will be authorized for extra work caused by his unfamiliarity with the sites(s) and/or drawings or the conditions particular to this job.

2.4. ALTERNATIVE BIDS

Add alternative bids are not included in this contract.

2.5. ALLOWANCES

A. Allowances shall be included as part of the Base Bid TOTAL and then further delineated in the Project Schedule of Values where the drawdowns shall be accounted for. Allowances are subject to all general conditions and standards of the Contract. All unused funds connected with the allowances shall be fully credited to the Owner at project closeout.

1. **Miscellaneous Metal Work, Fabrication, and Concrete Repairs ($60,000):**

(a) This allowance includes possible scope changes resulting from changes due to field conditions, discovery of steel and concrete conditions that were not visible due to the limitations of the inspection during the gate operation investigation and may present harm to person, property, or otherwise jeopardizes the project schedule and team from proceeding in a timely manner, changes required by the utility companies that modify/adjust the direction of the prescribed plan set and/or other circumstance's that may be required due to items including but not limited to field conditions, regulatory changes and other processes.

(b) The remediation work under this allowance will be compensated on a time and materials basis including overhead and profit defined in Section 5.10. Contractor to provide Owner a detailed cost estimate of work for review and approval by Owner.

2. **Uniformed Traffic Control Allowance ($20,000):**

(a) This allowance is intended to cover the cost of supplementary uniformed traffic control measures, including the use of off-duty City of Providence Police Officers ("detail officers"), as deemed necessary by the Owner.

(b) The Contractor shall coordinate and implement all necessary traffic control measures, including those requiring the services of detail officers. The Contractor shall be responsible for obtaining all necessary permits and approvals for traffic control operations.

(c) The City of Providence Police Department will bill the Owner directly for detail officer services. The Contractor shall furnish the Owner with copies of the detail slips as supporting documentation to verify the services provided and facilitate accurate billing.

B. While allowances are part of the Overall Bid Value (Base Bid) submitted, that Contractor is advised that there are No Guarantees that they will be used or otherwise drawn down on and should have no expectation of the allowance work being awarded. Allowances will be accounted for the Schedule of Values as separate Lines Items with the value debited as separate values as they are drawn against. Change Orders are used to memorialize the work completed but do not alter the Base contract value unless total exceeds the awarded sum.

2.6. BIDS

A. All Bids must be submitted on forms supplied by the Owner and shall include all of the requirements of the Contract Documents, including, but not limited to, the Drawings and other incidental and appurtenant exhibits including these INSTRUCTIONS TO BIDDERS. All Bids shall be complete in every respect and no interlineations, excisions or special conditions shall be made to be included in the Bid Form by the Bidder.

B. All blank spaces for Bid Prices shall be filled-in in ink or typewritten; in both words and figures.

C. Each Bidder shall include in their Bid the following information:

1. Firm (name, address, phone, web address)

2. Principals (names and home addresses)

D. Bid Submission: Bids shall be submitted to the City's Board of Contract and Supply as indicated in the Request for Proposals. Bidders must submit two paper copies of their bid (one original and one copy), along with one USB drive containing a single PDF of all bid documents and required forms. No CDs or emailed PDFs will be accepted. Failure to submit a USB stick with a single PDF of the required documents and forms may result in disqualification.

E. Proposal Submission Evaluation:

Respondent proposals will be evaluated and scored on their responsiveness using the criteria below. To be considered qualified and responsible, a brief proposal submission must include the following information for DPW review and subsequent selection recommendation(s):

1. Letter of Transmittal & Company Introduction (5 points max.): A Letter of Transmittal, signed by an owner, officer, or other authorized agent of the firm, must accompany each response. Maximum length of letter shall be two pages. Qualified respondents must provide evidence of expertise relevant to the requested services. Respondents are also required to include a complete description and other relevant information documenting organizational structure and specific office locations.

2. Statement of Bidder Qualifications (40 points max.): Respondents are to provide a comprehensive listing of similar current and past projects and/or clients served providing relating to the Scope of Work. Respondents must demonstrate at least 5 years' experience (within the last 7 years) on structural steel repair, concrete repair, and flood control projects of similar size and complexity. Reference Section 2.9 Statement of Bidder's Qualifications for complete requirements.

   (a) Additionally, resumes and past project information sheets regarding the history and experience of the CONTRACTOR and all subcontractors proposed to be part of the work described herein. Resumes shall include the name(s), business addresses, phone numbers, email addresses, and relevant experience of individuals participating in this project.

   (b) The Project Manager shall be clearly identified along with the roles of other significant project participants. The CONTRACTOR and subcontractors shall be collectively scored based on their demonstrated level of experience and competence in the following areas:

      (i) Experience working on structural steel repair, concrete repair, and flood control projects of similar size and complexity.

      (ii) Personnel qualifications and certification for the CONTRACTOR responsible for performing and producing nondestructive testing reports.

      (iii) Personnel qualifications and certification for the CONTRACTOR responsible for structural steel welding.

3. Client References (15 points max.): Respondents must provide at a minimum THREE (3) references for whom the respondent has provided similar construction services, detailing client name/address, complete contact information, type of project, description of services

provided, and timeframe completed. The reference must have been directly involved in the project on behalf of the hiring agency and have direct experience supervising the work. By listing these references, permission is granted to City to contact said individuals to verify the satisfactory performance of services provided.

4. Proposed Schedule (10 points max): Respondents shall provide a proposed project schedule broken down by task and subtask.

5. MBE/WBE Participation (10 points max): Using the Subcontractor Disclosure Form, respondents shall provide a utilization plan of proposed MBE/WBE Subcontractors. The score will be weighted based on the percentage of participation (ie. 10% MBE/WBE participation = 5 points).

   (a) The City has blanket goals of 10% Minority Business Enterprise (MBE) and 10% Women-owned Business Enterprise (WBE) utilization for a total of 20% of the total contract value. The selected respondents are responsible for achieving this goal or submitting a waiver. All relevant MBE/WBE forms must be submitted.

6. Required Bid Documents (20 points max): The following required forms must be filled out and submitted with the Proposal. Failure to submit all required forms will result in disqualification from this bid.

   (a) Bid Forms

      (i) Bid Form 1 - Bidders Blank
      (ii) Bid Form 2 - Certification of Bidder
      (iii) Bid Form 3 - Certificate Regarding Public Records
      (iv) Bid Form 4 - Affidavit of City Vendor

   (b) Form of Bid

   (c) Schedule of Unit Prices

   (d) Schedule of Rates for all Labor and Equipment

   (e) City of Providence’s Minority and Women-owned Business Enterprise (M/WBE) Program forms

   (f) Bid Bond

   (g) Certificate of Corporate Principal

   (h) Non-Collusive Affidavit of Prime Bidder

   (i) Non-Collusive Affidavit of Subcontractor

   (j) Certification of Non-Segregated Facilities

   (k) Bidder's Certification for Equal Employment Opportunity

   (l) Special Requirement for All Out-of-State Contractors and Firms

   (m) Certification with Regard to Performance of Previous Contracts and Subcontracts

   (n) Affidavit of Non-Discrimination

(o) Certification of Non-Discrimination in Equal Employment Opportunity

(p) Statement of Bidders Qualifications

(q) Proposed Subcontractors

(r) Municipal Contract Addendum, Rhode Island Department of Labor and Training, Prevailing Wage Requirements (RIGL 37-13-1 ET SEQ)

F. Evaluation and Selection:

1. A Review Committee will be convened comprised of members of the City's Department of Public Works and the Pare Corporation.

2. The Review Committee members will review and evaluate qualification proposal submissions from each Respondent to determine if they are responsive or nonresponsive to the requirements of this RFP. All qualified and responsible firms will be evaluated and rated based on the criteria herein. To be considered qualified and responsible, the Bidder's total proposal submission evaluation score shall be no less than 75 points. Bids with a score or 74 points or less will be considered nonresponsive and rejected.

3. Those bids with a proposal submission evaluation score greater or equal to 75 points will be ranked in order of their total Base Bid cost from lowest to greatest.

G. Final Evaluation and Ranking

Final evaluation and ranking will be based on the respondents' Proposals, their demonstrated ability and commitment to provide services to the City in a timely manner, and the total Base Bid cost. The City may, at its sole option, elect to require interviews and/or presentations by respondents clearly in consideration for the award. Other submissions, certifications, or affirmations may be required, as appropriate. The Owner may consider any Bid with alterations or departures from the attached Bid Form as irregular and may reject it at its discretion.

H. Contract Award

The City reserves the right to award the Contract, at its sole discretion, to the lowest qualified and responsible Bidder(s). Notwithstanding the foregoing, the City may, in its sole discretion and if deemed to be in the best interest of the City, elect to award the Contract to an alternate bidder or to multiple bidders. The award of the Contract shall not be construed as a guarantee or entitlement to the full Contract Amount. The actual scope of work performed and the final Contract Amount shall be subject to the availability of funds and the evolving needs and priorities of the City. The successful Bidder(s) shall be obligated to complete the work in strict compliance with the Contract Documents.

2.7. BID GUARANTEE

A. The Bid must be accompanied by a Bid Guarantee which shall not be less than **five percent (5%)** of the amount of Bid. The guarantee may be a bid bond in the form attached. The Bid Bond shall be secured by a guarantee or a surety company listed in the latest issue of the U.S. Treasury Circular 570. The amount of such Bid Bond shall be within the maximum amount specified for such company in said Circular 570. No Bid will be considered unless it is accompanied by the required guarantee. Certified checks, cashier's checks, or cash deposits will not be accepted. The Bid Guarantee shall insure the execution of the Agreement and the

furnishing of the surety bond or bonds by the successful Bidder; all as required by the Contract Documents.

B. Revised Bids submitted before the opening of Bids, whether forwarded by mail or telegram, if representing an increase in excess of two percent (2%) of the original Bid, must have the Bid Guarantee adjusted accordingly, otherwise the Bid will not be considered.

C. Bid Bonds of unsuccessful Bidders will be returned as soon as practical after the opening of Bids.

2.8. COLLUSIVE AGREEMENTS

A. Each Bidder submitting a Bid to the Owner for any portion of the work contemplated by the documents on which bidding is based, shall execute and attach thereto, an affidavit substantially in the form herein provided, to the effect that he has not entered into a collusive agreement with any other person, firm, or corporation in regard to any Bid submitted.

B. Before executing any subcontract, the successful Bidder shall submit the name of any proposed Subcontractor for prior approval and an affidavit substantially in the form provided in this document.

2.9. STATEMENT OF BIDDER'S QUALIFICATIONS

A. Bidder's Experience and Capacity

Each Bidder shall furnish a Statement of Bidder's Qualifications, detailing their experience in steel repairs, concrete repairs, and flood control work, along with a description of their organization and available equipment for the project. This information shall be provided on the form(s) furnished for that purpose. If specifically requested by the Owner, a detailed financial statement must also be submitted.

The Owner reserves the right to conduct any necessary investigations to assess the Bidder's ability to fulfill the contractual obligations. The Bidder shall furnish all such information and data as the Owner may request for this purpose. The Owner retains the right to reject any Bid if the available evidence or information does not satisfy the Owner that the Bidder is qualified to carry out the terms of the contract properly.

B. Minimum Experience Requirements

Bidders must demonstrate a minimum of 5 years of construction experience (within the last 7 years) on structural steel repair, concrete repair, and flood control projects of comparable size and complexity. Detailed instructions for documenting this experience are included in the Statement of Bidder’s Qualifications bid form.

C. Bidders must furnish the following:

1. A list of equipment owned or leased and currently in their possession;

2. Names and resumes of the Superintendent and Supervisory personnel to be assigned to major features of the work;

3. A comprehensive description of all work to be self-performed;

4. Names of proposed subcontractors and the specific scope of work each will undertake;

5. A work plan demonstrating compliance with the State Public Works Contract apprenticeship program as prescribed by RIGL Title 37 Section 37-13-3.1.

6. The name of the firm's Equal Employment Opportunity contact, with reference to the City or State;

7. Financial references and a set of audited financial statements (prepared by a CPA) for the most recent 3-year period, submitted to the City for review and approval;

8. Original letters from Bonding & Insurance Companies District Offices indicating their willingness to furnish the required bonds/certificates

9. Insurance documentation naming the Owner as an additionally insured party

10. A list of the 10 most recent contracts completed by the Bidder

11. A list of all uncompleted contracts

12. A statement disclosing whether, within the past 3 years, the firm has had any bids rejected for reasons such as lack of qualifications, responsibility, submission of informal/non-responsive bids, or has been denied or revoked pre-qualification status; or has been cited for any violation of State labor laws or prevailing wage regulations

2.10. UNIT PRICES, SUPPLEMENTAL UNIT PRICES AND ALTERNATES

A. The Unit Price for each of the items in the proposal of each Bidder shall include as part of the Unit Cost the pro rata share of overhead and profit so that the sum of the products obtained by multiplying the quantity shown for each item by the Unit Price Bid represents the Total Bid. Bid pricing sheets are included in Appendix A.

B. The special attention of all Bidders is called to this provision for, should conditions make it necessary to revise the quantities, no limit will be fixed for such increased or decreased quantities nor extra compensation allowed, provided the net monetary value of all such additive and subtractive changes in quantities of such items of work (i.e., difference in cost) shall not increase or decrease the original contract price by more than twenty-five percent (25%), except for work not covered in the Drawings and Technical Specifications as provided for in the RHODE ISLAND DEPARTMENT OF TRANSPORTATION Standard Specifications for Road and Bridge Construction, 2004 Edition, Amended March 2018 GENERAL CONDITIONS PART 1, Section 104.0.7 a2.

C. Add alternate bid items are not included in this project.

D. The Bidder shall provide Bid Unit Costs that reflect the Fair Market Value of the work to be performed to prevent an unbalanced bid. As such the practice of submitting Penny, Dollar or Token Bid values is discouraged and could result in rejection of the bid if found to be unbalanced.

E. A description of the items inclusive within the base bid items can be found in the attached technical specification 01 22 00 Unit Prices.

2.11. CORRECTIONS

Erasures or other changes in the Bids must be explained or noted over the signature of the Bidder.

2.12. TIME FOR RECEIVING BIDS

A. Bids received prior to the advertised hour of opening will be securely kept and sealed. The officer whose duty it is to open them will decide when the specified time has arrived and no Bid received thereafter will be considered. Bidders are solely responsible for delivery to and receipt by the Owner of bids. The time of receipt will determine the acceptability of mailed bids, regardless of postmark.

B. Bidders are cautioned that while telegraphic modifications of Bids may be received as provided above, such modifications, if not explicit and if in any sense subject to misinterpretation, shall make the Bid so modified, or amended, subject to rejection.

2.13. OPENING OF BIDS

At the time and place fixed for the opening of Bids, the Owner will cause to be opened and publicly read aloud, every Bid received within the time set for receiving Bids, irrespective of any irregularities therein. Bidders and other persons properly interested may be present in person or by representative.

2.14. WITHDRAWAL OF BIDS

Bids may be withdrawn upon written or telegraphic request dispatched by the Bidder in time for delivery in the normal course of business to the time fixed for opening provided that written confirmation of any telegraphic withdrawal over the signature of the Bidder is placed in the mail and postmarked prior to the time set for Bid opening. The Bid Guarantee of any Bidder withdrawing his Bid in accordance with the foregoing conditions will be returned promptly.

2.15. DESCOPING MEETING

All bidders shall be available for a Pre-Bid Award Descope Meeting as may be required by the Owner. The Owner reserves the right to descope one or more bidders. Additionally, the meeting minutes of the Descope Meeting shall be enumerated as part of the signed contract agreement. The intent is NOT to renegotiate cost in any manner but to obtain clarifications and details of representations made by the Bidder to assure an understanding of the bid prior to final award.

2.16. AWARD OF CONTRACT; REJECTION OF BIDS

A. The Contract will be awarded to the lowest, qualified, and responsible Bidder or Bidders submitting the bid complying with the conditions of the Invitation for Bids. The Bidder or Bidders to whom the award is made will be notified at the earliest possible date. The Owner, however, reserves the right to reject any and all Bids and to waive any informality in Bids received, whenever such rejection or waiver is in its interest.

B. The Owner reserves the right to consider as unqualified to do the work of general construction, any Bidder who does not habitually perform work with their own forces, the major portions of the work involved in the construction of the improvements embraced in this Site Improvements contract.

C. The Owner will not award the Contact to any Contractor who is, at the time, ineligible under the provisions of any regulations issued by the Secretary of Labor; United States Department of Labor; or is not qualified under applicable ordinances of the City of Providence or the Laws of the State of Rhode Island. Attention of all Bidders is called to Title 37, Chapter 13, Sections 1-14, General Laws of Rhode Island, 1956, relative to the payment of wages, obligations and charges by Contractors on public works.

2.17. EXECUTION OF AGREEMENT; PERFORMANCE AND PAYMENT BOND

A. Subsequent to the award within ten (10) days after the prescribed forms are presented for signature, the successful Bidder shall execute and deliver to the Owner an Agreement on the form included in the Contract Documents in such number of copies as the Owner may require.

B. Having satisfied all conditions of award as set forth elsewhere in these documents, the successful Bidder shall, within the period specified in paragraph "A" above, furnish a statutory surety bond in a penal sum not less than the amount of the Contract as awarded, as security for the faithful performance of the Contract and for the payment of all persons, firms or corporations to whom the Contractor may become legally indebted for labor, materials, tools, equipment, or services of any nature including utility and transportation services employed or used by him in performing the work. Such Bond shall be in the same form as that included in the Contract Documents and shall bear the same date as, or a date subsequent to, that of the Agreement. The current power of attorney for the person who signs for any surety company shall be attached to such bond. This bond shall be signed by a guarantee or surety company listed in the latest issue of the U.S. Treasury Circular 570 and the penal sum shall be within the maximum specified for such company in said Circular 570.

C. The failure of the successful Bidder to execute such Agreement and to supply the required bond or bonds within ten (10) days after the prescribed forms are presented for signature, or within such extended period as the Owner may grant based upon reasons determined sufficient by the Local Public Agency, shall constitute a default and the Owner may either award the Contract to the next lowest responsible Bidder, or readvertise for Bids and, may charge against the Bidder the difference between the amount of the Bid and the amount for which a Contract for the work is subsequently executed; irrespective of whether the amount thus due exceeds the amount of the Bid Bond. If a more favorable Bid is received by readvertising, the defaulting Bidder shall have no claim against the Owner for a refund.

2.18. WAGES AND SALARIES

A. Attention of Bidders is particularly called to the requirements concerning the payment of not less than the prevailing wage and salary rates specified in the Contract Documents and the conditions of employment with respect to certain categories and classifications of employees. See General Conditions, Part II.

B. The rates of pay set forth under General Conditions, Part II, are the minimums to be paid during the life of the Contract. It is therefore the responsibility of Bidders to inform themselves as to local labor conditions, such as length of workday and work week, overtime compensation, health and welfare contributions, labor supply and prospective changes or adjustments of rates.

C. Attention of all Bidders is called to Title 37, Chapter 13, Section I-14 of the General Laws of Rhode Island, 1956, relative to the payment of wages, obligations, and charges by contractors on public works.

D. Prevailing wage rates and Davis-Bacon Wage Determination Reference Materials are available online at https://beta.sam.gov/.

2.19. EQUAL EMPLOYMENT OPPORTUNITY

Attention of Bidders is particularly called to the requirement for ensuring that employees and applicants for employment are not discriminated against because of their race, color, religion, sex, or national origin. All pronouns contained herein and in the Contract Documents, and any variations

thereof, shall be deemed to refer to the masculine, feminine or neutral, singular or plural, as to the identity of the parties hereto may require.

2.20. NOTICE TO PROCEED, TIME OF COMPLETION, AND LIQUIDATED DAMAGES

A. The Bidder must agree to commence work on or before a date to be specified in a written Notice to Proceed by the Owner and to be fully completed by **Friday, May 2, 2025**.

B. Contractors are advised that mobilization is to commence post **November 11, 2024** for the initial work schedule, or as otherwise agreed in writing by the Owner. The Contractor can elect to start at the Manchester Street Station prior to the beginning of work at Allens Avenue with the written approval of the Owner.

C. The Contractor is required to sign and date four (4) copies of the Notice to Proceed. The Contractor shall keep one copy and return the other three copies to the Department of Public Works, 700 Allens Avenue, Providence, RI, 02905 (2 copies for DPW and 1 copy for PPBA).

D. The Bidder must agree to commence work on or before a date to be specified in a written Notice to Proceed by the Owner and to fully complete the project by the indicated completion date. The Bidder will be subject to liquidated damages, as indicated in the SPECIAL CONDITIONS, Section 6.3.

2.21. ITEMS NOT LISTED IN THE BID

Appurtenant items of work shown on the drawings or specified or required to complete the work but not listed separately under the list of items in the Bid shall be included in the cost of payment under the various applicable Bid items of work and no separate payment will be made for such items. It shall be the responsibility of the Contractor to verify any missing or incomplete data.

2.22. BALANCED BIDDING

A. Minus-bidding on any item or items of the specifications is prohibited. Bids should be made on each separate item of work shown in the Bid (proposal) with reasonable relation to the probable cost of doing the work included in such items; the right is reserved to reject wholly any Bid in case an item or items thereof are obviously unbalanced or appear to the Owner to be so unbalanced as to affect, or liable to affect adversely any interests of the Owner. 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.

B. The Bidder shall provide Bid Unit Costs that reflect the Fair Market Value of the work to be performed to prevent an unbalanced bid. As such, the practice of submitting Penny, Dollar, or Token Bid values is discouraged and could result in rejection of the bid if found to be unbalanced.

2.23. PRICES

A. Bidders shall state the proposed price for the work by which the Bids will be compared. This price is to cover all the expenses incidental to the completion of the work in full conformity with the contract specifications and drawings. The price or prices proposed shall be stated both in writing and in figures, and any Bid not so stated may be rejected.

B. If there is a discrepancy between the price written in words, and written in figures, the price written in words shall govern. No bid will be accepted which does not contain a unit or lump sum price for every item contained in the Bid Form.

C. The Contractor shall provide Schedule of Rates for all Labor and Equipment as part of the Bid for the project. This rate table will be used for adjustments in costs in the event they are required.

2.24. UNCERTAINTY OF QUANTITIES

A. The quantities listed in the Bid (proposal) are approximate and are given only for use in comparing Bids and to indicate approximately the total amount of the contract, and the Owner does not expressly or by implication represent that the actual amounts of work will even approximately correspond therewith but does call 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 (proposal) as may be necessary in the judgment of the Owner 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 Bids may be largely dependent on subsurface ground conditions encountered and therefore the quantities of work to be done under the various items may vary substantially from the estimated quantities or may even be omitted.

B. Under the contract, the Owner reserves the right to increase or decrease the approximate quantities for, or to omit entirely, any of the items as listed in the Bid.

C. Only such quantities of the respective items of work performed and accepted will be paid for. An increase or decrease in the quantity for any item shall not be regarded as ground for an increase or decrease in the Bid Prices.

2.25. CONTRACT

A contract substantially in the form set forth hereinafter will be required to be executed by the successful Bidder and the Owner. The attention of all Bidders is, therefore, called to the form of said proposed contract and the provisions thereof.

2.26. WORK ON PRIVATE PROPERTY

A. Gate repair work occurring at the Manchester Street Station is work on private property. Work on private property may only occur with instruction from the Owner.

Address:	40 Point Street Providence, Rhode Island 02903
Owner Contact:	IHI Power Services Corp A.J. Gordon Plant Manager 401-457-9283 AGordon@ManchesterSPS.com

B. The Contractor shall not enter or occupy private land outside of easements, except by written permission of the property owner. Furnish Owner copies of all agreements the Contractor has with property owners to enter or occupy private lands

2.27. CONDITIONS OF WORK

A. Each Bidder must inform himself fully of the conditions relating to the construction and labor under which the work is now or will be performed; failure to do so will not relieve the successful Bidder of his obligation to furnish all required materials, equipment, services, systems, and labor necessary to carry out all of the provisions of the Contract Documents, and

to complete the prescribed set forth in their Bid. Insofar as possible, the Contractor, in the carrying out of their work must employ such methods or means as will not cause any reasonable interruption of or interference with traffic, the use of existing facilities and utilities, the use of municipally or State- or privately-owned lands, or with the work being performed by others. The Contractor shall perform the work in accordance with Technical Specifications. The Contractor is responsible for any and all additional efforts required to accommodate protections for pedestrians, vehicles and bicycle traffic through the work zone, including providing temporary access routes/ramps that are detectable and include accessibility features consistent with the existing sidewalks, resulting infield conditions created by the means and methods deployed by the Contractor.

B. The Contractor must satisfy himself by his own investigation and research as to the nature and location of the work, the general and local conditions, including but not restricted to those bearing upon underground pipes and structures, subsurface soil conditions including rock and groundwater, transportation, disposal, handling and storage of materials, water, electric power, roads, means of access, the construction and making of connections of the work to existing facilities and utilities, the locations of existing utilities and structures affecting the work, or other similar conditions at the site, the character of equipment and facilities needed preliminary to and during prosecution 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 labor and materials needed, and make his Bid in sole reliance thereon, and shall not at any time after the submission of a Bid assert that there was any misunderstanding in regard to the nature or amount of the work to be done.

2.28. NOTICE OF SPECIAL CONDITIONS

Attention is particularly called to those parts of the contract documents and specifications which deal with the following:

A. Testing and Remediation of Hazardous Materials

B. Insurance Requirements

C. Wage Rates

D. Interpretation of Drawings and Specifications

E. Test Pits

F. Existing Utilities and Connections

G. Layout of Work

H. Locations of Work

I. Schedule of Work

J. Salvageable Materials

K. Construction Schedule

L. Occupational Safety and Health Standards (OSHA) required PPE shall be provided by the Contractor as part of their costs, as well as any PPE Requirements related to Covid-19.

M. The Contractor shall submit a Life and Safety Plan prior to the execution of the Work including the Contractor's COVID-19 Plan

N. Environmental

2.29. LAWS AND REGULATIONS

The Bidder's attention is directed to the fact that all applicable Federal and State laws, municipal ordinances and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included as if they are attached and written in full.

2.30. DEFINITIONS

A. Wherever a reference is made to any standard specifications, it shall mean the most recent specification, code, standard or tentative specification of the organization referred to, and these standard specifications shall be considered a part of these Contract Documents to the extent indicated. Abbreviations which may be used refer to the following organizations:

1.	AA	Aluminum Association
2.	AAMA	Architectural Aluminum Manufacturers Association
3.	AASHTO	American Association of State Highway and Transportation Officials
4.	ACI	American Concrete Institute
5.	ACOE	Army Corps of Engineers
6.	AISC	American Institute of Steel Construction
7.	AISI	American Iron and Steel Institute
8.	ANSI	American National Standards Institute
9.	ASTM	American Society for Testing and Materials
10.	AWS	American Welding Society
11.	RIDEM	Rhode Island Department of Environmental Management
12.	CRMC	Rhode Island Coastal Resources Management Council
13.	NFPA	National Fire Protection Association
14.	OSHA	Occupational Safety and Health Administration
15.	PTI	Post-tensioning Institute
16.	UL	Underwriter's Laboratory

B. Owner: The term "Owner" means the Providence Public Buildings Authority (PPBA), the City of Providence (City), and the Department of Public Works (DPW) which are authorized to undertake this contract.

C. General: A substantial amount of specification language consists of definitions of terms found in other Contract Documents, including the Drawings. Certain terms used in Contract Documents are defined in this article. Definitions and explanations contained in this section are not necessarily either complete or exclusive but are general for the Work to the extent that they are not stated more explicitly in another element of the Contract Documents.

D. Engineer: The term "Engineer" means any qualified person or persons, employed by the Local Public Agency for the purpose of directing or having in charge the work of Site Improvements embraced in this Contract, the said Engineer acting directly or indirectly through any Assistant Engineer having general charge of the work or through any assistant having immediate charge of a portion thereof limited by the particular duties

entrusted to him. Refers to the engineer on record, Pare Corporation (Pare) of Foxboro, MA, Holyoke, MA and Lincoln, RI, and its Representatives.

E. Regulatory Agencies: Refers to the following agencies having jurisdiction over all or part of the work:

1. Army Corps of Engineers

2. Rhode Island Department of Transportation

F. Work: Refers to all construction activities associated with the repairs the two vehicular hurricane barrier gates located across Allens Avenue and at the Manchester Street Station (40 Point Street, Providence, RI) as specified in the Contract Documents and specified herein.

2.31. SEQUENCE OF CONSTRUCTION

The Contractor shall schedule his operations so as to minimize delays and inconvenience to traffic and shall at all times cooperate with the City of Providence, Parks Department, Department of Public Properties, Police and Fire Departments, the Traffic Engineering Department and the Department of Planning & Development and their appointed representatives. The Contractor shall also cooperate with the Department of Public Works, the Rhode Island Department of Transportation, the Rhode Island Public Transit Authority (bus stops and route impacts) and other private companies. The Contractor shall submit his proposed "Sequence of Construction" to the Owner for approval before commencing work and shall be flexible in revising the “Sequence of Construction” to meet the Owner’s needs.

2.32. TITLE 37 - CHAPTER 13 (LABOR AND PAYMENT OF DEBTS BY CONTRACTORS – GENERAL LAWS OF RI, 1956, AS AMENDED)

Title 37 - Chapter 37-13 of the General Laws of RI, 1956, as amended, shall be considered part of this Contract as if attached and written in full.

2.33. PROVIDENCE CODE OF ORDINANCES – SECTION 21.28.1. QUALIFICATIONS OF PARTIES DOING BUSINESS WITH THE CITY.

The Contractor shall comply fully with this Section as if attached and written in full (https://library.municode.com/ri/providence/codes/code_of_ordinances)

2.34. INSTRUCTIONS TO BIDDERS

Instructions to Bidders are contained in the Instructions to Bidders Section, of which this Article is hereby made part of. When the provisions of the Contract Documents are changed by this Article, the portion modified is referred to by number. Unchanged portions and other provisions remain intact.

2.35. BID SECURITY

Bid Security shall be in the amount stated in the Board of Contract and Supply CONSTRUCTION & SERVICE CONTRACT BID TERMS and INVITATION FOR BIDS. Bid Bond naming the City of Providence as Obligee.

2.36. PRE-BID CONFERENCE

A Mandatory Pre-bid conference will be held on Wednesday, September 4, 2024, at 9:00 a.m. at the Allens Avenue Vehicular Gate, located at the intersection of Henderson Street and Allens Avenue.

2.37. BIDDING REQUIREMENTS

A. Attention is particularly called to those parts of the Contract Documents and Specifications dealing with the following:

1. Required Bid Documents
2. Insurance Requirements
3. Wage Rates
4. City of Providence Code of Ordinances, Chapter 21, Article II, Section 21-52. Minority and Women Business Enterprise
5. City of Providence Code of Ordinances, Chapter 21, Article II, Section 21-28.1. Qualifications of parties doing business with the Owner.

B. The Bidder is specifically advised that any person or firm, or other party to whom it is proposed to award a subcontract under this Contract must be acceptable to the Owner.

2.38. REQUIRED BID DOCUMENTS

The following documents must be fully executed on the special forms provided herein and must accompany all bids:

A. Bid Forms

1. Bid Form 1 - Bidders Blank
2. Bid Form 2 - Certification of Bidder
3. Bid Form 3 - Certificate Regarding Public Records
4. Bid Form 4 - Affidavit of City Vendor

B. Form of Bid

C. Schedule of Unit Prices

D. Schedule of Rates for all Labor and Equipment

E. City of Providence Board of Contract and Supply and MBE/WBE Participation Forms

F. Bid Bond

G. Certificate of Corporate Principal

H. Non-Collusion Affidavit of Prime Bidder

I. Non-Collusion Affidavit of Subcontractor

J. Certification of Non-Segregated Facilities

K. Bidder's Certification for Equal Employment Opportunity

L. Special Requirement for All Out-of-State Contractors and Firms

M. Certification with Regard to Performance of Previous Contracts and Subcontracts

N. Affidavit of Non-Discrimination

O. Certification of Non-Discrimination in Equal Employment Opportunity

P. Statement of Bidders Qualifications

Q. Proposed Subcontractors

R. Municipal Contract Addendum, Rhode Island Department of Labor and Training, Prevailing Wage Requirements (RIGL 37-13-1 ET SEQ)

2.39. CERTIFICATE OF NON-SEGREGATED FACILITIES

All contractors should be aware of the Certification of Non-Segregated Facilities which is part of the Bid proposal.

2.40. CERTIFICATION WITH REGARD TO PERFORMANCE OF PREVIOUS CONTRACTS OR SUBCONTRACTS SUBJECT TO THE EQUAL OPPORTUNITY CLAUSE

In general, this certificate refers to Standard Form 100, which is an annual form submitted by certain contractors to the U.S. Department of Labor. Contractors should refer to the Federal Procurement Regulations for a more thorough explanation of this report.

2.41. MISCELLANEOUS / NOTIFICATIONS

A. The Contractor shall notify "Dig-Safe" and all public and private utility companies for confirmation and layout of utility locations prior to the commencement of work.

City-Owned utilities such as but not limited to drainage, sewers, traffic signal and street lighting infrastructure are NOT PART of the DIG SAFE program in Providence and are not marked by the City of Providence. Contractors are urged to exercise due diligence and review handholes, manholes, fixtures and other visual clues that underground utilities exist in the Work Zone that may not be located and marked by Dig Safe. This effort may require observing underground structures by removing manhole and handhole covers to observed depths and direction of utilities. Additionally, the Providence Department of Public Works does have a limited library of public utilities and roadway information on file. This information can be obtained by contacting the Engineering Division at DPW.

B. Refer to the Contract Specifications for Additional Requirements.

C. The Contractor shall verify all dimensions and accurately locate the property boundary and Limit-of-Work lines to the satisfaction of the Owner prior to the commencement of work.

D. As of May 18, 1995, all contractors proposing to execute work within the public right-of-way in the City of Providence must obtain an annual sidewalk license through the Providence

Department of Public Works, 700 Allens Avenue, Providence, RI. The annual license fee is $100.00, to be paid by the Contractor.

E. The Contractor shall be back charged for at actual costs to correct issues resulting from not failure to perform this task and required timely notifications of work. The Contractor will not be eligible for extensions in time for failure to comply.

F. Project layout and the highest standards of execution for the project is extremely important. All methods and materials will be approved in advance of the execution of work. The Contractor, Owner, Engineer, and Project Manager shall agree on a project schedule, acceptable work schedule and schedule of approvals in advance of any work or action taken on the site and delivery of materials.

G. Contractors and Subcontractors shall provide all the qualified and skilled labor required to meet the quality level expected for this project. If the Owner determines that the Contractor is not providing the labor and skill required he/she will be required to immediately provide new personnel or Subcontractor for said skill acceptable to the Owner to replace unacceptable sections/areas and continue the project.

H. Work deemed unacceptable during the course of the work will be cause for the Owner to reasonably withhold payments for work completed to-date until acceptability is achieved and required work is properly corrected. The contractor shall not proceed with new work until work done to-date is acceptable.

2.42. HOLDING OF BIDS

A. Bids may be held by the Owner for a period not to exceed ninety (90) days from the date of Opening of Bids, for the purpose of reviewing of bids and investigating the qualifications of bidders, all prior to award of Contract.

2.43. AWARD OF CONTRACT / START OF CONSTRUCTION

A. The CONTRACT for construction is expected to be awarded on **Monday, October 21, 2024**. The Board of Contract and Supply may take up to 60 days to formally award the Contact and the Contract shall commence work within 14 days of Contract Award unless otherwise agreed to in writing.

B. CONTRACTOR shall commence construction within ten (10) calendar days of issuance of NOTICE-TO-PROCEED. The Contractor shall have made application for required bonds no later than the day after Contract Award. The City reserves the right to issue notices to proceed in phases.

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3. REQUIRED BIDDING DOCUMENTS

LIST OF FORMS

The following forms must be completed and signed by the bidder and included with the bid. Failure to execute any form, or portion thereof may lead to disqualification of a bid. Blank copies of the forms are included in the Appendix.

1. Bid Forms
   (a) Bid Form 1 - Bidders Blank
   (b) Bid Form 2 - Certification of Bidder
   (c) Bid Form 3 - Certificate Regarding Public Records
   (d) Bid Form 4 - Affidavit of City Vendor
2. Form of Bid
3. Schedule of Unit Prices
4. Schedule of Rates for all Labor and Equipment
5. City of Providence Board of Contract and Supply and MBE/WBE Participation Forms
6. Bid Bond
7. Certificate of Corporate Principal
8. Non-Collusion Affidavit of Prime Bidder
9. Non-Collusion Affidavit of Subcontractor
10. Certification of Non-Segregated Facilities
11. Bidder's Certification for Equal Employment Opportunity
12. Special Requirement for All Out-of-State Contractors and Firms
13. Certification with Regard to Performance of Previous Contracts and Subcontracts
14. Affidavit of Non-Discrimination
15. Certification of Non-Discrimination in Equal Employment Opportunity
16. Statement of Bidders Qualifications
17. Proposed Subcontractors
18. Municipal Contract Addendum, Rhode Island Department of Labor and Training, Prevailing Wage Requirements (RIGL 37-13-1 ET SEQ)

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4. CONTRACT FORMS

Copies of the following contract forms are included in the Appendix.

LIST OF FORMS

A. Construction Agreement

B. Contract Bond for Complete Performance and Full Payment

C. Contractor's MBE/WBE Subcontractor Utilization Form

D. Partial Release – Contractor

E. Final Release – Contractor

F. Partial Release – Subcontractor

G. Final Release – Subcontractor

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5. GENERAL CONDITIONS

5.1. SCOPE OF WORK

The City of Providence, Department of Public Works (DPW, City, OWNER) is soliciting proposals from vendors (CONTRACTOR) with expertise in structural steel gate repairs, welding, epoxy painting, and flood control.

This Project involves the recommended repairs, as shown in the Contract Documents, at two hurricane barrier locations, one at Allens Ave and the other at the Manchester Street Station. The following describes the tasks associated with the scope of services:

Task 1: Allens Ave Hurricane Barrier Repairs

1. Mobilize equipment and personnel to the job site;
2. Install erosion controls and temporary security fencing;
3. Remove, stockpile, and protect for reuse all signage;
4. Remove, transport, and modify gate specific repairs as indicated in the Contract Documents off-site;
5. Inspection of ground pin conditions at the lower hinge locations, remove and replace if needed at the direction of the Engineer. The contractor is responsible for the reinstallation of the pin to As-built conditions.
6. Off-site modifications include, but are not limited to: sandblasting, epoxy coating, removal and replacement of 20 gauge steel skin, replacing the lower hinge for the gate, modifying of front and rear recess structures, fabricating the reinforced “U” hook, fabricating the steel panel flaps, modifying the central “A” frame of the east gate as indicated, removal and replacement of the top WF section inclusive of installing a cover plate;
7. Clean on site drains between the front and rear recess;
8. Seal construction joints of the concrete abutment roofs;
9. Implement onsite concrete repair program;
10. Remove and replace rubber fibre seal at both abutments;
11. Reinstallation of vehicular gate and demonstrating functionality;
12. Site clean-up and restoration of areas as necessary;
13. Demobilization;

Task 2: Manchester Street Station Hurricane Barrier Repairs

1. Mobilize equipment and personnel to the job site;
2. Install erosion controls and temporary security fencing;
3. Remove, stockpile, and protect for reuse all signage;
4. Off-site modifications include: sandblasting, epoxy coating, hinge plate replacement, and replacement of the closure hook brackets as modified in the Contract Documents;
5. Reinstallation of vehicular gate and demonstrating functionality;
6. Removal and replacement of closure hooks;
7. Installation of ladder and operation platform;
8. Removal and potential replacement of crank operating bar.
9. Remove, transport, and modify gate specific repairs as indicated in the Contract Documents off-site;
10. Demobilization;
11. Project close-out.

The CONTRACTOR shall provide a competent Superintendent and/or Project Manager, dedicated to the project and satisfactory to the Owner, on the work at all times during working hours with full authority to act on behalf of the CONTRACTOR. The CONTRACTOR shall also provide an adequate staff for the proper coordination and expediting of their work.

The CONTRACTOR shall lay out their own work and shall be responsible for all work executed under the Contract. **The CONTRACTOR shall field verify conditions and accessibility prior to completing work and will be held responsible for any error resulting from failure to do so.**

5.2. DEFINITIONS

Whenever used in any of the Contract Documents, the following meanings shall be given to the terms defined:

A. Addendum: The term "Addendum" or "Addenda" means any changes, revisions or clarifications of the Contract Documents which have been duly issued by the Owner to prospective Bidders prior to the time of receiving Bids.

B. Contract: The term "Contract" means the Contract executed by the Owner and the Contractor, of which these GENERAL CONDITIONS form a part.

C. Contract Documents: The term "Contract Documents" means and shall include the following: Executed Agreement, Addenda (if any), Invitation for Bids, Instructions to Bidders, Signed Copy of Bid, General Condition, Special Conditions, Technical Specifications, and Drawings (as listed in the Schedule of Drawings).

D. Contractor: The term "Contractor" means the person, firm or corporation entering into the Contract with the Owner to construct and install the improvements embraced in this Contract.

E. Drawings: The term "Drawings" means the drawings listed in the Schedule of Drawings.

F. Engineer: The term "Engineer" means any qualified person or persons, employed by the Local Public Agency for the purpose of directing or having in charge the work of Site Improvements embraced in this Contract, the said Engineer acting directly or indirectly through any Assistant Engineer having general charge of the work or through any assistant having immediate charge of a portion thereof limited by the particular duties entrusted to him. Refers to the engineer on record, Pare Corporation (Pare) of Foxboro, MA, Holyoke, MA and Lincoln, RI, and its Representatives.

G. Local Government: The term "Local Government" means the City of Providence, Rhode Island, within which the Project Area is situated.

H. Owner: The term "Owner" means the CITY OF PROVIDENCE, THE CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS (DPW) and the PROVIDENCE PUBLIC BUILDING AUTHORITY (PPBA) which are authorized to undertake this Contract.

I. Project Area: The term “Project Area” means the site of the CITY OF PROVIDENCE – 2024 HURRICANE BARRIER STREET GATE REPAIRS within the City of Providence which are the specified Contract limits of the evaluation contemplated to be completed in whole or in part under this Contract. The Project Area shall be considered the area identified on the Contact Documents in the vicinity of the Allens Avenue and Manchester Street Station Hurricane Barrier Street Gates on the Fox Point Hurricane Barrier levee.

J. Technical Specifications: The term "Technical Specifications" means that part of the Contract Documents which describes, outlines and stipulates: the quality of the materials to be furnished; the quality of workmanship required; and the methods to be used in carrying out the construction work to be performed under this Contract.

K. Wherever in the specifications or upon the contract drawings the words directed, required, permitted, ordered instructed, designated, considered necessary, or words of like import are used, it shall be understood that the direction, requirement, permission, order, instructions, designation or decision of the Owner is intended; where as shown, as indicated, as detailed or words of similar import are used, it shall be understood that reference to the drawings accompanying these specifications is made unless otherwise stated; and similarly the words approved, acceptable, satisfactory, or words of like import shall mean approved by, or acceptable, or satisfactory to the Owner or his representative. As used herein "provided" shall be understood to mean "provided complete in place", that is "furnished and installed complete".

5.3. SUPERINTENDENCE BY CONTRACTOR

A. Except where the Contractor is an individual and gives his personal superintendence to the work, the Contractor shall provide a competent Superintendent and/or Project Manager, dedicated to the project and satisfactory to the Owner, on the work at all times during working hours with full authority to act on behalf of the Contractor. The Contractor shall also provide an adequate staff for the proper coordination and expediting of his work.

B. The Contractor shall lay out their own work and shall be responsible for all work executed under the Contract. The Contractor shall verify all figures and elevations before proceeding with the work and will be held responsible for any error resulting from failure to do so.

5.4. SUBCONTRACTS

A. The Contractor shall not execute an agreement with any Subcontractor or permit any Subcontractor to perform any work included in this contract until they have submitted a non-collusion affidavit from the Subcontractor and have received written approval of such Subcontractor from the Owner. (See Non-Collusion Affidavit for Subcontractor in Bidding Documents section)

B. No proposed Subcontractor shall be disapproved by the Owner except for cause.

C. The Contractor shall be as fully responsible to the Owner for the acts and omissions of his Subcontractors, and of persons either directly or indirectly employed by them as they are for the acts and omissions of persons directly employed by them.

D. The Contractor shall cause appropriate provision to be inserted in all subcontracts relative to the work to require compliance by each Subcontractor with the applicable provisions of the Contract for the improvements embraced in the Site Preparation.

E. Nothing contained in the Contract shall create any contractual relation between any Subcontractor and the Owner.

F. The Contractor shall have full control over their Subcontractors to deliver the project and/or elements of the project allowing he Contractor to perform the work timely. The Contractor shall not permit any Subcontractor from holding up the project due to unavailability or not wanting to perform small sections of Work. If a Subcontractor is not able to perform work in a timely manner, the Contractor shall replace them with a replacement Subcontractor approved by the Owner.

G. The Contractor shall provide complete sets of items, such as, but not limited to, Contracts, Specifications, Drawings, Sketches and other applicable documents for both office and field use.

5.5. OTHER CONTRACTS

The Owner may award, or may have awarded, other contracts for additional work, and the Contractor shall cooperate fully with such other Contractor, by scheduling his own work with that to be performed under other Contracts as may be directed by the Owner. The Contractor shall not commit or permit any act, which will interfere with the performance of work by any other Contractor as scheduled.

5.6. FITTING AND COORDINATION OF THE WORK

The Contractor shall be fully responsible for the proper fitting of all work and for the coordination of the operations of all trades, Subcontractors, or materialmen engaged upon this Contract. The Contractor shall be prepared to guarantee to each of their Subcontractors the locations and measurements which they may require for the fitting of their work to all surrounding work.

5.7. MUTUAL RESPONSIBILITY OF CONTRACTORS

If, through acts or neglect on the part of the Contractor, any other Contractor or any Subcontractor shall suffer loss or damage on the work, the Contractor shall settle with such other Contractor or Subcontractor by agreement or arbitration, if such other Contractor or Subcontractor will so settle. If such other Contractor or Subcontractor shall assert any claim against the Owner on account of any damage alleged to have been so sustained, the Owner will notify this Contractor, who shall defend at his own expense any suit based upon such claim, and, if any judgment or claims against the Owner shall be allowed, the Contractor shall pay or satisfy such judgment or claim and pay all costs and expenses in connections therewith.

5.8. PROGRESS SCHEDULE

A. The Contractor shall submit for approval immediately after execution of the Agreement, a carefully prepared Cost Loaded Progress Schedule (in PDF and Native Format), showing the proposed dates of starting and completing each of the various sections of the work, the anticipated monthly payments to become due the Contractor, and the accumulated percent of progress every two weeks Every two weeks, the Contractor shall update and submit the progress schedules for review by the Owner. Failure to maintain the progress schedule will be cause to withhold payments due to the Contractor.

B. Submission shall occur at least ten (10) calendar days before the scheduled Pre-Construction Conference

C. Submit revised progress schedules with the submission of each payment request or as indicated in the contract agreement.

D. Form of Schedules:

1. Prepare schedules using Microsoft Project (2010 or later) in the form of a horizontal bar chart or other approved equivalent.

2. Provide a separate horizontal bar for each item of work that matches verbatim the breakdown of the contract price toward which partial payments will be made to the Contractor.

3. Horizontal Time Scale: Identify the first workday of each week.

4. Scale and Spacing: To allow space for notations and future revisions.

5. Minimum Sheet Size: 8-1/2" by 11".

E. Contents of Schedules:

1. Construction Progress Schedule: Include the following:

(a) The name of the project and name and address of the Contractor.
(b) The name and address of the Owner.
(c) Date indicating the end of the construction period being reported.
(d) Legend showing a solid line representing estimated construction and a dotted line representing actual construction.
(e) Columns showing the percentage of the total contract of each item, the percentage of completion to date of each item and the weighted percentage of completion of each item to the project as a whole.
(f) Starting and completion dates of the contract.
(g) Projected percentage of completion for each item, as of the first day of each month.

2. Submittals Schedule for Shop Drawings, Product Data and Samples: Show the following:

(a) The dates for Contractor's submittals.
(b) The dates reviewed submittals will be required from the Engineer/Owner.

F. Monthly Progress Reports:

1. Indicate progress of each activity to date of submission.

2. Show changes occurring since previous submission of schedule:

(a) Major changes in scope.
(b) Activities modified since previous submission.
(c) Revised projections of progress and completion.
(d) Other identifiable changes.

3. Provide a narrative report as needed to define:

(a) Problem areas, anticipated delays, and the impact on the schedule.
(b) Corrective action recommended, and its effect.
(c) The effect of changes on schedules of other prime Contractors.

G. Distribution:

1. Distribute copies of the reviewed schedules to:

(a) Job site file.
(b) Subcontractors.
(c) Other concerned parties.

2. Instruct recipients to report promptly to the Contractor, in writing, any problems anticipated by the projections shown in the schedules

5.9. COMPENSATION AND PAYMENTS TO CONTRACTOR

A. Compensation:

1. When base bid quantities are exceeded, they shall be added to the Schedule of Values as a new line item. The Contractor and the Owner all shall monitor overages versus those items coming in lower than estimated to assure that the budget health is not compromised.

2. The amount of the Contract (accepted bid prices) listed in the Bid is based on the estimated quantities as set forth in the Bid. Actual work may result in greater or lesser quantities estimated. It is understood and agreed that the CONTRACTOR will accept as payment the actual measured quantities at the unit set forth in the accepted bid.

3. The estimated quantities given in the Bid (proposal) for the various items of work are given for the purpose of comparing proposals offered for the work under this contract and if it is found in the performance of the contract work that any or all of the said estimated quantities are not even approximately correct, the Contractor shall have no claim for anticipated profits, or for loss of profits or for increase in prices as listed in the accepted Bid because of the difference between the quantities of the various items of work actually done and the estimated quantities stated in the accepted Bid (proposal) except as provided for in Section 5.10 hereof.

4. It is understood that, except as otherwise specifically stated in the contract documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of every nature, and all other services and facilities of every nature whatsoever necessary to protect, execute, complete and deliver the work within the specified time.

5. Any work necessary to be performed after regular working hours, on Saturdays, Sundays and legal holidays, shall be performed by the Contractor without additional expense to the Owner.

6. Night work or work on Saturdays, Sundays and legal holidays shall be done only with the approval of the City, Providence Traffic Engineering Department, RIDOT for state-maintained roads, or as specified in the Contract Documents.

7. Payments for unit items shall be in accordance with the specifications.

8. Retainage in the amount of 5% will be withheld by the Owner until final completion and acceptance of the project. If the Contractor is from out of state, the 5% retainage shall be increased to 8% to account for the extra 3% withheld for sales tax under RIGL 44-1-6.

B. Progress Payments:

1. The CONTRACTOR shall prepare his requisition for monthly progress payment, at a date to be specified by the Owner, and submit it digitally in a PDF and unlocked Excel document formats, to the Owner for his approval. The payment amount shall be determined by adding the total value of work completed to date and deducting (1) five percent (5%) of the total amount, to be retained until final payment and (2) the amount of all previous payments. If the Contractor is from out of state, the five percent retainage shall be increased to eight percent (8%) (refer to RIGL 44-1-6). The total value of work completed to date shall be based on the actual quantities of work completed and on the unit prices contained in the Bid Form. For lump sum items the value of the work

completed to date will be based on a percentage of the total lump sum price, reflecting the proportion of work completed for that item during the payment period, as assessed by the Owner or their representative. Copies of all invoices shall be available for inspection by the Owner or their representative.

2. THE OWNER, PRIOR TO MAKING EACH PAYMENT TO THE CONTRACTOR, shall require the Contractor to furnish releases or receipts from any or all persons / firms performing work and supplying material or services to the Contractor, or any Subcontractor, if this is deemed necessary to protect its interest. Additionally, the Contractor may be required to submit certified payrolls for any and all employees, including Subcontractors.

3. Payment Processing Requirements:

   (a) Certified Payrolls

   (b) MBE/WBE Utilization Form

   (c) Lien Releases

   (d) Summary of Items for Period and Completed to Date (with Progress Report)

C. Final Payment:

1. After the CONTRACTOR has demonstrated the operation and complete closure (including fastening) of the street gates post repairs and the DPW's receipt of all project related inspection and testing reports, videos, pictures, other multimedia, and acceptance by the Owner of all work under the Contract, the CONTRACTOR shall prepare his requisition for final payment which shall be based upon the carefully measured or computed quantity of each item of work at the applicable unit prices stipulated in the Bid Form. The total amount of the final payment due the CONTRACTOR under this contract shall be the amount computed as described above less all previous payments. Release of retainage and final payment to the CONTRACTOR shall be made subject to his completion of all outstanding work on the Punchlist, and a release in satisfactory form of all claims against the Owner arising under and by virtue of his contract., other than such claims, if any as may be specifically excepted by the Contractor from the operation of the release as provided under Section 5.14 hereof.

2. The Contractor shall retain consent of surety. This shall be submitted at the time of the final Payment requisition.

3. The Owner, before paying the final invoice, may require the CONTRACTOR to furnish releases or receipts from all Subcontractors having performed any work and all persons having supplied materials, equipment and services to the CONTRACTOR, if the Owner deems the same necessary in order to protect its interest. The Owner, however, may if it deems such action advisable, make payment in part or in full to the CONTRACTOR without requiring the furnishing of such releases or receipts and any payments so made shall in nowise impair the obligations of any surety or sureties furnished under this Contract.

4. Withholding of any amount from the Owner under Section 6.3, entitled "Liquidated Damages", under SPECIAL CONDITIONS, shall be deducted from the final payment due the Contractor.

5. Final payment by the Owner shall in no way relieve the Contractor of liability for its obligations to repair or replace faulty or defective Contract Work discovered after final payment. All such defenses Contractor may have to such claims are preserved.

D. Withholding Payments:

The Owner may withhold from any payment otherwise due the Contractor so much as may be necessary to protect the Owner and if it so elects may also withhold any amounts due from the Contractor to any Subcontractors or material dealers, for work performed or material furnished by them. The foregoing provisions shall be construed solely for the benefit of the Owner and will not require the Owner to determine or adjust any claims or disputes between the Contractor and his Subcontractors or material dealers, or to withhold any monies for their protection unless the Owner elects to do so. The failure or refusal of the Owner to withhold any monies from the Contractor shall in nowise impair the obligations of any surety or sureties under any bond or bonds furnished under this Contract.

Specifically, the Owner may withhold payment for the following reasons:

a. Failure to comply with Certified Payroll and Wage Rate requirements.

b. Failure to comply with MBE/WBE Program requirements.

c. Failure to provide Lien Releases as required.

d. Failure to provide adequate supporting information for invoices.

e. Incomplete or Deficient Work.

f. Unresolved Punch List Items.

E. Payments Subject to Submission of Materials Certificates and Materials Testing:

1. Each payment to the Contractor by the Owner shall be made subject to submission by the Contractor of all written certifications required of him and his Subcontractors. Materials and associated bid items found to be deficient by the City’s third-party testing agency will not be paid until defective materials have been replaced.

F. Payments Subject to Reporting Requirements:

1. Each payment to the Contractor by the Owner shall be made after satisfactory reporting is submitted for First Source, Apprenticeship Utilization, MBE/WBE utilization and any other reporting as stated at the pre-construction meeting. Payment to the Contractor by the Owner is also contingent upon receipt of updated and accurate project construction schedules.

G. Payments Subject to Certified Payroll Requirements:

1. Complete and executed certified payroll statements are required to be submitted with all invoice requests. Failure to do so will result in non-payment until certified payrolls are received.

H. Payments Subject to Progress Schedule

1. Each payment to the Contractor by the Owner shall be made subject to submission of a current, accurate and reasonable progress schedule. Failure to do so will result in non-payment until a progress schedule is received and accepted.

5.10. CHANGES IN THE WORK

A. The Owner may make changes in the scope of the work required to be performed by the Contractor under the Contract or making additions thereto, or by omitting work therefrom, without invalidation of the Contract, and without relieving or releasing the Contractor from any of his obligations under the Contract or any guarantee given by him pursuant to the Contract provisions, and without affecting the validity of the guaranty bonds, and without relieving or releasing the surety or sureties of said bonds. All such work shall be executed under the terms of the original Contract unless it is expressly provided otherwise.

B. Except for the purpose of affording protection against any emergency endangering health, life, limb or property, the Contractor shall make no change in the materials used or in the specified manner of constructing and/or installing the improvements or supply additional labor, services or materials beyond that actually required for the execution of the Contract, unless in pursuance of a written order from the Owner authorizing the Contractor to proceed with the change. No claim for an adjustment of the Contract Price will be valid unless so ordered.

C. If applicable unit prices are contained in the Agreement (established as a result of either a unit price bid or a Supplemental Schedule of Unit Prices) the Owner may order the Contractor to proceed with desired changes in the work, the value of such changes to be determined by the measured quantities involved and the applicable unit prices specified in the Contract; provided that in case of a unit price contract the net value of all changes does not increase or decrease the original total amount shown in the Agreement by more than twenty-five percent (25%) in accordance with the Section entitled Unit Prices, under INSTRUCTIONS TO BIDDERS.

D. If applicable unit prices are not contained in the Agreement or if the total net change increases or decreases the total Contract Price more than twenty-five percent (25%) the Owner shall, before ordering the Contractor to proceed with desired changes, request an itemized proposal from him covering the work involved in the change after which the procedure shall be as follows:

   1. If the proposal is acceptable, the Owner will prepare the change order in accordance with Paragraph E below for acceptance by the Contractor, and

   2. If the proposal is not acceptable and prompt agreement between the two parties cannot be reached, the Owner may order the Contractor to proceed with the work on a cost-plus-limited basis, defined as the net cost of the Contractor's labor, materials and insurance plus fifteen percent (15%) of said net cost to cover overhead and profit, the total cost not to exceed a specified limit.

E. Each change order shall include in its final form:

   1. A detailed description of the change in the work.

   2. The Contractor's proposal (if any) or a conformed copy thereof.

   3. A definite statement as to the resulting change in the contract price and/or time.

4. The statement that all work involved in the change shall be performed in accordance with Contract requirements except as modified by the change order.

F. For any changes agreed by Owner and the Contractor, the Contractor shall be allowed a markup on any additional work not accounted for, as follows:

1. The Contractor shall consider a markup of cost of work plus general conditions at three percent (3%) plus overhead and profit at nine percent (9%).

2. The Subcontractor shall consider a markup of cost of work plus general conditions at three percent (3%) plus overhead and profit at nine percent (9%).

3. The Contractor's markup on Subcontractors shall be five percent (5%).

4. Labor and equipment rates shall be as provided as part of the original Bid document.

5.11. CLAIMS FOR EXTRA COST

A. If the Contractor has any claims for additional cost or extension of time, they shall, within three days after the occurrence of the claim, and in any event before proceeding to execute the work, submit their claim in writing to the Owner, stating clearly in detail the basis of the claim. No such claim will be considered unless so made.

B. Claims for additional compensation for extra work, due to alleged errors in ground elevations, contour lines, or benchmarks, will not be recognized unless accompanied by certified survey data, made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted, or would result, in handling more material, or performing more work, than would be reasonably estimated from the Drawings and maps issued.

C. Any discrepancies which may be discovered between actual conditions and those represented by the Drawings and maps shall at once be reported to the Owner and work shall not proceed except at the Contractor's risk, until written instructions have been received by him from the Owner.

D. If, on the basis of the available evidence, the Owner determines that an adjustment of the Contract Price and/or Time is justifiable, the procedure shall be as provided in Section 5.10 hereof.

5.12. TERMINATION, DELAYS, AND LIQUIDATED DAMAGES

A. Termination of Contract: If the Contractor or any of his Subcontractors refuses or fails to prosecute the work with such diligence as will ensure its completion within the time specified in these Contract Documents, or as modified as provided in these Contract Drawings, or violates any other Provisions of this Contract, the Owner, by written notice to the Contractor, may terminate the Contractor's right to proceed with the work. Upon such termination, the Owner may take over the work and prosecute the same to completion, by contract or otherwise, and the Contractor and his sureties shall be liable to the Owner for any additional cost incurred by the Owner in its completion of the work and they shall also be liable to the Owner for liquidated damages for any delay in the completion of the work as provided below. If the Contractor's right to proceed is so terminated, the Owner may take possession of and utilize in completing the work such materials, tools, equipment, and plant as may be on the site of the work and necessary therefore.

B. Liquidated Damages for Delays: If the work is not completed within the time stipulated in the SPECIAL CONDITIONS, Section 6.2, including any extensions of time for excusable delays

as herein provided, the Contractor shall pay to the Owner as fixed, agreed, and liquidated damages for each calendar day of delay, until the work is completed, the amount as set forth in SPECIAL CONDITIONS, Section 6.3, and the Contractor and his sureties shall be liable to the Owner for the amount thereof.

C. Excusable Delays: An excusable delay is defined as a delay to the Contract or Milestone/phase completion date which was unforeseeable and beyond the Contractor's control and not caused by the Contractor's fault or negligence and for which a Contract or Milestone time extension may be granted by the Owner. Excusable delays include the following:

1. Acts of the Government, including controls or restrictions upon or requisitioning of materials, equipment, tools, or labor by reason of war, National Defense, or any other national emergency;

2. Acts of the Owner;

3. Causes not reasonably foreseeable by the parties to this Contract at the time of the execution of the Contract which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to acts of God or of the public enemy, acts of another Contractor in the performance of some other contract with the Owner, fires, floods, epidemics, pandemics, quarantine, restriction, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones, and other extreme weather conditions; and

4. Any delay of any Subcontractor occasioned by any of the causes specified in subparagraphs (1), (2) and (3) of this paragraph "C". Provided, however, that the Contractor promptly notify the Owner within three (3) days in writing of the cause of the delay. Upon receipt of such notification the Owner shall ascertain the facts and the cause and extent of delay. If, upon the basis of the facts and the terms of this contract, the delay is properly excusable, the Owner shall extend the time for completing the work for a period of time commensurate with the period of excusable delay.

5.13. ASSIGNMENT OR NOVATION

The Contractor shall not assign or transfer, whether by an assignment or novation, any of its rights, duties, benefits, obligations, liabilities, or responsibilities under this Contract without the written consent of the Owner's sole discretion.

5.14. DISPUTES

A. Disputes to be resolved in accordance with the Rhode Island General Law Title 37, Chapter 37-16-1 et seq.

B. 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.

5.15. TECHNICAL SPECIFICATIONS AND DRAWINGS

Anything mentioned in the Technical Specifications and not shown on the Drawings or shown on the Drawings and not mentioned in the Technical Specifications, shall be of like effect as if shown on or mentioned in both. In case of any difference or discrepancy in Drawings or Technical Specifications, the matter shall be immediately submitted to the Owner, without whose decision, said difference/discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense. Any Discrepancies of this nature noted by the CONTRACTOR shall be brought to the immediate attention of the ENGINEER.

5.16. ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS

It shall be the responsibility of the Contractor to make timely requests of the Owner for any additional information not already in his possession which should be furnished by the Owner under the terms of this Contract, and which he will require in the planning and execution of the work. Such requests may be submitted from time to time as the need is approached, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. The additional drawings and instructions thus supplied to the Contractor will coordinate with the Contract and instructions thus supplied to the Contractor will coordinate with the Contract Documents and will be so prepared so that they can be reasonably interpreted as part thereof. The Contractor shall carry out the work in accordance with the additional detail drawings and instructions. The Contractor and the Engineer will prepare jointly a schedule, fixing the dates at which special detail drawings will be required, such drawings if any, to be furnished by the Engineer in accordance with said schedule, and a schedule fixing the respective dates for the submission of shop drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment, and the completion of the various parts of the work; each such schedule to be subject to change from time to time in accordance with the progress of the work. The Contractor shall, if requested, furnish promptly any assistance and information the Engineer may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for any delay in his work or to others arising from his failure to comply fully with the provisions of this Section.

5.17. SHOP DRAWINGS

A. The Contractor shall submit promptly to the Owner each shop drawing, machinery or equipment details, layout drawings, or setting drawing, etc., prepared in accordance with the schedule predetermined as aforesaid. After examination of such drawings by the Owner and returned approval/denial, the Contractor shall make such corrections to the drawings as have

been indicated and shall submit new shop drawings. Regardless of corrections made in or approval given to such drawings by the Owner, the Contractor will nevertheless be responsible for the accuracy of such drawings and for their conformity to the drawings and specifications, unless they notify the Owner in writing of any deviations at the time they furnish such drawings.

B. The Contractor is required to have a portal to provide the Owner access to shop drawing documents. The portal shall be maintained for five years. The Owner shall be afforded administrative access. Five (5) seats shall be provided to the Owner.

C. Shop drawings of all fabricated work shall be submitted to the Owner for approval and no work shall be fabricated by the Contractor save at their own risk until approval has been given.

D. The Contractor shall submit all shop and setting drawings and dates sufficiently in advance of requirements to enable the Owner ample time for checking same, including time for correction, resubmission and recheck if necessary, and no claim for delay will be granted the Contractor by reason of their failure in this respect.

E. All shop drawings submitted must bear the stamp of approval of the Contractor as evidence that the Drawings have been checked by the Contractor. Any drawings submitted without this stamp of approval will not be considered and will be returned to the Contractor for resubmission. If the shop drawings show variations from the requirements of the Contract Documents because of standard shop practice or other reason, the Contractor shall make specified mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment; otherwise the Contractor will not be relieved of the responsibility for executing the work in accordance with the contract documents even though such shop drawings have been approved.

F. Where shop drawings are submitted by the Contractor that indicate a departure from the Contract which the Owner deems to be a minor adjustment in his interest and not involving a change in the Contract price or extension of time, the Owner may approve the drawings by the approval will contain, in substance, the following:

The modification shown on the attached drawings is approved in the interest of the Owner to effect an improvement for the Project and is ordered with the understanding that it does not involve any change in the Contract price or time; that it is subject generally to all Contract stipulations and covenants; and that it is without prejudice to any and all rights of the Owner under the contract and surety bond or bonds.

G. The approval of shop drawings will be general and shall not relieve the Contractor from the responsibility for adherence to the Contract nor shall it relieve him of the responsibility for any error which may exist.

H. The Contractor agrees to hold the Engineer and the Owner harmless and defend them against damages or claims for damages arising out of injury to others or property of third persons which result from errors on shop, working or setting drawings whether or not the same have been approved by the Owner.

I. See section 01 22 00 for other requirements regarding the submittals to accompany shop drawings.

5.18. MATERIALS AND WORKMANSHIP

A. Unless otherwise specifically provided for in the Technical Specifications, all workmanship, equipment, materials and articles incorporated in the work shall be new and the best grade of the respective kinds for the purpose. Where equipment, materials, articles or workmanship are referred to in the Technical Specifications as "equal to" any particular standard, the Engineer shall decide the question of equality. Whenever a material or article required is specified or shown on the drawings by using the name of the proprietary product or of a particular manufacturer or vendor, any material or article which will perform adequately the duties imposed by the general design may be considered equal and satisfactory providing the material or article so proposed is of equal substance and function in the opinion of the Owner. It shall not be purchased or installed without his written approval. In all cases, new material shall be used in the project. If two or more brands, makes or material, devices or equipment are shown or specified, each should be regarded as the approved equal of the other. Any other brand, make of material, device or equipment, which in the opinion of the Owner or his authorized agent, is the recognized approved equal of that specified, considering quality, workmanship and economy of operation and is suitable for the purpose intended, may be accepted.

B. The Contractor shall furnish to the Owner for approval the manufacturer's detailed specifications for all machinery, mechanical and other special equipment, which he contemplates installing together with full information as to type, performance characteristics, and all other pertinent information as required, and shall likewise submit for approval as required full information concerning all other materials or articles which he proposes to incorporate in the work.

C. Machinery, mechanical and other equipment, materials or articles installed or used without such prior approval shall be at the risk of subsequent rejection.

D. Machinery, mechanical and other equipment, materials or articles installed or used shall be used in accordance with the manufacturer’s recommendations.

E. Materials specified by reference to the number or symbol of a specific standard, such as an A.S.T.M. Standard, a Federal Specification or other similar standard, shall comply with requirements in the latest revision thereof any amendment or supplement thereto in effect on the date of the invitation for Bids, except as limited to type, class or grade, or modified in such reference. The Standards referred to, except as modified in the Technical Specifications shall have full force and effect as though printed therein.

F. Transportation of Materials:

1. Arrange deliveries of products in accordance with construction schedules, coordinate to avoid conflict with work and conditions at the site and also when two or more trades, Contractors, or suppliers are involved.

2. Transport all materials and equipment on legally approved conveyances as required or recommended by the respective manufacturer or supplier.

3. Deliver products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.

4. Receive and handle all materials and equipment, at the project site, by conveyances or methods as recommended by the respective manufacturer or supplier to prevent damage to products.

5. Immediately on delivery, inspect shipments to assure compliance with requirements of Contract Documents and reviewed submittals, and that products are properly protected and undamaged.

6. Remove from the site any material or item of equipment damaged during the transportation or handling process, and immediately replace at no additional cost to the Owner.

G. Storage of materials and equipment:

1. Store calibrated products in such a manner as to not alter the calibrated settings

2. Store products in accordance with the manufacturer's instructions, with seals and labels intact and legible.

3. Maintain temperature and humidity within the ranges required by manufacturer's instructions.

4. Store fabricated products above the ground, on blocking or skids, prevent soiling or staining. Cover products, which are subject to deterioration with impervious sheet coverings, provide adequate ventilation to avoid condensation.

5. Replace any material or item of equipment damaged, due to inadequate storage protection, and immediately replace it at no additional cost to the Owner.

H. The Owner may require the Contractor to dismiss from the work such employee or employees as the Owner or the Engineer may deem incompetent, or careless, or insubordinate.

I. The Contractor will cooperate with the Owner and provide the Owner’s agents with the facilities necessary to sample and inspect during each phase of construction at no cost to the Owner. The Contractor shall be responsible for all costs associated with retesting areas that have previously failed due to fabrication or application of products.

5.19. SAMPLES, CERTIFICATIONS AND TESTS

A. The Contractor shall submit all material or equipment samples, certificates, affidavits, etc., as called for in the Contract Documents, or required by the Owner or his representative, promptly after award of the Contract and acceptance of the Contractor's bond. No such material or equipment shall be manufactured or delivered to the site, except at the Contractor's own risk, until the required samples or certificates have been approved in writing by the Owner. Any delay in the work caused by late or improper submission of samples or certificates for approval shall not be considered just cause for an extension of the Contract time.

B. Each sample submitted by the Contractor shall carry a label giving the name of the Contractor, the project for which it is intended, and the name of the producer. The accompanying certificate or letter from the Contractor shall state that the sample complies with Contract requirements, shall give the name and brand of the product, its place of origin, the name and address of the producer and all specifications or other detailed information which will assist the Owner in passing upon the acceptability of the sample promptly. It shall also include the statement that all materials or equipment furnished for use in the project will comply with the samples and/or certified statements.

C. Approval of any materials shall be general only, and shall not constitute a waiver of the Owner's right to demand full compliance with the Contract Documents after actual deliveries, the Owner or his representative will have such check tests made as they deem necessary in each instance and may reject materials and equipment and accessories for cause, even though such materials and articles have been given general approval. If materials, equipment or accessories which fail to meet check tests have been incorporated in the work, the Owner or his representative will have the right to cause their removal and replacement by proper materials or to demand and secure such reparation by the Contractor as is equitable.

D. Except as otherwise specifically stated in the Contract, the costs of sampling and testing will be divided as follows:

5. The Contractor shall furnish without extra cost, including packing and delivery charges, all samples required for testing purposes, except those samples taken on the project by the Owner, his representative, or testing agency, however, the Contractor shall cooperate with and assist the Owner, his representative, or testing agency in the taking of samples on the project where the taking of samples is deemed necessary by the Owner.

6. The Contractor shall assume all costs of retesting materials which fail to meet contract requirements. The Contractor shall assume all costs of testing materials offered in substitution for those found deficient. All other expenses for testing of materials will be paid for by the Owner.

E. Testing and inspection of the various materials, equipment, or articles, etc., heretofore mentioned shall be performed by testing agency or agencies approved by the Owner.

F. Payments to the testing agency or agencies shall be paid for by the CONTRACTOR responsible for the performed work.

G. The cost of implementing the Quality Control (QC) Plan, including all required tests, is considered incidental to the lump sum and unit price items and no additional payment shall be disbursed by the Owner.

H. Further explanation of Quality Control/Quality Assurance procedures can be found in the attached Technical Specification 01 40 00.

5.20. PERMITS AND LICENSES

A. The Contractor shall give all notices required by and comply with all applicable laws, ordinances, standard requirements, and codes of the Local Government. All construction work and/or utility installation shall comply with all applicable ordinances, standard requirements, and codes including all written waivers. Before installing any work, the Contractor shall examine the Drawings and Technical Specifications for compliance with applicable ordinances, standard requirements and codes and shall immediately report any discrepancy to the Owner. Where the requirements of the Drawings and Technical Specifications fail to comply with such applicable ordinances, standard requirements, or codes, the Owner will adjust the Contract by Change Order to conform to such ordinances, standard requirements, or codes (unless waivers in writing covering the difference have been granted by the governing body or department) and make appropriate adjustment in the Contract Price or stipulated prices. Should the Contractor fail to observe the foregoing provisions and proceed with the construction and/or install any utility at variance with any applicable ordinance, standard requirement, or code, including any written waivers (notwithstanding the fact that such installation is in compliance with the Drawings and Technical Specifications), the Contractor shall remove such work without cost to the Owner,

but a Change Order will be issued to cover only the excess cost the Contractor would have been entitled to receive if the change had been made before the Contractor commenced work on the items involved.

B. The Contractor shall, at his own expense, secure and pay to the appropriate department of the Local Government the fees or charges for all permits for street pavement, sidewalks, sheds, removal of abandoned water taps, sealing of house connection drains, pavement cuts, buildings, electrical, plumbing, water, gas and sewer permits required by the local regulatory body or any of its agencies. The required permits shall be those set forth in SPECIAL CONDITIONS, Section 6.67.

C. The Contractor shall comply with applicable local laws and ordinances governing the disposal of surplus excavation, materials, debris and rubbish on or off the Project Area and commit no trespass on any public or private property in any operation due to or connected with the Improvements embraced in this Contract.

5.21. CARE OF WORK

A. The Contractor shall be responsible for all damages to person or property that occur as a result of his fault or negligence in connection with the prosecution of the work and 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 in whole or in part by payments made by the Owner.

B. The Contractor shall provide at his own expense sufficient competent watchmen or other security/monitoring devices approved by the OWNER, both day and night, including Saturdays, Sundays, and holidays, from the time the work is commenced until final completion and acceptance

C. In an emergency affecting the safety of life, limb or property, including adjoining property, the Contractor, without special instructions or authorization from the Owner, is authorized to act at his discretion to prevent such threatened loss or injury, and he shall so act. He shall likewise act if instructed to do so by the Owner. Any compensation claimed by the Contractor on account of such emergency work will be determined by the Owner as provided in the GENERAL CONDITIONS, Section 5.10.

D. The Contractor shall avoid damage as a result of his operations to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and he shall at his own expense completely repair any damage thereto caused by his operations.

E. The Contractor shall shore up, brace, underpin, secure, and protect as may be necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with the construction of the Improvements embraced in this Contract. The Contractor shall be responsible for giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of any work. The Contractor shall indemnify, defend, and save harmless the Owner from any damages on account of settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the Owner may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

5.22. ACCIDENT PREVENTION AND JOB SAFETY

A. The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work. The safety provisions of applicable laws and building and construction codes shall be observed and the Contractor shall take or cause to be taken such additional safety and health measures as the Owner may determine to be reasonable necessary. Further, the Contractor shall comply, and shall cause all Subcontractors to comply with all applicable provisions of the U.S. Department of Labor "Williams-Steiger Occupational Safety and Health Act of 1970."

B. The Contractor shall maintain an accurate record of all cases of death, occupational disease, or injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor shall promptly furnish the Owner with reports concerning these matters.

C. The Contractor shall indemnify, defend, and save harmless the Owner and the Engineer from any claims for damages resulting from property damage, personal injury and/or death suffered or alleged to have been suffered by any person as a result of any work conducted under this contract.

D. Upon execution of the Contract, the Contractor shall provide their Safety Program to the Owner.

5.23. SANITARY FACILITIES

A. The Contractor shall furnish, install, and maintain ample sanitary facilities for the workmen. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required by the sanitary codes of the State and Local Government. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations.

B. Sanitary facilities shall not be placed in the public right-of-way.

C. Service, clean, and maintain facilities and enclosures.

D. Pay costs associated with furnishing, installing, maintaining, operating and removing sanitary facilities.

5.24. USE OF PREMISES

A. The Contractor shall confine his equipment, storage of materials, and construction operations to the Contract Limits as shown on the Drawings and as prescribed by ordinances or permits, or as may be desired by the Owner, and shall not unreasonably encumber the site or public rights-of-way with his materials and construction equipment.

B. The Contractor shall comply with all reasonable instructions of the Owner and the ordinances and codes of the Local Government, regarding signs, advertising, traffic, fires, explosives, danger signals and barricades.

C. The Contractor is not permitted to store equipment or stockpiles in the public right-of-way.

5.25. REMOVAL OF DEBRIS, CLEANING, ETC.

A. The Contractor shall, periodically or as directed during the progress of the work, remove and legally dispose of all surplus excavated material and debris, and keep the Project Area and public rights-of-way reasonably clear. Upon completion of the work, he shall remove all temporary construction facilities, debris and unused materials provided for the work and put the whole site to the work and public rights-of-way in a neat and clean condition. No trash burning will be permitted on the site of the work. The Contractor shall obey all Owner and existing State and local regulations.

B. Noise Control:

1. The Contractor shall employ all reasonable measures to avoid unnecessary noise and ensure that noise is appropriate for normal ambient sound levels in the work area during working hours. Where required by agencies having jurisdiction, certain noise - producing work may have to be performed during specified periods only. Noise control measures during normal work hours shall include but not be limited to:

   (a) Operate machinery in a manner to cause least noise consistent with efficient performance of work.
   (b) Equip all construction machinery and vehicles with sound-muffling devices.
   (c) During construction adjacent to occupied buildings, erect screens or barriers to reduce noise in building to limits in accordance with applicable codes. Conduct operations in such a manner as to avoid unnecessary noise which might interfere with activities of building occupants.

2. When the Contractor's work extends beyond normal working hours the Contractor shall incorporate to the complete satisfaction of the Owner and Engineer, adequate noise prevention measures to insure minimum noise impact on the surrounding areas. Noise prevention measures shall include, but not be limited to:

   (a) Insulated enclosures.
   (b) Hospital grade silencers or mufflers.
   (c) Equipment modification.
   (d) Special equipment, as necessary to meet City noise guidelines.
   (e) Any other noise prevention measures.

3. Should at any time the Owner and/or Engineer determine that noise prevention measures are inadequate, the Contractor shall suspend all such work in question until acceptable measures are incorporated. Suspension of work due to inadequate noise prevention shall not be a cause for additional cost to the Owner.

4. Prior to the start of any work outside normal work hours, the Contractor shall submit a Noise Control plan to the Owner and Engineer for review. Noise Control plans shall be submitted for:

   (a) Night work.
   (b) All Pumping operations and work which extend beyond normal work day.
   (c) Any other work as determined by the Engineer which warrants special noise prevention measures.

5. All costs associated with noise control measures shall be considered part of the bid price for the appropriate work being completed

C. Surface Water Control:

1. Provide for drainage of storm water and such water as may be applied or discharged on site in performance of work.

2. Ensure that drainage facilities are adequate to prevent damage to work, site, and adjacent property.

   (a) Clean, enlarge, or supplement existing drainage channels to carry all increased runoff attributable to operation.
   (b) Construct dikes to:
      (i) Divert increased runoff from entering water bodies or existing drainage systems.
      (ii) Protect the work.

3. Direct water to drainage channels or conduits downstream of the dam

D. Pollution Control:

1. Prevent pollution of drains and watercourses by sanitary wastes, sediment, debris, and other substances resulting from construction activities.

   (a) In order to protect water bodies and existing drainage systems from hazardous waste releases by the construction equipment involved in this project, fueling shall take place within staged fueling areas in the presence of a spill kit, equipment must be in good condition and inspected for leaks; spill control and cleanup equipment shall be stored on site; and the Contractor shall be responsible for all cleanup and remediation of hazardous materials releases.
   (b) Do not allow sanitary wastes to enter any drain or watercourse other than sanitary sewers.
   (c) Do not allow sediment, debris, or other substances to enter sanitary sewers and take measures to prevent such materials from entering any drain or watercourse.
   (d) All concrete repair work requiring cleaning and removal of debris is to be contained so as not to contaminate the surrounding environment.

E. Spill Prevention Cleanup:

1. In the event of a spill of hydraulic oil, fuel, slurry, or other construction chemical into water bodies existing drainage systems, all work shall immediately be brought to a safe stoppage, and all efforts shall be diverted to preventing further release of the substance into the impoundment.

2. The Contractor will be responsible for all time, materials, and costs associated with clean-up, environmental testing, and remedial action required from a release or spill of chemical into the impoundment at no additional cost to the Owner.

3. RIDEM Office of Emergency Response, Owner, and Engineer must be notified immediately in the event of a spill. The contact of the RIDEM Office of Emergency Response is provided below:

   James Ball – Emergency Response Coordinator. 235 Promenade Street, Providence RI 02908. Phone: (401) 537-4533

   Roger Biron, Assistant Chief Engineer. 700 Allens Ave, Providence, RI 02830 Phone: (401) 680-7531

Todd Turcotte, P.E., WEDG, Waterfront/Marine Group Manager. 10 Lincoln Road Suite #210, Foxboro, MA 02035
Phone: (508) 543 1755

F. Debris and Cleanup:

1. Keep all premises free at all times from accumulation of waste materials and rubbish.

   (a) Immediately after unpacking, remove and dispose of all packing materials, case lumber, excelsior, wrapping, or other rubbish from site.

2. Provide trash receptacles about site, and empty containers daily.

3. Neatly stack construction materials, such as concrete forms and scaffolding, when not in use.

4. Promptly remove splattered concrete, asphalt, oil, paint, corrosive liquids, and cleaning solution from surfaces to prevent marring or other damage to satisfaction of Engineer and/or Owner.

5. Ensure that wastes are not buried or burned on site or disposed into storm drains, sanitary sewers, streams, or waterways.

   (a) Remove all wastes from site and dispose in a manner complying with local ordinances and antipollution laws.
   (b) Store volatile wastes in covered metal containers and remove daily.

6. Cleanup as determined by Engineer will be a condition for recommendation of progress payment application.

   (a) Contractor shall have full responsibility for cleaning up during and immediately upon completion of work. Remove all rubbish, waste, tools, equipment, and appurtenances caused by and used in execution of work, leaving site clean, free of debris and in condition acceptable to Owner.
   (b) Equipment or material shall not be left within any work area after acceptance of Contract without written permission of Owner. Do not abandon any material at or near site regardless of its value.

G. Public Safety:

1. Two calendar weeks prior to the start of the Work, Contractor will post signage indicating to the public that the Allens Avenue access will be limited at the times of Gate removal and reinstallation.

2. At all times until final acceptance of Work by Owner, the Contractor shall protect Work and shall take all precautions of preventing injuries to persons or damage to property on or about site.

3. Contractor shall comply with all applicable laws, ordinances, rules, and regulations regarding safety of persons or property or with regard to protecting them from damage, injury, or loss and shall not load or permit any part of work to be placed so as to endanger safety of work.

4. If Contractor constructs temporary bridges or provides temporary crossing of streams, Contractor's responsibility for accidents shall include roadway and sidewalk approaches as well as structure of such crossings.

5. Conduct work such that abutters shall have reasonable access to their property. Contractor shall be responsible for providing such reasonable safe means of access to public way as Engineer deems essential. When it is necessary to leave materials and equipment upon highway or city or town way, place them so as to cause least possible obstruction to drainage, pedestrian, and other travel.

H. Temporary Controls:

1. Completely remove temporary materials and equipment when their use is no longer required.

2. Upon completion of work of all trades and before final acceptance of entire project, each trade shall remove, at it's own expense, all wiring, appurtenances and accessories used in performance of its respective work

3. Temporary sheds, utilities, barricades, signs, and other appurtenances related to prosecution of the work and not incorporated in the permanent construction shall be completely removed from the site prior to acceptance of work by Owner

5.26. INSPECTION

A. All materials and workmanship shall be subject to inspection, examination, or test by the Owner and the Engineer at any and all times during manufacture or construction and at any and all places where such manufacture or construction is carried on. The Owner shall have the right to reject defective material and workmanship or require its correction. Unacceptable workmanship shall be satisfactorily corrected. Rejected material shall be promptly segregated and removed from the Project Area and replaced with material of specified quality without charge therefor. If the Contractor fails to proceed at once with the correction of rejected workmanship or defective material, the Owner may by Contract or otherwise have the defects remedied or rejected materials removed from the Project Area and charge the cost of the same against any monies which may be due the Contractor, without prejudice to any other rights or remedies of the Owner.

B. The Contractor shall furnish promptly all materials reasonably necessary for any tests which may be required. (See Section 5.19 hereof.) All tests by the Owner will be performed in such manner as not to delay the work unnecessarily and will be made in accordance with the provisions of the Technical Specifications.

C. The Contractor shall notify the Owner sufficiently in advance of backfilling or concealing any facilities to permit proper inspection. If any facilities are concealed without approval or consent of the Owner, the Contractor shall uncover for inspection and recover such facilities all at his own expense, when so requested by the Owner. Should it be considered necessary or advisable by the Owner at any time before final acceptance of the entire work to make an examination of work already completed by uncovering the same, the Contractor shall on request promptly furnish all necessary facilities, labor, and material. If such work is found to be defective in any important or essential respect, due to fault of the Contractor or his Subcontractors, the Contractor shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the actual cost of labor and material necessarily involved in the examination and replacement, plus 15% of such costs to cover superintendence, general expenses and profit, shall be allowed the Contractor and he shall, in addition, if completion of the work of the

entire Contract has been delayed thereby, be granted a suitable extension of time on account of the additional work involved.

D. Inspection of materials and appurtenances to be incorporated in the Improvements embraced in this Contract may be made at the place of production, manufacture or shipment, whenever the quantity justifies it, and such inspection and acceptance, unless otherwise stated in the Technical Specifications, shall be final except as regards (1) latent defects, (2) departures from specific requirements of the Contract, (3) damage or loss in transit, or (4) fraud or such gross mistakes as amount to fraud. Subject to the requirements contained in the preceding sentence, the inspection of materials as a whole or in part will be made at the Project Site.

E. Neither inspection, testing, approval nor acceptance of the work in whole or in part, by the Owner or its agents shall relieve the Contractor or his sureties of full responsibility for materials furnished or work performed not in strict accordance with the Contract.

5.27. REVIEW BY OWNER

The Owner, its authorized representatives and agents shall, at all times, have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices, and other relevant data and records pertaining to this Contract, provided, however, that all instructions and approval with respect to the work will be given to the Contractor only by the Owner through its authorized representatives or agents.

5.28. FINAL INSPECTION

When the Improvements embraced in this Contract are substantially completed, the Contractor shall notify the Owner/Engineer in writing that the work will be ready for final inspection on a definite date which shall be stated in the notice. The notice will be given at least ten (10) days prior to the date stated for final inspection, and bear the signed concurrence of the representative of the Owner having charge of inspection. If the Owner/Engineer determines that the status of the improvements is as represented, it will make the arrangements necessary to have final inspection commenced on the date stated in the notice, or as soon thereafter as is practicable. The inspection party will also include the representatives of each department of the Local Government.

5.29. CORRECTION OF WORK

All work, all materials, whether incorporated in the work or not, all processes of manufacture, and all methods of construction shall be at all times and places subject to the inspection of the Owner who shall be the final judge of the quality and suitability of the work, materials, processes of manufacture and methods of construction for the purposes for which they are used. Should they fail to meet his approval they shall be forthwith reconstructed, made good, replaced and/or corrected, as the case may be, by the Contractor, at their own expense. Rejected material shall immediately be removed from the site. If, in the opinion of the Owner or his representative, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the Contract Documents, the compensation to be paid to the Contractor hereunder shall be reduced by such amount as in the judgment of the Owner shall be equitable. The Contractor shall be responsible for all costs associated with correction of work, including but not limited to police details, construction management/inspection, Traffic Engineering fees and materials testing.

5.30. INSURANCE

Contract Party shall procure Required Insurance as defined herein:

A. At the sole cost and expense of Contract Party.

B. Obtain and maintain such Required Insurance in full force and effect during the entire term of the Contract until all obligations of Contract Party have been discharged, including any warranty periods or extended reporting periods, against claims that may arise out of, are alleged to arise out of, directly or indirectly, in whole or in part, from or in connection with the Contract and/or result from the performance of the Contract.

C. Any deductible, self-insured retention, or form of self-insurance under the policies shall be the sole responsibility of the Contract Party and shall be disclosed to and acceptable to the Owner.

D. Any required liability insurance policy that is to insure any form of products liability and/or completed operations exposure created by Contract Party must provide extended coverage as follows:

1. When required liability insurance policy uses “Occurrence” coverage trigger (Including that known as “Reported Occurrence”):

   (a) Policy issued by same insurer for Contract Party as of effective date of Contract between State and Contract Party or by comparable insurer providing renewal insurance policy of 1-same coverage terms and conditions of prior expired policy or 2-coverage at least equal to that required by Contract.

2. Such coverage must be provided for a period of not less than five (5) years after the later of:

   (a) when the Contract has ended; or

   (b) when products or services have been put to intended use; or

   (c) when hardware, software, buildings, other physical structures or repairs have been put to intended use.

3. Such required insurance can be provided by annual insurance policies or by single runoff policy commonly referred to as “discontinued products or operations.”

E. When required liability insurance policy uses any form of “claims-first made trigger:”

1. Policy issued by same insurer for Contract Party as of effective date of Contract between State and Contract Party or by comparable insurer providing renewal insurance policy of 1-same coverage terms and conditions of prior expired policy or 2-coverage at least equal to that required by Contract and provide the Owner with an additional endorsement for additional insured requirements.

2. Provide coverage with a retroactive date on or before the effective date of the Contract or at the beginning of Contract work.

3. Such coverage must be provided for a period of not less than five (5) years after the later of:

   (a) when the Contract has ended; or

   (b) when products or services have been put to intended use; or

   (c) when hardware, software, buildings, other physical structures or repairs have been put to intended use.

4. Such required insurance can be provided by annual insurance policies or by single runoff policy commonly referred to as “discontinued products or operations”.

5. If “claims-first made” liability insurance policy is cancelled or not renewed, and not replaced with another claims-made policy form with a retroactive date prior to the Contract date, the Contract Party must purchase extended reporting coverage for a minimum of five (5) years after completion of work.

6. Required Insurance limits to be provided by single insurance policy or through “follow form primary” layered excess insurance policies to obtain overall required limit(s).

7. Contract Party’s subcontractors to maintain same insurance.

8. Any insurance obtained by Contract Party that includes an “insured vs. insured” exclusion must be revised to exclude State and Owner as Additional Insured.

9. The Owner reserve the right to consider and accept alternative forms and plans of insurance or to require additional more extensive coverage for any individual requirement and can modify types of insurance and revise limits required of Contract Party at any time during the term of this Contract.

F. Required Insurance:

1. Commercial General Liability Insurance:

Commercial General Liability Insurance (“CGL”) based on Insurance Services Office (“ISO”) most recent version of Commercial General Liability policy form CG00 01, or its equivalent:

(a) Covering bodily injury (including death), broad form property damage, personal and advertising injury, independent contractors, products and completed operations and contractual liability.

(b) Such insurance coverage is subject to a minimum combined single limit of $1,000,000 per occurrence, $2,000,000 general aggregate and $1,000,000 products/completed operations aggregate.

(c) The general aggregate must be on a “per project” or “per location” basis.

(d) Shall include waiver of subrogation in favor of State and City of Providence.

(e) Include State and Owner as additional insured on a primary and non-contributory basis.

(f) The Contract Party shall submit a copy of any policy endorsement, or blanket endorsement, evidencing the State and Owner as additional insured on a primary and non- contributory basis and a waiver of subrogation in favor of State and Owner. All endorsements shall be subject to review and approval by the authorized State personnel.

(g) Any time Contract Party is responsible for construction of any kind the additional status for State shall include additional Insured-products/completed operations in addition to additional insured-premises/operations.

2. Automobile Liability Insurance:

Automobile Liability Insurance based on ISO most recent version of Business Automobile Policy ("BAP") CA 00 01, or its equivalent:

(a) Covering bodily injury and property damage for any vehicles used in conjunction with the performance of this Contract including owned, non-owned, and hired vehicles.

(b) If a Contract Party does not own any vehicle at any time during the duration of this Contract then the Contract Party can seek hired and non-owned automobile coverage as provided by BAP or by hired non-owned automobile coverage endorsement to CGL.

(c) At a minimum Contract Party must maintain hired and non-owned automobile coverage for the full duration of this Contract.

(d) Such insurance coverage is subject to a minimum combined single limit of $1,000,000 per occurrence and $2,000,000 aggregate.

(e) Shall include waiver of subrogation in favor of State and City of Providence.

3. Workers' Compensation and Employers' Liability:

(a) Statutory coverage as required by the workers' compensation laws of the State of Rhode Island, plus any applicable state law other than State of Rhode Island if employee(s) state of hire is other than State of Rhode Island or employee(s) work related to the Contract is not in the State of Rhode Island.

(b) Policy form based on NCCI or its equivalent.

(c) Employers' Liability with minimum limits of $500,000 each accident, $500,000 disease or policy limit and $500,000 each employee or minimum amount necessary for umbrella/excess liability policy of Contract Party.

(d) A Contract Party neither eligible for, nor entitled to, Worker's Compensation who is an independent Contract Party under Rhode Island law must comply with the statutory procedure precluding an independent Contract Party from bringing a workers' compensation claim against the State or the Owner.

(e) Policy to include waiver of subrogation in favor of State and Owner.

(f) The Contract Party shall submit a copy of any policy endorsement or blanket endorsement evidencing the waiver of subrogation in favor of the State and Owner. All endorsements shall be subject to review and approval by the State authorized personnel.

4. Umbrella Liability Insurance

(a) $5,000,000 per occurrence and $5,000,000 in aggregate.

5. Pollution Liability Insurance

(a) $2,000,000 policy limit

G. All Required Insurance shall be placed with insurers:

1. Authorized to do business in Rhode Island.

2. Rated “A-,” class X or better by A.M. Best Company, Inc.

3. Any insurer with a lesser financial rating must be approved by the authorized State personnel.

H. The legal defense provided to the State and the Owner under the policy and any endorsements must be free of any conflicts of interest, even if retention of separate legal counsel for the State and the Owner is necessary.

I. As evidence of the insurance required by this Contract, the Contract Party shall furnish to Owner Certificates of Insurance, including confirmation of all required policy endorsements including, but not limited to, additional insured endorsements:

1. In form acceptable to the Owner prior to project award. Failure to comply with this provision may result in rejection of the bid offer.

2. All certificates of insurance, whenever issued, shall include the requirement of the insurer for thirty (30) days advance written notice of cancellation or non-renewal of any insurance policy to the Owner. Contract Party shall also immediately notify the Owner if the Required Insurance is cancelled, non-renewed, potential exhaustion of policy limits or otherwise changed.

3. Certificates of Insurance and required endorsements shall thereafter be submitted annually or earlier upon expiration and renewal of any of the policies.

4. All Certificates of Insurance and to the extent possible endorsements shall reference the State procurement number.

5. Owner retains the right to demand a certified copy of any Required Insurance policy, Certificate of Insurance or endorsement.

6. The Contract Party shall submit a copy of any policy endorsement, or blanket endorsement, evidencing the Owner as additional insureds on a primary and non-contributory basis and a waiver of subrogation in favor of Owner. All endorsements shall be subject to review and approval by the Owner.

J. The Contract Party shall be responsible to obtain and maintain insurance on any real or personal property owned, leased or used by Owner that is in the care, custody or control of Contract Party. All property insurance of Contract Party must include a waiver of subrogation that shall apply in favor of the Owner.

K. No warranty is made that the coverages and limits listed herein are adequate to cover and protect the interests of the Contract Party for the Contract Party’s operations. These are solely minimums that have been established to protect the interest of the Owner.

L. Owner shall be indemnified, defended, and held harmless as required by the Contract Party and to the full extent of any coverage actually secured by the Contract Party in excess of the minimum requirements set forth above.

M. The Contract Party shall use at its own risk and insure at its own cost any of its owned, leased or used real or personal property. All such insurance of Contract Party must include a waiver of subrogation that shall apply in favor of the Owner.

N. The Contract Party shall comply with any other insurance requirements including, but not limited to, additional coverages or limits contained in the procurement or solicitation.

O. Failure to comply with these Insurance Requirements is a material breach entitling the Owner to terminate or suspend the Contract immediately.

P. These Insurance Requirements shall survive expiration or termination of the Contract.

5.31. PATENTS

The Contractor shall indemnify, defend, hold and save harmless the Owner, its officers and employeesfrom liability of any nature or kind, including costs and expenses, for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the Contact, including its use by the Owner, unless otherwise specifically stipulated in the Technical Specifications.

5.32. WARRANTY OF TITLE

No material, supplies, or equipment to be installed or furnished under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale, lease-purchase or other agreement by which an interest therein or in any part thereof is retained by the seller or supplier. The Contractor shall warrant good title to all materials, supplies, and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same together with all improvement and appurtenances constructed or placed thereon by him to the Owner free from any claims, liens, or charges. Neither the Contractor nor any person, firm or corporation furnishing any material or labor for any work covered by this Contract shall have any right to a lien upon any improvement or appurtenance thereon. Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any bond given by the Contractor for their protection or any rights under any law permitting such persons to look to funds due the Contractor in the hands of the Owner. The provisions of this paragraph shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such materials.

5.33. GENERAL GUARANTEE

Neither the final certificate of payment nor any provision in the Contract nor partial or entire use of the Improvements embraced in this Contract by the Owner or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of 24 months from the date of final acceptance of the work. Final acceptance shall be defined as the date in which all outstanding punch list items are completed and when all work items identified during the final inspection are completed The Owner will give notice of defective materials and work with reasonable promptness.

5.34. REPRESENTATIONS OF CONTRACTOR

The Contractor represents and warrants:

A. That they are financially solvent and that they are experienced and competent to perform the type of work or furnish the plant, material, supplies, or equipment to be performed or furnished by them; and

B. That they are familiar with all Federal, State, municipal and department laws, ordinances, orders and regulations which may in any way effect the work of those employed therein, including but not limited to any special, acts relating to the work or to the project of which it is a part; and

C. That such temporary and permanent work required by the Contract Documents to be done by them can be satisfactorily constructed and used for the purpose for which it is intended, and that such construction will not injure any person or damage any property; and

D. That they have carefully examined the Drawings, Technical Specifications and addendum (or addenda), if any, and the site of the work, and that from their own investigation they have satisfied themselves as to the nature and location of the work, the character, quality and quantity of surface and subsurface materials likely to be encountered, the character of equipment and. other facilities needed for the performance of the work, the general and local conditions, and all other materials which may in any way affect the work or its performance.

5.35. WEATHER CONDITIONS

In the event of temporary suspension of work, or during inclement weather, or whenever the Owner or his representative shall direct, the Contractor shall, and shall cause his Subcontractors to protect carefully his and their work and materials against damage or injury from the weather at no additional cost to the Owner. If, in the opinion of the Owner or his representative, any work or material shall have been damaged or injured by reason of failure on the part of the Contractor or any of his Subcontractors so to protect his work, or otherwise damaged by the negligence of the Contractor, Subcontractors or their agents or servants, or is otherwise defective, such materials shall be removed and replaced at the expense of the Contractor. Special attention shall be given to the winter shutdown period. All temporary patching to make the roads passable or to keep driveways open and safe, shall be done at no additional cost to the Owner.

5.36. QUANTITIES OF ESTIMATE

Wherever the estimated quantities of work to be done and materials to be furnished under this contract are shown in any of the Contract Documents including the Bid (proposal), they are given for use in comparing bids and the right is especially reserved by the Owner to increase or diminish them as may be deemed reasonably necessary or desirable by the Owner, and such increase or diminution shall in no way vitiate claims or liability for damages except as provided for in Section 5.10 hereof.

5.37. NOTICE AND SERVICE THEREOF

A. The service of any notice, letter or other communication shall be deemed to have been made to one of the contracting parties on the other party to the Contract when such letter, notice or other communication has been delivered to the legal office address of the addressee, by a duly authorized representative of the address or in person, or when such notice, letter or other communication has been deposited in any regularly maintained mailbox of the United States Postal Department in a properly addressed, postpaid wrapper. The date of such service shall be considered to be the date of such personal delivery or mailing.

B. The address of the Contractor noted in his bid (proposal) and/or the address of his field office on or near the site of the work hereunder shall be considered as his legal address for the purposes as above set forth.

5.38. PROVISIONS REQUIRED BY LAW DEEMED INSERTED

Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and 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 or correction.

5.39. RELEASES

A. Neither the final payment nor any part of the retained percentage shall become due until the Contractor delivers to the Owner a complete release of all liens, damages, and/or release of liens arising out of this contract, or receipts in full in lieu thereof, and an affidavit that so far as he has knowledge or information the releases and receipts include all the labor and material for which a lien could be filed, but the Contractor may, if any Subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the Owner to indemnify him against any liens. If any liens remain unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorney's fee.

B. THE OWNER, PRIOR TO MAKING EACH PAYMENT TO THE CONTRACTOR, may require the Contractor to furnish releases or receipts from any or all persons / firms performing work and supplying material or services to the Contractor, or any Subcontractor, if deemed necessary to protect its interest.

5.40. CONTRACTOR'S OBLIGATIONS

A. The Contractor shall and will in good workmanlike manner, do and perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work required by this Contract, within the time herein specified, in accordance with the provisions of this Contract and said Technical Specifications and in accordance with the Plans and Drawings covered by this contract and any and all supplemental Plans and Drawings, and in accordance with the directions of the Owner or his representative as given from time to time during the progress of the work as may be required. He alone shall be responsible for the safety, efficiency, and adequacy of his plant, appliances, and methods and for any damage which may result from their failure or their improper construction, maintenance or operation. The Contractor shall observe, comply with and be subject to all terms, conditions, requirements, and limitations of the Contract specifications, and shall do, carry on, and complete the entire work to the satisfaction of the Owner or his representative.

B. The Contractor shall be solely responsible for all the work and shall provide all precautionary measures necessary for preventing injury to persons or damage to property. All injury or damage of whatever nature resulting from the work or resulting to persons, property, or the work during its progress, from whatever cause, shall be the responsibility of and shall be borne and sustained by the Contractor. The Contractor shall hold the Engineer, the Owner or their agents harmless and defend and indemnify the Engineer and the Owner or their agents against damages or claims for damages due to injuries to persons or to property arising out of the execution of the work and for damages to materials furnished for the work, infringement of inventions, patents and patent rights used in doing the work, or damages arising out of the use of any improper materials, equipment, or labor used in the work, and for any act, omission or neglect of the Contractor, his agents, employees and his Subcontractors therein. He shall bear all losses resulting to him including but not limited to losses sustained on account of character, quality or quantity of any part or all of the work, or because the

nature of the land in or on which the work done being different from what was estimated or indicated, or on account of the weather, elements or other causes.

5.41. ENGINEER'S AUTHORITY

A. The Engineer shall give all orders and directions contemplated under this Contract and Technical Specifications relative to the execution of the work. The Engineer shall determine the amount, quality, acceptability, and fitness of the several kinds of work and materials which are to be paid for under this Contract and shall decide all questions which may arise in relation to said work and construction thereof. The Engineer's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. In case any question shall arise between the parties hereto relative to said Contract or Technical Specifications, the determination or decision of the Engineer shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this Contract affected in any manner or to any extent by such question. The Engineer shall decide the meaning and intent of any portion of the Technical Specifications and of any Plans or Drawings where the same may be found obscure or be in dispute. Any differences or conflicts in regard to their work which may arise between the Contractor under this Contract and other Contractors performing work for the Owner shall be adjusted and determined by the Engineer.

B. The Engineer does not have unilateral authority and shall work collaboratively with the Owner.

C. The Contractor is responsible for field verifying all quantities and quality presented by the Engineer in the Contract Documents

D. The Engineer is not responsible for nor should direct the Contractor means and methods to execute the work presented in the Contract Documents.

5.42. ALL WORK SUBJECT TO CONTROL BY ENGINEER

A. In the performance of the work, the Contractor shall abide by all orders, directions and requirements as outlined in the Contract Documents, and shall perform all work to the satisfaction of the Owner/Engineer, and at such time and places, by such methods and in such manner and sequence as he may require. The Contractor shall be responsible for field verifying all quantity, quality, acceptability and fitness of all parts of the work as specified by the Engineer in the Contract Documents. The Engineer shall provide clarification of the Drawings, Technical Specifications, Contract, all other documents and the extra work orders in the form of a formal RFI. The Engineer shall also decide all other questions in connection with the work. The Contractor shall employ no plant, equipment, materials, methods or men to which the Engineer objects and shall remove no plant, materials, equipment or other facilities from the site of the work without the Engineer's permission. Upon request, the Engineer will confirm in writing any oral order, direction, requirement or determination.

B. Inspectors shall be authorized to inspect all work done and material furnished. Such inspection may extend to all or any part of the work, and to the preparation or manufacture of the materials to be used. The presence or absence of an Inspector shall not relieve the Contractor from any requirements of the Contract. In case of any dispute arising between the Contractor and the Inspector as to materials furnished or the manner of performing the work, the Inspector shall have the authority to reject material or suspend the work until the question at issue can be referred to and decided by the Engineer. The Inspector shall not be authorized to revoke, alter, enlarge, relax or release any requirement of these specifications, nor to approve or accept any portion of the work, nor to issue instructions contrary to the drawings and specifications. The Inspector shall in no case act as foreman or perform other duties for the Contractor, or interfere with the management of the work by the latter. Any

advice which the Inspector may give the Contractor shall in nowise be construed as binding the Owner or the Engineer in any way nor releasing the Contractor from the fulfillment of the terms of the contract.

5.43. INTERPRETATION OF DRAWINGS AND TECHNICAL SPECIFICATIONS

A. Except the Contractor's executed set, all Drawings and Technical Specifications are the property of the Owner. The Owner will furnish the Contractor electronic files of Drawings and Technical Specifications. The Contractor is responsible to print the documents to supply to construction personnel.

B. The Contractor shall keep at the site of the work one copy of the Drawings and Technical Specifications and shall at all times give the Owner and the Engineer and their representatives access thereto. Anything shown on the Drawings and not mentioned in the Technical Specifications or mentioned in the Technical Specifications and not shown on the Drawings, shall have the same effect as if shown or mentioned in both. In case of any conflict or inconsistency between the Drawings and Technical Specifications, the Specifications shall take precedence. Any discrepancy in the Technical Specifications and the Drawings shall be immediately submitted by the Contractor to the Owner and Engineer for decision and the decision thereon by the Owner and Engineer shall be final. In case of differences between small and large scale drawings, the larger scale drawings shall take precedence.

5.44. ENGINEER'S CONTROL NOT LIMITED

The enumeration in this Contract of particular instances in which the opinion, judgment, discretion or determination of the Engineer shall control or in which work shall be performed to his satisfaction or subject to his approval or inspection, shall not imply that only matters similar to those enumerated shall be so governed and performed, but without exception all the work shall be so governed and performed.

5.45. CONTRACT AND CONTRACT DOCUMENTS

The Drawings, the Technical Specifications and Addendum (or Addenda), the Advertisement, the Information for and Notice To Bidders, and the Bid (Proposal) as accepted by the Owner as evidenced by the Owner's Notice to Award to the Contractor, which Notice is made a part of this Contract. Special Provisions and the General Provisions shall form a part of this Contract and the provisions thereof shall be as binding upon the parties hereto as if they were herein fully set forth. The table of contents, titles, headings, running headlines and marginal references to various provisions of the Contract Documents are in no way to affect, limit or cast light on the interpretation of the provisions to which they refer. Whenever the term "Contract Documents" is used, it shall mean and include this Contract, the enumerated Drawings, Special Provisions, General Provisions, the Technical Specifications, the Advertisement, the enumerated Addendum (or Addenda), Information for Bidders, the Bid (Proposal) as accepted by the Owner. The Owner shall interpret his own requirements. In case of any conflict or inconsistency between the provisions or this signed portion of the Contract and those of the Technical Specifications, the provisions of this signed portion of the Contract shall govern.

5.46. LIST OF DRAWINGS:

The list of Drawings for the project can be found in the SPECIAL CONDITIONS, Section 6.71.

5.47. COORDINATION WITH UTILITIES

A. The Contractor shall arrange and cooperate with the various utility corporations or other parties interested in connection with the relocation and maintenance of all public fixtures

when necessary and appurtenances or service connections within or adjacent to the limits of construction, as directed by the Owner or his representative. There shall be no additional payment for such coordination. The Contractor shall be aware of such projects and prepare the schedule accordingly.

B. The Contractor will be responsible for any damage done to any utility poles or lines, curbing, basins, hydrants, water and sewer lines, conduits and other accessories and appurtenances of a similar nature which are fixed or controlled by the City Public Utility Company or Corporation. He shall perform any carry out his work in such a manner as not to interfere with or damage fixtures mentioned herein, or as shown on the Plans or discovered during construction.

C. The Contractor shall notify the affected Utility companies at least fourteen (14) calendar days prior to commencing work in the location of the respective utility.

D. The purpose of this advanced notification is to allow the utility company ample time to adjust, reconstruct or reset utility features within the influence of the Work of the roadways and sidewalks scheduled for construction.

5.48. MAINTENANCE OF FIRE LANES

Fire lanes designated by the Department of Public Safety must be accessible at all times for firefighting equipment, other emergency apparatus and traffic crossing.

5.49. "OR APPROVED EQUAL" CLAUSE

Whenever a material or article required is specified or shown on the Drawings by using the name of the proprietary product or of a particular manufacturer or vendor, any material or article which will perform adequately the duties imposed by the general design will be considered equal and satisfactory providing the material or article so proposed is of equal substance and function in the City's opinion. It shall not be purchased or installed without the Owner's written approval. In all cases new material shall be used on the project.

5.50. REPORTS, RECORDS AND DATA

A. The Contractor and each of his Subcontractors shall submit to the Owner such schedules of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data as the Owner or his representative may request concerning work performed or to be performed under this Contract.

B. See Technical Specification 01 78 39 for further record document details.

5.51. SAFETY AND HEALTH REGULATIONS

These construction documents, and the joint and several phases of construction hereby contemplated, are to be governed, at all times, by applicable provisions of the Federal law(s), including, but not limited to, the latest amendments of the following:

A. Williams-Steiger Occupational Safety and Health Act of 1970, Public Law 91-596;

B. Part 1910 - Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations;

C. Part 1926 - Safety and Health Regulations for Construction, Chapter XVII of Title 29, Code of Federal Regulations.

5.52. PROTECTION OF LIVES AND PROPERTY

A. In order to protect the lives and health of their employees under the Contract, the Contractor shall comply with all pertinent provisions of the "Manual of Accident Prevention in Construction" issued by the Associated General Contractors of America, Incorporated, and shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under this Contract.

B. The Contractor alone shall be responsible for the safety, efficiency and adequacy of their plant, appliances and methods, and for any damage which may result from their failure or their improper construction, maintenance or operation.

C. The Contractor shall be solely responsible for the acts and omissions of their agents, employees and their Subcontractors and their agents and employees and shall hold the Engineers and the Owner harmless and defend the injuries to others or property of others which result from said acts or omissions.

5.53. CONTRACTOR TO LAYOUT THEIR OWN WORK

The Contractor shall be responsible to lay out all the contract work and shall be responsible for the accuracy of all lines, grades and measurements, and conformance to the Americans with Disabilities Act.

5.54. SUBSURFACE DATA

A. The Contractor shall be aware that some buildings in the City have basements and/or utility vaults under the sidewalks. The Contractor shall be solely responsible to verify the presence of building/utility vaults and use extreme care when working within or adjacent to sidewalks in front of buildings that may contain vaults. Any basement or utility vaults damaged by the Contractor while carrying out this Contract shall be repaired by the Contractor to the satisfaction of the Owner or his representative at no additional charge to the Owner. The Contractor is solely responsible for the investigation of subsurface basement vaults. It is recommended that the Contractor perform a pre-existing conditions survey.

B. Pavement cores have not been obtained. Core logs are not included in the Contract Documents.

5.55. NON-FEDERAL LABOR STANDARD PROVISIONS

The following Non-Federal Labor Standards Provisions, including the following provisions concerning maximum hours of work, minimum rates of pay, and overtime compensation, with respect to the categories and classifications of employees hereinafter mentioned are included in this Contract pursuant to the requirements of applicable State or local laws, but the inclusion of such provisions shall not be construed to relieve the Contractor or any Subcontractor from the pertinent requirements of any corresponding Federal Labor-Standards Provisions of this contract. In case the set forth in the Federal Labor Standards Provisions of this Contract for corresponding classifications, be the applicable minimum rates of pay for such classifications. The limitations, if any, in these employees engage on the work covered by this Contract may be required of permitted to work thereon shall not be exceeded.

A. Other Stipulations

1. The Contractor shall comply with the applicable provisions of all Rhode Island labor laws as administered by the Rhode Island State Department of Labor, including particularly the provisions of the following:

   (a) Title 37, Chapter 13, Sections 1 to 14

   (b) Title 28, Chapter 16, Sections 1 and 2

   (c) Title 45, Chapter 32, Sections 43 and 44

B. The Contractor shall further comply with the applicable provisions of the Rhode Island Employment Security Act and the Rhode Island Temporary Disability Insurance Act, and shall report, upon the certified copies of payrolls as required by the GENERAL CONDITIONS, all employer contributions made and all employee deductions taken in compliance with said Acts.

C. The Contractor shall further comply with the applicable provisions of Title 28, Chapter 5, Sections 1 to 43, of the General Laws of Rhode Island, 1956 the State Fair Employment Practices Act, as amended.

D. Schedule of Salaries and Wages

   The rates of payment of wages, obligations and charges for labor by the contractor shall be not less than Davis-Wage determinations available online at https://beta.sam.gov/.

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6. SPECIAL CONDITIONS

6.1. PROJECT AREA

The Project Area shall be considered the area identified on the Contact Documents in the vicinity of the Allens Avenue and Manchester Street Station Hurricane Barrier Vehicular Gates on the Fox Point Hurricane Barrier levee.

6.2. TIME FOR COMPLETION

The work which the Contractor is required to perform under this Contract shall be commenced at the time stipulated by the Owner in the Notice to Proceed to the Contractor and shall be fully completed, including all punch list items by May 2, 2025, with both gates reinstalled and fully operational by April 1, 2025. Time is of the essence and construction needs to occur in a continuous manner without gaps in the work, unless an excusable delay occurs, as defined in GENERAL PROVISIONS, Section 5.12.

6.3. LIQUIDATED DAMAGES

Failure to complete the project by May 2, 2025, shall result in the assessment of liquidated damages in the amount of $3,000 per day for each calendar day beyond this date or extension thereof that the Work remains incomplete, in accordance with the terms of the Agreement.

6.4. RESPONSIBILITIES OF CONTRACTOR

A. Except as otherwise specifically stated in the Contract Documents and Technical Specifications, the Contractor shall provide and pay for all materials, labor, tools, equipment, testing, water, light, heat, power, transportation, superintendence, temporary construction of every nature, charges, levies, fee or other expenses and all other services and facilities of every nature whatsoever necessary for the performance of the Contract and to deliver all improvements embraced in the Contract for Site Preparation complete in every respect within the specified time.

B. Water shall not be pumped directly from surrounding hydrants without the express written approval of the City of Providence. Metering of water is anticipated in the case of given approval.

C. Pay costs associated with furnishing, cleaning, installing, maintaining, operating, and removing of water-related equipment.

6.5. COMMUNICATIONS

A. All notices, demands, requests, instructions, approvals, proposals, and claims must be in writing.

B. Any notice to or demand upon the Contractor shall be sufficiently given if delivered at the office of the Contractor stated on the signature page of the Agreement (or at such other office as the Contractor may from time to time designate in writing to the Owner), or if deposited in the United States mail in a sealed, postage-prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to such office.

C. All papers required to be delivered to the Owner shall, unless otherwise specified in writing to the Contractor, be delivered to the Department of Public Works, 700 Allens Avenue, Providence, Rhode Island 02905, and any notice to or demand upon the Owner shall be

sufficiently given if so delivered, or if deposited in the United States mail in a sealed, postage-prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission to said Owner at such address, or to such other representatives of the Owner or to such other address as the Owner may subsequently specify in writing to the Contractor for such purpose.

D. Any such notice shall be deemed to have been given as of the time of actual delivery or (in the case of mailing) when the same should have been received in due course of post, or in the case of telegrams, at the time of actual receipt, as the case may be.

6.6. PARTIAL USE OF SITE IMPROVEMENTS

The Owner, at its election, may give notice to the Contractor and place in use those sections of the improvements which have been completed, inspected and can be accepted as complying with the Technical Specifications and if in its opinion, each such section is reasonably safe, fit and convenient for the use and accommodation for which it was intended, provided:

A. The use of such sections of the improvements shall in no way impede the completion of the remainder of the work by the Contractor.

B. The Contractor shall not be responsible for any damages or maintenance costs due directly to the use of such sections.

C. The use of such sections shall in no way relieve the Contractor of his liability due to having used defective materials or to poor workmanship.

D. The period of guarantee stipulated under GENERAL CONDITIONS, Section 5.33, shall not begin to run until the date of the final acceptance of all work which the Contractor is required to construct under this Contract.

6.7. WORK BY OTHERS

The Contractor will consult and cooperate with the utility companies to permit their work to proceed coincidentally with the work under this contract so as not to delay completion of the project.

6.8. CONTRACT DOCUMENTS AND DRAWINGS

The Owner will furnish the Contractor with digital files containing the Contract Documents, Plans and Addenda without charge. Reprographics shall be the responsibility of the Contractor.

6.9. DISPOSAL OF SALVAGED MATERIALS

A. All salvaged material such as granite curbing; manhole frames and covers; catch basin frames, grates, covers and traps; etc., not required to be installed in the work shall be removed and transported to the City of Providence, Department of Public Works storage yards located in the vicinity of 700 Allens Avenue, Providence, Rhode Island 02905.

B. All steel and other miscellaneous material denoted to be removed and shall be removed, transported, and disposed of in accordance to Local, State, and Federal Regulations. Disposal of these items shall be inclusive within the price of the respective line items.

C. The above work shall be accomplished at no additional expense to the Owner but the cost of the work shall be included in the submitted unit price for the applicable items of work.

D. The Contractor shall be responsible for arranging salvaged materials delivery and obtaining signed receipt(s) from responsible personnel at the above agencies listing material types and quantities salvaged and delivered. Copies of receipt(s) shall be provided said agencies and the Local Public Agency on the date of delivery.

6.10. PROVISION FOR FLOW OF PRESENT DRAINAGE

Provision for the flow of all sewers, drains and watercourses that are met or altered during construction shall be provided by the Contractor and all the connections shall be restored without extra charge. All offensive matter shall be removed immediately with such precautions as may be directed. If required, the Contractor shall install temporary bypass connections for surface or pipe drainage facilities to provide uninterrupted or continuous service during the work of construction. Contractor is responsible to clean sediment and erosion control devices, as well as clearing standing water as a result of the presence of sediment and erosion controls immediately upon request, and at no additional charge.

6.11. WORK TO BE ACCOMPLISHED IN ACCORDANCE WITH THE DRAWINGS AND TECHNICAL SPECIFICATIONS

The work, during its progress and at its completion, shall conform to the lines and grades shown on the Drawings and to the directions given by the Owner or his representative from time to time, subject to such modifications or additions as they 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. The work shall also be accomplished in accordance with the date provided in Section 6.2 (Time for Completion), hereof.

6.12. CONTRACTOR TO CHECK DIMENSIONS AND SCHEDULES

The Contractor will be required to check all dimensions and quantities shown on the Drawings or schedules given to him by the Owner or his representative and shall notify the Owner or his representative of all errors therein which he may discover by examining and checking them. The Contractor shall not take advantage of any error or omissions in these Technical Specifications, Drawings or schedules. The Owner or his representative will furnish all instructions should such errors or omissions be discovered, and the Contractor shall carry out such instructions as if originally specified.

6.13. PROTECTION OF TREES

A. Along the location of this work, all fences, pathways, bushes, trees, shrubbery and other physical features shall be protected and restored in a thoroughly workmanlike manner. All grass areas beyond the limits of construction which have been damaged by the Contractor shall be regraded and seeded as necessary, subject to the approval of the Engineer.

B. Trees close to the work and not marked for removal shall be boxed or otherwise protected against injury. The Contractor shall trim all branches that are likely to be damaged because of his operations, but in no case shall any tree be cut or removed without prior notification of the Engineer. All injuries to bark, trunk, limbs, and roots of trees shall be repaired by dressing, cutting and painting according to approved methods, using only approved tools and materials, subject to the approval of the Owner

C. The Contractor shall take special care to preserve and protect from injury all trees and other plant material to remain along the lines of construction. No such trees or plant material shall be removed or cut down, trimmed or otherwise cut without permission from the Owner or his representative. Failure to comply may result in a fine by the City Forester.

6.14. REMOVAL OF WATER AND PROTECTION FROM FLOODING

The Contractor shall construct and maintain, at no additional expense to the Owner, all pumps, drains, well points or any other facility for the control and collection of groundwater and/or surface water and provide all pumps and piping for the removal of water from the trenches and excavations so that all trenches and excavations may be kept, at all times, free from water and so that all construction work may be performed in the dry. Any damage resulting from the failure of the dewatering operations of the Contractor and any damage resulting from the failure of the Contractor to maintain the areas of all work in a suitable dry condition, shall be repaired by the Contractor as directed by the Owner or his representative, at no additional expense to the Owner. The Contractor's pumping and dewatering operations shall be carried out in such a manner as to prevent damage to existing structures and utilities and the contract work, and so that no loss of ground will result from these operations. Precautions shall be taken to protect new and existing work from flooding during storms or from other causes. Pumping shall be continuous where directed by the Owner or his representative, to protect the work and/or maintain satisfactory progress. All pipe lines or structures not stable against uplift during construction or prior to completion shall be thoroughly braced or otherwise protected. Water from the trenches, excavations and drainage operations shall be disposed of in such a manner as will neither cause public nuisance, nor cause injury to public health nor to public or private property nor to the work completed, nor to the work in progress. No extra payment will be made for the removal of water, protection from flooding, drainage work, diversion of existing water courses and such other work; but compensation therefor shall be considered as having been included in the prices stipulated for the appropriate items of work as listed in the Bid.

At times when the hurricane gates are removed from site the Contractor shall carry the means to supplement the loss of flood protection to that as if the gates were not removed. The time of work is not anticipated to occur during the New England flood season. The implementation of the flood protection is considered an allowance within the contract, but the ability to access the material should be readily available for implementation.

6.15. HURRICANE PROTECTION

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 closing all openings, removing all loose materials, tools and/or equipment from exposed locations, and removing or securing scaffolding and other temporary work.

6.16. FIRST-AID TO INJURED

The Contractor shall keep in his office, ready for immediate use, all articles necessary for giving first aid to injured employees. He shall also provide arrangements for the immediate removal and hospital treatment of any employee injured on the work who may require the same.

6.17. CONFORMANCE WITH DIRECTIONS

The Owner or his representative may make alterations in the line, grade, plan, form, dimensions or materials of the work, or any part thereof, either before or after the commencement of construction. If such alterations diminish the quantity included in any item of work to be done and paid for at a Unit Price, the Contractor shall have no claim for damages or for anticipated profits and the work that may thus be dispensed with. If they increase the quantity included in any such item, such increase shall be paid for at the stipulated price, but no such alteration shall increase shall be paid for at the stipulated price, but no such alteration shall be made without the consent of the Owner.

6.18. PROTECTION AGAINST HIGH WATER AND STORM

A. The Contractor shall take all precautions to prevent damage to the work or equipment by high waters or by storms. The Owner or his representative may prohibit the carrying out of any work at any time when, in his 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.

B. 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 or his representative may require, at no additional expense to the Owner.

6.19. SEQUENCE OF WORK

A. The Contractor shall be required to prosecute his work in accordance with a schedule prepared by him in advance in accordance with additional requirements specified herein and approved by the Owner or his representative. This schedule shall state the methods and shall forecast the times for doing each portion of the work. Before beginning any portion of the work, the Contractor shall give the Owner or his representative advance notice and ample time for making the necessary preparations.

B. Sequence and scheduling of the Work shall be submitted to the Owner/City for written approval prior to the commencement of work. The City reserves the right to indicate the sequence of work prior to construction.

C. The order of the barrier repair locations may occur in either order with the written approval of the schedule to the Owner.

D. The repair program is limited such that the temporary flood barriers are onsite and ready to be deployed prior to removal of the Hurricane Barriers.

6.20. COMPETENT HELP TO BE EMPLOYED

The Contractor shall employ experienced foremen, craftsmen and other workmen competent in the work in, which they are to be engaged, and whenever the Owner or his representative shall notify the Contractor in writing that any person employed on the project is, in his opinion, incompetent, unfaithful, disorderly, or otherwise unsatisfactory, or not employed in accordance with 'the provisions of this contract, such person shall be discharged from the project and shall not be again employed on it.

6.21. STREETS AND SIDEWALKS TO BE KEPT OPEN

A. The Contractor shall at all times keep the streets, highways, roads, private walks and sidewalks in which he may be at work, open for pedestrian and vehicular traffic at his own expense, unless otherwise authorized by the Owner in writing. If, in the opinion of the Owner, the interest of abutters and public requires it, the Contractor shall bridge or construct plank crossings over the trenches at street crossings, roads, or private ways, or provide such temporary means of crossing and guarding as shall be acceptable to the Owner. The Contractor shall conduct his work for this objective in such manner as the Owner may direct from time to time. No sidewalk shall be obstructed where it is possible to avoid it. The closing of any traffic lanes shall be done only with the approval of the Providence Traffic Engineering Department.

B. The Contractor shall provide at his own expense, all necessary fire crossings at principal intersections or ways usually traveled by fire apparatus.

C. Temporary closure of streets are limited to times at which gates are, removed, installed, or exercised.

6.22. LIGHTS, BARRIERS, WATCHMEN AND INDEMNITY

A. The Contractor shall put up and maintain such barriers, lighting and warning lights, danger warning signals and signs that 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 indemnify, defend and protect the Owner and the Engineer in every respect from any injury or damage whatsoever caused by any act or neglect of the Contractor or his subcontractors, or their servants or agents.

B. In addition to the above, when and as needed, or when required by the Owner or his representative, the Contractor shall post signs and employ watchmen for excluding at all times unauthorized persons from the work, for which the Contractor will not be paid additional compensation.

C. The Contractor shall be responsible for excluding at all times from lands within easement areas, all persons not directly connected with the work or authorized by the Owner to be in the work areas.

6.23. TRAFFIC CONTROL

A. Approval of any street closure, lane closure, sidewalk closure or detour must be coordinated with City of Providence Traffic Engineer and RIDOT for State maintained roads before it is put into operation. All proper Traffic Engineering and/or RIDOT permits must be approved prior to work starting.

B. The Contractor shall make himself aware of all City regulations governing construction and their effect on vehicular and pedestrian traffic.

C. Whenever necessary, or whenever directed by the Owner, the Contractor shall employ traffic control devices to insure a safe, orderly routing of traffic around or across the work. No separate payment shall be made for this work, but compensation, therefore, shall be considered as having been included in the prices stipulated for the appropriate items of work as listed in the bid.

D. Where deemed necessary by the Owner, supplementary traffic control shall be provided by off-duty, City of Providence Police Officers.

E. The Contractor shall request for use of off-duty, City of Providence Police Officers for supplementary traffic control in accordance with the Price and Payment. Invoices shall be billed directly to the Owner.

F. The Contractor shall be solely responsible for the safe passage of traffic and shall indemnify, defend, and protect the Owner and the Engineer in every respect from any injury or damage whatsoever caused by any act or neglect of the Contractor of their Subcontractors, or their servants or agents.

6.24. NIGHT WORK

A. Night work or work on Saturdays, Sundays and legal holidays shall be done only with the approval of the Providence Traffic Engineering Department or RIDOT for State roads.

B. All work within lanes of traffic, shall be conducted at times as directed by the Owner or his representative that will minimize the interference with normal and emergency vehicular traffic flow.

C. No work shall be scheduled by the Contractor on nights, Saturdays, Sundays or legal holidays unless directed or approved in writing by the Owner. The Contractor will receive no extra payment for work at these times and compensation shall be considered as having been included in the prices stipulated for the appropriate items of work as listed in the Proposal.

D. All necessary lighting, safety precautions, and other requirements for night, Saturday, Sunday and holiday work shall be provided at no extra cost to the Owner.

6.25. BUS LINE INTERFERENCE

Whenever it may be necessary to interfere with any bus lines, notice shall be given to the Rhode Island Public Transit Authority (RIPTA) owning the same, and reasonable time shall be given to said corporation to arrange the schedule for operation of same, as may be necessary. RIPTA shall be notified for any work impacting their bus routes or adjacent (within 200 to their shelters from the approach side and 100 feet to the exit side).

6.26. WORK IN COLD WEATHER

A. The OWNER will determine when conditions are unfavorable for work and may order the work or any portion of it suspended whenever, in his opinion, the conditions are not such as will insure first class work. In general, work shall be prosecuted throughout the year and the Contractor will be expected to keep work going and employment of labor as continuous as possible.

B. All methods and materials used for concrete, masonry, or painting work in cold weather shall be subject to the approval of the Owner and carrier out in accordance with the manufacturer recommendations of the products utilized. The Contractor shall take the necessary precautions to protect the work from damage and for removing ice and frost from materials, including heating the water, sand and coarse aggregate and for protecting the newly laid masonry. This protection shall also include the covering of work with tarpaulins and the heating by salamanders or steam pipes or other suitable method. The Contractor will receive no extra payment or any labor, apparatus, tools or materials necessary to comply with the above requirements, but compensation shall be considered to be included in the prices stipulated for the appropriate items of work as listed in the bid.

C. In the event of temporary suspension of work, or during inclement weather, or whenever the Owner shall direct, the Contractor will, and will cause his Subcontractors to protect carefully his and their work and materials against damage or injury from the weather. If in the opinion of the Owner, any work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of his Subcontractors to so protect his work, such materials shall be removed and replaced at the expense of the Contractor.

D. In the event that the project is shut down during the winter months, the Contractor will be required to install, maintain and remove such temporary materials as may be required to protect completed work and to provide safe vehicular and pedestrian access. No separate payment shall be made to the Contractor for such temporary materials and labor.

6.27. BLASTING AND EXPLOSIVES

A. Blasting or use of explosives will not be permitted on this project.

B. Rock, boulders, ledge, concrete foundations, etc., shall be removed by the use of pneumatic tools; drilling and splitting mechanically or by hand; or by other means not requiring the use of explosives.

6.28. RESERVED MATERIALS

A. Materials found on the work suitable for any special use shall be reserved for that purpose without charge to the Owner.

B. Where permitted, the Contractor may use in the various parts of the work, without charge to the Owner, therefore, any materials taken from the excavations.

6.29. DISPOSAL OF MATERIALS. ACCESS TO HYDRANTS AND GATES AND MATERIALS TRIMMED- UP FOR CONVENIENCE OF PUBLIC TRAVEL OR ADJOINING TENANTS

A. The materials from the structures noted to be removed and those used in the construction of the work shall be deposited in such a manner so they will not endanger persons or the work, and so that free access may be had at any time to all hydrants and gates in the vicinity of the work. The materials shall be kept trimmed-up so as to be of as little inconvenience as possible to the public travel or the adjoining tenants. The material may be stockpiled, temporarily, prior to the off-site removal by the Contractor at no additional expense to the Owner.

B. The disposal of any excess or unsuitable material including earth, pavement, debris from demolished structures of all types, vegetative matter and any other material either found on the work site or brought to the site by the contractor or subcontractors will be in accordance with all applicable local, State and Federal laws. The following procedures will be encountered during the prosecution of work:

1. Under no circumstances will any material be deposited in a freshwater or coastal wetland or regulated areas. The Contractor must obtain the permission of the Owner prior to on site disposal of material.

2. The off-site disposal of any material will be allowed only by written permission of the property owner upon whose property the material is to be deposited. The Contractor must furnish a copy of said written permission.

3. For all off-site disposal areas, it will be the Contractor's responsibility to obtain the approval of the Department of Environmental Management, the Coastal Resources Management council, and any other governmental agency as necessary.

C. The above procedures will be performed by the Contractor at no additional cost to the Owner. Under these procedures, the Contractor retains all responsibilities and liabilities under City, State and Federal laws for violations resulting from disposal of material from the project and will indemnify, defend and hold the Owner harmless therefrom.

D. Removal and disposal of the Asbestos Cement materials shall be according to all current City, State and Federal regulations. Asbestos Cement removal is not anticipated for the proposed scope of work.

6.30. LENGTH OF TRENCH TO BE OPENED, MAINTAINING PREMISES FROM OBSTRUCTIONS, CROSSOVERS, DIRECTIONAL SIGNS, AND LIGHTS

A. Trench work is not anticipated as a result of the proposed work.

B. Suitable signs, lights and such required items to direct traffic shall be furnished and maintained by the Contractor.

C. The Contractor must keep streets and premises free from unnecessary obstructions, debris and all other materials. The Owner 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 and 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 he may employ, at the Contractor under the contract. In special cases, where public safety urgently demands it, the Owner may cause such materials to be removed without prior notice.

6.31. INTERFERENCE WITH EXISTING STRUCTURES

A. Whenever it may be necessary to cross or interfere with existing culverts, drains, sewers, water pipes or fixtures, guardrails, fences, gas pipes or fixtures, or other structures needing special care, due notice shall be given to the Owner and to the various public and private agencies or individuals responsible for the utility or structure that is interfered with. Whenever required, all objects shall be strengthened to meet any additional stress that the work herein specified may impose upon it, 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.

B. The Contractor shall be responsible for all broken mains or utilities encountered during the progress of the work and shall repair 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 encountered during the work, but the entire responsibility and expense shall be with the Contractor.

C. 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 Owner at no additional expense to the Owner.

6.32. MATERIALS

All materials furnished and used in the completed work shall be new, of best quality workmanship and design and recognized as standard in good construction practices. Whenever a specification number or 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 himself with the requirements of the Owner when the occasion or choice of materials or supplies so demands.

6.33. DEFECTIVE MATERIALS, INSPECTION AND TESTING OF MATERIALS FURNISHED, SAMPLES AND ORDERING LISTS

A. No materials shall be laid or used which are known or may be found to be in any way defective. Any materials found to be defective at the site of the work or upon installation shall be replaced by the Contractor at his expense. Notice shall be given to the Owner 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 material without additional expense to the Owner.

B. The Contractor shall be responsible to compensate the City's Project Management team and police details and materials testing for errors, defective work or damage caused by the Contractor. This will be done by direct invoice to the Contractor, or monies deducted through invoices.

C. All materials furnished by the Contractor are subject to thorough inspections and tests by the Owner or his Representative.

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

6.34. TESTING AND REMEDIATION OF HAZARDOUS MATERIALS

NOT USED

6.35. SPIRITUOUS LIQUORS

The Contractor shall neither permit nor suffer the introduction or use of spirituous liquors upon the work embraced in this contract.

6.36. FINISHING AND CLEANING UP

In completing site operations the Contractor shall replace all surface material to the satisfaction of the Owner, and shall then immediately remove all surplus material, and all tools and other property belonging to him, leaving the street, Manchester Street Station facilities, or surroundings free and clean and in good order, at no additional expense to the Owner. The Contractor shall exercise special care in keeping rights-of-way and private lands, upon which 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.

6.37. CLEAN-UP AT CONTRACTOR'S EXPENSE

In case the Contractor shall fail or neglect, to promptly remove all surplus materials, tools and other incidentals, or promptly do the required repaving when ordered, the 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 the Contractor.

6.38. RIGHTS OF ACCESS

Nothing herein contained or shown on the Drawings shall be construed as giving the Contractor exclusive occupancy of the work areas involved. The Owner or any other Contractor employed by the Owner, the various utilities companies, Contractors or Subcontractors employed by the 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 his work in such manner as to permit such access to the other and prevent unnecessary delay to the work as a whole.

6.39. LOADING

No part of the structures involved in this contract shall be loaded during construction with a load greater than is calculated to carry with safety. Should any accidents or damage occur through any violation of this requirement, the Contractor will be held responsible under his Contract and bond.

6.40. EXISTING UTILITIES OR CONNECTIONS

A. The Location of existing underground pipes, conduits and structures, as may be shown in the project drawings, has been collected from the best available sources and the Engineer and the Owner together with its agents does not guarantee, expressly or by implication, the data and information in connection with underground pipes, conduits, structures, electric and telephone ducts and lines, vaults and such other parts as to their completeness nor their locations as indicated. The Contractor shall assume that there are existing water, gas, electric, and other utility 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 not shown, shall be the responsibility of the Contractor, at no additional expense to the Owner.

B. Before proceeding with construction operations, the Contractor shall make such supplemental investigations, including exploratory excavations by hand digging, as he deems necessary to uncover and determine the exact locations of utilities and structures and 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.

6.41. COMPLETENESS OF WORK

In addition to the specified or described portions, all other work and all other materials, equipment and labor of whatever description which are necessary or required to complete the work, or for carrying out the full intent of the Drawings and Technical Specifications, as interpreted by the Owner, such work, labor, materials, and equipment shall be provided by the Contractor, and payment therefor shall be considered as having been included in the prices stipulated for the appropriate items of work as listed in the Bid.

6.42. VEHICLE CROSSINGS

As required or directed by the Owner, the Contractor shall install in selected locations suitable plank, timber or steel crossings substantially bound and reinforced to sustain vehicular traffic across trench or other excavations. Crossings shall be constructed with side and usable approaches for use by the traveling public, private property owners or firefighting equipment. No separate payment will be made for this work, but the cost shall be included in the prices stipulated for the appropriate items of work as listed in the Bid.

6.43. CLEANING FINISHED WORK

After the work is completed, the catch basins, manholes, and recessed structures shall be carefully cleaned free of dirt, broken masonry, mortar, construction and other debris and left in first class condition ready for use. All temporary or excess materials shall be disposed of and the work left broom-clean to the satisfaction of the Owner.

6.44. DUST CONTROL

A. At no additional cost to the Owner take measures to prevent unnecessary dust.

1. Keep earth surfaces subject to dusting moist with water only.

2. Cover dusty materials in piles or in transit to prevent blowing.

B. Protect buildings or operating facilities which may be affected adversely by dust.

C. Protect existing or new machinery, motors, instrument panels, or similar equipment with dust screens.

D. Include proper ventilation with dust screens.

E. The Contractor shall act quickly to address any concerns or complaints from Rhode Island Coastal Resources Management Council (CMRC) or the Owner if dust is to blow within the project area.

6.45. CARE OF THE WORK

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

6.46. INDEMNITY

A. The Contractor will indemnify, defend and hold harmless the Owner and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense; a) Is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom, and; b) Is caused in whole or in part by any negligent act or omission of the Contractor or any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

B. In any and all claims against the Owner or any of their agents or employees by any employee of the Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under GENERAL CONDITIONS, Section 5.30 shall not be limited in any way by any limitation on the amount or type of damages, compensation acts, disability benefit acts or other employee benefit acts.

C. The obligation of the Contractor under paragraph GENERAL CONDITIONS, Section 5.30 shall not extend to the liability of the Owner, their agents or employees arising out of a) the preparation or approval of maps, Drawings, opinions, reports, surveys, Change Orders, designs or Specifications or; b) the giving of or the failure to give directions or Instructions by the Owner, their agents or employees provided such giving or failure to give is the primary cause of injury or damage.

6.47. CONSTRUCTION SCHEDULE

A. In addition to the other requirements specified and prior to issuance of the Notice to Proceed, the Contractor shall confer with the Owner for the purpose of drafting a construction schedule satisfactory to the Owner which is to include all the work of this contract. The Contractor shall perform the work of this contract to conform to the construction schedule as approved by the

Owner, except the Owner reserves the right to amend and alter the construction schedule, as approved, at any time, in a manner which it deems to be in the best interests of the Owner to do so.

B. The Contractor shall arrange his work under this Contract to conform with the construction schedule as it shall be revised biweekly by the Contractor, at no additional expense to the Owner. The Contractor shall notify the Owner immediately of any circumstances which may affect the performance of the work in accordance with the current construction schedule. Failure to maintain schedule will delay in processing pay applications.

6.48. OTHER WORK

The Owner reserves the right to do any other work which may connect with, or become a part of, or be adjacent to the work embraced by this Contract, at any time, by contract work 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 his own work in such manner as to aid in the executing of work by others as may, be required.

6.49. CHANGES AND MODIFICATIONS

The Owner reserves the right to delete or cancel any item or items or parts thereof as listed in the Bid, without recourse by the Contractor. The Owner also reserves the right to add to any item or part thereof as listed in the Bid. The compensation to be paid the Contractor for such additional extension, appurtenance or item shall be made under the applicable items as listed in the bid. Where no applicable items are provided in the bid for such additional extension, appurtenance or item, the compensation to be paid the Contractor shall be as set forth under GENERAL CONDITIONS, Section 5.10. No further mobilization charges shall be considered for changes or modifications in the work.

6.50. LAYOUT OF WORK

A. The Contractor shall provide all materials, labor, equipment, etc., necessary to layout the work and shall be responsible for all lines, grades, elevations, measurements, etc. conforming to the Americans with Disabilities Act.

B. Datum used for this project is the National Geodetic Vertical Datum of 1929 (NGVD29).

C. No separate payment will be made for this work, but the cost shall be included in the prices stipulated for the appropriate items of work as listed in the Bid.

6.51. PROTECTION OF LIVES AND HEALTH

A. In order to protect the lives and health of his employees under the Contract, the Contractor shall comply with all pertinent provisions of the U.S. Department of Labor, "Williams-Steiger Occupational Safety and Health Act of 1970” and shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or Causing loss of time from work, arising out of and in the course of employment on work under the contract.

B. The Contractor alone shall be responsible for the safety, efficiency and adequacy of his plant, appliances and methods, and for any damage which may result from their failure or their improper construction, maintenance or operation.

C. The Contractor shall be solely responsible for the acts and omissions of his agents, employees and his Subcontractors and their agents and employees and shall hold the Engineer and the Owner harmless and defend the Engineer, and the Owner against damage

or claims for damages arising out of injuries to others or property of others which result from said acts or omissions.

6.52. SUBSURFACE STRUCTURES AND UTILITIES

A. Available information of the location of existing substructures and utilities has been collected from various sources, but the results of the investigations shown on the Drawings are not guaranteed to be accurate complete. [attached/include available boring logs/test pits etc. if available]

B. The Contractor shall make all supplemental investigations including exploratory excavations, by hand digging, as he seems necessary to uncover and determine the exact locations of utilities and structures and 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.

6.53. CONTRACTOR'S RESPONSIBILITY FOR DAMAGED STORM DRAINS

The Contractor shall use care when working within or in the vicinity of existing drainage structures. Any drainage structures or pipes damaged while carrying out any work on this contract shall be the Contractor's responsibility. Any drainage structures or pipes damaged by the Contractor while carrying out this Contract shall be replaced or repaired by the Contractor to the satisfaction of the Owner at no additional charge to the Owner.

6.54. PROTECTION OF CONSTRUCTION FEATURES

The Contractor shall take adequate precautions to protect existing sidewalks, curbs, pavements, utilities, building vaults, adjoining property and such incidentals and to avoid damage thereto. The Contractor shall completely repair the damage caused by his operations at no additional expense to the Owner.

6.55. TEST PITS

Not anticipated to be required to perform work.

6.56. LOCATION OF WORK

The Contractor's attention is directed to the fact that work under this contract is performed strictly within the City of Providence.

6.57. PRE-CONSTRUCTION CONFERENCE

A. Within ten (10) days after award of Contract, a preconstruction conference shall be held between the Owner, the Contractor, and other City of Providence agencies having jurisdiction over the project area.

B. No work of any nature shall be performed by the Contractor until the pre-construction conference has been held, and all required permits have been obtained.

6.58. NOTIFICATION PRIOR TO CONSTRUCTION

A. Not less than ten (10) calendar days prior to the start of any work under this contract the Contractor shall send written notification of his intentions to the following:

1. DEPARTMENT OF PUBLIC WORKS
   700 Allens Avenue
   Providence, RI 02905
   Patricia A. Coyne-Fague, Esq., Director
   pcoynefague@providenceri.gov
   (401) 680-7500

2. DEPARTMENT OF PLANNING AND DEVELOPMENT
   444 Westminster Street
   Providence, RI 02903
   Robert Azar, Deputy Director
   razar@providenceri.gov
   (401) 680-8524

3. RIPTA
   705 Elmwood Avenue
   Providence, RI 02907
   (401) 781-9400

4. RHODE ISLAND ENERGY
   280 Melrose Street
   Providence, RI 02907-2152
   Marisa Albanese
   MAAlbanese@rienergy.com
   (401) 784-7090

   cc: Jim Paulette
   JIPaulette@rienergy.com

5. RIDOT
   Two Capitol Hill
   Providence, RI 02903
   Robert Rocchio, Chief Engineer
   (401) 222-2023

6. VERIZON
   85 High Street
   Pawtucket, RI 02865
   Peter DeCosta, State Highway Coordinator
   (774) 409-3177

7. COX COMMUNICATIONS
   9 J.P. Murphy Hwy.
   West Warwick, RI 02893
   David Velilla, Right Of Way Agent II
   (401) 615-1284

8. PROVIDENCE WATER
   125 Dupont Drive
   Providence, RI 02907

Mr. Peter LePage, Senior Director of Engineering
plepage@provwater.com
(401) 521-6300 Ext. 7242

9. DEPARTMENT OF TELECOMMUNICATIONS
1 Communications Place, West Exchange Street
Providence, RI 02903
Joseph Migliaccio, Director of Telecommunications
jmigliaccio@providenceri.gov
(401) 274-1150

B. This notification shall set forth the Contractor's proposed sequence of construction and shall give the approximate dates of when each street or phase of the work is expected to begin. The sequence of construction shall also state the expected completion dates of each street or phase of the work.

C. Copies of each notification shall be sent to the Engineering Division, Department of Public Works, 700 Allens Ave., Providence, Rhode Island 02905 (c/o Roger Biron, rbiron@providenceri.gov). The notifications shall reference the Project, include a description of the work to be performed, including street names, and shall indicate when the construction will start. Additionally, the Contractor shall request the name and telephone number of the person or department to be contacted when assistance is required, copies of all replies shall be forwarded to the Chief Engineer, Department of Public Works, 700 Allens Ave., Providence, Rhode Island 02905.

6.59. NON-INTERFERENCE WITH ADJACENT PROPERTIES

All work under this Contract shall be performed in a manner which will minimize interference with the normal neighborhood operations.

6.60. FIRE PROTECTION AND PREVENTION

A. Federal laws (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.

B. All fire protection equipment such as water tanks, hoses, pumps, extinguishers, and other materials and apparatus shall be provided for the protection of the Contract work, temporary work and adjacent property. Trained personnel experienced in the operation of all fire protection equipment and apparatus shall be available on the sites whenever work is in progress and at such other times as may be necessary for the safety of the public and the work.

6.61. PLANIMETER

For estimating quantities in which the computation of areas by analytic and geometric methods would be comparatively laborious, it is stipulated and agreed that the planimeter shall be considered an instrument of precision adapted to the measurement of such areas.

6.62. DAILY REPORTS

The Contractor shall submit, 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; any authorized extra work (time and material reports shall be submitted on separate forms).

6.63. OTHER PROHIBITED INTERESTS

No official of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept or approve, or to take part in negotiating, making, accepting or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this Contract or in any part hereof. No officer, employee, architect, attorney, engineer or inspector of or for the Owner who is authorized in such capacity and on behalf of the Owner to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part thereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

6.64. WATER

The Contractor shall provide and maintain at his own expense an adequate supply of water for his use for construction and domestic consumption, and to install and maintain necessary supply connections and piping for same, but only at such locations and in such manner as may be approved by the Owner. All water shall be carefully conserved. Before final acceptance, temporary connections and piping installed by the Contractor shall be removed in a manner satisfactory to the Owner.

6.65. ELECTRICITY

All electric current required by the Contractor shall be furnished at his own expense and all temporary connections for electricity shall be subject to approval of the Engineer. All temporary lines shall be furnished, installed, connected and maintained by the Contractor in a workmanlike manner satisfactory to the Engineer and shall be removed by the Contractor in like manner at his own expense prior to completion of the construction.

6.66. DRAWINGS

A. If furnished, the Contractor shall use the dimensions of the Drawings as shown. Measurements shall not be by scale. Full size details have preference over scale details, and large-scale details and photographs have preference over small.

B. If discrepancies exist between Drawings and Technical Specifications, or if necessary measurements and work specified or shown is obviously incorrect or impossible to execute, and/or if figures fail to check, the Contractor shall bring these facts to the attention of the Engineer. The decision of the Engineer as to the intention of the Contract Documents shall be final. No work shall start until all such problems have been resolved.

6.67. PERMITS

A. Contractor to obtain all required permits to complete work.

B. Engineering Division, Department of Public Works Permits.

   1. Physical Alteration Permit

C. Traffic Engineering, Department of Public Works

1. Providence Traffic Engineering permits are required for Posting Emergency No Parking Signs at work zones prior to the beginning of the workday, detour permits and lane/sidewalk closing permits. Traffic Engineering permits are required when work zones occupy public sidewalk or road or a detour is required.

2. The Contractor is responsible for the scheduling of the permit applications as described on the Traffic Engineering website (http://www.providenceri.gov/public-works/traffic-engineering). Permit applications shall be sent to Providence Traffic Engineering at least two business days in advance of the requested start date on the permit. The Contractor shall obtain approval from the PDPW or their agent as to the number and time frame of Posting Emergency No Parking Signs prior to scheduling. Failure to obtain traffic engineering permits may result in shutting down the job site and other fines. There will be no compensation paid to the Contractor for job shut down relating to the failure to obtain permits and other fines.

3. The Traffic Engineering permit fees for this project shall be waived.

D. Rhode Island Department of Transportation (RIDOT)

1. Physical Alteration Permit (PAP)

(a) Absolutely no construction shall take place within the State Highway Right-of-Way without a permit having been issued approving the construction. Any construction or change to existing topography of State Highway Right-of-Way which causes additional flow of water onto or into the State Highway drainage system is also prohibited without a Permit.

(b) Required for any alterations to a State maintained road in the following circumstances:
(i) Curbs
(ii) Sidewalks
(iii) Highway/Bridge Access
(iv) Stormwater Disposal
(v) Construction within the State Highway Right-of-Way
(vi) Traffic Signals
(vii) Signage

2. Transportation Management Plan (TMP) *[Currently awaiting approval]*

(a) The TMP shall be implemented as required by RIDOT as it has been determined that there will be a significant impact to traffic operations on State Roadways.

6.68. SIDEWALK WORK

Not anticipated to be required.

6.69. COORDINATION WITH OTHER CONTRACTS

A. The Contractor is hereby notified that multiple construction projects may be ongoing throughout the construction period. The Contractor shall attend bi-weekly meetings or as required by the Owner, at a location to be determined, to assure cooperation between all involved parties.

B. Contracts that may require coordination include, but are not limited to:

1. Providence Water Main Replacement and Rehabilitation

2. Providence Water Lead Service Replacement

3. Rhode Island Energy Main Replacement

4. Citywide Paving and Sidewalk Repairs

6.70. JOB SITE POSTERS

The contractor must comply with US Department of Labor (DOL) and Rhode Island Department of Labor and Training (DLT) requirements for job site posters.

6.71. LIST OF CONTRACT DRAWINGS

A. Appendix D: Pare Construction Drawings

B. Appendix E: Historical Drawings of Vehicular Hurricane Barrier (26 Sheets)

C. All work under this Contract shall be done in conformance with the RIDOT Standard Specifications for Road and Bridge Construction, 2024, with all revisions, and the State and Federal Special Provisions included in the contract documents. Standard Details for this project are City of Providence Standard Details, 2017 Edition, with all revisions. Refer to RIDOT Standard Details, 2022 Edition, with all revisions, for all other standard details.

6.72. UTILITY AND MUNICIPAL NOTIFICATION AND COORDINATION:

A. The Contractor shall contact DIG SAFE at 1-888-DIG SAFE (1-888-344-7233) prior to work requiring excavation.

B. The Contractor shall coordinate with the utility Companies and necessary municipal offices prior to the start of work.

C. Refer to SPECIAL CONDITIONS for utility company contacts.

6.73. SHOP DRAWINGS

The Contractor must develop and submit shop drawings, product data, and/or catalogue cut-sheets in accordance with the GENERAL CONDITIONS.

6.74. SEQUENCE OF CONSTRUCTION/MAINTENANCE AND MOVEMENT OF TRAFFIC/WORK RESTRICTIONS

A. At the direction of the Owner, the Contractor may be required to clean catch basins within the project limits before installing silt sacks to ensure that the silt sack functions correctly. The Contractor shall accomplish the catch basin cleaning and erosion control installation at no additional expense to the Owner. Any construction debris, sediment, or silt at project completion shall be removed at the Contractor’s expense.

B. The Contractor shall limit the closure of roads to the minimum where possible, it is anticipated temporary closures of road is to occur only at times of gate remove, gate reinstallation, and gate exercising.

C. Action Required by Contractor:

1. Approval of the work sequence and time schedule is required before the start of any construction or other work associated with this contract. The proposed construction and time schedule must consider and address the safe vehicle passage through the project.

2. In addition to the requirements of the Standard Specifications for Road and Bridge Construction and the Special Requirements of other sections of these contract documents, the Contractor must adhere to the following requirements:

   (a) All Maintenance and Protection of Traffic devices shall be in place and approved by the City of Providence Division of Traffic Engineering prior to starting construction. All Maintenance and Protection of Traffic shall conform with the latest edition and revisions of the Manual on Uniform Traffic Control Devices (MUTCD).

   (b) Any deviations from the requirements stated here or detailed in the specifications, as well as any deviation from the approved construction sequence and time schedule, must be submitted to the City of Providence Division of Traffic Engineering in writing for approval a minimum of 24 hours prior to implementation.

   (c) The construction operations of this project must be coordinated with the local community public safety officials. It is the Contractor's responsibility to coordinate the construction operations of this project with the local public safety officials. In case of an emergency, the Contractor will be required to move equipment to allow the passage of emergency vehicles. The safety of the residents of the area must be considered at all times.

   (d) The Contractor shall maintain one full travel lane (11 foot minimum) in each direction of travel at all times unless otherwise approved by the City of Providence Division of Traffic Engineering. Safe access and egress to side streets and all driveways must be maintained at all times unless otherwise directed by the City of Providence Division of Traffic Engineering. The Contractor shall open the roadway to all parking and vehicle and pedestrian traffic at the end of each work day.

   (e) Detours are permitted only upon written approval from the City of Providence Division of Traffic Engineering. The Contractor must submit a detour plan with written approval from the City of Providence Traffic Engineer.

   (f) The Contractor shall be responsible for maintaining appropriate construction related signing at all times. Any signs not appropriate for the lane closures, speed limits or any construction activity taking place at any given time shall be removed or covered to the satisfaction of the City of Providence Division of Traffic Engineering.

D. The following definitions will apply:

1. Travel Lane - A travel lane must be at least 11 feet wide and must be paved with a hard smooth surface. This surface may be existing pavement, existing base course, or new pavement. Gravel or dirt surfaces will not be acceptable.

2. Pedestrian Way - A pedestrian way must have an unobstructed clear width of five feet (per ADA requirements) and must have a hard, smooth surface, and must conform to all handicapped accessibility requirements. The surface may be existing pavement, new pavement, or plywood. All wooden walkways shall meet the Engineer's approval for surface smoothness and deflection. If there is a drop-off in excess of six inches from the edge of the pedestrian way, a handrail conforming to all applicable standards shall also be provided. There shall be no additional compensation for the provision of Pedestrian Ways; all costs shall be considered incidental to the Contract.

E. Pedestrian ways to all building entrances including service entrances must be maintained at all times. The Contractor shall provide temporary access routes/ramps through construction areas to insure this access. The Contractor must provide for pedestrians to safely guide them away from broken and uneven pavement, open excavations, drop-offs, construction operations and other hazards at all times.

F. The Contractor shall backfill or place steel plates capable of supporting HS-20 vehicle loading over all open recessed structures at the end of work each day except when otherwise directed by the City of Providence Division of Traffic Engineering. There shall be no additional compensation for backfilling, re-excavating and/or plating these trenches.

G. The Contractor shall install and maintain a Rhode Island Standard 26.2.0 barricade at each location where adjustments to grade and/or reconstruction of drainage and utility structures have been made until resurfacing work has been performed. Other types of protective devices may be used if approved by the City of Providence Division of Traffic Engineering.

6.75. LEGAL RELATIONS AND RESPONSIBILITIES TO PUBLIC UTILITIES AND FACILITIES

A. In those areas where the Contractor's operations are adjacent or proximate to underground utilities such as gas, electric, water, telephone, fire alarm, sanitary and storm sewers, the provisions of Section 105.06 of the Rhode Island Standard Specifications for Road and Bridge Construction shall be followed.

B. During the process of the work, the Contractor shall cooperate with the Owners of the utilities and permit their representatives access to the work to determine if their utilities are being endangered in any way.

6.76. WORK ADJACENT TO GAS LINES, WATER LINES AND TELEPHONE DUCTS

Extreme care, particularly when installing the gates, recessed structures, and below concrete shall be exercised during construction in the vicinity of the gas lines, water lines and telephone ducts. Complete coordination with the utility companies shall be maintained.

6.77. BUILDING UTILITY SERVICES

The Contractor is to assume building services connections (electric, gas, telephone, water, and sanitary) are present to all buildings. Locations are to be checked with appropriate utility companies. The Contractor shall follow the Dig Safe process in accordance with the State of Rhode Island specifications for road and bridge construction.

6.78. DAMAGE TO EXISTING UTILITIES

A. The Contractor shall check and verify the exact location of all existing utilities and service connections with Dig Safe. Any damage to the utilities, which are detailed by Dig Safe, shall be the Contractor’s responsibility. Cost to repair such damage shall be borne by the Contractor.

B. The Contractor shall assume full responsibility for the protection of all buildings, structures, pavement, and utilities, public or private, including poles, signs, services to buildings, utilities below grade, utilities on overhead lines, gas pipes, water pipes, hydrants, sewers, drains, electric and telephone cables, and cesspools adjacent to trench excavations, whether or not they are shown on the Drawings. The Contractor shall carefully support and protect all such structures and utilities from injury of any kind. Any damage resulting from the Contractor's operations shall be repaired by the Contractor at their expense, to the damaged items original condition.

C. The Contractor shall bear full responsibility for obtaining all locations of underground structures and utilities (including existing water, gas, electric and telephone services, drain lines, and sewers). Services to buildings shall be maintained, and all costs or charges resulting from damage thereto shall be paid by the Contractor.

D. Protection and temporary removal and replacement of existing utilities and structures as described in this section shall be a part of the work under the contract and all costs in connection therewith shall be included in the unit prices established in the proposal.

E. Contractor shall note and protect buried utilities and pipes with the limits of work and anticipated staging areas

6.79. LOCAL POLICE COMPENSATION

It will be the responsibility of the Contractor to retain the services of local police for traffic control and protection for this project, in consultation with the project manager.

6.80. PARKING SPACE(S) LOSS

With work requires the loss of any parking space (s), the Contractor will be responsible for obtaining temporary “No Parking” signs from the City of Providence Traffic Engineer and the posting of said signs. The Contractor shall also be responsible for the removal of said temporary signs when the parking space(s) is opened.

6.81. STORAGE OF CONSTRUCTION MATERIALS AND/OR EQUIPMENT

In addition to the requirements of Division I Part 100 Section 106.06 “Storage of Materials” of the Rhode Island Standard Specification for Road and Bridge Construction 2004 Edition, the Contractor shall submit for approval the location of Material & Equipment Storage to the Engineer. No materials shall be stockpiled in the Public Right-of-Way.

6.82. DISPOSAL OF SURPLUS MATERIALS

All existing or other materials not required or needed for use on the project, and not required to be removed and stockpiled, shall become the property of the Contractor and shall be removed from the site during the construction period and legally disposed of. No separate payment will be made for this work, but all costs in connection therewith shall be included in the unit bid prices for this Contract.

6.83. LOCATION OF SIGNS

The location of all new signs shall be marked in the field and approved by the City of Providence Division of Traffic Engineering prior to installation.

6.84. CONSTRUCTION REQUIREMENTS FOR TRAFFIC SIGNAL INSTALLATION

Proposed work not anticipated to require traffic signal installation. The proposed removal of gates is to be minimized to one day per gate removal and/or reinstallation.

6.85. SIDEWALK REMOVAL/INSTALLATION

A. Proposed work not anticipated to require manipulation of the existing sidewalks.

B. Any brick, paver, or stamped concrete/asphalt sidewalk, crosswalk, or roadway disturbed by construction activity shall be repaired by the Contractor at no additional cost. Any brick, paver,

or stamped concrete/asphalt sidewalk, crosswalk, or roadway damaged or to be restored shall match the same materials that exist, including concrete base if appropriate, unless otherwise indicated on the plans, or directed by the Engineer.

6.86. PAVING NOTES

Proposed work not anticipated to require the installation of pavement.

6.87. CURB RAMPS

A. Proposed work not anticipated to require the installation of curb ramps.

B. Any existing curb ramps disturbed by gate removal or installation or other construction activities shall be replaced with a new curb ramp in accordance with RIDOT curb ramp details including required curbing to match existing, if required.

6.88. DIFFERING SITE CONDITIONS, CHANGES, AND EXTRA WORK

Any changes in the original scope of work shall be in accordance with the GENERAL CONDITIONS.

6.89. SURVEY OF CURB RADII

Proposed work not anticipated to require the removal or survey of curbs.

6.90. COORDINATION WITH RIPTA

The Contractor shall coordinate with the Rhode Island Public Transportation Authority (RIPTA) to ensure that RIPTA remains operational at all times, as specified in the SPECIAL CONDITIONS.

6.91. RHODE ISLAND ENERGY REQUIREMENTS

Proposed work not anticipated to impact Rhode Island Energy subgrade utilities.

6.92. CITY OF PROVIDENCE TECHNICAL SPECIFICATIONS

In addition to the standard and job specific specifications included in these Contract Documents, the construction in this Contract shall be in accordance with the City of Providence “Technical Specifications” provided by Pare Corporation.

6.93. PAVEMENT INFORMATION

NOT USED.

6.94. UTILITY PROBE INFORMATION

NOT USED.

6.95. TESTING AND CERTIFICATION OF MATERIALS

A. The Contractor shall adhere to the appropriate ASTM, AISC, or RIDOT Materials Testing and Certification Schedule when providing certifications or testing results to the Owner.

B. Documentation of conformance to the required testing or certification of compliance as outlined in the schedule for each bid item must be submitted and approved by the Engineer

prior to request for payment. Partial or complete payment for a given bid item may be delayed or refused without testing/certification documentation approved by the Engineer.

C. Materials not meeting the requirements of the specifications will be rejected. Testing of materials will be completed by the Contractor's testing agency. The Contractor is responsible to provide 48-hour advanced notice to the Owner prior to fabrication of precast structures to be inspected at the plant or delivery of any materials to be tested under the Materials Testing and Certification Schedule. Materials sample sizes shall be per the appropriate ASTM, AISC, RIDOT Master Schedule for the Preparation of a Project Schedule for Sampling, Testing, and Certification of Materials, latest edition.

D. Authorized representatives performing the testing shall have access to the Work at all times and at all locations where the work is in progress. The Contractor shall provide facilities for such access to enable the personnel to perform their functions properly. Concrete and bituminous mixes will be subject to inspection and testing at the mixing plants and at the locations of installation for compliance with quality requirements.

E. Concrete and asphalt testing, if required, will be tested randomly as determined by the Engineer. The concrete testing will be performed by the Contractors approved Testing agency and/or the Engineer. Costs for testing will be borne by the Contractor. Concrete and asphalt not meeting the requirements of the specification and/or the approved shop drawings (mix design) will be rejected.

F. The Contractor shall cooperate with the Local Public Agency's selected testing agency and all others responsible for testing and inspecting the Work.

G. All specimens and samples for testing, unless otherwise provided in the Contract Documents shall be taken by the testing personnel.

H. With the exception of some testing to be performed by the Engineer all sampling equipment and personnel will be provided by the testing laboratory.

I. All deliveries of specimens and samples to the testing laboratory will be performed by the testing laboratory.

6.96. FIRST SOURCE ORDINANCE

The attention of prospective bidders is called to the fact this project is to be bid upon and executed under the City of Providence, Code of Ordinances Chapter 21 Art. III 1/2 First Source Agreements Sec. 21-91 through 21-96. This ordinance outlines requirements for hiring employees to work on this project. The attention of prospective bidders is called to the fact that reporting the efforts undertaken and progress towards achieving the requirements in this ordinance is a condition for payment. Compliance reporting shall be submitted with any contract payment requisition, in the format to be provided. This demonstration of compliance through such reports shall be a condition of the requisition for payment to be processed. Upon the contract being awarded to the successful bidder, a mandatory meeting will be scheduled to review the project requirements relative to the First Source Agreements and the process and protocols by which these goals will be achieved. At this meeting, specific forms and procedures for the documentation and achievement of these requirements by the successful bidder will be provided, discussed and agreed upon for the execution of the contract.

6.97. APPRENTICE REQUIREMENTS

Attention of prospective bidders is called to the fact this project is to be bid upon and executed under the City of Providence, Code of Ordinances Chapter 21 Art. II Section 21-28.1 c (1) and (2)

relating to utilizing apprentices in the contract. This ordinance outlines requirements for utilizing not less than 15% of total hours worked by apprentices. The attention of prospective bidders is called to the fact that reporting the efforts undertaken and progress towards achieving the requirements in this ordinance is a condition for payment. Compliance reporting shall be submitted with any contract payment requisition, in the format to be provided. This demonstration of compliance through such reports shall be a condition of the requisition for payment to be processed. Upon the contract being awarded to the successful bidder, a mandatory meeting will be scheduled to review the project requirements relative to apprenticeship requirements and the process and protocols by which these goals will be achieved. At this meeting, specific forms and procedures for the documentation and achievement of these requirements by the successful bidder will be provided, discussed and agreed upon for the execution of the contract.

6.98. AMERICANS WITH DISABILITIES ACT REQUIREMENTS

Proposed work not anticipated to fall within the Americans with Disabilities Act requirements.

6.99. STORM WATER POLLUTION PREVENTION PLAN

NOT REQUIRED.

6.100. CONSTRUCTION DURATION/RESTRICTIONS

All work requiring the removal of the hurricane gates shall occur between November 1 and May 2 as it is not anticipated for hurricanes to occur in New England during that timeframe. Pending seasonal changes the Owner reserves the right to delay the start of hurricane gate removal in the event of an extended hurricane season.

6.101. DRIVEWAYS

A. Work proposed within the Contract Documents is not anticipated to result in impacts to driveways. Should, however, incidental damages occur to the private or public driveways as a result of work and/or transport of materials within this Contract the following procedure shall be adhered to.

B. The Contractor shall provide notice to abutters at least 24 hours before sidewalk or driveway work will be performed. When installing cement concrete driveways, the Contractor shall provide at least 48 hours' notice that the driveway will be inaccessible while grading, forming, pouring and curing. The notices shall state the Contractor's name, a statement that the Contractor is working for the Providence of Public Works, a contact name and phone number for the contractor and the date and time that the driveway will be accessible. The Contractor shall remove all warning tape and stakes when the driveway is accessible.

C. The Contractor shall also coordinate with the City Parking Administrator when residents are displaced during a driveway pour. The Parking Administrator will coordinate with the Providence Police Department to allow for overnight street parking.

6.102. SECURITY

A. The Contractor shall provide security personnel for all work which will otherwise be unattended during cure time or while the site is unattended during non-working hours. All work damaged during this cure time or unattended time shall be removed and reconstructed at the Contractor's expense. Alternatively, the Contractor shall install temporary security fencing to prevent access to the site by unauthorized personnel during periods of construction.

B. The Contractor shall be responsible for the preservation of all public and private property, and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, such property shall be restored by the Contractor, at his expense, to a condition similar or equal to that existing before the damage was done, or he shall make good the damage in other manner acceptable to the Engineer.

C. The protection, removal, and replacement of existing physical features along the line of work shall be a part of the work under the Contract, and all costs in connection therewith shall be included in the unit and/or lump sum prices established under the items in the proposal.

D. The Contractor shall thoroughly protect all completed work and all stored materials.

6.103. DIG SAFE

A. The Contractor shall comply with the Rhode Island General Law, Chapter 39-1.2, "Excavation Near Underground Utility Facilities" which became effective on July 1, 1984.

B. Before commencing with the construction of any work, identify any water main, gas main, telephone duct, electric duct, and/or other utility present which is or could be in conflict with the proposed work.

C. Relocation of the affected utilities shall be done as directed by the Local Public Agency and in accordance with the requirements of the corresponding utility company.

D. The attention of the Contractor is directed to the fact that certain utility companies may not fall under the provisions of "DIG SAFE". Individual utility company notifications by the Contractor shall be necessary to ensure proper notification and protection of all existing utilities affected by this Contract. This includes but is not limited to Providence sewer and streetlight assets.

6.104. CONTRACTORS WORKING HOURS

A. Work shall be performed during normal business hours, Monday through Friday, 7:00 AM-5:00PM. Some jobs may require the Contractor to work outside normal business hours. In this event, the Contractor may request to work on Saturdays and Sunday or during the night, only with approval by the City. Such restrictions shall not be the basis for damages or claims against the City.

B. The Contractor's attention is also directed to the fact that it may be deemed necessary to perform various items of work during off-peak traffic hours, during early morning or late at night. The City will dictate these special conditions prior to awarding work to the Contractor.

C. The Contractor shall not be entitled to any additional compensation from the City for any expenses including premiums on labor that may be incurred by change of working hours and/or scheduling.

6.105. CITY FORESTER

A. Work proposed within the Contract Documents is not anticipated to require proposed greenery. Should, however, incidental damages occur to the City greenery as a result of work within this Contract the following procedure shall be adhered to.

B. The Contractor shall be required to have all proposed tree work, which includes as a minimum all trimming, root pruning, tree removal, tree planting or tree well work approved by the City Forester.

C. The Contractor shall coordinate the scheduling of the City Forester with the Owner. The Engineer shall be present during the City Forester evaluation and document the outcome.

6.106. PRE-CONSTRUCTION CONFERENCE

A. The Owner or Engineer shall schedule and administer the preconstruction conference. The Owner or Engineer shall:

1. Prepare the agenda for the meeting.
2. Notify all parties required to attend meeting.
3. Make physical arrangements for meeting.
4. Preside at meeting.
5. Record the minutes, including significant proceedings and decisions.
6. Reproduce and distribute copies of minutes within three (3) calendar days after the meeting to participants in the meeting and other parties affected by decisions made at the meeting.

B. Attendance:

1. Owner and/or Representative.
2. Resident project Representative.
3. Contractor's superintendent.
4. Major Subcontractors.
5. Major suppliers.
6. Others as appropriate.

C. Suggested Agenda:

1. Distribution and discussion of
    a. List of major Subcontractors and suppliers.
    b. Projected construction schedules.
2. Critical work sequencing.
3. Major equipment deliveries and priorities.
4. Project coordination.
    a. Designation of responsible personnel.
5. Procedures and processing of:
    a. Field decisions.
    b. Proposal requests.
    c. Submittals.
    d. Change orders.
    e. Applications for payment.
6. Adequacy of distribution of Contract Documents.
7. Procedures for maintaining record documents.
8. Use of premises:
    a. Office, work and storage areas.
    b. Owner's requirements.
9. Construction facilities, controls, and construction aids.
10. Traffic Maintenance Plan.
11. Temporary utilities.
12. Safety and first-aid procedures.

13. Security procedures.
14. Housekeeping procedures.
15. Place, date, and time for regular progress meetings

6.107. PROGRESS MEETINGS

A. The Owner or Engineer shall schedule and administer periodic progress meetings, and specially called meetings throughout the progress of the Work. The Owner or Engineer shall:

1. Prepare the agenda for the meeting.
2. Notify all parties required to attend meeting.
3. Make physical arrangements for meeting.
4. Preside at meeting.
5. Record the minutes, including significant proceedings and decisions.
6. Reproduce and distribute copies of minutes within three (3) calendar days after the meeting to participants in the meeting and other parties affected by decisions made at the meeting

B. Representatives of Contractors, Subcontractors and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.

C. Conduct, at most, scheduled weekly progress meetings (meeting schedule may be adjusted at the Owner’s discretion) at a place and time agreed upon at Pre-Construction Conference.

D. Conduct additional meetings as progress of the Work dictates.

E. Attendance:

1. Engineer and his/her professional consultants as needed.
2. Owner or Representative, when required.
3. Contractor's superintendent.
4. Subcontractors as appropriate to the agenda.
5. Suppliers as appropriate to the agenda.
6. Others.

F. Suggested Agenda:

1. Review approval of minutes of previous meeting.
2. Review of work progress since previous meeting.
3. Field observations, problems, and conflicts.
4. Problems which impede construction schedule.
5. Review of off-site fabrication and delivery schedules.
6. Corrective measures and procedures to regain projected schedule.
7. Revisions to construction schedule.
8. Progress schedule during succeeding work period.
9. Maintenance of quality standards.
10. Pending changes and substitutions.
11. Coordination of schedules.
12. Review submittal schedules; expedite as required.
13. Review proposed changes for:
    (a) Effect on construction schedule and on completion date.
    (b) Effect on subcontracts of the project.
14. Other business.

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APPENDIX

APPENDIX A: BID FORMS

A. Form of Bid
B. Purchasing Department Documents and MBE/WBE Participation Forms
C. Bid Bond
D. Certificate of Corporate Principal
E. Non-Collusion Affidavit of Prime Bidder
F. Non-Collusion Affidavit of Subcontractor
G. Certification of Non-Segregated Facilities
H. Bidder's Certification for Equal Employment Opportunity
I. Special Requirement for All Out-of-State Contractors and Firms
J. Certification with Regard to Performance of Previous Contracts and Subcontracts
K. Affidavit of Non-Discrimination
L. Certification of Non-Discrimination in Equal Employment Opportunity
M. Statement of Bidders Qualifications
N. Proposed Subcontractors
O. Schedule of Unit Prices
P. Schedule of Rates for all Labor and Equipment
Q. Municipal Contract Addendum, Rhode Island Department of Labor and Training, Prevailing Wage Requirements (R.I. Gen. Laws §§ 37-13-1 ET SEQ)

APPENDIX B: CONTRACT FORMS

A. Construction Agreement
B. Contract Bond for Complete Performance and Full Payment
C. Contractor’s MBE/WBE Subcontractor Utilization Form
D. Partial Release – Contractor
E. Final Release – Contractor
F. Partial Release – Subcontractor
G. Final Release – Subcontractor

APPENDIX C: TECHNICAL SPECIFICATIONS

APPENDIX D: CONSTRUCTION DRAWINGS

APPENDIX E: HISTORIC DRAWINGS OF VEHICULAR HURRICANE BARRIERS

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APPENDIX A:

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F. Non-Collusion Affidavit of Subcontractor

G. Certification of Non-Segregated Facilities

H. Bidder's Certification for Equal Employment Opportunity

I. Special Requirement for All Out-of-State Contractors and Firms

J. Certification with Regard to Performance of Previous Contracts and Subcontracts

K. Affidavit of Non-Discrimination

L. Certification of Non-Discrimination in Equal Employment Opportunity

M. Statement of Bidders Qualifications

N. Proposed Subcontractors

O. Schedule of Unit Prices

P. Schedule of Rates for all Labor and Equipment

Q. Municipal Contract Addendum, Rhode Island Department of Labor and Training, Prevailing Wage Requirements (R.I. Gen. Laws §§ 37-13-1 ET SEQ)

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C I T Y O F

FORM OF BID

P R O V I D E N C E , R H O D E I S L A N D

TO: PURCHASING OFFICE
3rd Floor City Hall
Providence, Rhode Island 02903

1. The undersigned, having familiarized (himself) (herself) (themselves) (itself) with existing conditions at the **CITY OF PROVIDENCE – 2024, PROVIDENCE HURRICANE BARRIER STREET GATE REPAIRS** project affecting the cost of work, and with the Contract Documents (which includes the Invitation for Bids, Instructions to Bidders, Form of Bid, Form of Bid Bond, Form of Agreement, Form of Non-Collusive Affidavit, Addenda (if any), Drawings/Figures, Technical Specifications, Form of Surety Bond(s); as prepared by the Department of Public Works, and on file in the office of the Department of Public Works, 700 Allens Avenue, Providence, RI 02905, hereby proposes to furnish all supervision, technical personnel, labor, materials, machinery, tools, equipment and services including utility and transportation services, and to perform and complete all required work for the **CITY OF PROVIDENCE – 2024 PROVIDENCE, HURRICANE BARRIER STREET GATE REPAIRS** project and such other required and incidental work, complete, all in accordance with the above listed documents and for the unit prices for work in-place for the following items and quantities.

The undersigned further agrees to pay OWNER, as liquidated damages, $3,000 per day for each calendar day beyond the Contract Time Limit (May 2, 2025) or extension thereof that the Work remains incomplete, in accordance with the terms of the Agreement.

***Total of Base Bid - For the sum of: $** _____

_____ **Dollars**

***The Total of Base Bid includes allowances on page 6 of 14 in the SCHEDULE OF UNIT VALUES.**

2. In submitting this Bid, the Bidder understands that the right is reserved by the Department of Public Works to reject any and all Bids. If written notice of acceptance of this Bid is mailed, telegraphed or delivered to the undersigned within (90) days after the opening thereof, or at any time thereafter before this Bid is withdrawn, the undersigned agrees to execute and deliver an Agreement in the prescribed form and furnish the required bond within ten (10) days after the Agreement is presented to him/her for signature.

3. Security in the sum of _____ Dollars ($_____), in the form of _____ is submitted herewith in accordance with the Instructions to Bidders.

4. Attached hereto is an affidavit in proof that the undersigned has not colluded with any person in respect to this Bid or any Bids for the Contract for which this Bid is submitted. Also attached is a Statement of Bidder's Qualifications.

5. The Bidder is prepared to submit a financial and experience statement upon request.

6. If applicable unit prices are contained in the Agreement, the Owner may order the Contractor to proceed with desired changes in the work, the value of such changes to be determined by the measured quantities involved and the applicable unit prices specified in the Contract; provided that in case of a unit price contract the net value of all changes does not increase or decrease the original total amount shown in the Agreement by more than **twenty- five percent (25%)** in accordance with the Section entitled Unit Prices, under Instructions to Bidders.

Bidder Signature and Acknowledgement of Addenda:

DATE: _____, 20_____

Official Address:

_____

_____

_____

Name of Bidder (Firm):

_____

By: _____ *(Signature)*

Title: _____

Bidder shall indicate, in space provided,
the earliest possible Project **Start-up Date:** _____, 20_____

ADDENDA: The undersigned acknowledges receipt of the following Addenda, if any, and has included the provisions thereof in this Bid:

Addendum No.	**Date**	**Addendum No.**	**Date**
_____	_____, 20____	_____	_____, 20____
_____	_____, 20____	_____	_____, 20____
_____	_____, 20____	_____	_____, 20____
_____	_____, 20____	_____	_____, 20____

C I T Y O F

MBE/WBE FORMS

P R O V I D E N C E , R H O D E I S L A N D

REFER TO BOARD OF CONTRACT AND SUPPLY RFP FOR REQUIRED MBE/WBE FORMS

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C I T Y O F

BID BOND

P R O V I D E N C E , R H O D E I S L A N D

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____as
(Name of Principal)
PRINCIPAL, and _____AS SURETY are held and firmly bound unto
(Name of Surety)

the **City of Providence** thereinafter called the "Local Public Agency", in the penal sum of

_____Dollars,

($ _____) lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that Whereas the principal has submitted the Accompanying Bid, Dated _____, 20_____, for

_____

_____

NOW, THEREFORE, if the Principal shall not withdraw said Bid within the period specified therein after the opening of the same, or, if no period be specified, within thirty (30) days after the said opening, and shall within the period specified therefor, or if no period be specified, within ten (10) days after the prescribed forms are presented to him for signature, enter into a written Contract with the Local Public Agency in accordance with the Bid as accepted and give bond with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such Contract; or in the event of the withdrawal of said Bid, within the period specified, or the failure to enter into such Contract and give such bond within the time specified, if the Principal shall pay the Local Public Agency the difference between the amount specified in said Bid and the amount for which the Local Public Agency may procure the required work or supplies or both, if the latter be in excess of the former, then the above obligation shall be void and of no effect, otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals this
_____day of _____, 20__, the name and corporate seal of each corporate party being hereto affixed and these presents signed by its undersigned representative, pursuant to authority of its governing body.

In presence of: _____(Seal)

(Individual Principal) _____ _____

(Business Address including Zip)

(Title) _____ _____(Seal)

(Partnership)

_____

_____

(Business Address including Zip)

By: _____

Attest:

_____ _____

(Corporate Principal)

_____

(Business Address including Zip)

By: _____

(Affix Corporate Seal)

_____ _____

Attest:

_____ _____

(Corporate Surety)

By: _____

(Affix Corporate Seal)

Countersigned:

by _____

*Attorney-in-Fact, State of _____

(*Power-of-attorney for person signing for surety company must be attached to bond.)

C I T Y O F

CERTIFICATE AS TO CORPORATE PRINCIPAL

P R O V I D E N C E , R H O D E I S L A N D

I, _____, certify that I am the _____, Secretary of the Corporation named as Principal in the within bond; that, who signed the said bond on behalf of the Principal was then

_____of said corporation; that I know his signature, and his signature thereto is genuine; and that said bond was duly signed, sealed, and attested to for and in behalf of said corporation by authority of this governing body.

_____(Corporate Seal)

_____
(Title)

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C I T Y O F

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

P R O V I D E N C E , R H O D E I S L A N D

State of _____

County of _____

_____, being first duly sworn, deposes and says that:

(1) He is _____ of _____

(owner, partner, officer, representative, or agent) _____, the Bidder that has submitted the attached Bid:

(2) He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid:

(3) Such Bid is genuine and is not a collusive or sham Bid;

(4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement, any advantage against the Department of Public Works or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) _____

_____
(Title)

Subscribed and sworn to before me this

_____day of _____, 20_____

_____

_____

(Title)

My Commission expires _____

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C I T Y O F

NON-COLLUSION AFFIDAVIT OF SUBCONTRACTOR

P R O V I D E N C E , R H O D E I S L A N D

State of _____

County of _____

_____, being first duly sworn, deposes and says that:

(1) He is _____ of _____

(owner, partner, officer, representative, or agent) _____

, the Subcontractor that has submitted the attached Bid:

(2) He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid:

(3) Such Bid is genuine and is not a collusive or sham Bid;

(4) Neither the said Subcontractor nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Subcontractor, Bidder, firm or person to submit a collusive sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has communication or conference with any other Subcontractor, Bidder, firm or person to fix the price or prices in the attached Bid or of any other Subcontractor, Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Subcontractor, Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement, any advantage against the Department of Public Works or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Subcontractor or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) _____

_____
(Title)

Subscribed and sworn to before me this

_____day of _____, 20_____

_____

_____

(Title)

My Commission expires _____

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C I T Y O F

CERTIFICATION OF NON-SEGREGATED FACILITIES

P R O V I D E N C E , R H O D E I S L A N D

The Bidder certifies that he/she does not maintain or provide for his/her employees any segregated facilities at any of his establishments, and that he/she does not permit his/her employees to perform their services at any location, under his/her control, where segregated facilities are maintained. The Bidder agrees that a breach of this certification will be a violation of the Equal Opportunity Clause in any contract resulting from acceptance of this Bid. As used in this certification, the term "segregated facilities" means any waiting rooms, work rooms, restrooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin, because of habit, local custom, or otherwise. The Bidder agrees that (except where he/she has obtained identical certification from proposed subcontractors for specific time periods) he/she will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding $10,000.00 which are not exempt from provisions of the Equal Opportunity Clause, and that he/she will retain such certifications in his/her files.

Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. & 1001.

Date _____, 20_____

Official Address:

_____

_____

_____

_____

Name of Bidder (Firm):

_____

By _____
(Name)

_____
(Signature)

Title _____

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C I T Y O F

BIDDER'S CERTIFICATION FOR EQUAL EMPLOYMENT OPPORTUNITY

P R O V I D E N C E , R H O D E I S L A N D

In compliance with Executive Order 11246 Equal Opportunity (GC II, Section 210, or latest publication) the Bidder hereby certifies he shall comply with Bid Conditions, Affirmative Action Requirements, Equal Employment Opportunity, as provided in the attachment Shown on pages GC II - 47a to GC II - 47f, or latest publication.

Full name and address of individual or company submitting this Bid:

_____

_____

_____

_____

Signed _____

Name _____

Title _____

Date _____

Notice: Bid should be signed in ink by a person having proper legal authority, and the person's title should be given, such as "Owner" in the case of an individual, "Partner" in the case of a general partnership, "President", Treasurer, or other authorized officer in the case of a corporation.

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C I T Y O F

SPECIAL REQUIREMENT FOR ALL OUT-OF-STATE CONTRACTORS AND FIRMS

P R O V I D E N C E , R H O D E I S L A N D

It is the understanding that any and all out-of-state firms and companies must be registered to do business in the State of Rhode Island with the Secretary of State's Office. Any false statements made in this regard will cause this Contract to become null and void at the option of the City, therefore, in accordance with this requirement the following statement is made:

I (we) being duly sworn officers of said company or firm, hereby declare and affirm that this company or firm is registered with the Rhode Island Secretary of State's Office to do business in Rhode Island.

_____
(Company or Firm)

Attest:

Signature _____ Name _____

Title _____

Note: If proposal is being made by an in-state contractor or firm, this form may be left blank.

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C I T Y O F

CERTIFICATION WITH REGARD TO PERFORMANCE OF PREVIOUS CONTRACTS AND SUBCONTRACTS

P R O V I D E N C E , R H O D E I S L A N D

The Bidder _____, proposed Subcontractor _____, hereby certifies that he/she __HAS __HAS NOT, participated in a previous contract or subcontract subject to the Equal Opportunity Clause, as required by Executive Orders 10924, 11114, or 11246 and that he/she _HAS _HAS NOT, filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements:

Company _____

Signature _____ By _____

Date _____ Title _____

NOTE: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7 (b)(1), and must be submitted by bidders and proposed subcontractors any in connection with the contracts and subcontracts which are subject to the Equal Opportunity Clause. Contracts and subcontracts which are exempt from the Equal Opportunity Clause are set forth in 41 CFR 60-15. Generally, only contracts or subcontracts of $10,000.00 or under are exempt.

Currently, Standard Form 100 (EEO-11) is the only report required by the Executive Orders or their implementing regulations. Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the

Executive Orders and have filed the required reports should note that 41 CFR 60-1.7(b)(1) prevents the award of contracts

and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

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C I T Y O F

AFFIDAVIT OF NON-DISCRIMINATION

P R O V I D E N C E , R H O D E I S L A N D

State of _____

County of _____

_____, being first duly sworn, deposes and says that:

He is the _____of_____

a corporation organized and existing under the Laws of _____and the

Contractor for the _____

that he makes this affidavit for and on behalf of said Corporation; that during the period

_____, 20____to _____, 20____, the said corporation has maintained the practices of employment as required by federal, state, and city laws in regards to the hiring of employees for the aforementioned project and that in employment, upgrading, the demotion or transfer, recruitment or recruitment advertising; layoffs or termination, rates of pay or other forms of compensation; and selection for training including apprenticeship, that it has not discriminated against any employee or applicant for employment on the work covered by this contract because of race, religion, color or national origin.

Signed _____

Name _____

Title _____

Subscribed and sworn to before me this

_____day of _____, 20_____ (Seal)

Signed _____

Title _____

My commission Expires _____

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C I T Y O F

CERTIFICATION OF NON-DISCRIMINATION IN EQUAL EMPLOYMENT OPPORTUNITY

P R O V I D E N C E , R H O D E I S L A N D

The bidder represents the he/she

☐ **has** ☐ **has not** participated in a previous contract or subcontract to either the equal opportunity clause contracted in Section 202 of the Executive Order 11246; that

he/she

☐ **has** ☐ **has not** filed with the Joint Reporting Committee, the Director of OFCC, any Federal agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements of those organizations; and that representations indicating submission of required compliance reports, signed by proposed subcontractors will be obtained prior to subcontract awards.

Full name and address of individual or company submitting this Bid:

_____

_____

_____

_____

Signed _____

Name _____

Title _____

Date _____

Notice: Bid should be signed in ink by a person having proper legal authority, and the person's title should be given, such as "Owner" in the case of an individual, "Partner" in the case of a general partnership, "President", Treasurer, or other authorized officer in the case of a corporation.

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C I T Y O F

STATEMENT OF BIDDER'S QUALIFICATIONS

P R O V I D E N C E , R H O D E I S L A N D

Separate statements shall be submitted by the bidder with his/her proposal for Him/herself, the Designer, the Construction Contractor, and for major design or construction subcontractors. All questions must be answered completely. The date given must be clear and comprehensive. This statement must be notarized. If necessary, questions may be answered on separate attached pages keyed into this form. The bidder may submit any additional information he/she desires.

1. Name of Bidder _____ (Proper Name First)

2. Contact Person / Title _____

3. Permanent Main Office Address _____

_____

4. Telephone _____

5. When Organized _____

6. If a Corporation, When Incorporated _____

7. How many years have you been engaged in the contracting business under your present firm or trade name?

_____

8. State your current contracts in-hand. (Schedule the contracts showing amount of each contract and the appropriate anticipated date of completion.)

_____

_____

_____

_____

_____

_____

9. Will your firm be the Bidder, Designer, Construction Contractor, or Design or Construction Contractor for this project?

_____

10. State the general character of work performed by your Company:

_____

_____

_____

_____

11. Have you ever failed to complete any work awarded to you? _____

If so, where and why: _____

_____

_____

12. Have you ever defaulted on a contract? _____

If so, where and why: _____

_____

_____

13. List the more important projects recently completed by your Company, stating the appropriate cost for each, and the month and year complete:

Projects	**Cost**	**Completion Date**

14. List the major equipment your Company has available for this project:

_____

_____

_____

15. List the names of projects, owners, architects, contract amounts, dates of completion, and percent of work accomplished with own forces which have been completed within the last five (5) years (or projects etc. which a partner or officer, while associated with another organization, was primarily responsible for:

Project Location	Owner	Engineer/ Architect	Contract Amount	Date Completed	Contact Name/Phone

16. List the background and experience of all principal members of your organization: Name

Background / Experience

17. State your firm's particular qualifications, services, etc. for completing the project on-time within the project's program:

18. Based on your knowledge of construction and the Owner's program for the project, indicate a project completion date:

_____

19. Credit Available: _____

20. Give bank reference: _____

21. Will you, upon request, complete a detailed financial statement and furnish any other information requested by the Owner?

_____

22. The Bidder hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the Owner in verification of the recitals comprising this:

STATEMENT OF BIDDER'S QUALIFICATIONS, dated _____

this _____day of _____, 20_____

Name of Bidder _____

By/Title _____

State of _____

County of _____

Subscribed and sworn before me

____day of _____, 20_____

Signed _____

Title _____

My Commission expires _____

C I T Y O F

PROPOSED SUBCONTRACTORS

P R O V I D E N C E , R H O D E I S L A N D

I, _____, the BIDDER, hereby propose to utilize the following named SUBCONTRACTORS for the project, Providence, RI, for the work items and/or estimated prices stated below and understand that the Owner reserves the right to reject any subcontractor if investigation determines they do not meet federal requirements or are otherwise unacceptable for the Project.

1. WORK ITEM/DESCRIPTION: _____

_____

Estimated Value of Work: _____

Subcontractor: _____

Address: _____

_____

City/State/Zip-Code: _____

Telephone No.: _____

2. WORK ITEM/DESCRIPTION: _____

_____

Estimated Value of Work: _____

Subcontractor: _____

Address: _____

_____

City/State/Zip-Code: _____

Telephone No.: _____

3. WORK ITEM/DESCRIPTION: _____

_____

Estimated Value of Work: _____

Subcontractor: _____

Address: _____

_____

City/State/Zip-Code: _____

Telephone No.: _____

4. WORK ITEM/DESCRIPTION: _____

_____

Estimated Value of Work: _____

Subcontractor: _____

Address: _____

_____

City/State/Zip-Code: _____

Telephone No.: _____

5. WORK ITEM/DESCRIPTION: _____

_____

Estimated Value of Work: _____

Subcontractor: _____

Address: _____

_____

City/State/Zip-Code: _____

Telephone No.: _____

6. WORK ITEM/DESCRIPTION: _____

_____

Estimated Value of Work: _____

Subcontractor: _____

Address: _____

_____

City/State/Zip-Code: _____

Telephone No.: _____

7. WORK ITEM/DESCRIPTION: _____

_____

Estimated Value of Work: _____

Subcontractor: _____

Address: _____

_____

City/State/Zip-Code: _____

Telephone No.: _____

(Add additional pages if necessary)

SCHEDULE OF UNIT PRICES

P R O V I D E N C E, R H O D E I S L A N D

Unit prices are to be Complete prices to be added on the basis of quantities of work involved, for each item in place in the unit indicated.

Item Code	Description	Quantity	Unit	Unit Bid Price	Amount (PxQ)
				$0.00	$0.00

BASE BID

1	General Bid Items	1	LS	$_____	$_____
2	Flood Contingency Materials and Storage	1	LS	$_____	$_____
3	Allens Ave Mobilization & Demobilization	1	LS	$_____	$_____
4	Allens Ave Recess Repairs	1	LS	$_____	$_____
5	Allens Ave Gate Structural Repairs	1	LS	$_____	$_____
6	Allens Ave “A” Frame Repairs	1	LS	$_____	$_____
7	Allens Ave Internal Component Repairs	1	LS	$_____	$_____
8	Allens Ave Hinge Repairs	1	LS	$_____	$_____
9	Allens Ave Concrete Repair	1	LS	$_____	$_____

Item Code	Description	Quantity	Unit	Unit Bid Price	Amount (PxQ)
				$0.00	$0.00
10	Allens Ave Rubber Fiber Seal Replacement	1	LS	$_____	$_____
11	Allens Ave Drain Cleanout	1	LS	$_____	$_____
12	Manchester Street Station Mobilization & Demobilization	1	LS	$_____	$_____
13	Manchester Street Station Steel Plate Sandblasting and Coating	1	LS	$_____	$_____
14	Manchester Street Station Hinge Repairs	1	LS	$_____	$_____
15	Manchester Street Station Concrete Repair	1	LS	$_____	$_____
16	Manchester Street Station Rubber Fiber Seal Replacement	1	LS	$_____	$_____
17	Manchester Street Station Control Repairs	1	LS	$_____	$_____

A. SUBTOTAL BID PRICE $_____

FLOOD DEPLYOMENT CONTINGENCY ITEMS (AS NEEDED)

B1	Deployment of Flood Contingency Control at Allens Avenue	2	EA	$_____	$_____
B2	Deployment of Flood Contingency Control at Manchester Street Station	2	EA	$_____	$_____

B. SUBTOTAL FLOOD DEPLOYMENT	**$**
C. SUBTOTAL MISC. METAL WORK, FABRICATION, & CONCRETE REPAIRS ALLOWANCE	**$60,000.00**
D. SUBTOTAL UNIFORMED TRAFFIC CONTROL	**$20,000.00**
E. TOTAL BASE BID (A+B+C+D)	**$**

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C I T Y O F

SCHEDULE OF RATES FOR LABOR AND EQUIPMENT

P R O V I D E N C E , R H O D E I S L A N D

Part 1

LABOR RATES

1. Labor Rates per hour - includes insurance, fringes, and overhead

(Submission of Certified Payrolls required)

a. _____ Classification

$ _____ Standard Rate per hour

$ _____ Overtime Rate per hour

b. _____ Classification

$ _____ Standard Rate per hour

$ _____ Overtime Rate per hour

c. _____ Classification

$ _____ Standard Rate per hour

$ _____ Overtime Rate per hour

d. _____ Classification

$ _____ Standard Rate per hour

$ _____ Overtime Rate per hour

e. _____ Classification

$ _____ Standard Rate per hour

$ _____ Overtime Rate per hour

f. _____ Classification

$ _____ Standard Rate per hour

$ _____ Overtime Rate per hour

g. _____ Classification

$ _____ Standard Rate per hour

$ _____ Overtime Rate per hour

Use additional sheets if necessary

Part 2

EQUIPMENT RATES

2. Equipment Rates

	Type	Make	Year	Rate per hour
a.				$
b.				$
c.				$
d.				$
e.				$
f.				$
g.				$
h.				$
I.				$
j.				$
k.				$

Use additional sheets if necessary

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C I T Y O F

MUNICIPAL CONTRACT ADDENDUM, RHODE ISLAND DEPARTMENT OF LABOR AND TRAINING, PREVAILING WAGE REQUIREMENTS (RIGL 37-13-1 ET SEQ)

P R O V I D E N C E , R H O D E I S L A N D

MUNICIPAL CONTRACT ADDENDUM

RHODE ISLAND DEPARTMENT OF LABOR AND TRAINING

PREVAILING WAGE REQUIREMENTS
(RIGL 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;

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 https://dlt.ri.gov/reguiredposters 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 https://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 https://dlt.ri.gov/wrs/prevailingwage/ 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 Water Daily Log listing the contractor's employees employed each day on the public works site; the RI Certified Prevailing Wage 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 Wage Daily Log together with the Rhode Island Weekly Certified Payroll to the awarding authority.

10. Any violation of RIGL §37-13-13 of Certified Weekly Payroll Forms and Daily Logs will result in the department imposing a penalty on the contractor of a minimum of one hundred dollars ($100) for each calendar day of noncompliance.

11. 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 an OSHA ten (10) hour construction safety certification in compliance with by RIGL §37-23-1;

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 https://dlt.ri.gov/wrs/prevailingwage/.

CERTIFICATION

MUNICIPAL CONTRACT ADDENDUM, RHODE ISLAND DEPARTMENT OF LABOR AND TRAINING, PREVAILING WAGE REQUIREMENTS (RIGL 37-13-1 ET SEQ)

I hereby certify that I have reviewed this CONTRACT ADDENDUM and understand my obligations as stated above.

By:

_____
(Name and Title)

STATE OF _____

COUNTY OF _____

Subscribed and sworn to before me on this _____day of _____, 20__.

_____
NOTARY PUBLIC
My Commission Expires: _____

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APPENDIX B:

CONTRACT FORMS

A. Construction Agreement

B. Contract Bond for Complete Performance and Full Payment

C. Contractor's MBE/WBE Subcontractor Utilization Form

D. Partial Release – Contractor

E. Final Release – Contractor

F. Partial Release – Subcontractor

G. Final Release – Subcontractor

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C I T Y O F

CONSTRUCTION AGREEMENT
CITY OF PROVIDENCE – 2024,
HURRICANE BARRIER STREET GATE REPAIRS

P R O V I D E N C E , R H O D E I S L A N D

CONSTRUCTION AGREEMENT BETWEEN THE CITY OF PROVIDENCE AND INSERT CONTRACTOR NAME HERE

FOR

CITY OF PROVIDENCE – 2024, HURRICANE BARRIER STREET GATE REPAIRS

This Construction Agreement ("Agreement") is made this _____ day of _____, 20___ by and between the City of Providence Department of Public Works (DPW) and the Providence Public Building Authority (PPBA) (jointly, the "Owner") and insert contractor name and mailing address

("Contractor") (jointly, "Parties").

Project: This contract is for CITY OF PROVIDENCE – 2024, HURRICANE BARRIER STREET GATE REPAIRS. The work to be performed under this Contract includes all labor, materials, equipment, and incidentals necessary to complete the repair and refurbishment of two vehicular hurricane barrier gates and associated abutments at the Allens Avenue and Manchester Street Station locations on the Fox Point Hurricane Barrier levee. This work includes all other incidentals necessary to execute the work complete in place and accepted within the limits of this contract, in accordance with the Contract Documents and to the satisfaction of the engineer and Owner.

Project Address: The Project Area shall be considered the area identified on the Contact Documents in the vicinity of the Allens Avenue and Manchester Street Station Hurricane Barrier Vehicular Gates (40 Point Street, Providence RI) on the Fox Point Hurricane Barrier levee.

Contractor agrees to complete the work identified in this Agreement and in the Contract Documents, ("Project"). With regard to the Project, Owner and Contractor agree:

1. CONTRACT DOCUMENTS

1.1. This Agreement, the scope of work, invitation for bids, and any other documents referenced in or attached to this agreement are collectively referred to as the "contract documents," and include:

1.2. Contract Documents prepared by the Department of Public Works and issued by Owner as part of the Request for Proposals, CITY OF PROVIDENCE – 2024, HURRICANE BARRIER STREET GATE REPAIRS awarded in month, year;

1.2.1. Bid submitted by Contractor dated day, month, year;

1.2.2. Addenda as issued.

1.2.3. Each of the Contract Documents forms part of and is fully incorporated in this Agreement.

1.3. To the extent any of the Contract Documents that form part of and are incorporated in this Agreement differ or contradict the terms of this Agreement, the terms of this Agreement shall control.

2. SCOPE OF WORK AND AGREEMENT PRICE

2.1. Contractor, having examined the Contract Documents and Project Site, agrees to be bound by the Contract Documents.

2.2. Contractor agrees to furnish all required Project Management, labor, materials, equipment, competent supervision, tools, safety measures, transportation costs, proof of insurance, performance bond and payment bond (as directed by Owner) and any and all other appurtenant items necessary for complete performance of the Contract Work in a good and workmanlike manner.

2.3. The Contract Work shall conform to all applicable laws, regulations and/or ordinances of any and all governmental agencies including Quasi and having jurisdiction over the Contract Work. All required standards required by the Utility Providers shall be strictly complied with unless otherwise confirmed in writing by the Owner.

2.4. Contractor agrees to perform the repair and refurbishment of two vehicular hurricane barrier gates and associated abutments at the Allens Avenue and Manchester Street Station locations on the Fox Point Hurricane Barrier levee, as set forth in the Scope of Work and in strict accordance with the Contract Documents.

2.5. Contractor agrees to perform the Contract Work strictly in accordance with the Contract Documents, task order and subject to the final approval of Owner for the Agreement Price. Owner and Contractor may amend the Agreement Price only by a written Change Order executed by both Parties. Contractor shall not charge overtime or travel time to Owner unless Owner first approves such charges in writing.

2.6. Contractor is responsible for the cleanup and removal of all debris associated with the Contract Work to assure the safety and protection of all persons and property associated with the Project.

2.7. If the progress schedule cannot be met due to business interruption and circumstances beyond the control of Contractor, the Owner and Contractor shall discuss and document the cause of such delay and present to the Owner to review and discuss reasonable means to complete the work to avoid further delay. No overtime work will be conducted without an agreed upon Change Order.

2.8. From Time to Time the Contractor may be given advanced notice of special events taking place within the Project Limit Lines that will require special attention to work around and/or otherwise provide detailed cleanup, minimize road openings and sidewalk closures as well other applicable tasks that may be required. These events will be required to be captured in the Project Schedule and worked around as necessary to accommodate the events and assure that efforts are made to accommodate the events. Potential events in and around the project area shall be provided to the contractor upon award.

2.9. Contractor is employed as an independent contractor to perform the Contract Work and is responsible to provide all tools, equipment and incidentals required to complete the Work.

2.10. Contractor has examined the Project Site and has acquainted themselves with local conditions, including ready availability of a project management Team, labor, sub-contractors, equipment, and materials.

2.11. Based on the Contractor’s examination of the Project Site, the Contractor accepts all open and obvious conditions at the Project Site visible upon reasonable inspection as of the date of this Agreement. No allowances will be made after the date of this Agreement for any oversight, error

or omission by Contractor in assessing the Project Site with respect to the Scope of Work to be performed and the Agreement Price for conditions falling within these parameters.

3. PERFORMANCE AND WARRANTY

3.1. Time is of the essence.

3.2. Contractor shall cooperate with Owner in scheduling and performing the Contract Work to avoid conflict, delay in or interference with any separate work of the Owner or other engineers or contractors. Performance requirements may be included in task order, to be agreed to by the Owner and Contractor.

3.3. At Owner's request, Contractor shall promptly provide Owner with proof of the ordering of all materials, equipment and supplies required for complete performance of the Contract Work.

3.4. Upon execution of this Agreement, Contractor shall promptly provide the Owner with a schedule of work to be performed, which shall be considered a living schedule and updated a minimum of every two weeks. Failure to submit an update may result in rescinding work and/or withholding of payment. The schedule must be agreed upon between the Owner and Contractor before execution of the work.

3.5. Contractor shall use only new material for the Contract Work. Contractor shall remove and replace promptly, at Contractor's own expense, all defective or nonconforming work or materials. Contractor shall promptly report to Owner, in writing, any errors, inconsistencies or omissions relating to the Contract Work and any errors, inconsistencies or omissions in the Drawings and Specifications. Contractor may use salvaged materials with the approval of the Owner.

3.6. Contractor shall complete each aspect of the Contract Work in strict accordance with the standards set forth in this Agreement and the other Contract Documents. Notice to proceed will be issued upon the Contractor's furnishing of insurance, bond, and execution of this Agreement. Contractor shall begin the work no later than ten calendar days after full execution of this contract, and must complete work by **Friday, May 2, 2025, with both gates reinstalled and fully operational by April 1, 2025,** unless otherwise stipulated in the task order. The Completion Date may be changed only by a written Change Order signed by the Contractor and Owner. Contractor's failure to perform and timely complete each aspect of the Contract Work, excluding delays caused by Owner or third party persons who are not under Contractor's control, in strict accordance with the Contract Documents, or delay of any work by other engineers, contractors or Owner caused by Contractor, constitutes a material breach of this Agreement, and Contractor shall be responsible for all additional costs incurred by Owner or other engineers or contractors, including overhead, profit, attorneys' fees and litigation expenses resulting from any such breach.

3.7. If Contractor, by its own fault or omission, fails to diligently pursue completion of the Contract Work, overtime work may be required by Contractor without additional compensation from Owner.

3.8. Contractor agrees to keep Owner informed both verbally and in writing as to the progress of the Contract Work and shall perform the Contract Work faithfully and in such order as necessary to keep the overall Project on schedule and to avoid any delay in completion of the Project. Failure to update project schedule may result in rescinding work and/or withholding of payment.

3.9. Contractor shall provide safe and proper facilities for inspection at all times during performance of the Contract Work including preparing and maintaining a **Safety Plan to be submitted prior to the start of Work.**

3.10. Contractor warrants that the Contract Work shall (i) be free of defects in material and workmanship for a period of Two (2) years except where prescribed to be for a longer period; (ii) comply with the Drawings and the Specifications or as otherwise agreed to by the Parties; (iii) be performed in safe

and workmanlike manner by trained, qualified, and efficient workers, in strict conformity with construction best practices; and (iv) be constructed of new materials of the most suitable grade for the application and furnish satisfactory evidence to Owner of the type and quality of materials so furnished and used. In the event that the Contract Work fails to meet any of the aforementioned warranties, Contractor shall have the right to cure any nonconforming or defective Work and may replace the defective Contract Work, or reimburse Owner for the Contract Work at the invoice or market price, within thirty (30) days after discovery of the breach of warranty. Contractor shall also, at its cost, remove all material, equipment, and Contract Work which does not comply with the Drawings or meet the Specifications, or is otherwise defective, whether incorporated in the Project or not, and shall re-execute the Contract Work and correct any other work damaged thereby. If Contractor does not remove nonconforming or defective Contract Work promptly, Owner may do so and restore such nonconforming Contract Work at Contractor's expense.

3.11. Contractor shall reimburse Owner for all reasonable costs and expenditures made in the settlement of any claim against Owner relating to nonconforming or defective Contract Work.

3.12. Neither acceptance of the Contract Work nor payment of some or all of the Agreement Price shall relieve Contractor of responsibility for faulty materials, equipment or workmanship. Contractor shall remedy, as soon as possible, defects appearing within two (2) years from the date of final payment, or within such longer period of time as provided by any manufacturer's warranty, and correct resulting damage to other work at no cost to Owner.

4. ASSIGNMENT

4.1. Contractor shall not assign or sublet the whole or any part of this Agreement or any funds accrued or to accrue under this Agreement without the prior written consent of Owner; any assignment or sublet without prior written consent of Owner shall be voidable at the election of Owner. Owner retains the right to refuse any and all assignments or subletting in Owner's sole and absolute discretion. Any attempt to assign this Agreement in whole or in part without Owner's prior written consent constitutes a material breach of this Agreement.

5. CHANGES AND DELAYS

5.1. Contractor shall not deviate from the Contract Documents except on written order of Owner, received by Contractor before beginning any deviation.

5.2. Owner may make written changes in the Contract Documents which may add to or deduct from the Contract Work without invalidating this Agreement. All work outside the scope of the Contract Work which Contractor is directed to perform by Owner or Owner's authorized representative without an agreement as to the price for the work shall be preserved and resolved through the dispute resolution clause in Section 14 of this Agreement.

5.3. Unless a written Construction Change Directive has been issued to Contractor by Owner directing that certain work be performed prior to agreement on extra compensation and/or time or in the event of a dispute as to whether the work is within the original Scope of Work, no extra compensation for extra work, materials or any time extension shall be allowed unless a written Change Order has been signed by Owner, nor shall Contractor proceed with extra work without a written Change Order signed by Owner. Compensation for any work added by a Change Order shall be in accordance with unit prices, applicable add/alternate prices, a lump sum price, or with the prior approval of Owner, shall be performed on a time and material basis with a detailed account of labor and material costs associated with the work.

5.4. Recovery by Contractor for delays caused by Owner shall be limited to time extensions only as set forth in an executed Change Order. Contractor shall not be entitled to damages or compensation for any losses on account of delay from any cause whatsoever, including, but not limited to, any act, neglect, omission, default or failure of performance by Owner or separate contractors, failure to obtain required materials, delay in obtaining permits, or other conditions. Notwithstanding the

above, the Owner at its sole option may consider an “equitable adjustment” for any claim by the Contractor for any delay caused by the Owner pursuant to this paragraph. It is understood that the Contractor has no claim for delay pursuant to this paragraph unless specifically agreed upon by the Owner at the Owner’s sole discretion and any claim for delay shall be presented to the Owner in detail format itemizing the dollar amount of delay with necessary backup for the Owner’s consideration.

6. PROTECTION OF THE WORK AND EMPLOYEES; SUPERVISION AT THE PROJECT SITE

6.1. Until the Contract Work is complete, Contractor shall effectively secure and protect the Contract Work and shall repair and/or replace all loss or damage to the Contract Work caused by the Contractor or anyone for whom Contractor is responsible.

6.2. Following completion of the Contract Work, Contractor shall be bound by the warranty obligations of Contractor and its subcontractors and suppliers.

6.3. Contractor shall at all times supply a sufficient number of skilled workers to perform the Contract Work in a timely and efficient manner. In addition, Contractor shall assign a competent person who shall supervise the performance of the Contract Work, be present at the Project Site at all times when Contract Work is being performed, and act as Contractor's representative at the Project Site for the purposes of coordinating Contractor’s activities with those of the Owner and others at the Project Site.

7. BREACH AND REMEDIES

7.1. Contractor shall be deemed to be in material breach of this Agreement if Contractor: (i) fails to perform the Contract Work in strict accordance with the Contract Documents or task order; (ii) fails to provide competent supervision or a sufficient number of properly skilled workers; (iii) fails to supply sufficient material or equipment of proper quality; (iv) fails to correct nonconforming or defective work promptly; (v) fails to perform any terms of this Agreement; (vi) is unable to meet its debts or fails to pay promptly for labor, material or other obligations; (vii) becomes financially insecure; (viii) disregards any law, including, without limitation, Environmental Laws, rules, regulations or ordinances applicable to the Contract Work; (ix) by negligent act or omission causes delay or interference with Owner or separate contractors; (x) assigns this Agreement for any reason without the prior written consent of Owner; or (xi) performs or fails to perform any act the commission or omission of which is defined elsewhere in the Contract Documents as a material breach of this Agreement or which would constitute a material breach at common law.

7.2. In the event of Contractor's breach, Owner shall have the following remedies in addition to any other remedies available at law or in equity:

7.2.1. Upon five (5) days’ written notice to Contractor, Owner may declare Contractor in breach of this Agreement subject to the Contractor’s right to cure, and after such time, the Owner may (i) terminate the Agreement; (ii) after termination, employ one or more other contractors to complete the Contract Work; (iii) complete the Contract Work with its own forces; or (iv) employ some combination of the foregoing to complete the Contract Work. Upon Contractor’s breach, Contractor shall assign all material, equipment, tools, services, and supplies, and all of Contractor's agreements and supply contracts to Owner for the purpose of assisting Owner’s completion of the Contract Work by any of the foregoing means. Equipment and tools left on the Project Site subject to a security or rental agreement shall be returned to Contractor. Equipment or tools owned outright by Contractor left on the Project Site may be assigned to Owner upon the termination of this Agreement resulting from Contractor’s breach of the Contract Documents for use to complete the Project.

7.2.2. Contractor shall remain liable to Owner for all costs incurred by Contractor in completing the Contract Work caused by Contractor’s breach of the terms of this Agreement. Contractor shall remain liable to Owner for all costs incurred by Contractor in completing the contract work caused by Contractor’s breach of the terms of this Agreement. The Liquidated Damages shall be three thousand dollars ($3,000.00) per day past the Completion Date.

7.3. If Contractor breaches this Agreement, Contractor shall not be entitled to any further payments for Contract Work not completed until the Contract Work has been completed and accepted by Owner and all above-described expenses have been paid by Contractor to Owner. Contractor shall be liable to Owner for all costs of completion of the Contract Work that exceed the balance due under this Agreement, and Contractor shall promptly pay all valid amounts owed to Owner upon demand.

7.4. The Owner will be in breach of this Agreement and in default if any of the following events occur:

7.4.1. Owner fails or refuses to pay on time (generally within 60 days of acceptance of Payment Application) any monies due under the Contract Documents;

7.4.2. Owner fails or refuses to perform any obligation required under the Contract Documents;

7.4.3. Owner makes any assignment for the benefit of creditors or files any petition under any bankruptcy or debtor-relief law.

8. INDEMNITY

8.1. To the fullest extent permitted by law, Contractor shall indemnify, defend and hold harmless Owner, its respective employees, agents, officers, directors and representatives (collectively, the "Indemnified Parties") from, for, of, and against any and all claims, damages, losses, liabilities, demands, costs and expenses, including but not limited to attorneys' fees and litigation expenses arising out of or resulting from, in whole or in part, the performance of the Contract Work, or which are caused, in whole or in part, by any negligent act or omission of the Contractor, or by any of Contractor's subcontractors or suppliers, or anyone directly or indirectly employed by them. Excluded from this indemnity section is any claim attributable to the conduct and actions of the Owner or arising out of any non-delegable duty owed by the Owner.

8.2. To the fullest extent permitted by law, Owner shall indemnify and hold harmless Contractor and its agents, officers, directors and employees from, for, of, and against any and all claims, damages, losses, liabilities, demands, costs and expenses, including but not limited to attorneys' fees and litigation expenses attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property which are caused, in whole, by any negligent act or omission of Owner, or any of Owner's separate contractors, or anyone directly or indirectly employed by them.

8.3. Such obligations shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this section.

9. INSURANCE

9.1. Contractor shall purchase and maintain the following insurance for limits in amounts no less than set forth below:

9.1.1. GENERAL LIABILITY INSURANCE – PROPERTY DAMAGE AND BODILY INJURY: One Million Dollars ($1,000,000) per Occurrence; Two Million Dollars ($2,000,000) Aggregate Limit.

9.1.2. OWNED, HIRED AND NON-OWNED AUTOMOBILE LIABILITY INSURANCE: for Bodily Injury, Wrongful Death and Property Damage; One Million Dollars ($1,000,000) per Occurrence; Two Million Dollars ($2,000,000) Aggregate.

9.1.3. WORKERS COMPENSATION AND OCCUPATIONAL DISEASE: including Employer's Liability-Statutory Limit, such Employer's Liability limits for bodily injury by accident or disease to not be less than Five Hundred Thousand Dollars ($500,000) each accident, Five Hundred Thousand Dollars ($500,000) each employee and Five Hundred Thousand Dollars ($500,000) policy limit.

9.1.4. UMBRELLA LIABILITY INSURANCE: Five Million Dollars ($5,000,000) per Occurrence; Five

Million Dollars ($5,000,000) Aggregate.

9.1.5. POLLUTION LIABILITY INSURANCE: Two Million Dollars ($2,000,000) policy limit.

9.2. All required insurance coverages listed above shall be written on an occurrence-basis, and shall be maintained continuously, without interruption, from the date of commencement of this Agreement until the completion of the Contract Work or the date of final payment for the Contract Work, whichever occurs later.

9.3. Certificates of insurance acceptable to Owner shall be submitted to Owner before commencement of the Contract Work. The certificates of insurance and the insurance policies required above shall include a provision stating that the insurance coverage under each policy shall not be cancelled or otherwise allowed to expire until at least thirty (30) days' advance notice has been given directly to Owner by the insurance company or companies.

9.4. The insurance policies required for general liability coverages, owned, hired and non-owned automobile liability coverage shall include Owner (City of Providence and the Providence Public Building Authority) as an additional insured and shall provide that these insurance coverages are primary and non-contributory in the event any additional insured is insured for the same coverages under another insurance policy or policies. Contractor shall provide copies of the endorsements from the carrier showing that these entities have been added as additional insured.

9.5. Nothing in the provisions of this Section shall modify, alter or otherwise affect the indemnity obligations of Contractor under Section 8 of this Agreement.

10. SAFETY

10.1. At its own expense and at all times, Contractor shall take all necessary precautions to protect persons and property at or adjacent to the Project Site from damage, loss, or injury resulting from performance of the Contract Work by the Contractor, its employees, subcontractors and others for whom Contractor is responsible.

10.2. If any accident occurs, person is injured, or property is damaged at or near the Project Site resulting from the performance of the Contract Work by Contractor, its employees, subcontractors or others for whom Contractor is responsible, Contractor shall immediately notify Owner both verbally and in writing.

10.3. Contractor shall maintain a safety program that complies with all applicable laws and shall comply with all specific safety requirements promulgated by any applicable governmental authority and the City of Providence, including without limitation, the requirements of the Occupational Safety and Health Act ("OSHA"). Copies of the program shall be furnished to the Owner upon request.

10.4. The Contractor shall submit a Life and Safety Plan prior to the execution of the Work including the Contractors COVID-19 Plan.

11. COMPLIANCE WITH LAWS

11.1. Contractor shall comply with all applicable federal, state, and local laws, codes, regulations and ordinances, including, but not limited to, the Fair Labor Standards Act, OSHA, workers compensation, social security, employment and wage and hour laws.

11.2. Contractor shall not discriminate in the employment or advancement of any employee or applicant because of race, national origin, sex, color, age, religion, creed, physical handicap, Veteran's status or any protected class.

11.3. Contractor shall maintain all records and accounts for the employment of labor and the furnishing of materials and supplies in accordance with proper accounting and record keeping procedures

and with all federal, state, and local laws, codes, regulations and ordinances. Copies of such records shall be provided to Owner upon request.

12. PAYMENTS

12.1. Compensation:

12.1.1. When base bid quantities are exceeded, they shall be added to the Schedule of Values as a new line item carrying the same unit prices. The CONTRACTOR and the Owner all shall monitor overages versus those items coming in lower than estimated to assure that the budget health is not compromised.

12.1.2. The amount of the Contract (accepted bid prices) listed in the Bid is based on the estimated quantities as set forth in the Bid. Actual work may result in greater or lesser quantities estimated. It is understood and agreed that the CONTRACTOR will accept as payment the actual measured quantities at the unit set forth in the accepted bid.

12.1.3. The estimated quantities given in the Bid (proposal) for the various items of work are given for the purpose of comparing proposals offered for the work under this contract and if it is found in the performance of the contract work that any or all of the said estimated quantities are not even approximately correct, the CONTRACTOR shall have no claim for anticipated profits, or for loss of profits or for increase in prices as listed in the accepted Bid because of the difference between the quantities of the various items of work actually done and the estimated quantities stated in the accepted Bid (proposal).

12.1.4. It is understood that, except as otherwise specifically stated in the contract documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of every nature, and all other services and facilities of every nature whatsoever necessary to protect, execute, complete and deliver the work within the specified time.

12.1.5. Any work necessary to be performed after regular working hours, on Saturdays, Sundays and legal holidays, shall be performed by the Contractor without additional expense to the Owner.

12.1.6. Night work or work on Saturdays, Sundays and legal holidays shall be done only with the approval of the Providence Traffic Engineering Department, RIDOT for state-maintained roads, or as specified in the Contract Documents.

12.1.7. Payments for unit items shall be in accordance with the specifications.

12.1.8. Retainage in the amount of 5% will be withheld by the Owner until final completion and acceptance of the project. If the Contractor is from out of state, the 5% retainage shall be increased to 8% to account for the extra 3% withheld for sales tax under RIGL 44-1-6.

12.2. Progress Payments:

12.2.1. The CONTRACTOR shall prepare his requisition for monthly progress payment, at a date to be specified by the Owner, and submit it digitally in a PDF and unlocked Excel document formats, to the Owner for his approval. The payment amount shall be determined by adding the total value of work completed to date and deducting (1) five percent (5%) of the total amount, to be retained until final payment and (2) the amount of all previous payments. If the Contractor is from out of state, the five percent retainage shall be increased to eight percent (8%) (refer to RIGL 44-1-6). The total value of work completed to date shall be based on the actual quantities of work completed and on the unit prices contained in the Bid Form. For lump sum items the value of the work completed to date will be based on a percentage of the total lump sum price, reflecting the proportion of work completed for that item during the payment period, as assessed by the Owner or their representative. Copies of all invoices shall be available for inspection by the Owner or their representative.

12.2.2. THE OWNER, PRIOR TO MAKING EACH PAYMENT TO THE CONTRACTOR, shall require the CONTRACTOR to furnish releases or receipts from any or all persons / firms performing work and supplying material or services to the CONTRACTOR, or any Subcontractor, if this is deemed necessary to protect its interest. Additionally, the CONTRACTOR may be required to submit certified payrolls for any and all employees, including Subcontractors.

12.2.3. Payment Processing Requirements to process payment:

(a) Certified payrolls

(b) MBE/WBE utilization form

(c) Liens Releases

(d) Summary of Items for Period and Completed to Date (with Progress Report)

12.3. Final Payment:

12.3.1. After the CONTRACTOR has demonstrated the operation and complete closure (including fastening) of the street gates post repairs and the DPW's receipt of all project related inspection and testing reports, videos, pictures, other multimedia, and acceptance by the Owner of all work under the Contract, the CONTRACTOR shall prepare his requisition for final payment which shall be based upon the carefully measured or computed quantity of each item of work at the applicable unit prices stipulated in the Bid Form. The total amount of the final payment due the CONTRACTOR under this contract shall be the amount computed as described above less all previous payments. Release of retainage and final payment to the CONTRACTOR shall be made subject to his completion of all outstanding work on the Punchlist, and a release in satisfactory form of all claims against the Owner arising under and by virtue of his contract.

12.3.2. The Contractor shall retain consent of surety. This shall be submitted at the time of the final Payment requisition.

12.3.3. The Owner, before paying the final invoice, may require the CONTRACTOR to furnish releases or receipts from all Subcontractors having performed any work and all persons having supplied materials, equipment and services to the CONTRACTOR, if the Owner deems the same necessary in order to protect its interest. The Owner, however, may if it deems such action advisable, make payment in part or in full to the CONTRACTOR without requiring the furnishing of such releases or receipts and any payments so made shall in nowise impair the obligations of any surety or sureties furnished under this Contract.

12.3.4. Withholding of any amount from the Owner under Section 7.2.2, shall be deducted from the final payment due the Contractor.

12.3.5. Final payment by the Owner shall in no way relieve the Contractor for liability for its obligations to repair or replace faulty or defective Contract Work discovered after final payment. All such defenses Contractor may have to such claims are preserved.

12.4. Withholding Payments:

12.4.1. The Owner may withhold from any payment otherwise due the CONTRACTOR so much as may be necessary to protect the Owner and if it so elects may also withhold any amounts due from the CONTRACTOR to any Subcontractors or material dealers, for work performed or material furnished by them. The foregoing provisions shall be construed solely for the benefit of the Owner and will not require the Owner to determine or adjust any claims or disputes between the CONTRACTOR and his Subcontractors or material dealers, or to withhold any monies for their protection unless the Owner elects to do so. The failure or refusal of the Owner to withhold any monies from the CONTRACTOR shall in nowise impair the obligations of any surety or sureties under any bond or

bonds furnished under this Contract.

Specifically, the Owner may withhold payment for any of the following reasons:

(a) Failure to comply with Certified Payroll and Wage Rate requirements.

(b) Failure to comply with MBE/WBE Program requirements.

(c) Failure to provide Liens Releases as required.

(d) Failure to provide adequate supporting information for invoices.

(e) Incomplete or Deficient Work.

(f) Unresolved Punch List Items.

12.4.2. Payments Subject to Submission of Materials Certificates and Materials Testing:

(a) Each payment to the Contractor by the Owner shall be made subject to submission by the Contractor of all written certifications required of him and his Subcontractors. Materials and associated bid items found to be deficient by the Owner's third-party testing agency will not be paid until defective materials have been replaced.

12.4.3. Payments Subject to Reporting Requirements:

(a) Each payment to the Contractor by the Owner shall be made after satisfactory reporting is submitted for First Source, Apprenticeship Utilization, MBE/WBE utilization and any other reporting as stated at the pre-construction meeting. Payment to the Contractor by the Owner is also contingent upon receipt of updated and accurate project construction schedules.

12.4.4. Payments Subject to Certified Payroll Requirements:

(a) Complete and executed certified payroll statements are required to be submitted with all invoice requests. Failure to do so will result in non-payment until certified payrolls are received.

12.4.5. Payments Subject to Progress Schedule

(a) Each payment to the Contractor by the Owner shall be made subject to submission of a current, accurate and reasonable progress schedule. Failure to do so will result in non-payment until a progress schedule is received and accepted.

13. RIGHTS AND REMEDIES

13.1. Duties and obligations imposed by this Agreement and rights and remedies available hereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available at law or in equity.

14. DISPUTES

14.1. Disputes to be resolved in accordance with the Rhode Island General Law Tittle 37, Chapter 37-16-1 et seq.

14.2. 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.

15. GOVERNING LAW

15.1. This Agreement shall be governed by and construed under the laws of the State of Rhode Island, without regard to its conflicts of law principles.

16. ALL CHANGES TO AGREEMENT SHALL BE IN WRITING

16.1. This Agreement shall not be changed except by written agreement of Owner and Contractor.

17. LEGAL EFFECT

17.1. In the event any provision contained herein is found to be legally unenforceable, all other provisions of this Agreement shall remain in full force and effect as if the unenforceable provision was never made a part of this Agreement.

18. INTERPRETATION

18.1. This Agreement is the result of negotiations between the parties and, accordingly, shall not be construed for or against either party regardless of which party drafted this Agreement or any portion thereof.

19. NO PARTNERSHIP

19.1. Nothing contained herein shall, or shall be deemed to, create any relationship between the Parties other than that of Owner and Contractor.

20. FURTHER DOCUMENTS

20.1. The Parties shall execute and deliver all such documents and perform all such acts as reasonably requested by the other party from time to time, to carry out the matters contemplated by this Agreement.

21. RECORD KEEPING, AUDIT AND INSPECTION

21.1. Contractor shall retain all books and records pertaining to the provision of the Contract Work for a

period of no less than five (5) years after completion of all Contract Work or the termination of this Agreement, whichever occurs earlier and shall, during such time, shall permit Owner and its designated representative(s) to audit, inspect, and make copies of all such books and records so maintained by Contractor. Any such audit and inspection shall take place during normal business hours upon reasonable prior notice to Contractor. The right to audit and inspect shall survive the termination of the Agreement.

22. NOTICE

22.1. All notices to either party pursuant to this Agreement shall be in writing and signed by a duly authorized representative of the party giving such notice and shall be served either in person, by overnight delivery service or by certified mail, return receipt requested, to the respective address for each party given in the Agreement.

23. AUTHORITY

23.1. The individuals executing this Agreement on behalf of the parties represent they are duly authorized to sign on behalf of the parties and bind the Parties hereto.

24. COUNTERPARTS

24.1. This Agreement may be signed in counterparts.

25. NOTICES

25.1. No notice, consent, approval, or other communication given in connection herewith shall be validly given, made, delivered, or served unless in writing and delivered by hand, email, or by registered/certified United States mail to Owner or Contractor, as the case may be. Correspondence shall be delivered to the respective mailing and/or email addresses set forth below, or to such other addresses as either party may from time to time designate in writing and deliver to the other party. Notices, consents, approval, or communications shall be deemed given or received 24 hours after deposit in the mail, or immediately if hand-delivered or sent by email transmission. All written correspondence shall be followed by a telephone call within 24 hours of sending to confirm that it was received by the other party.

If to City:
Patricia A. Coyne-Fague, Esq.,
Director Department of Public Works
700 Allens Avenue
Providence, RI 02905
401-680-7500
lperotta@providenceri.gov

cc:
Craig Hochman, Deputy Chief
Engineer 401-680-7515
chochman@providenceri.gov

If to PBBA:
Girard Visconti
Savage Law Partners, LLP
564 South Water Street Providence, RI 02903
Phone: 401-238-8500
gvisconti@savagelawpartners.com

If to Contractor:
[CONTACT NAME, TITLE]
[COMPANY]
[ADDRESS]
[CITY, STATE, ZIP]
[PHONE]

26. EXHIBITS

This Exhibit List is hereto attached to that certain Construction Agreement between the City of Providence/Providence Building Authority and the Contractor, _____, for the Project known as CITY OF PROVIDENCE – 2024, HURRICANE BARRIER STREET GATE REPAIRS.

[SIGNATURES APPEAR ON FOLLOWING PAGE]

NOW, THEREFORE, the Parties execute this Agreement on the day and date listed in the Preamble.

PROVIDENCE PUBLIC BUILDING AUTHORITY

By: _____

Name (Printed): _____

Title: _____

Date: _____

CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS

By: _____

Name (Printed): _____

Title: _____

Date: _____

[CONTRACTOR NAME]

By: _____

Name (Printed): _____

Title: _____

Date: _____

APPROVED AS TO FORM AND CORRECTNESS

By: _____

Name (Printed): _____

Title: _____

Date: _____

EXHIBIT LIST

TO CONSTRUCTION AGREEMENT

EXHIBIT A	**Request for Proposals dated _____**
EXHIBIT A-1	**Contractor's Proposal dated _____**
EXHIBIT B	**Contractor's Insurance**
EXHIBIT C	**Contractor's Performance and Payment Bonds (Statutory Form)**
EXHIBIT D	**Contractor's Schedule of Values, if applicable**
EXHIBIT E	**RIGL (Prevailing Wages) Sections 37-13-5, 6, 7 & 9**
EXHIBIT F	**Project Schedule**
EXHIBIT G	**Safety Plan**
EXHIBIT H	**Lien Releases**

CITY OF

CONTRACT BOND FOR COMPLETE PERFORMANCE AND FULL PAYMENT

PROVIDENCE, RHODE ISLAND

KNOW ALL MEN BY THESE PRESENTS, THAT, _____ of _____ hereinafter called the "Contractor," and _____ AS SURETY are held and hereinafter called the "Surety," a corporation authorized to execute surety bonds under the laws of the State of Rhode Island, are held and firmly bounden unto the City of Providence, City of Providence Department of Public Works, and the Providence Public Buildings Authority in the penal sum _____ Dollars, ($ _) lawful money of the United States of America, to the payment of which sum, well and truly to be made the Contractor and the Surety herein firmly bind themselves and their respective heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT,

WHEREAS, the contractor did on the ___ day of ___ 20___, enter into a written Contract for _____ in the sum of _____ ($.00).

NOW, THEREFORE, if the Contractor, its 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 its 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 City of Providence, City of Providence Department of Public Works, and the Providence Public Buildings Authority, as therein stipulated, and shall also promptly pay for all such labor performed or furnished, (which as to equipment shall mean payment of the reasonable rental value, as determined by the City of Providence, City of Providence Department of Public Works, and the Providence Public Buildings Authority, for its use during the period of its use), as shall be performed or furnished for and 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; and shall also pay for all Wages, Workers' Compensation, Public Liability, Fire Insurance, Federal and State Unemployment, Social Security and Compensation Taxes; then this obligation shall become and be null and void; otherwise it shall be and remain in full force and virtue.

This Bond is subject to all such rights and powers of the City of Providence, City of Providence Department of Public Works, and the Providence Public Buildings Authority and such other provisions as are set forth in the Contract and the Plans, Specifications and Proposal incorporated by reference in the Contract; and is subject also to all rights of the State and others which are set forth with respect to such a bond in RIGL §37-12-1 et. seq. and RIGL §37-13-14 and is subject to the provision 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 this Bond or release the liability of the Surety hereunder.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals this _____ day of _____, 20____, the name and corporate seal of each corporate party being hereto affixed, and these presents signed by its undersigned representative, pursuant to authority of its governing body.

In presence of: _____(Seal)

(Individual Principal) _____ _____

(Business Address including Zip)

(Title) _____ _____(Seal)

(Partnership)

_____

_____

(Business Address including Zip)

By: _____

Attest:

_____ _____

(Corporate Principal)

_____

(Business Address including Zip)

By: _____

(Affix Corporate Seal)

_____ _____

Attest:

_____ _____

(Corporate Surety)

By: _____

(Affix Corporate Seal)

Countersigned:

by _____

*Attorney-in-Fact, State of _____

(*Power-of-attorney for person signing for surety company must be attached to bond.)

CITY OF

CONTRACTOR'S MBE/WBE SUBCONTRACTOR UTILIZATION FORM

PROVIDENCE, RHODE ISLAND

Contractor:_____ **Telephone:** _____

Contact Person:_____ **Fax:** _____

E-mail: _____

BID PRICE: $_____ **BID DATE:** ____/____/____

PROJECT # _____ **PROJECT LOCATION:** _____

TOTAL ANTICIPATED DBE _____ **% PARTICIPATION FOR THIS SUBMISSION**

WBE•	MBE•	Non MBE WBE	Firm Name	Item Number & Description of Work	Quantity	Cost per Unit/Item	Actual $ Value
					Subcontractor Total ›		
					DBE Total >		

NOTE: THIS INFORMATION IS USED TO TRACK AND REPORT ANTICIPATED DBE PARTICIPATION IN FEDERALLY FUNDED CDBG CONTRACTS. THE ANTICIPATED DBE AMOUNT IS VOLUNTARY AND WILL NOT BECOME A PART OF THE CONTRACTUAL TERMS.

Equal Opportunity Use:

Form received: ___/___/___ Verified by: _____

For a complete list of certified firms and company designation (WBE/DBE) go to http://www.providenceri.gov

PARTIAL RELEASE

WHEREAS, the undersigned Contractor, Architect, Engineer and Consultant supplied labor, materials, equipment and/or services to the **Providence Public Building Authority** and the **City of Providence**, relative to improvements made to the property owned by **Providence Public Building Authority** and/or the **City of Providence**, which project was located at the street address of _____.

NOW, THEREFORE, the undersigned for and in consideration of payment in the amount of $_____, (for monies due Contractor, Architect, Engineer and Consultant through and including month/day/year) contingent upon the receipt of said payment, does hereby unconditionally and irrevocably waives and releases any and all actions, claims, demands, liens, damages, or any and all claims whatsoever against the **Providence Public Building Authority** and the **City of Providence**, the Project or the property whether arising at law, in equity or under the Mechanic's Lien law in the State of Rhode Island, which Contractor, Architect, Engineer and Consultant has or may have against the **Providence Public Building Authority** and the **City of Providence** or the property on account of labor, materials, equipment and/or services furnished for use at the project as of the date of the execution of this document. This Release does not release any pending change orders or retainage due or to become due to Contractor, Architect, Engineer and Consultant nor does this Release release any of the following items:_____.

The undersigned warrants that all costs for labor, materials, equipment and/or services incurred by Contractor, Architect, Engineer and Consultant or its employees, consultants, subcontractors, sub-subcontractors, suppliers and all tiers have been paid or will be paid out of these proceeds by the undersigned. The Contractor, Architect, Engineer and Consultant warrants

that no obligations, legal, equitable, or otherwise will be owed to any person arising out of or from Contractor, Architect, Engineer and Consultant's work on the project that will not be satisfied by the payment set forth above for all work, labor, materials, equipment and/or services performed by or furnished to Contractor, Architect, Engineer and Consultant on the project up to and inclusive of the date this document is executed.

Contractor, Architect, Engineer and Consultant agrees to indemnify, defend and hold harmless the **Providence Public Building Authority** and the **City of Providence** from any claim, lien, damage, cost or expense brought by any employee, agent or consultant of Contractor, Architect, Engineer and Consultant, any subcontractor or lower tier subcontractor, and any material supplier relating to any labor, material and/or equipment furnished, supplied or performed for, or on behalf of the Contractor, Architect, Engineer and Consultant or the project to which payment was made to Contractor, Architect, Engineer and Consultant for the work performed.

By:

_____
(Name and Title)

STATE OF _____

COUNTY OF _____

Subscribed and sworn to before me on this _____day of _____, 20__.

_____
NOTARY PUBLIC
My Commission Expires: _____

FINAL RELEASE

WHEREAS, the undersigned Contractor, Architect, Engineer and Consultant supplied labor, materials, equipment and/or services to the **Providence Public Building Authority** and the **City of Providence**, relative to improvements made to the property owned by **Providence Public Building Authority** and/or the **City of Providence**, which project was located at the street address of _____.

NOW, THEREFORE, the undersigned for and in consideration of the final payment in the amount of $_____, (for monies due Contractor, Architect, Engineer and Consultant through and including month/day/year) contingent upon the receipt of said payment, does hereby unconditionally and irrevocably waives and releases any and all actions, claims, demands, liens or other claims whatsoever against the **Providence Public Building Authority** and the **City of Providence**, the Project or the property whether arising at law, in equity or under the Mechanic's Lien law in the State of Rhode Island, which Contractor, Architect, Engineer and Consultant has or may have against the **Providence Public Building Authority** and the **City of Providence** or the property on account of labor, materials, equipment and/or services furnished for use at the project as of the date of the execution of this document.

The undersigned warrants that all costs for labor, materials, equipment and/or services incurred by Contractor, Architect, Engineer and Consultant or its employees, consultants, subcontractors, sub-subcontractors, suppliers and all tiers have been paid or will be paid out of these proceeds by the undersigned. The Contractor, Architect, Engineer and Consultant warrants that no obligations, legal, equitable, or otherwise will be owed to any person arising out of or from Contractor, Architect, Engineer and Consultant's work on the project that will not be satisfied out of the full and final payment set forth above for all work, labor, materials,

equipment and/or services performed by or furnished to Contractor, Architect, Engineer and Consultant on the project up to and inclusive of the date this document is executed.

Contractor, Architect, Engineer and Consultant agrees to indemnify, defend and hold harmless the **Providence Public Building Authority** and the **City of Providence** from any claim, lien, damage, cost or expense brought by any employee, agent or consultant of Contractor, Architect, Engineer and Consultant, any subcontractor or lower tier subcontractor, and any material supplier relating to any labor, material and/or equipment furnished, supplied or performed for, or on behalf of the Contractor, Architect, Engineer and Consultant or the project to which payment was made to Contractor, Architect, Engineer and Consultant for the work performed.

_____

By:

_____
(Name and Title)

STATE OF _____

COUNTY OF _____

Subscribed and sworn to before me on this _____day of _____, 20__.

_____
NOTARY PUBLIC
My Commission Expires: _____

PARTIAL RELEASE

WHEREAS, the undersigned **subcontractor** supplied labor, materials, equipment and/or services to the Contractor, Architect, Engineer and Consultant, _____, relative to improvements made to the property owned by **Providence Public Building Authority** and/or the **City of Providence**, which project was located at a street address of

_____.

NOW, THEREFORE, the undersigned for and in consideration of payment in the amount of $_____, (for monies due subcontractor through and including month/day/ year) contingent upon the receipt of said payment, does hereby waive and release any and all actions, claims, demands, liens or bond claims against _____, its surety, the project, the Owner and the property described herein whether arising at law, in equity or under the Mechanic's Lien law in the State of Rhode Island, which subcontractor has or may have against _____, its surety, the project and the property described herein on account of labor, materials, equipment and/or services furnished for use at the project as of the date of the execution of this document.

Upon presenting this signed waiver to _____, the above payment will be issued to the subcontractor in accordance with the terms of the subcontract agreement.

The undersigned warrants that all costs for labor, materials, equipment and/or services incurred by subcontractor or its employees, consultants, sub-subcontractors, suppliers and all tiers have been paid or will be paid out of these proceeds by the undersigned. The subcontractor warrants that no obligations, legal, equitable, or otherwise will be owed to any person arising out of or from subcontractor's work on the project that will not be satisfied by the payment set forth above for all work, labor, materials, equipment and/or services performed by or furnished to subcontractor on the project up to and inclusive of the date this document is executed.

Exempt from release are any retained amounts being withheld pursuant to the subcontract agreement on account of labor, materials, equipment and/or services furnished by subcontractor on the project.

_____

(Name of Subcontractor)

By:

_____

(Name and Title)

STATE OF _____

COUNTY OF _____

Subscribed and sworn to before me on this _____day of _____, 20__.

_____

NOTARY PUBLIC

My Commission Expires: _____

FINAL RELEASE

WHEREAS, the undersigned **subcontractor** supplied labor, materials, equipment and/or services to the Contractor, Architect, Engineer and Consultant, _____, relative to improvements made to the property owned by **Providence Public Building Authority** and/or the **City of Providence**, which project was located at a street address of

_____.

NOW, THEREFORE, the undersigned for and in consideration of the final payment in the amount of $_____, contingent upon the receipt of said payment, does hereby unconditionally and irrevocably waive and release any and all actions, claims, demands, liens or bond claims against _____, its surety, the project, the Owner and the property described herein whether arising at law, in equity or under the Mechanic's Lien law in the State of Rhode Island, which subcontractor has or may have against _____, its surety, the project and the property described herein on account of labor, materials, equipment and/or services furnished for use at the project, whether known or unknown by the subcontractor as of the date of the execution of this document.

Upon presenting this signed waiver to _____, the above payment will be issued to the subcontractor in accordance with the terms of the subcontract agreement.

The undersigned warrants that all costs for labor, materials, equipment and/or services incurred by subcontractor or its employees, consultants, sub-subcontractors, suppliers and all tiers have been paid or will be paid out of these proceeds by the undersigned. The subcontractor warrants that no obligations, legal, equitable, or otherwise will be owed to any person arising out of or from subcontractor's work on the project that will not be satisfied out of the full and final payment set forth above for all work, labor, materials, equipment and/or services performed by or furnished to subcontractor on the project up to and inclusive of the date this document is

executed.

This final release does not extinguish and is subject to subcontractor's warranty and contractual obligations set forth in its contract and/or agreement with _____

_____
(Name of Subcontractor)

By:

_____
(Name and Title)

STATE OF _____

COUNTY OF _____

Subscribed and sworn to before me on this _____day of _____, 20__.

_____
NOTARY PUBLIC
My Commission Expires: _____

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APPENDIX C:

TECHNICAL SPECIFICATIONS

DIVISION 01 – GENERAL REQUIREMENTS

01 00 00	General Instructions
01 25 00	Measurement and Payment
01 33 00	Submittal Procedure
01 40 00	Quality Control and Quality Assurance
01 70 00	Contract Closeout Requirements
01 71 13	Mobilization and Demobilization
01 78 39	Project Record Documents

DIVISION 02 – FACILITY CONSTRUCTION

02 40 00	Demolition and Removal

DIVISION 03 – CONCRETE

03 01 00	Concrete Maintenance and Repair

DIVISION 05 – METALS

05 05 23	Welding
05 10 01	Structural Metal Framing for Vehicular Gates
05 50 00	Metal Fabrications

DIVISION 09 - FINISHES

09 97 02	Epoxy Painting

DIVISION 31 – EARTHWORK

31 25 00	Erosion and Sedimentation Control

DIVISION 32 – EXTERIOR IMPROVEMENTS

32 52 00	Flood Control Measures

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SECTION 01 00 00

GENERAL INSTRUCTIONS

PART 1 - GENERAL

1.01 SCOPE

A. The work covered under this project consist of the furnishing of all plant, labor, equipment, hardware and materials, for the Hurricane Barrier Street Gate Repairs located on Allens Avenue and at the Manchester Street Station in Providence, Rhode Island, complete in strict accordance with Specifications and accompanying drawings and subject to all terms and conditions of contract.

1.02 DESCRIPTION

A. The scope of work of the project is provided on Sheet 1.0 - Notes of the Contract Drawings. The Contractor shall submit for approval the manufacturer's printed recommendations for the storage, protection, handling and installation of the reinforcing steel, miscellaneous steel, rubber fiber seal, ladder, platforms, and other appurtenances, which shall be strictly adhered to by the Contractor.

B. The repair program is limited such that the temporary flood barriers are onsite and ready to be deployed prior to removal of the Hurricane Barriers. Miscellaneous site work can occur in any order that does not result in an impact to travel or lane closure without the written approval of the Owner.

C. The BASE BID is comprised of the following: Allens Avenue:

1. Mobilize equipment and personnel to the job site;
2. Install erosion controls and temporary security fencing;
3. Remove, stockpile, and protect for reuse all signage;
4. Remove, transport, and modify gate specific repairs as indicated in the Contract Documents off-site;
5. Inspection of ground pin conditions at the lower hinge locations, remove and replace if needed at the direction of the Engineer. The contractor is responsible for the reinstallation of the pin to As-built conditions.
6. Traffic Control per Approved Transportation Management Plan (TMP);
7. Off-site modifications include, but are not limited to: traffic controls, RIDOT permitting, sandblasting, epoxy coating, removal and replacement of 20 gauge steel skin, replacing the lower hinge for the gate, modifying of front and rear recess structures, fabricating the reinforced "U" hook, fabricating the steel panel flaps, modifying the central "A" frame of the east gate as indicated, removal and replacement of the top WF section inclusive of installing a cover plate;
8. Reinstallation of vehicular gate and demonstrating functionality;
9. Removal, transport, and modifying of the second vehicular hurricane gate;
10. Repeat items 5 and 6 as indicated on the Contract Documents;
11. Clean on site drains between the front and rear recess;
12. Seal construction joints of the concrete abutment roofs;
13. Implement onsite concrete repair program;
14. Remove and replace rubber fiber seal at both abutments;
15. Site clean-up and restoration of areas as necessary;
16. Demobilization.

Manchester Street Station:

1. Mobilize equipment and personnel to the job site;
2. Install erosion controls and temporary security fencing in coordination with the Manchester Street Station;
3. Remove, stockpile, and protect for reuse all signage;
4. Remove, transport, and modify gate specific repairs as indicated in the Contract Documents off-site;
5. Off-site modifications include: sandblasting, epoxy coating, hinge plate replacement, and replacement of the closure hook brackets as modified in the Contract Documents;
6. Reinstallation of vehicular gate and demonstrating functionality;
7. Removal and replacement of closure hooks;
8. Installation of ladder and operation platform;
9. Removal and potential replacement of crank operating bar.
10. Project close-out.

1.03 WORK COMMENCEMENT

A. Contractors are advised that mobilization is to commence post November 11, 2024 for the initial work schedule, or as otherwise agreed in writing by the Owner. The Contractor can elect to start at the Manchester Street Station prior to the beginning of work at Allens Avenue with the written approval of the Owner.

B. The Contractor is to make every effort to ensure that sufficient materials and equipment are delivered to site in a prompt and orderly fashion.

1.04 DATUM

A. Datum used for this project is the National Geodetic Vertical Datum of 1929 (NGVD29).

B. Bidders are advised to consult the Tide Tables issued by NOAA to keep informed of the tidal condition affecting work. Though no work is proposed within the waterways, tides may affect groundwater elevations and subsequently excavations.

1.05 EXAMINATION OF SITE

A. Parties intending to bid for this work are advised to visit the site and make their own estimates of facilities and difficulties pertaining to the execution of work; actual site and soil conditions; severity, exposure and uncertainty of weather; space restrictions and all other issues associated with the work.

B. The Contractor shall study the drawings and compare the same with the information gathered during his examination of the sites, as no extra compensation will be authorized for extra work caused by his unfamiliarity with the sites(s) and/or drawings or the conditions particular to this job.

1.06 WORK SCHEDULE

A. Immediately upon award of contract, the Contractor shall submit a schedule of work to the Owner and Engineer. All entries contained in unit price schedule will be entered on form. Each entry will show an intended start and completion date using a horizontal bar graph method. No work will commence until this schedule has been reviewed and approved by the Engineer or Owner.

B. Should the Contractor find that they cannot maintain schedule as originally intended, the Contractor shall immediately submit a revised schedule without being requested to do so by the Engineer.

1.07 LAYOUT OF WORK

A. Contractor shall lay out work on ground to satisfaction of the Engineer using base and datum information shown on Drawings or as requested by the Engineer.

1.08 SITE OPERATIONS

A. Arrange for sufficient space adjacent to project site for conducting operations and storage of materials. Exercise care so as not to obstruct or damage public or private property in area. Do not interfere with normal day to day operations adjacent to site. All arrangements for space and access will be made by the Contractor as approved by the Engineer or Owner.

B. The Contractor shall clean-up and restore all disturbed areas each week and every week throughout the duration of the project.

C. Materials and/or equipment stockpiled on site shall be done so in a manner to protect existing pavement, grassed areas, and site improvements.

D. At completion of each phase, restore area to its original condition. Damage to ground and property will be repaired by the Contractor. Remove all construction materials, residue, excess, etc., and leave site in a condition acceptable to the Engineer.

E. Work Hours shall be limited to local ordinances to avoid disturbance to local residents and businesses.

F. Both site locations shall have repairs and gate functionality restored prior to **April 1, 2025**, with all punch list items completed by **May 2, 2025**.

1.09 PROJECT MEETINGS

A. Engineer will arrange all project meetings.

B. All project meetings will take place on site of work unless so directed by the Engineer.

C. Contractor will have a responsible member of their firm present at all project meetings.

1.10 PROTECTION

A. The area designated for storage of materials and equipment shall be approved by the Engineer and Owner during the Pre-Construction Meeting.

B. Take necessary precautions to prevent damage by any means to all materials and equipment to be incorporated into work that are stored on site.

C. Repair or replace all materials or equipment damaged in transit or storage to the satisfaction of and at no cost to the Engineer or Owner.

1.11 EXISTING SERVICES

A. Before commencing work, establish locations and extent of any service lines in area of work and notify Engineer of findings.

B. Submit schedule to and obtain approval from Engineer for any shutdown or closure of active service or facility. Adhere to approved schedule and provide notice to affected parties.

C. Where unknown services are encountered, immediately advise Engineer, and confirm findings in writing.

D. Record locations of maintained, re-routed and abandoned service lines.

1.12 DOCUMENT REQUIRED AND PHOTOGRAPHS

A. Maintain at job site, one copy each of following:

1. Contract drawings
2. Specifications
3. Addenda
4. Reviewed shop drawings
5. Change orders
6. Other modifications to Contract
7. Field test reports
8. Copy of approved work schedule.

B. Photographs

1. The Contractor shall, at its own expense, furnish the Engineer with suitable electronic digital color photographs of the project.
2. A minimum of twenty-four (24) views will be required and shall be taken as follows:
   a. Before the project has started.
   b. Every week of construction activity.
   c. After the project has been completed.

1.13 TAXES AND PERMITS

A. The City of Providence (OWNER) is exempt from the payment of Federal Excise Taxes and Rhode Island Sales Tax.

B. If required, Contractor shall pay for applicable permits at no additional cost to the OWNER.

1.14 REGULATORY REQUIREMENTS

A. Contractor shall be responsible for performing all work in accordance with regulatory approval requirements. The Orders of Conditions shall be provided when received.

B. The Contractor shall provide and maintain an erosion and sediment control system, secured around the work area to prevent debris from entering the water.

1.15 CONSTRUCTION SCHEDULES AND SUBMITTALS

A. Reference the General Conditions.

B. A construction schedule shall be maintained on the project for review during site meetings. If a major change is made to the schedule, an updated schedule shall be submitted to the Engineer immediately.

C. Claims for scheduling delays caused by adverse weather conditions will not be considered.

D. Shop Drawings shall be submitted to the Engineer for review as required by the Specifications.

1.16 CONSTRUCTION FACILITIES

A. Provide and maintain temporary sanitary facilities. Existing facilities if present shall not be used.

1.17 MEASUREMENT AND PAYMENT

A. See Section 01 25 00

1.18 ATTACHMENTS

A. See Appendices

END OF SECTION

SECTION 01 25 00

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 ADMINISTRATIVE SUBMITTALS

A. Application for Payment: In accordance with the General Conditions and as specified herein.

B. Final Application for Payment: As specified herein.

1.02 APPLICATION FOR PAYMENT

A. Reference the General Conditions.

B. Use separate, AIA G702 Application and Certificate for Payment forms for each pay application.

C. Preparation:

1. List each Change Order and Written Amendment executed prior to date of submission as separate line item.
2. Submit digital copies of AIA G702 Application and Certificate for Payment forms, and such supporting data as may be requested by Owner.

1.03 MEASUREMENT - GENERAL

A. Reference the General Conditions for additional requirements on Unit Price Work.

B. All unit prices which are specified for measurement by the linear foot (LF) shall be measured from the beginning to the termination point of the unit being measured.

C. Measurement and payment for all bid items shall include furnishing all equipment, material, plant, and personnel required for completion of the work in accordance with the contract documents unless otherwise noted.

D. Units of measure shown on the Bid Form shall be as follows unless specified otherwise.

Item	Method of Measurement
CY	Cubic Yard – Field Measure by Engineer using the Average-End -Area Method to Calculate Volume
EA	Each-Field Count by Owner/Engineer
TON	Ton-Certified Truck Scale
LF	Linear Foot-Field Measure by Engineer
LS	Lump Sum-Unit is one; no measurement will be made.
SF	Square Foot-Field Measured by Engineer
SY	Square Yard-Field Measured by Engineer
AL	Allowances

1.04 PAYMENT

A. General: Progress payment requests shall be submitted monthly as specified in the General Conditions.

B. Payment for Lump Sum Work covers all personnel, equipment, materials, and incidentals required to furnish, install and/or complete the Work as specified, indicated, and directed as indicated in the Construction Documents for the following items. Lump Sum Items shall be paid to the Contractor in progress payments based on the percentage of completion of each Lump Sum Item, as determined by the Owner or his representative.

C. Payment for unit price items covers all personnel, equipment, materials, and incidentals required to furnish, install and/or complete the Work as specified, indicated, and directed as indicated in the Construction Documents for the following items.

D. Payment for equipment, materials and labor for items not included on the Bid or described in Article PAYMENT, herein, shall be considered incidental and no separate payment will be made.

Bid Item No.	Unit	Title/Description
1	LS	General Bid Item Requirements: Furnish all material, labor, and equipment to furnish, work plans, schedules, meetings, submittals, temporary construction facilities, permits, QC/QA, materials testing, closeout documentation, closeout survey, and Record Contract Documents as stated within the Contract Documents.
2	LS	Flood Contingency Materials and Storage: Furnish all material, labor, and equipment to purchase/rent, store, and protect flood contingency materials. The contractor is responsible for readily stockpiling the means, materials, design, labor, and equipment required to establish flood controls. Includes design calculations and drawings stamped by a Professional Engineer in the State of Rhode Island for the control of water design.
3	LS	Allens Ave Mobilization & Demobilization: Furnish all material, labor, and equipment and stage on-site: personnel, equipment, and materials to complete all work items stated in the Contract documents; install site signage, traffic controls, and warning signs; install temporary security fencing to secure work areas; erosion controls; prepare the site for construction; establish and maintain access roads; protect site utilities and other facilities to remain; move out personnel, equipment, and unused material; restore and clean portions of the site disturbed by construction and entrances; remove and dispose of signs and security fencing; and remove all debris and rubbish. This item is inclusive of site restoration and loam and seeding for areas disturbed by construction. Total payment under this item shall be less than 10 percent of the total contract amount associated with Allens Avenue. Following mobilization of equipment on site and approval of shop drawings, the Contractor can invoice for 20 percent of this item. Following completion of 50 percent of the work under the Contract, the Contractor may invoice 60 percent (40 percent more) of this item. Following remobilization (if necessary for phased elements), the contractor may invoice up to 80 percent (20 percent more) of this item. Following the completion of all work under this item, the Contractor can invoice the remaining 20 percent of this item.

4	LS	Allens Ave Recess Repairs: Furnish all materials, labor, and equipment to remove, transport, sandblast, complete steel repairs, epoxy coat, reinstall, and operate recessed gate components. This item shall also be inclusive of incidental metal fabrication, welding, and miscellaneous bolts, nuts, and washer replacements. The bolts, nuts, and washers are to be prepared as denoted within the Contract Documents.
5	LS	Allens Ave Gate Structural Repairs: Furnish all materials, labor, and equipment to remove/dispose denoted plates for removal and the sandblasting and epoxy coating off all components of the Allens Ave gate structures. Disassembling of the gate, as necessary, to sand and coat the steel shall be inclusive in this item. Furnish all materials, labor, and equipment to remove/dispose of the existing top WF members, fabricate/construct the replacement WF member with a steel coated cover plate which shall be inclusive of the hardware and welding as shown on the Contract Documents. This item shall include all materials, labor, and equipment to reinstall the top WF members to the hurricane barrier gates.
6	LS	Allens Ave "A" Frame Repairs: Furnish all materials, labor, and equipment to remove/dispose of the existing "A" Frame WF section, fabricate/construct the replacement WF member which shall be inclusive of the hardware and welding as shown on the Contract Documents. This item shall include all materials, labor, and equipment to reinstall members to the hurricane barrier gate.
7	LS	Allens Ave Internal Component Repairs: Furnish all materials, labor, and equipment to remove/dispose of the existing steel panel flaps utilized when the gates are in the closed position to cover the gaps created by the opened recess structures, and the internal winch components. This item shall also be inclusive of all materials, labor, and equipment fabricate/construct/install replacement steel metal flaps and winch components to match the openings as present at each recess location as shown in the Contract Drawings. This item shall be inclusive of all plates, bolts, nuts, washers, hinges, welding, and coating as shown in the Contract Documents.
8	LS	Allens Ave Hinge Repairs: Furnish all materials, labor, and equipment to remove/dispose of the lower hinge shapes, plates, bolts, nuts, washers, and other miscellaneous steel and or metal as shown in the Contract Documents. This item shall also be inclusive of all materials, labor, and equipment to fabricate/construct/reinstall the replacement lower hinge members including any associated bolts, washers, nuts, shapes, and/or welds as shown in the contract documents. The condition of the pin should be evaluated under this item, but any replacement shall be carried under the unforeseen condition allowance.
9	LS	Allens Ave Concrete Repair: Furnish all materials, labor, and equipment to repair the concrete cracking observed throughout the concrete abutment structures. The item is inclusive of three concrete alternative repairs that shall be selected based upon the notes provided in the Contract Documents.
10	LS	Allens Ave Rubber Fiber Seal Replacement: Furnish all materials, labor, and equipment to remove the existing rubber fiber seals, prepare and coat the steel plate surface and install new rubber fiber seals as shown in the Contract Drawings.
11	LS	Allens Ave Drain Cleanout: Furnish all materials, labor, and equipment to clean/unclog the drains between the front and lower recess structures as shown in the Contract Drawings.
12	LS	Manchester Street Station Mobilization & Demobilization: Furnish all material, labor, and equipment and stage on-site: personnel, equipment, and materials to complete all work items stated in the Contract documents; install site signage, traffic controls, and warning signs; install temporary security fencing to secure work areas; prepare the site for construction; establish and maintain access roads; protect site utilities and other facilities to remain; move out personnel, equipment, and unused material; restore and clean portions of the site disturbed by construction and entrances; remove and dispose of signs and security fencing; and remove all debris and rubbish. This item is inclusive of site restoration and loam and seeding for areas disturbed by construction.

		Total payment under this item shall be less than 10 percent of the total contract amount associated with the Manchester Street Station. Following mobilization of equipment on site and approval of shop drawings, the Contractor can invoice for 20 percent of this item. Following completion of 50 percent of the work under the Contract, the Contractor may invoice 60 percent (40 percent more) of this item. Following remobilization (if necessary for phased elements), the contractor may invoice up to 80 percent (20 percent more) of this item. Following the completion of all work under this item, the Contractor can invoice the remaining 20 percent of this item.
13	LS	Manchester Street Station Steel Plate Sandblasting and Coating: Furnish all materials, labor, and equipment to sandblasting and epoxy coating off all components of the Manchester Street Station gate structure as shown in the Contract Drawings. Disassembling of the gate, as necessary, to sand and coat the steel shall be inclusive in this item.
14	LS	Manchester Street Station Hinge Repairs: Furnish all materials, labor, and equipment to remove and inspect the components of the hinge and replace the deformed steel plate. Any findings during the inspection to indicate the replacement of the hinge system shall be carried under the Unforeseen Conditions Allowance.
15	LS	Manchester Street Station Concrete Repair: Furnish all materials, labor, and equipment to repair the concrete cracking observed throughout the concrete abutment structures. The item is inclusive of three concrete alternative repairs that shall be selected based upon the notes provided in the Contract Documents.
16	LS	Manchester Street Station Rubber Fiber Seal Replacement: Furnish all materials, labor, and equipment to remove the existing rubber fiber seals, prepare and coat the steel plate surface and install new rubber fiber seals as shown in the Contract Drawings.
17	LS	Manchester Street Station Control Repairs: Furnish all materials, labor, and equipment to install a ladder, operation platform, and fall protection anchor hook up. This item shall also be inclusive of all concrete preparation. Grouted anchors, nuts, bolts, washers, and other miscellaneous members as shown in the Contract documents or as indicated in the Manufacturers Recommendations for any approved products submitted. Furnish all materials, labor, and equipment to remove/dispose of the existing close hook, fabricate/construct the replacement reinforced Closure hooks as shown on the Contract Documents. Material, labor, and equipment required to fabricate as shown in the Contract Documents shall be included in this item.

FLOOD DEPLOYMENT CONTINGENCY ITEMS

Bid Item No.	Unit	Title/Description
B1	EA	Allens Ave Flood Contingency Deployment: Furnish all material, labor, and equipment to deploy, maintain, and remove flood contingency cofferdams.
B2	EA	Manchester Street Station Flood Contingency Deploy: Furnish all material, labor, and equipment to deploy, maintain, and remove flood contingency cofferdams.

ALLOWANCES

Bid Item No.	Unit	Title/Description
C.	AL	Miscellaneous Metal Work, Fabrication, and Concrete Repairs: The allowance for the unforeseen field conditions, as indicated in the Contract Documents, shall only be billed against after the written approval/direction of the Owner/Engineer. See above select items with indicated inspections that may result in the billing against this item pending the Engineer field verified condition.
D.	AL	Uniformed Traffic Control Allowance: The allowance for the use of off-duty City of Providence Police Officers ("detail officers"), as deemed necessary by the Owner. The City of Providence Police Department will bill the Owner directly for detail officer services.

1.05 NONPAYMENT FOR REJECTED OR UNUSED PRODUCTS

A. Payment will not be made for following:

1. Loading, hauling, and disposing of rejected material.
2. Quantities of material wasted or disposed of in manner not called for under the Contract Documents.
3. Rejected loads of material, including material rejected after it has been placed by Contractor.
4. Material not unloaded from transporting vehicle.
5. Defective Work not accepted by the Engineer.
6. Material remaining on hand after completion of Work.

1.06 PARTIAL PAYMENT FOR STORED MATERIALS AND EQUIPMENT

A. Final Payment: Will be made only for materials incorporated into the Work in the Contract; no partial payments shall be made for equipment or materials delivered to the site but not used.

1.07 FINAL APPLICATION FOR PAYMENT

A. Reference the General Conditions, and as may otherwise be required in the Contract Documents.

B. Prior to submitting final application, make acceptable delivery of required documents.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

END OF SECTION

SECTION 01 33 00

SUBMITTAL PROCEDURE

PART 1.00 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings, General Provisions of Contract, and Division-1 Specification Sections, apply to work of this section.

1.02 DESCRIPTION OF REQUIREMENTS

A. General: This section specifies procedural requirements for non-administrative submittals including shop drawings, product data, samples and other miscellaneous work-related submittals. Shop drawings, product data, samples and other work-related submittals are required to amplify, expand and coordinate the information contained in the Contract Documents.

1. Refer to other Division-1 sections and other Contract Documents for specifications on administrative, non-work-related submittals. Such submittals include, but are not limited to the following items:
   a. Permits.
   b. Written consents.
   c. Manifests
   d. Payment applications.
   e. Performance and payment bonds.
   f. Insurance certificates.
   g. Inspection and test reports.
   h. Progress reports.
   i. Listing of Subcontractors.
   j. Construction schedules.

B. Shop drawings are technical drawings and data that have been specially prepared for this project, including but not limited to the following items:

1. Fabrication and installation drawings.
2. Coordination drawings (for use on-site).
3. Schedules.
4. Design mix formulas.
5. Where verification of existing conditions is required to fabricate/construct an element; the Contractor shall provide a letter to the Engineer and Owner, along with the submittal stating that the conditions have been verified.

C. Product data includes standard printed information on manufactured products that has not been specially prepared for this project, including but not limited to the following items:

1. Manufacturer's product specifications and installation instructions.
2. Catalog cuts.
3. Roughing-in diagram and templates.
4. Standard wiring diagrams.
5. Printed performance curves.

6. Operational range diagrams.

D. Samples are physical examples of work, including but not limited to the following items:

1. Partial sections of manufactured or fabricated work.
2. Small cuts or containers of materials.
3. Complete units of repetitively-used materials.

E. Miscellaneous submittals are work-related, non-administrative submittals that do not fit in the three previous categories, including, but not limited to the following:

1. Specially-prepared and standard printed warranties.
2. Project photographs.
3. Testing and certification reports.
4. Record drawings.
5. Field measurement data.
6. Keys and other security protection devices.

1.03 SUBMITTAL PROCEDURES

A. General: Refer to the General Conditions for basic procedures for submittal handling.

B. Coordination: Coordinate the preparation and processing of submittals with the performance of the work. Coordinate each separate submittal with other submittals and related activities such as testing, purchasing, fabrication, delivery and similar activities that require sequential activity.

1. Coordinate the submittal of different units of interrelated work so that one submittal will not be delayed by the Engineer/Owner need to review a related submittal. The Engineer/Owner reserves the right to withhold action on any submittal requiring coordination with other submittals until related submittals are forthcoming.

C. Scheduling: In each appropriate administrative submittal, such as the progress schedule, show the principal work-related submittals and time requirements for coordination of submittal activity with related work.

D. Coordination of Submittal Times: Prepare and transmit each submittal to the Engineer/Owner sufficiently in advance of the scheduled performance of related work and other applicable activities. Transmit different kinds of submittals for the same unit of work so that processing will not be delayed by the Engineer/Owner's need to review submittals concurrently for coordination.

E. Review Time: Allow sufficient time so that the installation will not be delayed as a result of the time required to properly process submittals, including time for resubmittal, if necessary. Advise the Engineer/Owner on each submittal, as to whether processing time is critical to the progress of the work, and if the work would be expedited if processing time could be shortened.

1. Allow seven (7) calendar days for the Engineer/Owner's initial processing of each submittal. Allow a longer time period where processing must be delayed for coordination with subsequent submittals. The Engineer/Owner will advise the Contractor promptly when it is determined that a submittal being processed must be delayed for coordination.
2. Allow five (5) calendar days for reprocessing each submittal.

3. No extension of time will be authorized because of the Contractor's failure to transmit submittals to the Engineer/Owner sufficiently in advance of the work.

F. Submittal Preparation: Mark each submittal with a permanent label for identification. Provide the following information on the label for proper processing and recording of action taken.

1. Project name.
2. Date.
3. Name and address of Owner.
4. Name and address of Contractor.
5. Name and address of supplier.
6. Name of manufacturer.
7. Number and title of appropriate specification section.
8. Drawing number and detail references, as appropriate.
9. Similar definitive information as necessary.
10. Provide a space on the label for the Contractor's review and approval markings, and a space for the Engineer/Owner's "Action" marking.
11. Submittals shall be titled "24040_HurricaneBarrierStreetGateRepairs_SubmittalNo.XX-xxxxxxxxxxxxx".
    a. Where "XX" is the designated submittal Number.
    b. Where "xxxxxxxxxxxxx" is a short description of the submittal content.

G. Electronic Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit one (1) copy, including a transmittal form to the Contractor's Folder on the Pare File Transfer Protocol site. Emailed submittals shall be sent to the Engineer in the same format. Prepare a separate transmittal form for each division of work and identify each submittal by specification section number on the transmittal form.

1. Record relevant information and requests for data on the transmittal form. On the transmittal form, or on a separate sheet attached to the form, record deviations from the requirements of the Contract Documents, if any, including minor variations and limitations.
2. Include the Contractor's signed certification stating that information submitted complies with requirements of the Contract Documents.
3. Sequentially number the transmittal forms; resubmittals to have original number with an alphabetic suffix.
4. Where appropriate, submittals shall be in Adobe PDF format. Where appropriate, File formats shall be compatible with Microsoft Office 2010.
5. In the event of a discrepancy between the electronically transmitted submittal and the hardcopy, the hardcopy shall prevail.
6. Contractor shall be responsible for notifying Engineer in writing when new submittals are posted to the FTP site.
7. Emailed submittals shall be limited to one submittal per email.
8. Emailed submittals shall be titled "24040_HurricaneBarrierStreetGateRepairs_SubmittalNo.XX-xxxxxxxxxxxxx".
    a. Where "XX" is the designated submittal Number.
    b. Where "xxxxxxxxxxxxx" is a short description of the submittal content.
9. Emailed submittals must be confirmed as received by the Engineer through either but not limited to a read receipt or confirmatory email.

H. Contractor Review: Stamp of approval indicates to Owner and Engineer/Owner that all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data

have been determined and verified, and that each submittal has been reviewed or coordinated with requirements of work and Contract Documents.

I. No portion of Work requiring shop drawings shall be started or any materials be fabricated, delivered to site, or installed prior to approval of such items. Fabrication performed, materials purchased or on-site construction accomplished which does not conform to approved shop drawings and data shall be at Contractor's risk. Owner will not be liable for any expense or delay due to corrections or remedies required to accomplish conformity.

J. Project work, materials, fabrications, and installation shall conform to approved shop drawings.

1.04 SPECIFIC SUBMITTAL REQUIREMENTS

A. Miscellaneous Submittals:

1. Inspection and Test Reports: Classify each inspection and test report as being either "shop drawings" or "product data" depending on whether the report is specially prepared for the project, or a standard publication of workmanship control testing at the point of production. Process inspection and test reports accordingly.
2. Survey Data: Provide copies of all survey data collected for property surveys, field measurements, quantitative records of actual work, damage surveys and similar data required by the individual sections of these specifications. None of the specified copies will be returned.
3. Standards: Where submittal of a copy of standards is indicated, and except where copies of standards are specified as an integral part of a "Product Data" submittal, submit a single copy of standards for the Engineer/Owner's use. Where workmanship, whether at the project site or elsewhere, is governed by a standard, furnish additional copies of the standard to installers, Owner's field representative, and others involved in the performance of the work.
4. Closeout Submittals: Refer to section "Project Closeout" and to individual sections of these specifications for specific submittal requirements of project closeout information, materials, tools, and similar items.
   a. Record Documents: Furnish set of original documents as maintained on the project site.
5. General Distribution: Provide additional distribution of submittals to Subcontractors, suppliers, fabricators, installers, governing authorities and others as necessary for the proper performance of the work. Include such additional copies of submittals in the transmittal to the Engineer/Owner where the submittals are required to receive "Action" marking before final distribution. Record distributions on transmittal forms.

B. Verification of Existing Conditions: Where verification of existing conditions is required to fabricate/construct an element; the Contractor shall provide a letter along with the submittal stating that the conditions have been verified.

1.05 ENGINEER/OWNER'S ACTION

A. General: Except for submittals for the record and similar purposes, where action and return on submittals is required or requested, the Engineer/Owner will review each submittal, mark with appropriate "Action", and where possible return within seven (7) calendar days of receipt. Where the submittal must be held for coordination the Engineer/Owner will so advise the Contractor without delay.

B. Action Stamp: The Engineer/Owner will stamp, sign and date each submittal copy to be returned to Contractor and indicate disposition of each submittal in accordance with the following grading requirements:

1. "No Exceptions Taken" indicates that Engineer/Owner notes no exception to the intent of the Contract Documents. Fabrication of item may commence.
2. "Furnish as Corrected" indicates that with minor corrections or additions, Engineer/Owner notes no exception to the intent of the Contract Documents. Item may be fabricated on basis of corrections noted. No further checking will be required.
3. "Revise and Resubmit". No fabrication may commence.
4. "Rejected" indicates nonconformance with the contract requirements, or that too many corrections would be necessary. The Engineer/Owner will state the reasons for rejections.
5. "Submit Specified Item" indicates missing portions of the submissions. Fabrication may commence upon submission and approval of specified item.
6. "Reviewed" indicates that the Engineer/Owner has received and processed the submittal. No determination of conformance was completed/necessary.

C. Engineer/Owner Review:

1. Engineer/Owner's review of submitted drawings and data will cover only general conformity to drawings and specification, external connections, and dimensions which affect layout.
2. Engineer/Owner's review does not indicate thorough review of all dimensions.
3. Engineer/Owner's review of submittals does not relieve Contractor's responsibility for errors, omissions, or deviations, nor responsibility for compliance with Contract Documents.

1.06 RESUBMISSION REQUIREMENTS

A. Make any corrections or changes in the submittals required by the Engineer/Owner and resubmit until they are denoted "No Exceptions Taken" or "Furnish as Corrected" by the Engineer/Owner. Resubmission requirements specified in individual specification sections, which differ from these requirements, will take precedence over these requirements.

B. Shop Drawings and Product Data:

1. Revise initial drawings or data, and resubmit as specified for the initial submittal.
2. Indicate any changes which have been made other than those requested by the Engineer/ Owner.

C. Samples: Submit new samples as required for initial submittal.

1.07 DISTRIBUTION

A. Distribute reproductions of shop drawings and copies of product data which carry the Engineer's stamp denoting "No Exceptions Taken" or " Furnish as Corrected" to:

1. Job site file.
2. Record documents file.
3. Subcontractors.
4. Supplier or fabricator.

B. Distribute samples which carry the Engineer/Owner's stamp denoting "No Exceptions Taken" or "Furnish as Corrected" as directed by the Engineer/Owner.

PART 2.00 PRODUCTS

Not Used

PART 3.00 EXECUTION

Not Used

END OF SECTION

SECTION 01 40 00

QUALITY CONTROL & QUALITY ASSURANCE

PART 1.00 GENERAL

1.01 SECTION INCLUDES

A. Quality Control that the Contractor will perform during the performance of this work.

B. Quality Assurance that the Owner will perform during the performance of this work.

1.02 SUBMITTALS

A. Submit Quality Control Plan to the Owner/Engineer at least three (3) calendar days before starting work which includes the following information:

1. Statement and description of Contractor's overall Quality Control (QC) program as described below. Each Sub-contractor shall submit a separate QC program applicable to their scope of work to the Contractor.
2. Procedures to be used in obtaining field samples of materials except where required for submittal under other sections.
3. Name, qualifications, and prior experience of inspection and testing laboratories that Contractor proposes for Owner/Engineer's consideration.

1.03 QUALITY CONTROL (QC) PROGRAM

A. Formulation, Submission, Details and Acceptance of Plan:

1. Contractor shall develop a QC program appropriate to the scale of the project at no additional cost to the Owner.
2. The plan shall identify personnel, and establish procedures, instructions, records, and forms to be used.
3. The Contractor's QC Plan shall include as a minimum, the following:
    a. A description of the Contractor's QC organization, including a chart showing lines of authority, and acknowledgement that the Contractor's QC staff shall conduct inspections for all aspects of the work specified.
    b. The name, qualifications, responsibilities, and authority of each person assigned to the Contractor's QC function.
    c. Procedures for scheduling and managing submittals, including those of Subcontractor, fabricators, suppliers, and purchasing agents.
    d. Control procedures to be promulgated.
    e. Control testing procedures for each specific test, including field sampling.
    f. Reporting procedures including proposed reporting formats.
4. Acceptance of Plan: Acceptance of the Contractor's plan by the Owner/Engineer is required prior to the start of construction. Acceptance is conditional, and its continuation will depend on satisfactory performance by the Contractor during construction. The Owner/Engineer reserves the right to require the Contractor to make changes in the Contractor's QC Plan and operations as necessary to obtain the quality specified at no additional cost to the Owner.
5. Notification of Changes: After acceptance of the Contractor's QC Plan, the Contractor shall notify the Owner/Engineer in writing of any proposed change. The proposed changes will be subject to acceptance by the Owner/Engineer.

B. Implementation of QC Plan:

1. General:
    a. Comply with the highest industry standards except when specified requirements indicate more rigid standards, or more precise workmanship is required.
    b. Provide personnel to produce work of specified quality.
    c. Secure, protect, and maintain products and Work completed or in progress from damage during the progress of remaining Work.
    d. The cost of implementing the Quality Control (QC) Plan, including all required tests, is considered incidental to the lump sum and unit price items and no additional payment shall be disbursed by the Owner.
2. Preparatory Inspection: This shall be performed prior to beginning any segment of Work. It shall include a review of Contract requirements; a check to assure that all materials and or equipment are on hand, and have been tested, samples submitted and approved; a check to assure that provisions have been made to do required control testing; examination of the work that has been completed; and a physical examination of materials, equipment and sample work to assure that they conform to approved shop drawings or submittal data. Contractor shall instruct each Subcontractor contributing work as to the acceptable level of workmanship required in the Contractor's QC Plan in order to meet Specifications.
3. Initial Inspection: This shall be performed as soon as a representative portion of a particular segment of Work has been accomplished, and shall include examination of the quality of workmanship and materials, a review of control testing for compliance with Contract requirements, and inspection for omissions and dimensional requirements.
4. Follow-up Inspections: These shall be performed regularly to assure continuing compliance with Contract requirements, including control testing, until Completion. Final follow-up inspections shall be conducted and deficiencies corrected prior to final acceptance of segments of Work.
5. Tests: A list of QC tests, and the frequency of their performance, which the Contractor understands he is to perform, and on which he is to submit reports shall satisfy the requirements described under 3.03(A) of this section.
6. The Contractor shall submit the list of tests, and the frequency of their performance, as a part of the Contractor's QC Plan, to the Owner/Engineer. The list shall give the test name, Specification Paragraph containing the test requirements, and the personnel and laboratory responsible for each type of test. The Contractor shall perform the following activities:
    a. Verify that testing procedures comply with Contract requirements.
    b. Verify that facilities and testing equipment are available and comply with testing standards.
    c. Check test instrument calibration data against certified standards.
    d. Verify that recording forms, including all of the test documentation requirements, have been prepared.
7. Testing for Laboratory Capability:
    a. Capability Check: Owner/Engineer shall have the right to check laboratory equipment in proposed laboratories for compliance with testing procedures.
    b. Capability Rechecks: If the selected laboratory(ies) fails the capability check the Contractor shall be assessed actual costs to reimburse the Owner/Engineer for each succeeding recheck of the laboratory or the checking of a subsequently-selected laboratory.
8. Documentation:
    a. The Contractor shall maintain records of QC operations, activities and tests performed including the work of suppliers and Subcontractors. These records shall be on an acceptable form and shall include a description of the trades working on the project, the number of personnel working, weather conditions encountered, and delays encountered, and acknowledgement of deficiencies noted along with corrective actions taken on current or previous deficiencies. Additionally these records shall include evidence that required activities or tests have been performed, including but not limited

to the following:

i. Type and number of control activities and tests performed.
ii. Results of control activities or tests, including nature of any defects, causes for rejection, and other information related to deficient features.
iii. Proposed remedies and accomplished corrections.

b. These records shall cover both conforming and defective features and shall include a statement that supplies and materials incorporated in the Work comply with the Contract requirements. Legible copies of these records shall be submitted to the Owner/Engineer.

c. Notification of Noncompliance: Owner/Engineer will notify the Contractor or his designated representative of any observed noncompliance with requirements of this Section. If the Contractor fails or refuses to comply promptly, the Owner/Engineer may issue an order stopping all or part of the Work until satisfactory corrective action has been taken.

1.04 QUALITY ASSURANCE (QA) PROGRAM

A. The Contractor shall provide for all costs associated with implementing a QA testing program within the bid price for General Requirements. No additional payment shall be disbursed by the Owner, as these costs are considered incidental to the lump sum and unit price items.

1.05 WEIGHTS AND MEASURES

A. The Contractor shall weigh and measure its own materials.

B. Give one copy of each delivery's weight or measurement to Owner/Engineer prior to stockpiling or storage.

1.06 REFERENCE STANDARDS

A. Where reference to an industry standard does not include a date of issue, conform to issue current as of date of Contract Documents.

B. Where reference to an industry standard includes a date of issue, conform to issue current as of the date specified.

1.07 INSPECTION AND TESTING LABORATORIES

A. Independent testing laboratories shall perform inspections, tests, and other services specified in individual specification sections, the Contractor's Quality Control Plan, and as required for QA by the Owner/Engineer.

B. Reports and test results shall be submitted by the independent testing laboratory directly to the Owner, indicating observations and results of tests and indicating compliance or noncompliance with the requirements of the specifications.

C. Contractor shall provide access to the work and fully cooperate with laboratory firms. Notify Owner at least 48 hours prior to expected time when work is ready for inspection, sampling, or testing, if not otherwise specified for the particular work to be tested.

D. Retesting required due to nonconformance to specified requirements shall be performed by the same independent testing laboratories on instructions from the Owner/Engineer. Retesting costs shall be borne by the Contractor and will not be applied to any unit price items.

PART 2.00 PRODUCTS

2.01 MATERIALS

A. See applicable Specification Sections for types of material and equipment used on this project.

PART 3.00 EXECUTION

3.01 PRECONSTRUCTION TESTING

A. Prior to construction, identify sources for soil, rock, and bituminous materials and test samples of each material from each source to determine whether they meet the required material specifications.

B. Document all tests. Soil, rock, and bituminous materials shall be accepted or rejected according to the test results. Some or all of the following tests shall be performed in the evaluation of the material properties for construction purposes:

1. ASTM D422 - Particle Size Analysis
2. ASTM D1557 - Moisture/Density Relationship
3. ASTM D2216 - Moisture Content
4. ASTM D2488 - Unified Soils Classification
5. ASTM D854 - Specific Gravity

C. All material evaluation tests shall be performed by the independent testing laboratory retained by the Contractor and approved for use by the Owner/Engineer.

3.02 CONSTRUCTION TESTING

A. Document all tests. Some or all of the following tests shall be performed in the evaluation of the in-place properties of soil and rock materials.

1. ASTM C31 - Making and Curing Test Specimens in the Field
2. ASTM C39 - Compressive Strength of Cylindrical Concrete Specimens
3. ASTM C143 - Concrete Slump Test
4. ASTM D422 - Particle Size Analysis
5. ASTM D1557 - Moisture/Density Relationship
6. ASTM D2216 - Moisture Content
7. ASTM D1556 - Density of Soil in Place by Sand-Cone Method
8. ASTM D2216 - Laboratory Determination of Water Content
9. ASTM D2922 - Density of Soil in Place by Nuclear Methods
10. ASTM D3017 - Water Content of Soil in Place by Nuclear Methods

B. Further material testing may be necessary if alternative sources of material are required during construction or, if based on visual inspection during delivery to the site, it appears that a material

change (color, grain size, plasticity) has occurred. Additional source testing due to change of material shall be borne by the Contractor and will not be applied to any unit price items.

C. Questions concerning the accuracy of any single test shall be addressed by retesting.

3.03 FABRICATION TESTING

A. Document all tests. Some or all of the following tests shall be performed in the evaluation of the in-place properties of coated steel.

1. ASTM D5162- Standard Practice for Discontinuity (Holiday) Testing of Nonconductive Protective Coating on Metallic Substrates

3.04 QC TESTING FREQUENCY

A. All QC testing shall be conducted in accordance with the Contractor's QC Plan. Documentation and reporting of test results shall be the responsibility of the Contractor.

B. Testing frequencies for material/product evaluation and construction quality evaluation are presented in the following table.

Material / Product	RESPONSIBLE PARTY	SITUATION	Test	Minimum Frequency
Epoxy Coating	Contractor	As-Placed	Discontinuity (Holiday) Testing	All painted surfaces

C. Sampling locations shall be approved by the Owner/Engineer.

D. A special testing frequency shall be used at the discretion of the Owner/Engineer when visual observations of construction performance indicate a potential problem. Additional testing for suspected areas shall be considered when:

1. Materials appear substantially different from those specified
2. Directed by the Owner/Engineer

E. During construction, the frequency of testing may also be increased in the following situations:

1. Adverse weather conditions
2. Breakdown of equipment
3. Material fails to meet specification

3.05 QA TESTING FREQUENCY

A. In general, QA testing will be performed at a frequency equal to about 10 percent of the QC testing frequency or as directed by the Owner/Engineer.

3.06 DEFICIENCIES

A. If a defect is discovered, the Contractor shall immediately determine the extent and nature of the defect.

1. If the defect is indicated by unsatisfactory test results, the Contractor shall determine the extent of the deficient area by additional tests, observations, a review of records, or other means that the Contractor deems appropriate. Costs for additional testing shall be borne by the Contractor and not applied to any unit price items.
2. If the defect is related to adverse site conditions, such as overly wet soils or surface desiccation, the Contractor shall define the limits and nature of the defect.

B. After determining the extent and nature of a defect, the Contractor shall notify the Owner/Engineer and schedule for defect repair and retesting.

C. The Contractor shall correct the deficiency to the satisfaction of the Owner/Engineer. If the project specification criteria cannot be met, or if unusual weather conditions hinder work, then the Contractor shall develop and present to the Owner/Engineer suggested solutions for his approval.

D. All retests by the Contractor must verify that the defect has been corrected before any additional work is performed by the Contractor in the area of the deficiency. The Contractor shall also verify that all installation requirements are met and that all required submittals are provided.

END OF SECTION

SECTION 01 70 00

CONTRACT CLOSEOUT REQUIREMENTS

PART 1.00 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Comply with requirements stated in the conditions of the contract and in specifications for administrative procedure in closing out the work.

1.02 SUBSTANTIAL COMPLETION

A. When gates at both locations are reinstalled and fully operational the project will be considered substantially complete. At that time the contractor must provide the following:

1. A written notice that the work, or designated portion thereof, is substantially complete.
2. A list of items to be completed or corrected.

B. Within a reasonable time after receipt of such notice, Owner will review the work to determine the status of completion.

C. Should Owner determine that the work is not substantially complete:

1. Owner will promptly notify the Contractor in writing, giving the reasons therefore.
2. Contractor shall remedy the deficiencies in the work, and send out another written notice of substantial completion to the Owner.
3. Owner will again review the work.

D. When Owner concurs that the work is substantially complete, he will:

1. Prepare a certificate of substantial completion, accompanied by Contractor's list of items to be completed or corrected, as verified and amended by the Owner.
2. Submit the certificate to Contractor and manufacturer for their written acceptance of the responsibilities assigned to them in the certificate.

1.03 FINAL REVIEW

A. When Contractor considers the work is complete, he shall submit written certification that:

1. Contract documents have been reviewed.
2. Work has been inspected for compliance with Contract Documents.
3. Work has been completed in accordance with Contract Documents.
4. Equipment and systems have been tested in the presence of the Engineer and are operational.
5. Work is completed and ready for final review.

B. Owner will make final review to verify the status of completion with reasonable promptness after receipt of such certification.

C. Should Owner consider that the work is incomplete or defective:

1. Owner will promptly notify the Contractor in writing, listing the incomplete or defective work.
2. Contractor shall take immediate steps to remedy the stated deficiencies, and send out another written certification to Owner that the Work is complete.
3. Owner will again review the Work.

D. When the Owner finds that the Work is acceptable under the Contract Documents and that all punch list items have been accomplished to his satisfaction, he shall request the Contractor to make closeout submittals.

1.04 FEES FOR ADDITIONAL REVIEWS

A. Should Owner or Engineer perform additional reviews due to failure of the Work to comply with the claims of status of completion made by the Contractor:

1. Owner or Engineer will be compensated for such additional services.
2. Owner will deduct the amount of such compensation from the final payment to the Contractor.

1.05 CONTRACTOR'S CLOSEOUT SUBMITTALS TO OWNER

A. Operating and Maintenance Data:

1. Instruct the Owner's personnel with regard to equipment, systems and operating specialties which are installed as part of this project.
2. Submit brochures indicating operating instructions and maintenance schedules for all equipment, systems, operating devices and specialties, as specified in Section 01 33 00, SUBMITTALS.
3. Submit detailed maintenance methods and schedules for all materials and equipment provided in this project, as specified in Section 01 33 00, SUBMITTALS.

B. Warranties, Guarantees, and Bonds:

1. In addition to the Warranty and Guarantee Requirements of the General Conditions, provide all other guarantees, bonds, affidavits and certifications required throughout the specifications.

C. Spare parts and maintenance materials for Owner.

D. Reference requirements in the General Conditions and Construction Agreement.

E. Certificate of insurance for products and completed operations.

F. Project Record Drawings - (see Section 01 78 39)

1. Inclusive of red-lined markups and surveyed as-builts of final grades and site features.

1.06 FINAL ADJUSTMENT OF ACCOUNTS

A. Submit a final statement of accounting to Owner.

B. Statement shall reflect all adjustments to the contract sum:

1. The original contract sum.
2. Additions and deductions resulting from:
    a. Previous change orders.
    b. Allowances.
    c. Unit prices.
    d. Deductions for uncorrected work.
    e. Deductions for liquidated damages.
    f. Deductions for re-inspection payments.
    g. Other adjustments.
3. Total contract sum, as adjusted.
4. Previous payments.
5. Sum remaining due.

C. Owner will prepare a final change order reflecting approved adjustments to the contract sum which were not previously made by change orders.

1.07 FINAL APPLICATION FOR PAYMENT

A. Contractor shall submit the final application for payment in accordance with procedures and requirements stated in the General Conditions.

PART 2.00 PRODUCTS

Not Used

PART 3.00 EXECUTION

Not Used

END OF SECTION

SECTION 01 71 13

MOBILIZATION AND DEMOBILIZATION

PART 1 - GENERAL

1.01 WORK INCLUDED

A. This item shall consist of all administrative and overhead cost; preparatory work; operations; and testing; including, but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site, for the establishment of Contractor's field facilities, signage, buildings, and other facilities and accessories (job lighting and power, firefighting provisions, etc.), environmental requirements consistent with the permits necessary for work on the project, and all other work and operations which must be performed or for costs which must be incurred prior to beginning work. All services and materials specified in 01000 GENERAL INSTRUCTIONS shall also be included for payment under this Item.

1.02 SUBMITTALS

A. Submittals for work items shall be in accordance with Section 01 00 00 - General Instructions.

PART 2 - PRODUCTS

1.03 GENERAL

A. Products shall be as required and as specified in other sections.

PART 3 - EXECUTION

1.04 SITE PREPARATION AND RESTORATION

A. Contractor shall provide site access as required for the transport of materials, personnel and equipment to the project site.

B. Contractor shall remove all materials used for access and restore all areas to their pre-construction condition.

C. Contractor shall provide measures to prevent demolition materials from entering existing drainage systems or adjacent water bodies.

D. Excess material shall be removed from the site and become the property of the Contractor.

END OF SECTION

SECTION 01 78 39

PROJECT RECORD DOCUMENTS

PART 1.00 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Maintain at the site for the Owner one record copy of

1. Drawings
2. Specifications
3. Addenda
4. Change orders and other modifications to the contract
5. Engineer field orders or written instructions
6. Reviewed shop drawings, product data and samples
7. Field test records

B. The Contractor will be required to furnish, at no additional expense to the Owner, the services of a surveyor and/or Engineer registered in the state where the project is located and 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 site work.

1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

A. Store documents and samples in Contractor's field office apart from documents used for construction.

B. Provide locked file cabinet for storage of documents.

C. Provide locked cabinet space for storage of samples.

D. File documents and samples in accordance with CSI/CSC format.

E. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.

F. Make documents and samples available at all times for inspection by Engineer and Owner.

1.03 MARKING DEVICES

A. Provide felt tip marking pens for recording information in the color code designated by Engineer.

1.04 RECORDING

A. Label each document "Project Record" in neat large printed letters.

B. Record information concurrently with construction progress.

C. Do not conceal any work until required information is recorded.

D. Drawings: Principal dimensions, elevations and other data, as required, shall be recorded for all work, such as:

1. Deviations of any nature made during construction.
2. Location of underground utilities.
3. Field changes of dimension and detail.
4. Changes made by field order or by change order.
5. Details not on original contract drawings.

E. The marked-up prints shall be inspected weekly by the Engineer and shall be corrected immediately if found either inaccurate or incomplete.

F. Specifications and Addenda: Legibly mark each section to record:

1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
2. Changes made by field order or by change order shall reference the appropriate order on the drawings.

1.05 FINAL MEASUREMENTS

A. The Contractor shall provide qualified personnel and equipment for taking final measurements for quantities and record documents.

B. During and at the completion of the project the Contractor shall complete as-built surveys to accurately and precisely document the completed work within the project LOD:

1. Elevations of inverts of structures, gates, walls, pipes, and instrumentation shall be measured to within 0.01 foot.
2. Ground surfaces shall be surveyed to create a grade map with 1-foot contours with intermittent spot grades.

1.06 RECORD DRAWINGS

A. At the completion of the project, the record prints shall be submitted to the Engineer for final review and comment.

B. The Contractor shall correct, amplify and do all other work as may be required by the Engineer to complete the drawings in a manner satisfactory to the Engineer and at no additional cost to the Owner.

C. Upon approval, the Contractor shall provide two (2) full size copies of the final record drawing set and one (1) in PDF or electronic format to the Engineer. The final record set shall be submitted to the Owner by the Engineer.

1.07 SUBMITTAL

A. Close out submittal shall consist of the following:

1. A cover sheet indicating:
   a. Project Title
   b. Owner's name and address
   c. Contractor's name and address

d. Date of substantial completion
e. Date of final completion
f. Contents of submittal package

2. Final project submittals (submittals marked "rejected" or "revise and resubmit" need not be included)
3. Project RFI's
4. Project record documents (redlined drawings)
5. Electronic copy of close-out survey data

B. At contract close-out, deliver record documents to Engineer for the Owner.

C. Accompany submittal with transmittal letter in duplicate, containing:

1. Date
2. Project title and number
3. Contractor's name and address
4. Title and number of each record document
5. Signature of Contractor or his authorized representative

PART 2.00 PRODUCTS

Not Used

PART 3.00 EXECUTION

Not Used

END OF SECTION

SECTION 02 40 00

DEMOLITION AND REMOVAL

PART 1.00 - GENERAL

1.01 WORK INCLUDED

A. This section covers the work associated with but not limited to:
   1. The removal and offsite disposal of concrete debris.
   2. The removal and offsite disposal of steel relating to the gate structures.
   3. The removal and offsite disposal of miscellaneous metals.
   4. The removal and offsite disposal of epoxy or other removed coatings intended or incidental.

The work shall be executed to the lines and grades shown on the Contract Documents and described in the specifications.

1.02 SUBMITTALS

A. The Contractor shall submit to the Owner and Engineer a schedule of removal and disposal.

B. Contractor shall submit disposal site certification and haul roads for all disposal.

PART 2.00 - PRODUCTS

2.01 GENERAL

A. The Contractor shall provide all materials and equipment in suitable and adequate quantity as required to accomplish the Work shown and specified.

PART 3.00 - EXECUTION

3.01 GENERAL

A. Demolition approaches shall employ low vibration methodologies that limits disturbance to adjacent structure(s) to remain. Vibrations are not to exceed a peak particle velocity of 2 in/sec.

B. No blasting will be permitted.

3.02 STEEL

A. Remove and dispose of all steel or metal components marked for removal.
B. Remove and dispose of all steel or metal components marked for inspection and upon further investigation are required to be replaced.
C. Remove and dispose of all nuts, bolts, and washers incidental to removal.

3.03 PAINTING AND COATINGS

A. Remove and dispose of all coatings and or epoxy present on items denoted to be sandblasted and or disposed of.

3.04 CONCRETE STRUCTURES MARKED FOR DEMOLITION

A. Provide saw cut transitions where concrete structures designated to remain contact the limits of removal.

B. Sections of the stone masonry or concrete walls damaged by the Contractor that are not scheduled for abandonment or removal shall be replaced by the Contractor at no additional cost. This includes excavation and dewatering required to remove or replace damaged sections.

3.05 CONCRETE, MASONRY, AND STONE DEBRIS

A. Remove and dispose of miscellaneous stone material removed to facilitate grubbing and other work items requiring masonry demolition.

B. Stone removed should be stockpiled for reuse elsewhere on-site prior to be removed from the site, including in reconstruction of stone walls partially demolished during construction and for facing of the void filling within the downstream wall left of the primary spillway.

3.06 REMOVE AND STOCKPILE ON-SITE MATERIALS

A. Remove and stockpile on-site earthen fill from the right embankment for later reuse.

B. Materials shall be segregated by material type so as to not be mixed or require further segregation.

C. The suitability of the existing material for later reuse shall be determined by the Engineer or Owner. No material shall be disposed of offsite without the approval of the Engineer or Owner. Suitable soil material shall be used for backfilling or regrading operations or any other use as determined by the Engineer or Owner. All suitable soil material that is temporarily stockpiled on-site shall be protected from adverse weather conditions until the time of installation.

3.07 DISPOSAL

A. No burning of combustible materials will be permitted. Remove all demolition materials from the work site and dispose of in accordance with all Federal, State, and local codes, regulations, and ordinances.

3.08 PROTECTION OF EXISTING UTILITIES

A. Protect existing site improvements from damage during construction.

B. Restore damaged improvements to their original condition, as acceptable to the Engineer.

C. All areas disturbed through the removal and disposal of existing utilities and site improvements outside the limits of final grading shall be loamed and seeded or paved to match or exceed existing conditions.

D. The Contractor shall protect existing utility poles, guy wires, overhead wires, and other electrical or communications elements within and adjacent to the property that may be affected by construction activities.

E. Any damage to these utilities or structures resulting from the construction operation shall be repaired to meet or exceed the existing condition at the Contractor’s expense.

F. Any losses to the property or any other utility company resulting from the interruption of service from

construction, both directly or indirectly, shall be the responsibility of the Contractor, and shall result in no additional cost to the Owner.

G. The Contractor shall make every effort to protect existing utilities including electrical and communications conduits and structures during construction. Any damage to utilities designated to remain shall be repaired immediately at the Contractor's expense.

END OF SECTION

SECTION 03 01 00

Concrete Maintenance and Repair

PART 1.00 - GENERAL

1.01 DESCRIPTION

A. Work Included:

1. Cleaning the concrete of deleterious materials and coatings.
2. Removal of unsound concrete.
3. Repair of cracks, spalls, scaling, and/or delamination.
4. Roughening of the existing concrete surface.
5. Resurfacing of concrete.

1.02 REFERENCES

A. The latest editions of the following American Concrete Institute (ACI) publications shall be used as reference standards:

1. ACI 546R-14 Guide to Concrete Repair

B. The latest editions of the following American Society for Testing and Materials (ASTM) publications shall be used as reference standards:

1. D4259 Practice for Abrading Concrete
2. E965 "Standard Test Method for Measuring Pavement Macrotexture Depth Using a Volumetric Technique"

C. The latest edition of the U.S. Department of the Interior, Bureau of Reclamation, "Best Practices of Preparing Concrete Surfaces Prior to Repairs and Overlays."

1.03 SUBMITTALS:

A. Submit the following:

1. Procedures for the removal of unsound concrete.
2. Procedures for the preparation of the concrete surface.
3. Procedures for the preparation of internal reinforcement.
4. Demolition plan for areas of concrete to be removed including areas and anticipated depths.
5. Repair plan showing the anticipated areas for each repair product to be used.
6. Data sheets for each repair product proposed for use.

1.04 QUALITY ASSURANCE:

A. Provide in accordance with the requirements of the Quality Control section and as specified.

PART 2.00 - PRODUCTS

2.01 GENERAL

A. All products delivered to the site shall be new and unopened. In instances where cases are opened, but individual units are unopened the individual unopened units may be used. Previously opened jugs, individual units, buckets, or other storage containers shall not be used without the permission of the Engineer.

B. Repair products shall be delivered and stored in accordance with manufacture recommendations.

2.02 INJECTION CRACK REPAIR

A. Sikadur 35 Hi-Mod LV LPL, or approved equal epoxy resin adhesive, shall be used to inject cracks.

B. Sikadur 33, or approved equal, shall be used to seal cracks prior to injection.

C. Sikatop 123, or approved equal, shall be used to patch saw cut areas that are too large for pressure injected epoxy resin adhesive and/or fill pock marks, as shown on the plans.

D. Products shall be installed following manufacturer recommendations.

2.03 CONSTRUCTION JOINT REPAIR

A. Closed cell foam backer rod shall be used to fill construction joints deeper than 1 inch.

B. SikaFlex 2c NS, or approved equal, shall be used as a joint sealant for construction joint repair.

C. SikaFix HH, or approved equal, an expandable hydrophilic closed cell foam sealant shall be used as a construction joint filler material on fish passage construction joints.

2.04 BONDING AGENTS

A. Bonding agents shall be used in accordance with manufacture recommendations.

B. When manufacture recommendations list bonding agents as optional; the Contractor shall not apply a bonding agent as part of this work.

PART 3.00 - EXECUTION

3.1 CONCRETE REMOVAL GENERAL

A. The process of concrete preparation for repair is the process by which sound, clean, and suitably roughened surfaces are produced on concrete substrates. This process includes the removal of unsound and, if necessary, sound concrete and bond inhibiting foreign materials from the concrete and reinforcement surfaces, opening the concrete pore structure, and preparation and repair of damaged reinforcement that may be present.

B. Unsound or deteriorated concrete is defined as: concrete affected by weakness, spalling,

delamination, cracking, disintegration, and concrete in areas with cracking due to corrosion of reinforcing steel.

C. Concrete removal involves the removal of unsound material, as well as, some sound concrete to permit for adequate repair geometry, to remove contaminated concrete, to prepare embedded reinforcement, and to permit structural modifications.

D. Do not use methods to remove concrete or to prepare the concrete and reinforcement to receive the repair material that weakens the remaining sound concrete and reinforcement.

E. Structural Safety

1. Review the effect of concrete removal on the structural integrity of a structure prior to removal of existing concrete. Provide temporary shoring in cases where removal of concrete and/or reinforcing steel can affect the load carrying capacity of the structure or its elements. Caution needs to be exercised in order that the safety of the structure is not jeopardized by repair activities.
2. Review details of shoring to be used that are designed and stamped by a Professional Engineer. However, the Contractor is responsible for the safety and adequacy of the shoring system.
3. The limitations for concrete removal such as the depth, reduction of cross section, the amount of concrete removed from the top surface, etc. are subjected to the restrictions described in the contract.

F. Prior to Concrete Removal

1. Examine areas where concrete is to be removed to determine if there are electrical conduits, utility lines, or other embedments in the concrete which may be damaged during removal.
2. If required, enclose work areas with a barrier suitable to confine dust and debris inside the work areas. Inspect the enclosures to ensure they are securely constructed and inspect the enclosure each working day to ensure that there are no holes or tears.
3. Ensure that the level of equipment exhaust fumes (such as from air compressors or portable generators) is within acceptable limits. Use equipment and locate the equipment so that the fumes can be properly exhausted away from occupied areas.
4. Ensure that dust and debris does not constitute a hazard to personnel, equipment, the structure, its occupants and the general public. Keep dust and debris away from the working area by continuous cleaning.

3.2 CONCRETE REMOVAL GEOMETRY

A. The location, number, and extent of defects shown in the Contract are indicative only. The true location, number, and extent of defects requiring repair can only be assessed properly by close inspection and other testing during the course of concrete removal. Mark the limits of each repair with chalk or paint as a series of straight lines on the surface. The limits of each shall be approved by the Engineer before removal begins
B. Modify areas requiring repair to provide for simple layouts. Design the layouts to reduce boundary edge length and eliminate acute angles.
C. Make right angle cuts to the concrete surface by saw cutting, chipping, grinding or hydrodemolition at the perimeters of repairs that involve concrete removal.
D. Measure and record on drawings the extent and depth of concrete removal required. Obtain approval from the Engineer as the work proceeds.

3.3 CONCRETE REMOVAL METHODS

A. Saw Cutting

1. Make saw cut along the perimeter of the area where concrete is to be removed to reduce edge spalling and to provide a sound edge surface against which the repair material will be placed.
2. Make the saw cuts as deep as practical and to a minimum depth of 3/4 inch (19.05 mm). Adjust or eliminate saw cutting to prevent damage to the embedments.
   a. If necessary, use a grinder to create a minimum ¼-inch face perpendicular to the repair surface in areas that cannot be saw cut (Part 3.01.H).
   b. Roughen saw cuts prior to application of the repair material. This can be accomplished by sand blasting at the same time as cleaning of exposed reinforcement.
   c. Care needs to be exercised when roughening the cut surfaces to avoid damage to the repair cavity edges.
3. Use water-wash equipment to remove sawing slurry from the repair area before it dries.
4. Saw overcuts shall be chipped out and repaired in a similar fashion as described within this section. No additional payment shall be made for saw overcut repairs.

B. Chip Cutting

1. This method will only be allowed under special circumstances and will require permission from the Engineer prior to use due to the potential to damage (microfracture) sound concrete outside of the repair area.
2. The boundaries in the chip cutting procedure are the same as in the saw cut procedure, except the repair boundaries are not sawed. The concrete in the center of the repair area is removed using a light jackhammer with a maximum weight of 15 lb (6.8 kg). The concrete near the repair borders is then removed using a light jackhammer with a maximum weight of 15 lb (6.8 kg) and hand tools. The work should progress from the inside of the repair toward the edges, and the chisel point should be directed toward the inside of the repair.

C. Edge Grinding

1. This method will only be allowed under special circumstances.
2. The boundaries in the edge grinding procedure are the same as in the saw cut procedure, except the repair boundaries are not as deep. Make grind cuts along the perimeter of the area where concrete is to be removed to reduce edge spalling and to provide a sound edge surface against which the repair material will be placed.
3. Make the grind cuts as deep as practical and to a minimum depth of approximately 1/4 inch (3 mm). Roughen ground surfaces prior to application of the repair material. This can be accomplished by sand blasting at the same time as cleaning of exposed reinforcement. Care needs to be exercised when roughening the ground surfaces to avoid damage to the repair cavity edges.

D. Hydrodemolition

1. Pressures from hydrodemolition used for concrete removal and surface preparation can be defined as follows:
   a. Low: Maximum 5000 psi (35 MPa)
   b. High: Between 5000 psi and 20,000 psi (35 MPa to 140 MPa)
   c. Ultra high: Between 20,000 psi and 45,000 psi (140 MPa to 310 MPa)
2. Hydrodemolition may be used as a primary means for removal of concrete when it is desired to preserve and clean the steel reinforcement for reuse and to minimize damage to the concrete remaining in place. Hydrodemolition disintegrates concrete, returning it to sand and gravel-sized pieces. This process works preferentially on unsound or deteriorated concrete and leaves a rough profile.

3. Hydrodemolition shall not be allowed for concrete removal if there is a possibility that unbonded post-tensioned systems are within the concrete removal zone. The only viable method of concrete removal in this situation is concrete removal using lightweight chipping hammers.

E. Impact Method Concrete Removal Procedures

1. Delineate the repair boundaries.
2. Remove the deteriorated concrete in the center of the repair using a light jackhammer with a maximum weight of 15 lb (6.8 kg).
3. The work shall progress from the inside of the repair toward the edges.
4. When all unsound concrete in the repair area is removed and repair geometry is established, remove the concrete near the repair borders using a light jackhammer and/or hand
5. tools.
6. Removal near the repair boundaries must be completed with hammers fitted with spade bits. Gouge bits shall not be used along the repair boundary.
7. Jackhammers and mechanical chipping tools should be operated at an angle less than 45 degrees from the vertical.

F. Hydro Demolition Removal Procedures

1. The equipment manufacturer should be consulted to confirm the water demand.
2. Two trial areas, one of sound concrete and one of deteriorated concrete, shall be used to determine the appropriate hydrodemolition operating parameters. These parameters include speed, pressure, and the number of overlapping passes.
    a. Using trial and error in the test areas, the hydrodemolition machine must be programmed to prevent removing sound concrete unnecessarily. In the sound area, consistent concrete removal depth to the prescribed clear space behind the reinforcing bar shall be obtained as a minimum.
    b. After successful cutting of the test area, with specified depth control, the operation shall be moved to the deteriorated concrete, and a test performed to remove all deteriorated concrete. If a result is obtained which meets the specified requirements, these parameters shall be used as a basis for the production removal. If not, the Contractor shall repeat the trial process and recalibrate or replace the equipment until a result which meets the specified requirements is obtained.
    c. Once properly calibrated, the operating parameters should not be changed during hydrodemolition of the deteriorated concrete, unless the concrete changes (for example, a harder aggregate has been used in one section of the structure).
    d. If the concrete does change, the hydrodemolition machine must be recalibrated.
3. All concrete within a marked repair area should be removed to a minimum depth of 2 in (51 mm) with neat vertical faces. Then the repair area must be tested again for soundness. Any additional unsound concrete must be removed by continued hydrodemolition.

3.4 CONCRETE REMOVAL DEPTH

A. Remove all unsound concrete. If during the removal operation, reinforcing steel is exposed, then remove concrete around the bar to provide a minimum 3/4 inch (19.05 mm) clear space between the rebar and surrounding concrete or a clear space of 1/4 inch (6.35 mm) larger than the maximum size aggregate in the repair material, whichever is greater.

B. Remove concrete to a minimum depth suitable for the selected concrete repair material as indicated on the plan details. Some materials may require more concrete removal than removal depth required for removal of damaged concrete.

3.5 CONCRETE REMOVAL ALONG REINFORCING STEEL

A. Proper evaluation of the condition of reinforcing steel exposed in the repair area and proper reinforcement treatment steps are required.

B. The first step in preparing reinforcing steel for repair or cleaning is the removal of deteriorated concrete or chloride contaminated concrete surrounding the reinforcement. Extreme care should be exercised to prevent further damage to the reinforcing or prestressing steel through the process of removing concrete.

1. Impact breakers can damage reinforcing steel if the breaker is used without regard to the location of the reinforcement.
2. Once the larger areas of unsound concrete have been removed, a smaller chipping hammer (15 lbs.) should be used to remove the concrete in the vicinity of the reinforcement. Care should be taken not to vibrate the reinforcement or otherwise cause damage to its bond to concrete adjacent to the repair area.

C. Perform additional concrete removal along corroded exposed bars until a continuous length of 2 in (50 mm) of bar free from corrosion is exposed. Assessing the limit of active corrosion shall be on a visual basis. The edges of any additional areas removed shall be cut square as specified above. The extent of concrete removal shall be agreed to by the Engineer before any removal commences.

D. An additional length of uncorroded bar will have to be exposed if couplers or lap splices are to be used for replacement reinforcement.

3.6 CONCRETE SURFACE ROUGHNESS

A. Substrate roughness depends to a large extent on the method of substrate surface preparation.

B. The decisions about surface preparation, and its roughness in particular, cannot be made without knowing the properties and application requirements of the selected repair/overlay material. If a prepackaged repair material is selected for use, consult the material manufacturer for the required surface roughness.

C. For selecting, specifying and evaluating the concrete surface profile follow the International Concrete Repair Institute (ICRI) Guideline No. ICRI 310.2-19974. The nine concrete surface profile (CSP) chips provide benchmark profiles to aid in achieving the desired results. Each profile carries a number ranging from a base line of 1 (typically designated as CSP-1 which is nearly flat) through 9 (CSP-9, very rough).

3.7 CONCRETE SUBSTRATE SURFACE CLEANING GENERAL

A. For a successful repair, the following conditions must be satisfied:
1. The concrete must be strong and sound;
2. The surface should receive the optimum moisture conditioning;
3. The surface should be free of dust, laitance or any other foreign materials;
4. The surface should have an open pore system;
5. The surface temperature should be within suitable limits to permit proper wetting by the repair materials.

B. Place repair materials as soon as possible after concrete removal and cleaning is completed or protect the cleaned and prepared concrete and reinforcement surfaces from contamination.

3.8 CONCRETE SURFACE CLEANING

A. Concrete removal methods may leave the surface to receive the repair material too smooth, too rough,

too irregular, and without open pores. In these cases, procedures specifically intended for surface cleaning are necessary.

B. First stage cleaning operations shall commence in a repair area after all necessary concrete removal has been completed. The remaining concrete surface must have laitance, partially loosened chips of concrete and the bruised (microcracked) concrete layer, removed by blasting.

C. Second Stage Blasting and Cleaning

1. If in the Engineer's opinion bruising and/or contaminants, or weathered and carbonated concrete surface, which might interfere with bond, are present on the prepared surface, second stage blasting and cleaning must be performed as directed by the Engineer prior to placement of the repair material.
2. If excessive time passes after concrete removal and cleaning before repair material placement is performed, additional cleaning to remove the carbonated surface is justified.

D. The following cleaning techniques consist of removing thin layers of surface concrete using abrasive equipment such as sandblasters, shotblasters, or high-pressure waterblasters. The process uses common abrasive medium as a primary abrading tool. The process may be executed in one of three following methods:

1. Sandblasting — Use sand, silica sand, metallic sand or slag (Black Beauty) as the primary abrading agent.
2. Shotblasting — Shotblasting shall use a self-contained system which separates concrete particulates from metal shot, allowing the shot to be reused and concrete debris to be disposed.
3. Waterblasting — Spray water at pressures between 5,000 and 15,000 psi (35-105 MPa). This technique is suitable for vertical and horizontal surface cleaning.
4. Waterblasting (with abrasive) — Use aluminum oxide or garnet in the waterblasting stream to expose fine aggregates.

3.9 REINFORCEMENT CLEANING, INSPECTION AND REPAIR

A. The initial cleaning of exposed reinforcement shall take place during the concrete surface cleaning procedures using blasting techniques.

B. After the initial cleaning, reinforcing steel shall be carefully inspected to determine whether the steel shall be cleaned or repaired. The objective of the inspection is to determine whether the reinforcing steel is capable of performing as intended by the design. If the cross-section area of the rebar has been reduced by corrosion by more than 25 percent, the Engineer shall make the decision on the actions to be taken. One of three options may be taken:

1. To do nothing;
2. Add supplemental reinforcement;
3. Replacement.

C. Methods of supplementing reinforcement are as follows:

1. Extra reinforcement using straight laps. The concrete should be chipped away to allow placement of the supplemental bar beside the existing bar. The length of the supplemental bar should be equal to the length of the damaged segment of the existing bar plus a lap splice length on each end equal to the lap splice requirements for the smaller bar diameter of the two as specified in the applicable code.
2. Anchored extra reinforcement. Extra reinforcement may be installed with reduced laps by

anchoring the ends at 90° to the concrete face. The ends should be embedded using epoxy cement. Care must be taken to avoid damaging adjacent areas where the existing reinforcement to concrete bond remains intact.

D. The method of replacing reinforcement is to cut out the damaged portion and splice in replacement bar. A conventional lap splice shall be used.

1. When lap splices are not applicable, welded splices or approved mechanical connectors in the form of threaded couplers or bar grips shall be used.
2. If used, welded connections shall require submittal by the Contractor and approval by the Engineer of a welding procedure along with the test results to demonstrate the strength of the welded joint and metallurgical compatibility of the weld material with the reinforcing steel.

E. When epoxy-coated steel reinforcement is exposed in the repair area it should be recoated with an epoxy coating. Special care must be exercised during the recoating operation to achieve defect free full surface coverage.

F. When uncoated reinforcing steel is exposed in the repair area application of a protective coating should not be done, because it may cause corrosion in areas immediately adjacent to the repair area.

G. To reduce the likelihood of “hot spots” from forming, embed galvanic anodes following manufacturer’s recommendations.

3.10 MOISTURE CONDITIONING OF THE CONCRETE SUBSTRATE

A. The optimum moisture condition will vary from substrate to substrate in otherwise equal conditions.

B. The optimum water condition of a concrete substrate for a particular cement-based repair material shall be in accordance with the manufacturer recommendations for the given repair product.

C. In cases where no such recommendation is given, Saturated Surface Dry (SSD) moisture conditioning should be applied. Under this condition the substrate looks damp but contains no free water on the surface.

3.11 MAINTENANCE OF THE PREPARED SURFACE

A. After the substrate has been prepared, it should be maintained in a clean condition and protected from damage until the repair/overlay material is placed.

B. Prepared areas should be protected from repair activities in adjacent areas. Mud, debris, cement, dust, etc., when deposited on a prepared surface, will act as a bond breaker if not cleaned up before the repair material is placed.

C. In hot climates shade should be provided, if practically possible, to keep the substrate cool, thereby reducing rapid hydration or hardening of repair materials. In wintertime, necessary steps should be taken to provide sufficient insulation and/or heat to prevent the repair area from being covered with snow, ice, or snowmelt water.

3.12 QUALITY CONTROL OF SURFACE PREPARATION

A. The integrity and ultimate performance of repairs and overlays is in large part determined by the quality of the existing concrete surface preparation. It is imperative that care be taken, specifications followed, and surface preparation quality control and related decisions be made by qualified personnel.

B. Qualified personnel are required for all inspection operations.

3.13 BONDING AGENTS

A. Bonding agents shall be installed in accordance with Manufacture recommendations.

3.14 APPLICATION OF REPAIR MATERIALS

A. All products shall be installed following manufacture recommendations and procedures.

B. Prior to placement of repair materials, the application surface, application equipment, and the material being applied shall be within the manufactures recommended application temperature. Heating or cooling of the application surface, application equipment, and/or repair material shall be considered inclusive to the work.

END OF SECTION

SECTION 05 50 23

WELDING

Part 1.00 GENERAL

1.01 SUMMARY

A. Section includes general information and execution for welding.

B. Related Sections:

1. SECTION 05 50 00 - METAL FABRICATIONS

1.02 REFERENCES

A. American Society for Nondestructive Testing (ASNT):

1. SNT-TC-1A - Recommended Practice, Personnel Qualification and Certification in Nondestructive Testing

B. American Society of Mechanical Engineers (ASME):

1. Boiler and Pressure Vessel Code

C. American Water Works Association (AWWA):

1. C206 - Field Welding of Steel Water Pipe

D. American Welding Society (AWS):

1. D1.1 - Structural Welding Code - Steel
2. QC1 - Specification for AWS Certification of Welding Inspectors

1.03 SUBMITTALS

A. Shop Drawings:

1. Information regarding the location, type, size, and extent of welds.
2. Distinguish between shop and field welds.
3. 3. Control joints or groups of joints in which the welding sequence is especially important to minimize shrinkage stresses and distortion.
4. Specify the groove depths applicable for the effective throat required for the welding process.
5. Indicate welding positions and the details of the welded joints and the preparation of parent metal that is required to make them.
6. Joints in accordance with AWS D1.1, Section 3 shall be so noted on the Shop Drawings; joints that do not meet this requirement shall be qualified in accordance with AWS D1.1, Section 4.
7. Nondestructive testing procedure specifications prepared in accordance with the applicable Welding Code.

B. Quality Control Submittals

1. Welder/welding operator qualifications.
2. Shop welding inspector credentials.
3. Shop welding inspector's report.

C. Submittals required in this Section shall be submitted and approved prior to performing welding operations.

D. Prequalify welding procedures in accordance with the applicable code:

1. Submit a Welding Procedure Specification for each weld to be used (field or shop). For each Submittal clearly indicate whether the weld is prequalified under the AWS code.
2. Use welds which are prequalified in accordance with AWS D1.1, Clause 3.
3. For special conditions where the CONTRACTOR proposes to use welds which are not prequalified under AWS D1.1, the welds shall be qualified by testing:
   a. Submit a written statement explaining why a prequalified weld cannot be used in the situation.
   b. Submit a Procedure Qualification Record for each weld procedure that is not prequalified, in accordance with AWS D1.1, Clause 4.
   c. Variables noted in the Procedure Qualification Record shall be able to be duplicated and the welder performing the weld shall be qualified to meet the criteria of the submitted weld procedure.

E. Provide welding procedures for, but not limited to, longitudinal and girth or spiral welds for pipe cylinders, spigot and bell ring attachments, reinforcing plate and ring flange welds, plates for lug connections, and structural welding.

1.04 QUALITY ASSURANCE

A. Perform welding with skilled welders, welding operators, and tackers who have adequate experience in the methods and materials to be used. Qualify welders, welding operators, and tackers in accordance with the applicable code. Welders performing field welds on pipe shall be qualified in accordance with AWS D1.1 or ASME Boiler and Pressure Vessel Code, Section IX using test position 6G. Qualify welders for the positions in which they are welding. Welding completed by welders who are not qualified shall be rejected.

B. Welding Inspector: AWS certified, in accordance with AWS QC1, with prior inspections experience of welds specified.

C. Testing Agency: Personnel performing tests shall be NDT Level II Certified in accordance with ASNT SNT-TC-1A.

D. Qualifications:

1. Welders, welding operators, and tackers shall be qualified by an independent, local, approved testing agency. Submit evidence of qualification, including proof that each welder, welding operator, and tacker has been continuously engaged in the given process of welding for which the welder, welding operator, or tacker is qualified with no gaps in experience of more than 6 months. Welders, welding operators, and tackers with gaps in experience of more than 6 months, and those whose ability is questioned by the ENGINEER for a specific reason, shall undergo requalification under the provisions of the applicable standard.

2. Machines and electrodes similar to those used in the Work shall be used in qualification tests. Tests for qualification shall be performed in the presence of the testing agency or in the presence of a certified welding inspector appointed by the testing agency. Furnish material and bear the expense of qualifying welders and furnish copies of certifications to the ENGINEER or designated representative.
3. If radiographic testing is used in lieu of the prescribed AWS bend tests, the weld reinforcements do not need to be ground or otherwise smoothed for inspection unless surface irregularities or the juncture with the base metal would cause objectionable weld discontinuities to be obscured in the radiograph. The test coupon shall be radiographed from the top center line to the bottom center line on either side. Radiographic testing shall follow the procedure in accordance with AWS D1.1. Film and test specimens shall be provided to the ENGINEER.
4. Welders on steel pipe shall be qualified for groove welding in all four positions (flat, overhead, vertical, and horizontal). This qualification can be achieved with a single test or a combination of tests.
5. Welds on pipe less than 24 inches in diameter, welds with groove angles less than 30 degree, or welding performed from one side without backing require their own Welding Procedure Specification and Procedure Qualification Record in accordance with AWS D1.1, Clause 4. The welder also needs to be qualified to perform these procedures in accordance with AWS D1.1, Clause 4.

E. Welding and Nondestructive Testing Requirements:

Welding and nondestructive Testing						
Specification Section No.	**Governing Welding Codes or Standards**	**Submit Welding Procedure Spec.**	**Submit Welder/Operator Qualifications**	**On-Site Welding Construction Project Inspector Required**	**Submit Written Nondestructive Testing Procedure Specifications**	**Nondestructive Testing Requirements**
05 05 23 05 50 00	AWS D1.1 Structural Welding Code-Steel	Yes	Yes	No	No	100% Visual testing of all welds; as specified in this Section

Part 2.00 PRODUCTS (NOT USED)

Part 3.00 EXECUTION

3.01 PREPARATION

A. Site Work: For pipe welding in a trench, excavate the bottom of the trench sufficient to allow for welding and to provide the ENGINEER adequate space to inspect the weld. The bottom of the trench shall not contain standing water.

B. Welders: The ENGINEER will verify that welders on-site have approved Welder Qualification Test Records.

C. Materials:

1. The ENGINEER will verify that filler metals match the Welding Procedure Specification.

2. The ENGINEER will verify that shielding requirements are in accordance with the Welding Procedure Specification.
3. Low hydrogen electrodes (such as E7018) shall be stored in unopened containers or in an oven and shall not exceed a 4 hour to 10 hour exposure time with rebaking in accordance with AWS D1.1.

D. Metal Preparation

1. Parent metal shall be cleaned of all coating, deposits, or residues and shall be dry.
2. Parent metal shall be preheated as detailed on the Welding Procedure Specification. As a minimum, parent metal shall be preheated to 70°F if the metal surface temperature is below 32°F.

E. Wind Considerations: For flux-cored arc welding, Work shall be sheltered if wind speeds are over 5 mph.

3.02 INSTALLATION

A. Welding:

1. In accordance with the applicable AWS codes.
2. For weld procedures qualified by testing, welding shall be performed in the presence of a certified welding inspector.
3. Complete join penetrations on pipe weld:
   a. Use backing plates for pipe diameters less than or equal to 27 inches.
   b. Use back gouging with back welding for pipe diameters over 27 inches.

B. Weld Completion:

1. Allow weld to cool naturally.
2. Do not spray water or other substances on a hot weld to speed up cooling.
3. The Work schedule shall include time for the weld to cool.

3.03 QUALITY CONTROL

A. ENGINEER Inspection: Field welds shall be visually inspected by the CONTRACTOR in accordance with AWS D1.1, Table 6.1 and logged in the daily report.

B. Non-Destructive Testing by the CONTRACTOR:

1. The CONTRACTOR's certified welding inspector shall perform non-destructive testing of 10% of welded joints, as selected by the OWNER using the following methods:
   a. Single welded lap joints: Either dye penetrant or magnetic particle tested.
   b. Single with seal welded lap joints: Air tested in accordance with AWWA C206.
   c. Field butt joints: Ultrasonic testing of 100% of the joints.
2. Certified welding inspector test results shall be submitted to the ENGINEER.
3. Welds with non-passing test results shall be repaired and retested at the CONTRACTOR's expense.

END OF SECTION

SECTION 05 10 01

STRUCTURAL METAL FRAMING FOR VEHICULAR GATES

Part 1.00 GENERAL

1.01 SUMMARY

A. Section includes general information and execution for the structural steel within the vehicular gate structures.

B. Related Sections:

1. SECTION 05 50 00 - METAL FABRICATIONS
2. SECTION 05 05 23 - WELDING
3. SECTION 09 97 02 - EPOXY PAINTING

1.02 REFERENCES

A. American Institute of Steel Construction (AISC):

1. 303 - Code of Standard Practice for Steel Buildings and Bridges
2. 360 - Specification for Structural Steel Buildings
3. Steel Construction Manual

B. American Society of Testing and Materials (ASTM):

1. ASTM A6 - Standard Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling
2. ASTM A36 - Standard Specification for Carbon Structural Steel
3. ASTM A53 - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc Coated, Welded and Seamless
4. ASTM A108 - Standard Specification for Steel Bar, Carbon and Alloy Cold Finished
5. ASTM A123 - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
6. ASTM A153 - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
7. ASTM A276 - Standard Specification for Stainless Steel Bars and Shapes
8. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60000 PSI Tensile Strength
9. ASTM A500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
10. ASTM A563 - Standard Specification for Carbons and Alloy Steel Nuts
11. ASTM A572 - Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel
12. ASTM A774 - Standard Specification for Castings, Iron-Chromium-Nickel, Corrosion Resistant, for Severe Service
13. ASTM B271 - Standard Specification for Copper-Base Alloy Centrifugal Castings
14. ASTM B505 - Standard Specification for Copper Alloy Continuous Castings
15. ASTM D2137 - Standard Test Methods for Rubber Property-Brittleness Point of Flexible Polymers and Coated Fabrics
16. ASTM D2240 - Standard Test Method for Rubber Property - Durometer Hardness
17. ASTM D395 - Standard Test Methods for Rubber Property - Compression Set

18. ASTM D412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension
19. ASTM 471 - Standard Test Method for Rubber Property - Effect of Liquids
20. ASTM E164 - Standard Practice for Contact Ultrasonic Testing of Weldments
21. ASTM F436 - Standard Specification for Hardened Steel Washers Inch and Metric Dimensions
22. ASTM F593 - Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs
23. ASTM F959 - Standard Specification for Compressible-Washer-Type Direct Tension Indicators for Use with Structural Fasteners, Inch and Metric Series
24. ASTM F1554 - Standard Specification for Anchor Bolts, Steel, 36, 55, and 105 ksi Yield Strength
25. ASTM F3125 - Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile StrengthASTM 594 - Standard Specification for Stainless Steel Nuts

C. American Welding Society (AWS):

1. D1.1 - Structural Welding Code - Steel
2. QC1 - Specification for AWS Certification of Welding Inspectors

D. The Society for Protective Coatings (SSPC):

1. SP2 - Hand Tool Cleaning
2. SP3 - Power Tool Cleaning
3. Paint 15 - Steel Joist Shop Primer/Metal Building Primer

1.03 SUBMITTALS

A. Product Data: For the following:

1. Prefabricated structural steel components.
2. Proprietary steel hardware, metal plate connectors, etc.
3. Rubber Gate Seals

B. Shop Drawings: Indicate profiles, sizes, ASTM grading, spacing, and location of structural members including framed openings, attachments, size and type of fasteners, and connections that are not detailed.

C. Templates: For base plates, anchors and bolts.

D. Material Certificates: Provide copies of material certificates signed by material producer and/or subcontractor certifying that each material item complies with or exceeds specified requirements.

E. Welding Certificates

1.04 QUALITY ASSURANCE

A. Fabricator Qualifications:

1. A minimum of 3 years of documented experience in the Work of this Section.
2. Approved by the Manufacturer.

3. For conventionally framed buildings of one to five stories: Certified by AISC's Qualification Program for SBD.
4. For framed buildings greater than five stories or other complex structures: Certified by AISC's Quality Certification Program for CBD or CBR.

B. Erector Qualifications:

1. A minimum of 5 years of documented experience in the Work of this Section or an AISC Certified Advanced Steel Erector.
2. Approved by the Manufacturer.
3. Experienced in erecting structural systems similar in complexity to this Project as evidenced by five completed projects within the previous 3 years.

C. Welder Qualifications: As specified in SECTION 05 05 23.

D. Design Requirements: Connections and elements not detailed on the Drawings shall be designed by the CONTRACTOR. Submit Shop Drawings and calculations prepared, stamped, and signed by a Professional Engineer registered in the State of Rhode Island and in accordance with AISC Manual of Steel Construction.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Store steel off the ground on platforms, skids, or other supports; separate with wooden separators.

B. Protect steel from corrosion.

C. Prevent damage to the prime coat; use wooden protectors to prevent damage from chain or cable cinches.

Part 2.00 PRODUCTS

2.01 STAINLESS STEEL COMPONENTS

A. Stainless steel bars and shapes shall conform to ASTM A276/A276M, UNS S31603, Condition A, hot-finished or cold-finished. Stainless steel bars and shapes shall be used for any components of the canal which may need replacing such as the pins, pad eyes, washers, and winches.

2.02 STAINLESS STEEL BOLTS AND NUTS

A. Stainless steel bolts shall conform to ASTM F593, Grade A. Stainless steel nuts shall conform to ASTM F594, Grade A. Stainless steel bolts and nuts shall be used for all attachments made after the completion of the painting.

2.03 STRUCTURAL STEEL COMPONENTS

A. Structural Steel Beam Sections are to be prepared in accordance with ASTM A992. Steel under this category shall be epoxy coated with a zinc rich primer as described in specification 09 97 02 EPOXY PAINTING.

B. Shop cutting of structural steel may be by mechanically guided or hand-guided torches, provided an accurate profile with a surface that is smooth and free from cracks and notches is obtained

2.04 STEEL SHAPES, BARS, AND PLATES

A. Steel shapes, bars, and plates are to be prepared in accordance with ASTM A36. Steel under this category shall be epoxy coated with a zinc rich primer as described in specification 09 97 02 EPOXY PAINTING.

2.05 NICKEL ALUMINUM BRONZE

A. Bushings shall be nickel aluminum bronze in accordance with ASTM B271/B271M or ASTM B505/B505M, UNS C95800 (nickel aluminum bronze copper casting alloy), and per requirements in specified in Section 35 05 40.17 SELF-LUBRICATED MATERIALS, FABRICATION, HANDLING, AND ASSEMBLY.

2.06 WELDING

A. All welding shall be performed in accordance with AWS D1.1. Surfaces and edges to be welded shall be prepared in accordance with AWS D1.1. All welding shall be by an electric arc welding process using a method which excludes the atmosphere from the molten metal. The electrode, electrode-flux combination, and grade of weld metal shall conform to the appropriate AWS Specification for the base metal and welding process being used. All welds shall be prequalified as described in AWS D1.1, specification 05 05 23 WELDING.

2.07 RUBBER SEAL

A. All of the vehicular gate rubber seals shall be replaced in-kind. Rubber seal dimensions and configurations shall be as shown in accordance with the details on Sheet 65 of the Information Drawings. The Contractor shall verify existing rubber seal dimensions prior to fabrication. The rubber seal compound shall be either natural rubber or neoprene and shall be molded only. The seals shall have molded corners and splices shall be vulcanized. The compound shall have no reclaimed polymers and include reinforcing carbon black, zinc oxide, accelerators, antioxidants, vulcanizing agents and plasticizers. The rubber seal profile shall be properly cured into a homogeneous form and kept free of oils, grease, or other materials which would deteriorate the rubber. Physical characteristics of the seals shall meet the following minimum requirements:

1. Compound Options: Natural Rubber/Neoprene

PHYSICAL TEST	TEST VALUE	SPECIFICATION
DUROMETER HARDNESS (SHORE A)	60 - 70	ASTM D2240
TENSILE STRENGTH	2500 PSI (MIN)	ASTM D412
ELONGATION AT BREAK	400%(MIN)	ASTM D412
300% MODULUS	900 PSI (MIN)	ASTM D412
COMPRESSION SET	30% (MAX)	ASTM D395 METHOD B
WATER ABSORPTION	10% BY WEIGHT (MAX)	ASTM D471

2. Natural Rubber and Blends - Aged then immersed at 70 deg C for 166 hours
3. Neoprene - Aged then immersed at 212 deg C for 22 hours.
4. Aging: Tensile Strength minimum 4880% of strength per ASTM A572.
   a. Low temperature brittleness: non brittle
      i. 3' at - 40 deg C: Natural Rubber per ASTM2137 Method A
      ii. 3' at -25 deg C: Neoprene per ASTM2137 Method A

Part 3.00 EXECUTION

3.01 FABRICATION

A. Fabrication shall be in accordance with the applicable provisions of AISC 360. Fabrication and assembly shall be done in the shop to the greatest extent possible. The fabricating plant shall be certified under the AISC quality certification program for Category II structural steelwork. Ends shall be square within the tolerances for milled ends specified in ASTM A6/A6M. Structural steelwork shall be prepared for painting in accordance with Section 09 97 02 EPOXY PAINTING.

B. Fabricate in accordance with AISC 303 and AISC 360.

C. Welding: As specified in SECTION 05 05 23.

D. Where a collection of water inside the structural tubing could occur, provide a drilled drain hole at the lowest point.

E. Cap the open ends of tubes and seal the weld. Wherever practicable, weld connections all around. Seal seams that cannot be welded with joint sealer.

F. Shop Primer Painting:

1. Shop prime steel surfaces except:
   a. Surfaces that are to be welded.
   b. Contact surfaces of high-strength friction type bolted connections.
   c. Surfaces to receive direct-applied fireproofing.
2. Surface preparation: In accordance with SSPC-SP2 or SSPC-SP3.
3. Application: One coat; follow the Coating Manufacturer's instructions.
4. MDFT: 2 mils.
5. Paint primer shall be compatible with finish coating and as specified in SECTION 09 97 02.

3.02 ERECTION

A. Erect structural steel in accordance with AISC 303 and AISC 360.

B. Notify the ENGINEER in writing at least 2 days prior to structural steel fabrication and erection.

C. Accurately assemble to the lines and elevations shown on the Drawings within specified erection tolerances.

D. Align and adjust members forming parts of the complete frame or structure after assembly but before fastening.

E. Provide templates for setting anchor bolts. Position anchor bolts by using templates with two nuts to secure in place prior to the placement of concrete.

F. Clean bearing surfaces and surfaces that will be in permanent contact before assembling members.

G. Locate splices only where shown on the Drawings.

H. Tighten erection bolts and leave in place or remove bolts and fill holes with plug welds.

I. Do not correct fabrication by gas cutting unless authorized, in writing, by the ENGINEER.

J. High-Strength Bolted Connections:

1. Tighten in accordance with AISC 303 and 360.
2. Hardened washers:
   a. Provide hardened washers at the locations required by AISC for structural joints; include slip-critical connections using slotted or oversized holes or bolts in accordance with ASTM F 3125.
   b. Use beveled style and extra thickness where required.
   c. Do not substitute direct tension indicators for hardened flat washers at slotted and oversized holes.
3. For bearing type connections not fully tensioned, tighten to a snug-tight condition; use a hardened washer over slotted or oversized holes in outer members.
4. Use tension-control bolts only in snug-tight bearing connections.

K. Fully tensioned bolted connections:

1. Use direct tension indicators at slip-critical and fully tensioned bearing connections.
2. Position within the bolted assembly in accordance with ASTM F 959.
3. Install bolts, with direct tension indicators plus hardened washers as required, in the holes of the assembly and tighten until members are in firm contact and fasteners are uniformly tight.
4. Final tighten bolts by beginning at the most rigid part of the bolted connection and progressing toward the free edges until direct tension indicators are compressed to the average gap equal to or less than shown in Table 2, ASTM F 959.

L. Installation Tolerances:

1. Maximum variation from plumb: 1/4 inch in 10 feet, noncumulative.
2. Maximum variation from level: 1/4 inch in 10 feet, noncumulative.
3. Maximum offset from alignment of adjacent members: 1/4 inch.

M. Finish Coating: As specified in SECTION 09 97 02.

3.03 REPAIRS TO THE VEHICULAR GATES

A. Rubber Seals and Seal Retaining Bars

1. All rubber seals, seal retaining bars, and 5/8" diameter bolts attaching the seal retaining bars to the gates shall be replaced.

3.04 QUALITY CONTROL

A. Non-Destructive Testing by the CONTRACTOR:

1. The CONTRACTOR shall perform Holiday Tests and provide results to all shop painted steel prior to installation.

B. For testing and inspection services provided by an outside entity:

1. Inspect steel elements for conformance to the specified requirements including:
   a. Location and adequacy of bracing.
   b. Location and set of anchor bolts and other inserts.
   c. Alignment, plumb, camber, and other required attributes.
2. Inspect strength bolted construction in accordance with AISC 303 and AISC 360 and as follows:
   a. Visually inspect high-strength bolted connections.

b. Check at least three bolts of every diameter, length, and grade with a calibrated torque wrench for proper torque.

3. Inspect fully tensioned bearing and slip-critical connections in accordance with AISC 303 and AISC 360 and as follows:
   a. Conduct a pre-installation test:
      i. Prior to the start of Work, check at least three bolts of every diameter, length, and grade with a calibrated torque wrench for proper torque.
      ii. Include direct tension indicators and flat hardened washers to match the actual connection assembly.
   b. Monitor the installation and tightening of direct tension indicators.
   c. Monitor the condition of contact surfaces for slip-critical connections.
4. Inspect field welds in accordance with AWS D1.1 and as follows:
   a. Visually inspect welds.
   b. Test full penetration welds by ultrasonic method in accordance with ASTM E 164.
      i. Welded structural components supporting machinery, cranes, or vehicular traffic shall be evaluated for cyclical loading criteria.
5. Inspect post-installed anchors, mechanical and adhesive, in accordance with the Manufacturer's requirements, including:
   a. Preparation and cleaning of holes.
   b. Anchor size and embedment length.
   c. Adhesive installation and curing.
6. Make one set of six test cubes for each 1/3 cubic yard of grout placed or fraction thereof:
   a. Mold and test cubes in accordance with ASTM C 109; three at 7 days and three at 28 days.

C. Prevent grout from expansion by the use of a top plate.

END OF SECTION

SECTION 05 50 00

METAL FABRICATIONS

Part 1.00 GENERAL

1.01 SUMMARY

A. Section includes general information, products, and execution for metal fabrications for miscellaneous connections, non structural, and steel relating to the ladder and operational platform.

B. Related Sections:

1. SECTION 05 05 23 - WELDING
2. SECTION 09 97 02 - EPOXY PAINTING

1.02 REFERENCES

A. ASTM International (ASTM):

1. A 36 - Standard Specification for Carbon Structural Steel
2. A 47 - Standard Specification for Ferritic Malleable Iron Castings
3. A 48 - Standard Specification for Gray Iron Castings
4. A 108 - Standard Specification for Steel Bar, Carbon and Alloy, Cold-Finished
5. A 153 - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
6. A 242 - Standard Specification for High-Strength Low-Alloy Structural Steel
7. A 276 - Standard Specification for Stainless Steel Bars and Shapes
8. A 283 - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates
9. A 354 - Standard Specification for Quenched and Tempered Alloy Steel Bolts, Studs, and Other Externally Threaded Fasteners
10. A 480 - Standard Specification for General Requirements for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet, and Strip
11. A 489 - Standard Specification for Carbon Steel Lifting Eyebolts
12. A 500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
13. A 501 - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing
14. A 510 - Standard Specification for General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel, and Alloy Steel
15. A 653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
16. A 666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar
17. A 780 - Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings
18. A 786 - Standard Specification for Hot-Rolled Carbon, Low-Alloy, High-Strength Low-Alloy, and Alloy Steel Floor Plates
19. A 1008 - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable

20. A 1011 - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength
21. B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate
22. B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes
23. B 241 - Standard Specification for Aluminum and Aluminum-Alloy Seamless Pipe and Seamless Extruded Tube
24. C 881 - Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete
25. D 746 - Standard Test Method for Brittleness Temperature of Plastics and Elastomers by Impact
26. D 1505 - Standard Test Method for Density of Plastics by the Density-Gradient Technique
27. D 1525 - Standard Test Method for Vicat Softening Temperature of Plastics
28. F 436 - Standard Specification for Hardened Steel Washers
29. F 468 - Standard Specification for Nonferrous Bolts, Hex Cap Screws, Socket Head Cap Screws, and Studs for General Use
30. F 844 - Standard Specification for Washers, Steel, Plain (Flat), Unhardened for General Use

1.03 SUBMITTALS

A. Product Data: For the manufactured products used in metal fabrication, operational ladder, and operational platform. Ladder and platform shall meet State and local building code requirements.

B. Shop Drawings: Dimensions, metal thicknesses, finishes, joints, attachments, and relationship of Work to adjacent construction.

C. Finish Data.

D. Quality Control Submittals:

1. Provide the Manufacturer's design and calculations prepared, stamped, and signed by a Professional Engineer registered in the State of Rhode Island for platform structures.
2. Testing procedures for proof loading of adhesive anchor reinforcement.
3. Testing plan for epoxy adhesive anchors.
4. Location plan for epoxy adhesive anchors.

1.04 QUALITY ASSURANCE

A. Fabricator Qualifications: A minimum of 5 years of documented experience in the Work of this Section.

Part 2.00 PRODUCTS

2.01 APPROVED MANUFACTURERS:

A. Anti-seizing Lubricant:

1. Locite Co., ITW Permatex, Inc.

2.02 MATERIALS:

A. Carbon Steel:

1. Structural Steel: In accordance with A992 grade 50 steel.
2. Plates and Angles: In accordance with ASTM A36.
3. Structural Tubing: In accordance with ASTM A500 grade B.
4. High Strength Bolts: In accordance with A325, Type III.
5. Anchor Rods: In accordance with F1554, grade 36.
6. Headed Studs: In accordance with A108, grade 50.
7. Drill & Epoxy Anchor rods: In accordance with A449.
8. Steel framing, connections, and components: shall be hot dipped galvanized in accordance with ASTM A123.
9. Fasteners: shall be in accordance with ASTM F2329.

B. CI: In accordance with ASTM A 48, Class 30, or ASTM A 47.

C. Aluminum:

1. Extrusions: In accordance with ASTM B 221, 6061-T6 alloy and temper.
2. Sheet: In accordance with ASTM B 209, alloy and temper best suited to application.
3. Pipe: Extruded, anodizing quality, 6063 aluminum pipe, Schedule 40, in accordance with ASTM B 241.
4. Perforated metal:
   a. In accordance with ASTM B 209, Type: 3003-H14 or 5052-H32.
   b. Thickness: Minimum 12 gauge.
   c. Pattern: 3/16 inch round holes at 1/4 inch staggered centers, finished ends, minimum side margins, and 2 inch end margins.
   d. Open area: Approximately 50%.
5. Bolts: In accordance with ASTM F 468, Alloy 2024-T4.

D. Stainless Steel:

1. Bars and shapes: In accordance with ASTM A 276; Type 316.
2. Other SST: Rollable temper, in accordance with ASTM A 480 or ASTM A 666; Type 304 or 316.
3. Bolts, nuts, and washers: In accordance with ASTM F 593-17, Type 316.

E. Steel Bar Gratings:

1. Formed steel sheet for welding, riveting, or pressure locking: Rectangular shape, in accordance with ASTM A 1011.
2. Steel rod for cross bars: In accordance with ASTM A 510.

F. Aluminum Bar Gratings: As specified in SECTION 05 51 02.

2.03 ACCESSORIES

A. Exposed Screws: The same material as the metal being fastened; Phillips flat head, countersunk, unless otherwise noted.

B. Steel: Hexagonal head type, as specified in SECTION 05 12 00.

1. Galvanized steel bolts: Provide zinc coating in accordance with ASTM A 153.

C. Eye Bolts: Type 2 shoulder type, in accordance with ASTM A 489.

D. Threaded Rods: In accordance with ASTM A 36.

E. Flat Washers (Unhardened): In accordance with ASTM F 844, with zinc coating in accordance with ASTM A 153.

F. Flat Washers (Hardened): In accordance with ASTM F 436.

G. Anchor Bolt Sleeves:

1. High-density PE plastic:
   a. Single unit construction with deformed sidewalls.
   b. Self-threaded top of sleeve.
   c. Material requirements:
      i. Plastic: High-density PE.
      ii. Density: In accordance with ASTM D 1505.
      iii. Vicat softening point: In accordance with ASTM D 1525.
      iv. Brittleness temperature: In accordance with ASTM D 746.
2. Fabricated steel sleeve: In accordance with ASTM A 36.

H. Anti-Seizing Lubricant: Containing substantial amounts of molybdenum disulfide, graphite, mica, talc, or copper.

I. Concrete Anchors for Operational Platform and Ladder

1. Adhesives for slide gate anchors shall be provided in accordance to the gate manufacturer's recommendations.

J. Miscellaneous Concrete Anchors

1. Epoxy bonding/grouting adhesive shall be a multi-purpose 2 component, 100% solids, moisture tolerant structural epoxy adhesive conforming to the current ASTM C881 specifications.

2. Acceptable products:

   a. "HIT-RE 500 Epoxy Adhesive" as manufactured by Hilti.
   b. "AT-XP" as manufactured by Simpson Strong-Tie
   c. Or approved equal.

2.04 FABRICATION

A. Fit and shop assemble items in the largest practicable sections for delivery to the site.

B. Use materials clean and free of mill scale, flake rust, and rust pitting.

C. Fabricate to the dimensions shown on the Drawings or accepted on the Shop Drawings using proven details of fabrication and support.

D. Fabricate exposed Work true to line and level with accurate angles and smooth surfaces and straight sharp edges.

E. Fabricate items with joints tightly fitted and secured.

F. Ease exposed edges to a radius of approximately 1/32 inch unless otherwise shown on the Drawings. Form bent metal corners to the smallest radius possible without causing grain separation or otherwise impairing the Work.

G. Grind exposed joints flush and smooth with the adjacent finish surface. Make exposed joints butt tightly, flush, and hairline.

H. Exposed Mechanical Fastenings: Flush countersunk screws or bolts, unobtrusively located, consistent with the design of the component.

I. Supply the components required for the anchorage of fabrications. Fabricate anchors and related components of the same material and finish as the fabrication.

J. Conceal fastenings where possible.

K. Welding: As specified in SECTION 05 05 23.

Part 3.00 EXECUTION

3.01 PREPARATION

A. Provide setting drawings, templates, instructions, and directions for the installation of anchors, inserts, sleeves, anchor bolts, and miscellaneous items that are to be embedded in concrete or masonry construction per manufacturers recommendations.

B. Field Measurement: Check the actual locations of construction to which metal fabrications shall fit by accurate field measurement prior to fabrication. Show recorded measurements on the final Shop Drawings.

3.02 INSTALLATION

A. Install items in accordance with approved Shop Drawings.

B. Install components plumb, level, rigid, and free of rack.

C. Set accurately in location, alignment, and elevation.

D. Allowable Tolerances:

1. Maximum variation in straightness, elevation, plumb, level, line or true: 1/4 inch in 10 feet.

E. Welding: As specified in SECTION 05 05 23.

F. Provide the appropriate type and size of anchorage devices and fasteners for securing the fabrications to in-place construction that is adequate to support anticipated loads.

G. Install sleeved components with anchoring cement.

H. Use anti-seizing lubricant on SST threads.

I. Prevent the contact of dissimilar metals and aluminum and concrete from each other by use of zinc-rich paint, bituminous coating as specified in SECTION 09 90 00, or nonabsorptive gaskets.

3.03 ADJUSTING

A. Clean and touch up damaged primer paint with the same product as applied in the shop.

B. Clean and touch up galvanized coatings at welded and abraded surfaces in accordance with ASTM A 780, Annex A2.

END OF SECTION

SECTION 09 97 02

Epoxy Painting

Part 1.00 GENERAL

1.01 WORK INCLUDED

A. The work covered under this Section includes, but is not limited to, the furnishing of all plant, labor, equipment, appliances and materials including all epoxy paints, primers, and performing all operations in connection with epoxy coating the steel components as specified in the Contract Documents.

B. Operations shall be carried out in accordance to all Federal, State, and local rules and regulations and be performed by a qualified individual as described in Section 1.04 of this specification.

1.02 REFERENCES

A. The following standards (latest edition) shall apply to the work of this Section.

1. American Society of Testing Materials (ASTM):
   - D4417 Standard Test Methods for Field Measurement of Surface Profile of Blast Cleaned Steel
   - D7091 Standard Practice for Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to Ferrous Metals and Nonmagnetic, Nondestructive Coatings Applied to Non-Ferrous Metals
   - D5162 Discontinuity Testing of Nonconductive Protective Coating on Metallic Substrates.
2. Society for Protective Coatings (SSPC)
   - SSPC QP 1 Standard Procedure for Evaluating Painting Contractors (Field Application to Complex Industrial Structures
   - SSPC QP 2 Standard for Evaluating Painting Contractors (Removal of Hazardous Coatings from Industrial/Marine Structures)
   - SSPC SP 1 Solvent Cleaning
   - SSPC SP 5 White Metal Blast Cleaning
   - NACE No. 1
3. US Department of Defense (DOD)
   - MIL-DTL-24441 Paint, Epoxy-Polyamide, General Specification for

B. All work within this specification shall be performed as written herin.

1.03 SUBMITTALS

A. Submit the following:

1. Batch plant details giving the location, layout, capacity, and type of batch plant and the method of transporting concrete from the batch plant to the work location. Contractor shall provide documentation that all requirements of local authorities and regulations have been met.
2. Manufacturer's Product Data
3. Inspection Reports: Holidays test of potential discontinuities in the materials application.
4. Certifications:
   a. SSPC QP 1 Certificate

b. SSPC QP 2 Certificate
c. Coating thickness gauge qualifications

1.04 QUALIFICATIONS

A. Qualified Painting Contractor

1. Provide a certified SSPC QP 1 Painting Contractor to perform all preparation and painting work of this contract. Submit a copy of the SSPC QP 1 Certificate.

B. Qualified Hazardous Paint Removal Contractor

1. Provide a certified SSPC QP 2 Painting Contractor to perform all preparation for painting work of this contract. Submit a copy of the SSPC QP 2 Certificate

C. Coating Thickness Gauge Qualification

1. Submit Coating Thickness Gage Qualification documentation of manufacturer's certification for all coating thickness gages. Magnetic flux thickness gages as described in ASTM D7091 shall be used to make all coating thickness measurements on ferrous metal substrates. Gages shall have an accuracy of +/- 3 percent or better. Gages to be used on the job shall be certified by the manufacturer as meeting these requirements.

1.05 DELIVERY, STORAGE AND HANDLING

A. Paint utilized shall be processed and packaged within one year of the application date to lessen the occurrence of gel, liver, any other thicken defects , or gas potential during application. Paints, unless otherwise specified or permitted, shall be packaged in standard containers not larger than 5 gallons, with removable friction or lug-type covers. Each container of paint or separately packaged component thereof shall be labeled to indicate the purchaser's order number, date of manufacture, manufacturer's batch number, quantity, color, component identification and designated name, and formula or specification number of the paint together with special labeling instructions, when specified. Paints that can be harmed by exposure to cold weather shall be stored in ventilated, heated shelters. All paints shall be stored under cover from the elements and in locations free from sparks and flames.

B. Other handling and storage recommendations per the manufacturer not listed herein shall also be followed.

1.06 JOBSITE CONDITIONS

A. Paint shall be applied only to surfaces that are above the dew point temperature and that are completely free of moisture as determined by sight and touch. Paint shall not be applied to surfaces upon which there is detectable frost or ice. Except as otherwise specified, the temperature of the surfaces to be painted and of air in contact therewith shall be not less than 45 degrees F during paint application nor shall paint be applied if the surfaces can be expected to drop to 32 degrees F or lower before the film has dried to a reasonably firm condition. During periods of inclement weather, painting may be continued by enclosing the surfaces and applying artificial heat, provided the minimum temperatures and surface dryness requirements prescribed previously are maintained. Paint shall not be applied to surfaces heated by direct sunlight or other sources to temperatures that will cause detrimental blistering, pinholing, or porosity of the film.

Part 2.00 PRODUCTS

Not Used

Part 3.00 EXECUTION

3.01 CLEANING AND PREPARATION OF SURFACES TO BE PAINTED

A. The Contractor shall note that steel repairs may be necessary to the gates after the cleaning and blasting work is completed, and before painting is begun. All potential steel repair work shall be coordinated with the Contracting Officer prior to the start of any painting work. If steel repair to the gates becomes necessary, an equitable adjustment will be made to the contract.

1. General Requirements
   a. Clean all ferrous metal surfaces of the canal gates to be painted before applying paint. Remove deposits of grease or oil in accordance with SSPC SP 1, prior to mechanical cleaning. Solvent cleaning shall be accomplished with mineral spirits or other low toxicity solvents having a flash point above 100 degrees F. Use clean cloths and clean fluids to avoid leaving a thin film of greasy residue on the surfaces being cleaned. Protect items not to be prepared or coated from damage by the surface preparation methods. Machinery shall be protected against entry of blast abrasive and dust into working parts. Cleaning and painting shall be so programmed that dust or other contaminants from the cleaning process do not fall on wet, newly painted surfaces, and surfaces not intended to be painted shall be suitably protected from the effects of cleaning and painting operations. Welding of, or in the vicinity of, previously painted surfaces shall be conducted in a manner to prevent weld spatter from striking the paint and to otherwise reduce coating damage to a minimum; paint damaged by welding operations shall be restored to original condition.

2. Ferrous Surfaces
   a. Ferrous surfaces of the canal gates shall be dry blast-cleaned to SSPC SP 5/NACE No. 1 "White Metal Blast Cleaning". Water blasting is not permitted. The blast profile, unless otherwise specified, shall be 1.5 to 2.5 mils as measured by ASTM D4417, Method C. Appropriate abrasive blast media shall be used to produce the desired surface profile and to give an angular anchor tooth pattern. If recycled blast media is used, an appropriate particle size distribution shall be maintained so that the specified profile is consistently obtained. Steel shot or other abrasives that do not produce an angular profile shall not be used. Weld spatter not dislodged by blasting shall be removed with impact or grinding tools and the areas reblasted prior to painting. Surfaces shall be dry at the time of blasting. Within 8 hours after blast cleaning, and in any case prior to the deposition of any detectable moisture, contaminants, or corrosion, all ferrous surfaces shall be cleaned of dust and abrasive particles by brush, vacuum cleaner, and/or blown down with clean, dry, compressed air, and given the first coat of paint.

3.02 PAINTING APPLICATION

1. General
   a. The finished coating shall be free from holidays, pinholes, bubbles, runs, drops, ridges, waves, laps, excessive or unsightly brush marks, and variations in color, texture, and gloss. Application of initial or subsequent coatings shall not commence until the Contracting Officer has verified that atmospheric conditions and the surfaces to be coated are satisfactory. Each paint coat shall be applied in a manner that will produce an even, continuous film of uniform thickness. Edges, corners, crevices, seams, joints,

welds, rivets, corrosion pits, and other surface irregularities shall receive special attention to ensure that they receive an adequate thickness of paint. Spray equipment shall be equipped with traps and separators and where appropriate, mechanical agitators, pressure gauges, pressure regulators, and screens or filters. Air caps, nozzles, and needles shall be as recommended by the spray equipment manufacturer for the material being applied. Airless-type spray equipment may be used only on broad, flat, or otherwise simply configured surfaces, except that it may be employed for general painting if the spray gun is equipped with dual or adjustable tips of proper types and orifice sizes.

2. Mixing and Thinning
   a. Paints shall be thoroughly mixed, strained where necessary, and kept at a uniform composition and consistency during application. Dry-powder pigments specified to be added at the time of use shall, with the aid of powered stirrers, be incorporated into the vehicle or base paint in a manner that will produce a smooth, homogeneous mixture free of lumps and dry particles. Where necessary to suit conditions of the surface temperature, weather, and method of application, the paint may be thinned immediately prior to use. Thinning shall generally be limited to the addition of not more than 1 pint per gal of the proper thinner; this general limitation shall not apply when more specific thinning instructions are provided. Paint that has been stored at low temperature, shall be brought up to at least 70 degrees F before being mixed and thinned, and its temperature in the spray tank or other working container shall not fall below 60 degrees F during the application. Paint that has deteriorated in any manner to a degree that it cannot be restored to essentially its original condition by customary field-mixing methods shall not be used and shall be removed from the project site. Paint and thinner that is more than one year old shall not be used.

3. Time Between Surface Preparation and Painting
   a. Surfaces that have been cleaned and/or otherwise prepared for painting shall be primed as soon as practicable after such preparation has been completed but, in any event, prior to any deterioration of the prepared surface.

4. Method of Paint Application
   a. Unless otherwise specified, paint shall be applied by brush, roller, or spray to ferrous metal surfaces. Special attention shall be directed toward ensuring adequate coverage of edges, corners, crevices, pits, rivets, bolts, welds, and similar surface irregularities. Other methods of application to metal surfaces shall be subject to the specific approval of the Contracting Officer.

5. Coverage and Film Thickness
   a. Film thickness or spreading rates shall be as specified hereinafter. Where no spreading rate is specified, the paint shall be applied at a rate consistent with the manufacturer's written instructions. In any event, the combined coats of a specified paint system shall completely hide base surface and the finish coats shall completely hide undercoats of dissimilar color.

   b. Where dry film thickness requirements are specified for coatings on ferrous surfaces, measurements shall be made with a gage qualified in accordance with paragraph Coating Thickness Gage Qualification. They shall be calibrated and used in accordance with ASTM D7091. Prior to each use the Base Metal Reading (BMR) shall be established for the gage as specified in the test method. Accuracy of the gage shall be verified using plastic shims as specified by the test method both prior to and following each set of

measurements. Frequency of measurements shall be as recommended for field measurements by ASTM D7091, except that measurements shall be performed on all areas of the structure being coated. Thickness measurements shall be reported as the mean for each spot determination.

6. Progress of Painting Work
   a. Where painting on any type of surface has commenced, the complete painting operation, including priming and finishing coats, on that portion of the work shall be completed as soon as practicable, without prolonged delays. Sufficient time shall elapse between successive coats to permit them to dry properly for recoating, and this period shall be modified as necessary to suit adverse weather and temperature conditions. Paint shall be considered dry for recoating when it feels firm, does not deform or feel sticky under moderate pressure of the finger, and the application of another coat of paint does not cause film irregularities such as lifting or loss of adhesion of the undercoat. All coats of all painted surfaces shall be unscarred and completely integral at the time of application of succeeding coats. At the time of application of each successive coat, undercoats shall be cleaned of dust, grease, overspray, or foreign matter by means of airblast, solvent cleaning, or other suitable means. Undercoats of high gloss shall, if necessary for establishment of good adhesion, be scuff sanded, solvent wiped, or otherwise treated prior to application of a succeeding coat.

7. Drying Time Prior to Immersion
   a. Minimum drying periods after final coat prior to immersion shall be at least 5 calendar days. Minimum drying periods shall be increased twofold if the drying temperature is below 65 degrees F.

8. Protection of Painted Surfaces
   a. Items that have been painted shall not be handled, worked on, or otherwise disturbed until the paint coat is fully dry and hard. All metalwork coated shall be stored out of contact with the ground in a manner and location that will minimize the formation of water-holding pockets; soiling, contamination, and deterioration of the paint film, and damaged areas of paint on such metalwork shall be cleaned and touched up without delay.

B. Forms shall be removed in such a manner as to ensure the complete safety of the structure. In no case shall supporting forms or shoring be removed until members have acquired sufficient strength to support their weight and imposed loads safely.

3.03 PAINT SYSTEMS APPLICATION

A. The required paint system and the surfaces to which they shall be applied are shown in this paragraph. Supplementary information follows.

1. Surface Preparation
   a. The method of surface preparation and pretreatment shown in the tabulation of paint systems is for identification purposes only. Cleaning and pretreatment of surfaces prior to painting shall be accomplished in accordance with detailed requirements previously described.
2. System No. 21-A-Z
   a. The epoxy zinc-rich paint 19B shall be applied in two single half-lapped spray coats to an average dry film thickness of a minimum of 4.0 mils, and a thickness at any point of not less than 2.5 mils or greater than 8.0 mils. After a drying period of not less than 6 hours

nor more than 96 hours, at least two coats of epoxy polyamide paint shall be applied to produce an average dry film thickness totaling 12 mils. If the epoxy zinc-rich paint has been permitted to cure for longer than 96 hours, it shall be abraded and recoated with an additional thin tack coat of the zinc-rich paint, which in turn shall be overcoated within 96 hours with the first coat of the epoxy polyamide paint. When applying MIL-DTL-24441, the type of thinner, amount of thinning, and required induction time shall be as recommended by the manufacturer. The drying time between non-zinc coats shall not be less than 12 hours nor more than 96 hours. Color of top coats shall be as selected by the Contracting Officer from manufacturer's standard colors.

3.04 INSPECTION

A. Inspect and document all work phases and operations on a daily basis. Submit daily Inspection Reports. As a minimum the daily report shall contain the following:

1. Inspections performed, including the item involved and the results of the inspection.
2. Surface preparation operations performed, including the item involved, the mode of preparation, the kinds of solvent, abrasive, or power tools employed, and whether contract requirements were met.
3. Thinning operations performed, including thinners used, batch numbers, and thinner/paint volume ratios.
4. Application operations performed, including the item involved, mode of application employed, ambient temperature, substrate temperature, dew point, relative humidity, type of paint with batch numbers, elapsed time between surface preparation and application, elapsed time for recoat, condition of underlying coat, number of coats applied, and if specified, measured dry film thickness or spreading rate of each new coating.
5. After final coating application, with the appropriate set time allowed, a Holiday test shall be performed on all coated steel.

3.05 PAINTING SCHEDULES

System No. 21-A-Z			
Items or surfaces to be coated		All ferrous metal surfaces	
Surface preparation	1st and 2nd coat	3rd and 4th coat	5th coat
SSPC SP 5/NACE No.1 White Metal Blast Cleaning	MIL-DTL-24441/19B	MIL-DTL-24441,	As needed to obtain specified thickness

END OF SECTION

SECTION 31 25 00

EROSION AND SEDIMENT CONTROL

PART 1.00 GENERAL

1.01 WORK INCLUDED

A. Work covered under this Section shall include all work for erosion and sediment control.

B. All work shall conform to the requirements stated herein and to the requirements of the regulatory agencies having jurisdiction over the areas of work.

1.02 SUBMITTALS

A. Provide the following submittals:

1. Manufacturer's Data Sheet for Compost Filter Sock;
2. Manufacturer's Data Sheet for Plastic Sheeting used in Concrete Washout Station.

1.03 COMPLIANCE

A. All work shall be done in compliance with the provisions of all local, state and federal regulatory agencies. Failure to comply with these provisions shall constitute grounds for the Owner ordering work to cease until such provisions are met.

B. If required, the Contractor shall meet with regulatory agencies with purview for clarification regarding requirements of the execution of, and compliance with, environmental protection programs. The Contractor shall familiarize itself with the nature of the work to be performed. The Contractor shall be responsible for scheduling its submittals and/or meetings, if required, with the regulatory agencies.

PART 2.00 PRODUCTS

2.01 STRAWBALES

A. Bales of straw fastened with wire and have a minimum size of 1 foot by 1.5 feet by 3 feet and conform to the applicable portions of Rhode Island Standard Specifications for Road and Bridge Construction, latest edition. Bales shall be made of straw with forty pounds minimum weight and one hundred and twenty pounds maximum weight. They should be either wire or nylon bound.

B. Hay bales are prohibited on this project.

2.02 SILTATION FENCE

A. Filter fabric siltation fencing shall be a woven filter fabric having a permittivity of not less than 0.05 sec-1, a water flow rate of a minimum 12 gallons per minute per square foot, and a grab tensile strength of a minimum of 100 lbs. The material shall have a high sediment filtration capacity, high slurry flow and minimum clogging characteristics.

B. Silt fences or sedimentation barriers shall consist of wood posts with industrial support netting and sediment control filter fabric attached.

C. Wood post shall be standard 2”x2”x4.5’ long hardwood stakes commonly used to support filter fabric. Silt fence shall be furnished standard with filter fabric attached to hardwood posts and spaced at a maximum distance of 8 feet.

D. Provide suitable heavy nylon cord for securing abutting silt fence posts.

E. The filter fabric material shall be needle punched non-woven polypropylene geotextile conforming to the following criteria:

Fabric Properties	Minimum Acceptance Value	Test Method
Grab Tensile Strength (1bs)	124	ASTM D4632
Elongation of Failure (%)	15	ASTM D4632
Mullen Burst Strength (PSI)	300	ASTM D3786
Puncture Strength (1bs)	100	ASTM D4833
Flow Rate (gal/min/sf)	10	ASTM D4491
Apparent Opening Size (sieve)	30	ASTM D4751
Ultraviolet Radiation (% strength retained)	70	ASTM D4355
Unit Weight	5	ASTM D3776
Thickness	80	ASTM D1777
Trapezoidal Tear Strength	50	ASTM D4533
Permittivity	.01	ASTM D4491

F. Acceptable filter fabric materials include “Mirafi Envirofence”, “Propex Silt Stop” by Amoco Fabrics Co or equal approved by the Designer.

G. The control fabric shall be at least 3 feet wide.

2.03 EROSION CONTROL MATS

A. Erosion control mats shall consist of temporary degradable rolled erosion control product composed of processed natural or polymer fibers mechanically, structurally or chemically bound together to form a continuous matrix to provide erosion control and facilitate vegetation establishment

2.04 FILTER SOCKS

A. Filter Socks are biodegradable sediment-trapping devices. Manufacturers include SiltSoxx, Corr Logs, Straw Wattles, or equal.

2.05 WOODEN STAKES

A. Stakes: Oak wood, minimum 2-inch by 2-inch, by minimum 54 inches long.

2.06 WATER

A. Water used for dust control and equipment washes shall be clean and free of salt, oil, and other injurious materials. Water is available on-site; however the Contractor shall coordinate with the RIDEM for access to the water. The Contractor will be responsible for any costs associated with using Town water; otherwise the Contractor shall provide all necessary water.

2.07 CONSTRUCTION ENTRANCE/EXIT MATS

A. Geotextile: A non-woven geotextile fabric that meets the requirements of Section M 288 of AASHTO Standard Specifications for Transportation Materials and Methods of Sampling and Testing.

B. The surface course of the first 50 feet of the access road off of any paved roadway shall consist of crushed stone that conforms to Type II crushed gravel of Section M1.09.0 of the RI DOT Standard Specifications for Road and Bridge Construction. Beyond 50-feet, the roadway can consist of Engineered Fill, Common Fill or existing materials.

PART 3.00 EXECUTION

A. If necessary, the Contractor shall furnish, install, and remove dewatering basins in accordance the Contract Documents.

B. The Contractor shall maintain baled straw, filter socks, and siltation fence in good condition, rotating bales and replacing fencing periodically to maximize their effectiveness as sediment traps. The Contractor shall remove accumulated sediment periodically as directed by the Engineer. Remove baled straw, filter socks, and siltation fence in its entirety upon completion of the Work.

C. The Contractor is advised that impoundment flows and water levels of resource areas may vary substantially due to climatic and seasonal conditions and Contractor shall be responsible for controlling and handling ground and or surface water regardless of the volume of water and regardless of whether this flow is due to flood waters from storms.

D. The Contractor shall take every precaution to minimize and control erosion and turbidity within the contract area. These precautions shall be subject to approval by the Engineer and shall include, but not necessarily be limited to, the following:

1. Straw bale erosion barriers and sedimentation control fencing shall be staked in place down gradient from all exposed materials storage areas in order to reduce the amount of suspended solids in runoff water. The Contractor shall promptly remove any sedimentation buildup over 6 inches in depth that accumulates behind the erosion barriers. Barriers shall be checked after every storm and at regular weekly intervals.

E. Removal and clean up: All temporary erosion control facilities and accumulated sediments shall be removed and legally disposed in a neat and workmanlike manner when all disturbed areas have been satisfactorily stabilized.

F. Provide approved jute mesh or erosion control mats installed in accordance with manufacturer's recommendations on slopes steeper than 3H:1V or as otherwise required or as requested by the Engineer.

END OF SECTION

SECTION 32 52 00

Dewatering, Diversion, Control of Water

PART 1.00 - GENERAL

1.01 WORK INCLUDED

A. Work covered under this section consists of the control, and diversion of water as required to perform the Work.

B. The Contractor shall have onsite a PortaDam diversion/cofferdam system capable of supplementing the flood control temporarily unavailable due to the removal of the vehicular gates to the specified design flood elevation.

C. Contractor shall have the capability to deploy the temporary hurricane barrier in event that a hurricane or coastal storm is present and the City has requested deployment. The contractor shall include all measures to be able to install the PortaDam Diversion within 48 hours of the City's instruction.

1.02 WATER LEVELS

A. The Contractor shall be responsible for protecting the Work from increased water levels from impounded waters and increases in the ground water elevation.

1.03 PortaDam Coffer Dam

A. The contractor shall follow the Flood Contingency Plan per the Contract documents and is required for this project to supplement the flood protection lost by the removal of a vehicular gate.

1.03 SUBMITTALS

A. Drawings:

1. At least ten (10) calendar days prior to the start of gate removal, submit for review by the Engineer.
    a. Drawings
    b. Sections
    c. Details and other pertinent information
    d. Construction Flood Contingency Plan: Plan detailing the Contractor's means and methods for stabilizing the work area and emergency notification procedures if the work area becomes subject to flooding as a result of a storm event or cofferdam failure.
2. The data shown shall include:
    a. An overall schedule for storage onsite, installation, and removal.
    b. A description of the anticipated sequence of construction. Detailing how the mitigations will be implemented within 48 hours of notification from the City.
    c. Complete details of methods, equipment, and materials proposed to be used.
    d. Any other pertinent data required for review by the Engineer.
    e. The Contractor shall coordinate this submittal with submittal requirements specified in Section 31 25 00, EROSION AND SEDIMENT CONTROL.

B. Design Computations

1. The Contractor shall also submit complete computations for the design cofferdam(s).
2. All computations shall be made by a registered Professional Engineer licensed to practice in the State of Rhode Island. Computations and drawings shall bear the stamp of the Engineer.
3. The minimum factor of safety for each proposed cofferdam system shall be 1.50.

C. Construction Flood Contingency Plan:

1. The Contractor shall submit a Construction Flood Contingency Plan addressing Contractor operations during periods where flooding due to storm events are anticipated to occur.
2. The plan shall include descriptions of the following elements:
   a. Project Summary: including schedule of operations.
   b. Cofferdam System(s): including description, design water level to 500 year Storm, top elevation, and installation procedure.
   c. Contingency Actions: including specific actions to be taken in response to exceedances of Action Thresholds (e.g. emergency cofferdam erection), lists of on-site and off-site equipment and material quantities required for contingency actions and emergency demobilization. For off-site equipment and materials, indicate mobilization time to-site. Include schedule of contingency actions, including emergency demobilizations during nights, weekends and holidays. Address methods of protection for work outside of protected area (e.g. fresh concrete, temporary cofferdams, open fills).
3. The plan shall bear the stamp of a registered Professional Engineer licensed to practice in the State of Rhode Island.

PART 2.00 - PRODUCTS

A. The Contractor shall provide all materials and equipment including, but not limited to, sandbags, barriers, pipe, fittings, valves, pumps, tools, frac tanks, dewatering basins, fuel and other appurtenances in suitable and adequate quantities as required to control water.

PART 3.00 - EXECUTION

3.01 SURFACE DRAINAGE

A. The Contractor shall intercept and divert surface drainage away from the work sites by the use of dikes, curb walls, ditches, sumps or other means. The Contractor shall design surface drainage systems so that they do not cause erosion on or off the site. Surface runoff shall be controlled to prevent entry of water into excavations. The Contractor shall remove drainage systems when no longer needed.

3.02 PROPERTY LOSSES FROM REMOVAL OR DISTURBANCE OF GROUNDWATER

A. Any structure, including but not limited to walls, structures, and utilities that become unstable or vulnerable to settlement due to removal or disturbance of groundwater will be supported immediately by the Contractor. Support shall include but not be limited to bracing, underpinning, or compaction grouting.

B. All loss or damage arising from removal or disturbance of groundwater, including but not limited to claims for subsidence and the loss of structure support, that may occur in the progression of the Work shall be sustained and borne by the Contractor. If the Contractor needs to correct the damage resulting from his operations, the Owner may, 30 days after notifying the Contractor in writing, proceed to repair, rebuild or otherwise restore such damaged property as may be deemed necessary,

and the cost thereof shall be deducted from compensation which may be or become due to the Contractor under this Contract.

3.03 COFFERDAMS

A. General: It is expressly understood and agreed that whenever cofferdams and bracing are used, it shall not relieve the Contractor of the sole responsibility for any damages or injury due to the installation or failure of the cofferdams and bracing.

B. Installation: Where cofferdams and bracing are used they shall be installed ahead of other work activities.

1. Install to maintain sufficient restraint of the adjacent soil and to prevent movement, excessive inflow of water, and intrusion of soils into or instability of the bottom of the cofferdams.
2. If excessive leakage occurs behind the cofferdams, they shall be repaired and stabilized immediately to the satisfaction of the Engineer.

END OF SECTION

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APPENDIX D:

CONSTRUCTION DRAWINGS

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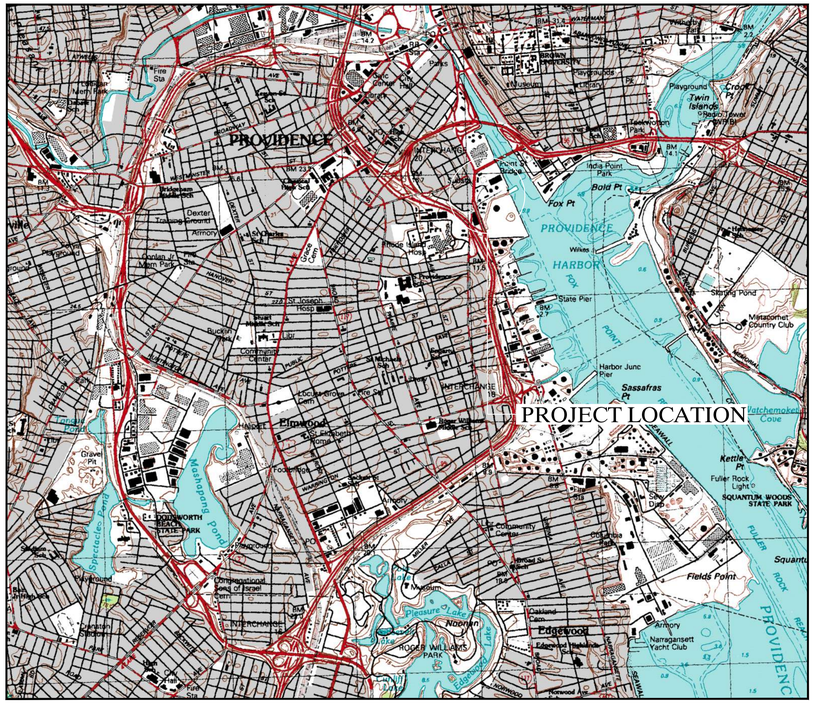
Prepared for The:

CITY OF PROVIDENCE,
DEPARTMENT OF PUBLIC WORKS

100% SUBMISSION
ISSUED FOR BID
NOT FOR CONSTRUCTION

CITY OF PROVIDENCE - 2024
HURRICANE BARRIER STREET GATE REPAIRS

PROVIDENCE, RHODE ISLAND


PROVIDENCE
PROVIDENCE HARBOR
PROJECT LOCATION
Edgewood
Fields Point
Elmwood
Oakland Cem.
Roger Williams Park
Narragansett Yacht Club
Rhode Island Country Club
Fox Pt
Bold Pt
India Point Park
Sassafras Pt
Fuller Rock Light
Gravel Pt
Kettle Pt
Squantum
Twin Islands
Crescent Park
Harbor Junc Pier
State Pier
Pawtuxet Cove
Fuller Rock
Pleasure Lake
Woonasquatucket River
Moshassuck River
Providence River
Seekonk River
Waterplace Park
Dexter Training Ground
Armory
Cranston Street Armory
Roger Williams Park
Museum
Playground
Golf Course
Cemetery
Sterling Pond
Public Boat Ramp
Fire Sta
Police Sta
Hospital
Church
Synagogue
Community Center
Water Tower
Gas Tanks
Power Lines
Railroad
Bridge
Interchange
Ramp
Exit
Dam
Marina
Yacht Club
Country Club
Cemetery
Park
Beach
Pier
Light
Monument
Statue
Fountain
Tennis Courts
Ball Fields
Golf Course
Oakland Cem.
Edgewood
Elmwood
Fields Point
Squantum Woods State Park
Conimicut Point
Conimicut Light
Nayatt Point
Nayatt Light
Rumstick Point
Rumstick Light
Bullock Cove
Seekonk Pond
Pawtuxet River
Pawtuxet Cove
Meshanticut Park
Cranston
Johnston
Warwick
East Providence
Barrington
Bristol
Bristol Ferry
Prudence Island
Hog Island
Patience Island
Dutch Island
Conanicut Island
Jamestown
Newport
Newport Bridge
Jamestown Bridge
Mount Hope Bridge
Sakonnet River
Narragansett Bay
Rhode Island Sound
Block Island Sound
Block Island
Point Judith
Point Judith Light
Point Judith Pond
Watch Hill
Watch Hill Light
Napatree Point
Weekapaug
Quonochontaug Pond
Quonochontaug
Misquamicut
Misquamicut State Park
Atlantic Beach Park
Charlestown
Charlestown Beach
Ninigret Pond
Ninigret National Wildlife Refuge
Green Hill
Green Hill Pond
Green Hill Beach
Matunuck
Matunuck Beach
Point Judith Country Club
Point Judith Light
Scarborough State Beach
Narragansett
Narragansett Pier
Narragansett Town Beach
Narragansett Pier Railroad Station
Narragansett Pier Railroad Museum

GENERAL NOTES:

1. FOR THE PURPOSE OF THIS PROJECT

   OWNER - CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS
   700 ALLENS AVENUE
   PROVIDENCE, RI 02905

   ENGINEER - PARE CORPORATION
   10 LINCOLN ROAD, SUITE 210
   FOXBORO, MA 02035
   CONTACT - TODD TURCOTTE, PE, WEDG

2. ALL CONSTRUCTION INDICATED ON THESE PLANS SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE RHODE ISLAND STATE BUILDING CODE, ALL FEDERAL AND MUNICIPAL BUILDING CODES, AND THE SPECIFICATIONS INCLUDED IN THIS CONTRACT. THESE PLANS ARE INCOMPLETE UNLESS ACCOMPANIED BY THE SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS.

3. CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS, METHODS, AND SAFETY OF WORK.

4. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

5. HORIZONTAL DATUM: RHODE ISLAND STATE PLANE - NAD83
   VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM - NGVD29

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS. PLANS SHALL NOT BE SCALED FOR DIMENSIONS.

7. NOTES, TYPICAL DETAILS, AND SCHEDULES APPLY TO ALL WORK UNLESS OTHERWISE NOTED. FOR CONDITIONS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS OF SIMILAR NATURE.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL PROJECT DEMOLITION AND EXCESS MATERIAL IN ACCORDANCE WITH RHODE ISLAND, LOCAL, AND FEDERAL LAWS.

9. THE CONTRACTOR SHALL PROTECT ALL ADJACENT STRUCTURES AND UTILITIES.

10. THE CONTRACTOR SHALL FOLLOW ALL OSHA, FEDERAL, STATE, AND LOCAL STANDARDS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL SITE SAFETY PROCEDURES AND PRACTICES REGARDLESS OF THE PRESENCE OF THE OWNER OR ENGINEER.

11. THE CONTRACTOR WILL SUBMIT A CONSTRUCTION SCHEDULE TO THE OWNER. THE CONTRACTOR WILL UPDATE SCHEDULE IN CONFORMANCE WITH CONTRACT DOCUMENTS.

12. THE CONTRACTOR SHALL STAGE ALL EQUIPMENT IN THE DESIGNATED STAGING AREA. ALL GREASING AND REFUELING ACTIVITIES SHALL OCCUR IN THE STAGING AREA. ALL NECESSARY MEASURES SHALL BE TAKEN TO PREVENT BY ANY METHOD, OIL, CONSTRUCTION DEBRIS, STOCKPILED MATERIALS, AND OTHER MATERIALS ON THE SITE, FROM ENTERING THE WATERWAY. STAGING/LAYDOWN AREAS SHALL BE RESTORED BY THE CONTRACTOR TO THE EXISTING CONDITION. IN ADDITION, THE CONTRACTOR SHALL REPLACE ALL DAMAGED MATERIALS AS A RESULT OF HIS OPERATIONS, TO THE SATISFACTION OF THE ENGINEER.

13. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT ALL CONSTRUCTION DEBRIS OR WASTE FROM FALLING INTO ADJACENT WATER BODIES AND DRAINAGE SYSTEMS. ANY DEBRIS FALLING INTO ADJACENT WATER BODIES AND DRAINAGE SYSTEMS SHALL BE RECOVERED AND PROPERLY DISPOSED OF.

14. THE CONTRACTOR SHALL MAINTAIN A SECURE SITE AND PROVIDE APPROPRIATE SAFETY MEASURES TO PREVENT ACCIDENTS. THE SAFETY MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO SIGNAGE, BARRICADES, FENCES, FLASHING WARNING LIGHTS, AND POLICING IF NECESSARY.

15. UPON COMPLETION OF THE PROJECT, CONTRACTOR WILL PROVIDE TWO AS-BUILT PLAN SETS, ONE ELECTRONIC PDF, AND ONE HARD COPY, TO THE ENGINEER DEPICTING ANY FIELD CHANGES OF DIMENSION OR DETAIL, LOCATION OF UNDERGROUND STRUCTURES AND/OR UTILITIES, CONSTRUCTION DEVIATIONS, CHANGES DUE TO FIELD OR CHANGE ORDER, AND DETAILS NOT ON THE ORIGINAL DRAWINGS.

16. THE GENERAL MODIFICATION OF THE VEHICULAR GATE AND GATE COMPONENTS IS TO BE PERFORMED AT AN OFFSITE LOCATION PROVIDED BY THE CONTRACTOR.

CONCRETE NOTES:

1. CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF ACI 318 - "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND THE RHODE ISLAND STATE BUILDING CODE.

2. CONCRETE SHALL BE NORMAL WEIGHT, WITH TYPE II CEMENT, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 5,000 PSI ON CAP, 3,000 PSI FOR THE BACKFILL, 3/4" AGGREGATE-TYPICAL WITH 2 GAL DCI. ALL CONCRETE DESIGN MIXES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.

3. ALL CONCRETE SHALL BE AIR-ENTRAINED WITH AN AIR CONTENT OF 6% +/- 1%.

4. WHEN CONCRETE IS PLACED AGAINST PREVIOUSLY HARDENED CONCRETE, THE INTERFACE SHALL BE CLEAN, FREE OF LAITANCE AND INTENTIONALLY ROUGHENED TO FULL AMPLITUDE OF APPROXIMATELY 1/4 INCH. APPLY SIKA BOND (OR PRE-APPROVED EQUIVALENT BONDING AGENT) AS REQUIRED PER PRODUCT SPECIFICATIONS.

5. PREPARATION OF THE CONCRETE SURFACES FOR REPAIR TO OCCUR IN ACCORDANCE TO SPECIFICATION SECTION 03 01 00.

6. CONCRETE WASHOUT OPERATIONS TO OR WITHIN THE ADJACENT WATER BODIES AND DRAINAGE SYSTEMS MUST NOT TAKE PLACE AT ANY TIME. CONCRETE WASHOUT OPERATIONS TO TAKE PLACE IN A WASHOUT PIT OR DISPOSABLE BOX IN ACCORDANCE WITH ALL CITY, STATE, AND FEDERAL ENVIRONMENTAL REQUIREMENTS.

SPILL PREVENTION AND CONTROL NOTES:

1. SPILLS AND LEAKS SHALL BE AVOIDED THROUGH FREQUENT INSPECTION OF EQUIPMENT AND MATERIAL STORAGE AREAS, AND SHALL BE REMEDIATED AND REPAIRED AS NECESSARY.

2. HAZARDOUS MATERIAL STORAGE TO BE PLACED ONLY IN DESIGNATED AREAS. MATERIAL STORAGE AREAS SHALL BE ROUTINELY INSPECTED FOR LEAKY CONTAINERS, OPEN CONTAINERS, OR IMPROPER STORAGE TECHNIQUES THAT MAY LEAD TO SPILLS OR LEAKS.

3. APPROPRIATE SPILL REMEDIATION PROCEDURES AND SUPPLIES SHALL BE READILY AVAILABLE ON-SITE. TOOLS AND SUPPLIES SHALL BE CLEARLY MARKED SO THAT ALL PERSONNEL CAN LOCATE AND ACCESS THESE SUPPLIES.

4. SPILL REMEDIATION SHALL BE PERFORMED IMMEDIATELY. CONTRACTOR SHALL FOLLOW PROPER RESPONSE PROCEDURES IN ACCORDANCE WITH ANY APPLICABLE REGULATORY REQUIREMENTS.

5. AT NO TIME SHALL SPILLS BE DIVERTED TOWARD STORM DRAINS OR TO THE WATERWAY.

6. EQUIPMENT/VEHICLE FUELING AND REPAIR/MAINTENANCE OPERATIONS SHALL TAKE PLACE ONLY WITHIN DESIGNATED STAGING AREAS.

7. THE EQUIPMENT OPERATOR SHALL FULLY MONITOR FUELING OPERATIONS TO EQUIPMENT AND VEHICLES AT ALL TIMES.

8. ANY SPILLAGE SHALL BE IMMEDIATELY CLEANED WITH SPILL KITS KEPT ON SITE.

9. IN THE CASE OF SMALL AMOUNTS OF SOIL CONTAMINATION, SUCH SOIL SHALL BE PLACED IN 55 GALLON DRUMS FOR DISPOSAL BY A LICENSED HAZARDOUS WASTE HAULER.

10. IN THE CASE OF A LARGE AMOUNT OF SOIL CONTAMINATION OR DISCHARGE TO THE WATERWAY, RHODE ISLAND DEM AND APPLICABLE AGENCIES SHALL BE NOTIFIED AS REQUIRED. A HAZARDOUS WASTE REMEDIATION FIRM SHALL BE CONTRACTED TO REMOVE AND DISPOSE OF THE CONTAMINATED MATERIAL OR CONTAIN THE SPILL AT NO ADDITIONAL COST.

STEEL NOTES:

1. DESIGN FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH AISC SPECIFICATION FOR BUILDINGS.

2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:

A.	STRUCTURAL STEEL	A992 GR. 50	Fy=50 KSI
B.	PLATES AND ANGLES	ASTM A36	Fy=36 KSI
C.	STRUCTURAL TUBING	ASTM A500, GR. B	Fy=46 KSI
D.	HIGH STRENGTH BOLTS	A325 (TYPE III)	Fy=92 KSI
E.	STAINLESS STEEL BOLTS PINS	SAE316	FY=30KSI
F.	ANCHOR RODS	F1554 (GRADE 36)	Fy=36 KSI
G.	HEADED STUDS	A108 GR. 50	Fy=50 KSI
H.	DRILL& EPOXY ANCHOR RODS	A449	Fy=92 KSI

3. STRUCTURAL STEEL CONNECTIONS NOT DETAILED ON THE PLANS SHALL DEVELOP (1/2) OF MEMBER'S TOTAL UNIFORM LOAD CAPACITY, TYPICAL UNLESS NOTED OTHERWISE.

4. ALL BOLTED CONNECTIONS SHALL USE 3/4" DIA., ASTM A-325-N BOLTS, UNLESS NOTED OTHERWISE.

5. HIGH STRENGTH BOLTS SHALL BE TORQUED TO 70% OF THE MINIMUM TENSILE STRENGTH OF THE BOLT IN CONFORMANCE WITH AISC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 BOLTS. PROVIDE ONE HARDENED WASHER UNDER THE ELEMENT TURNED IN TIGHTENING.

6. WELDS SHALL BE MADE ONLY BY OPERATORS CERTIFIED BY THE STANDARD QUALIFICATION PROCEDURE OF THE AMERICAN WELDING SOCIETY.

7. WELDING: IN ACCORDANCE WITH LATEST EDITION OF AWS D1.1 CODE FOR WELDING IN BUILDING CONSTRUCTION. USE E70 SERIES ELECTRODES UNLESS NOTED OTHERWISE.

8. FIELD WELDING OF STRUCTURAL MEMBERS IS NOT PERMITTED UNLESS SPECIFICALLY INDICATED.

9. FURNISH AND INSTALL ONE WASHER AND ONE HEAVY HEX NUT WITH ASTM F1554 ANCHOR BOLTS UNLESS OTHERWISE INDICATED.

10. PROVIDE FITTED WELDED 3/8" WEB STIFFENER PLATES ON EACH SIDE OF ALL BEAMS SEATED ON WALLS OR COLUMNS UNLESS NOTED OTHERWISE.

11. FIELD CUTTING OR MODIFICATION OF STRUCTURAL STEEL IS PROHIBITED UNLESS PRIOR WRITTEN APPROVAL IS RECEIVED FROM THE ENGINEER.

12. SURFACES OF GALVANIZED MEMBERS TO BE WELDED SHALL BE GROUND TO BARE METAL PRIOR TO WELDING, AND TOUCHED UP AFTER WELDING.

13. MINIMUM FILLET WELD (LEG) SIZE SHALL BE 3/16", UNLESS NOTED OTHERWISE.

14. ALL REPLACED BOLTS, NUTS, WASHERS AND PINS SHALL BE SAE 316

15. STRUCTURAL STEEL, PLATES,PANELS, AND BRACKETS TO BE EPOXY CODED PER SPECIFICATIONS

GENERAL SCOPE OF WORK

ALLENS AVENUE:

1. MOBILIZE EQUIPMENT AND PERSONNEL TO THE JOB SITE;
2. INSTALL EROSION CONTROLS AND TEMPORARY SECURITY FENCING;
3. REMOVE, STOCKPILE, AND PROTECT FOR REUSE ALL SIGNAGE;
4. REMOVE, TRANSPORT, AND MODIFY GATE SPECIFIC REPAIRS AS INDICATED IN THE CONTRACT DOCUMENTS OFF-SITE;
5. INSPECTION OF GROUND PIN CONDITIONS AT THE LOWER HINGE LOCATIONS, REMOVE AND REPLACE IF NEEDED AT THE DIRECTION OF THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR THE REINSTALLATION OF THE PIN TO AS-BUILT CONDITIONS.
6. OFF-SITE MODIFICATIONS INCLUDE, BUT ARE NOT LIMITED TO: SANDBLASTING, EPOXY COATING, REMOVAL AND REPLACEMENT OF 20 GAUGE STEEL SKIN, REPLACING THE LOWER HINGE FOR THE GATE, MODIFYING OF FRONT AND REAR RECESS STRUCTURES, FABRICATING THE REINFORCED "U" HOOK, FABRICATING THE STEEL PANEL FLAPS, MODIFYING THE CENTRAL "A" FRAME OF THE EAST GATE AS INDICATED, REMOVAL AND REPLACEMENT OF THE TOP WF SECTION INCLUSIVE OF INSTALLING A COVER PLATE;
7. REINSTALLATION OF VEHICULAR GATE AND DEMONSTRATING FUNCTIONALITY INCLUSIVE OF FULL CLOSURE WITH BOLTS EXTENDING THROUGH THE BUTTRESS STRUCTURE;
8. CLEAN ON SITE DRAINS BETWEEN THE FRONT AND REAR RECESS;
9. SEAL CONSTRUCTION JOINTS OF THE CONCRETE ABUTMENT ROOFS;
10. IMPLEMENT ONSITE CONCRETE REPAIR PROGRAM;
11. REMOVE AND REPLACE RUBBER FIBRE SEAL AT BOTH ABUTMENTS;
12. SITE CLEAN-UP AND RESTORATION OF AREAS AS NECESSARY;
13. DEMOBILIZATION;

MANCHESTER STREET STATION:

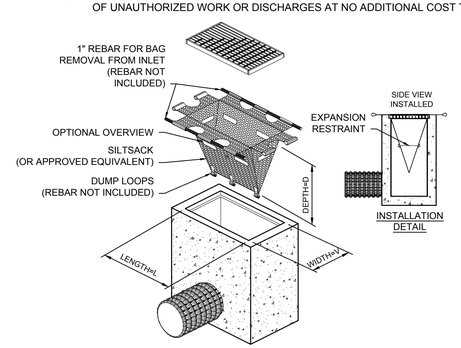
1. MOBILIZE EQUIPMENT AND PERSONNEL TO THE JOB SITE;
2. INSTALL EROSION CONTROLS AND TEMPORARY SECURITY FENCING;
3. REMOVE, STOCKPILE, AND PROTECT FOR REUSE ALL SIGNAGE;
4. REMOVE, TRANSPORT, AND MODIFY GATE SPECIFIC REPAIRS AS INDICATED IN THE CONTRACT DOCUMENTS OFF-SITE;
5. OFF-SITE MODIFICATIONS INCLUDE: SANDBLASTING, EPOXY COATING, HINGE PLATE REPLACEMENT, AND REPLACEMENT OF THE CLOSURE HOOK BRACKETS AS MODIFIED IN THE CONTRACT DOCUMENTS;
6. REINSTALLATION OF VEHICULAR GATE AND DEMONSTRATING FUNCTIONALITY;
7. REMOVAL AND REPLACEMENT OF CLOSURE HOOKS;
8. INSTALLATION OF LADDER AND OPERATION PLATFORM;
9. REMOVAL AND POTENTIAL REPLACEMENT OF CRANK OPERATING BAR.
10. PROJECT CLOSE-OUT.

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	
	SETBACKS	
	EASEMENT LINE	
255	CONTOUR	262
X 407.5	SPOT ELEVATION	× 261.5
D D D	DRAINAGE LINE	D D D
W W W	WATER LINE	W W W
	FIRE WATER LINE	FW FW
S S S	SANITARY SEWER LINE	S S S
G G G	GAS LINE	G G G
E E E	ELECTRIC	E E E
T T T	TELEPHONE LINE	T T T
OHW OHW OHW	OVERHEAD ELECTRIC LINE	OHW OHW OHW
	LIMIT OF DISTURBANCE	LOD
	LIMIT OF DISTURBANCE/COMPOST FILTER SOCK	LOD/CFS
	CATCH BASIN	
	HYDRANT	
	DRAINAGE MANHOLE	
	SEWER MANHOLE	
	UTILITY POLE	
WV WV	WATER VALVE	
GG	GAS GATE	
	LIGHT POLE	
	TREE LINE	
	STONE WALL	
X X X	CHAIN LINK FENCE	
	WIRE FENCE	
	WOOD FENCE	
	FENCE	
	CURBING	
	EDGE OF PAVEMENT	
	SAWCUT LINE	
	SIGN	
	COMPOST FILTER SOCK	
	SAND BAGS	
#	NO. OF PARKING SPACES	#

EROSION CONTROL NOTES:

1. CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES FOR THE DURATION OF THE PROJECT.
2. CONTRACTOR SHALL PREVENT SEDIMENT FROM ENTERING THE ADJACENT WATER BODIES AND DRAINAGE SYSTEMS VIA DISCHARGES THROUGH ANY DRAINAGE STRUCTURES OR RUNOFF FROM WITHIN THE LIMITS OF WORK.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING, RESTORING AND REPAIRING ALL DAMAGE AS A RESULT OF UNAUTHORIZED WORK OR DISCHARGES AT NO ADDITIONAL COST TO THE OWNER.



TEMPORARY INLET PROTECTION
SCALE:NOT TO SCALE

100% SUBMISSION
ISSUED FOR BID
NOT FOR CONSTRUCTION

PARE
PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
10 LINCOLN ROAD, SUITE 210
FOXBORO, MA 02035
508-543-1755

SCALE ADJUSTMENT GUIDE
0" 1"

HURRICANE BARRIER STREET GATE REPAIRS
PROVIDENCE, RHODE ISLAND
CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS

REVISIONS:

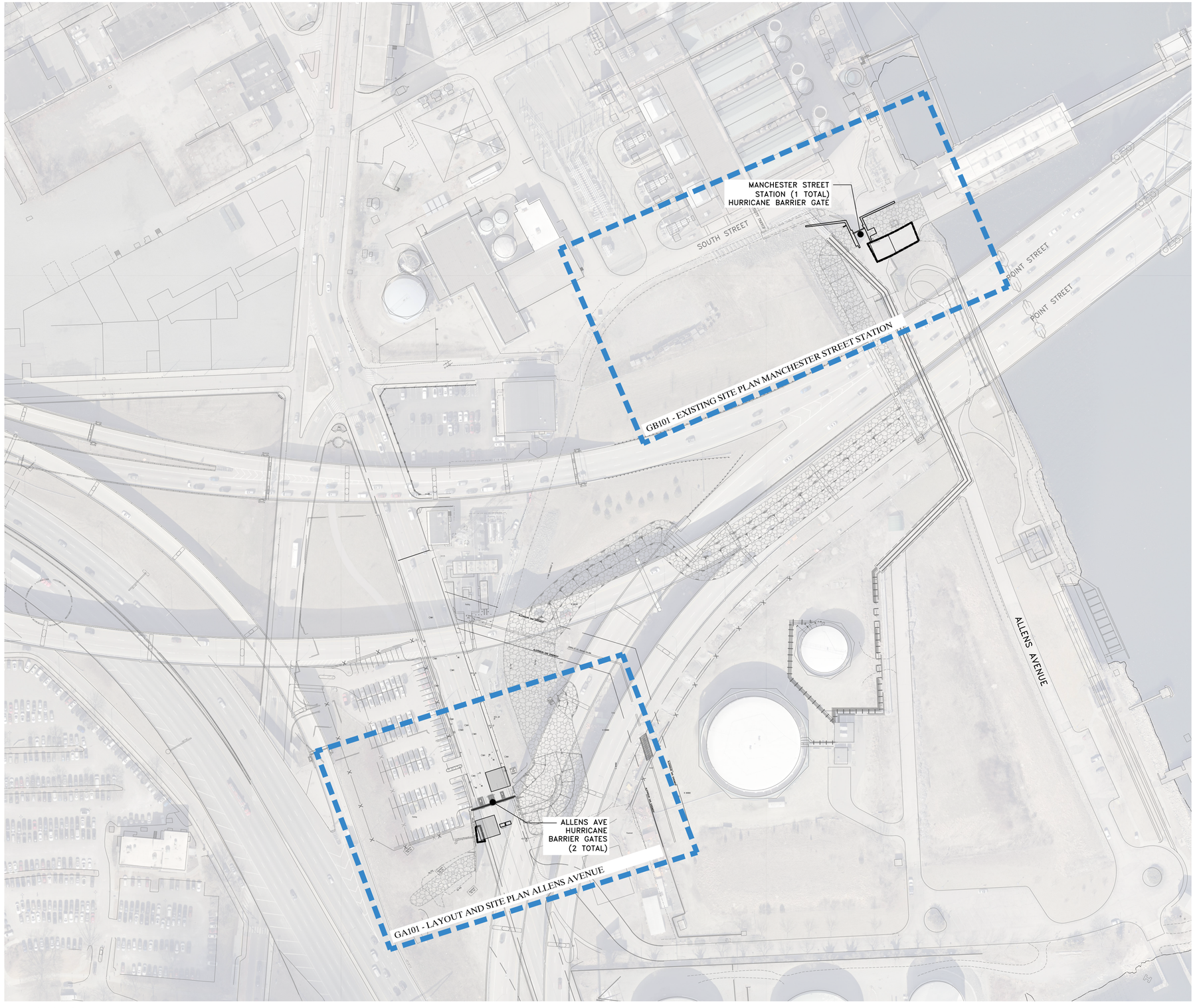
1	5/10/2024	90% IFP

PROJECT NO.:	24040.00
DATE:	AUGUST 2024
SCALE:	AS NOTED
DESIGNED BY:	JPN
CHECKED BY:	BMD
DRAWN BY:	CD/LMC
APPROVED BY:	TDT

GENERAL NOTES AND LEGEND

SHEET NO.:
G-002
2 OF 18

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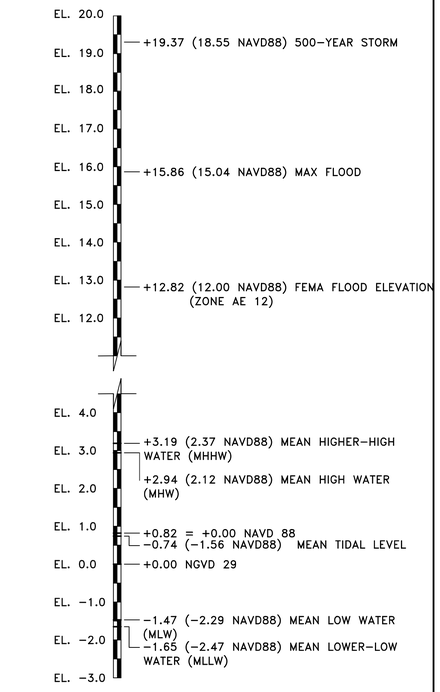


Scale: 1"=80'

0 40' 80' 160'

OVERALL SITE PLAN

SCALE: 1" = 80'



DATUM INFORMATION

1. NOAA TIDE STATION: PROVIDENCE 8454000
2. TO CONVERT ELEVATIONS FROM NGVD29 TO NAVD88, SUBTRACT 0.82FT FROM THE ELVATION

EX. 12.82 NGVD29 − 0.82FT = 12.00 NAVD88

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HURRICANE BARRIER
STREET GATE REPAIRS
PROVIDENCE, RHODE ISLAND
CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS

REVISIONS:

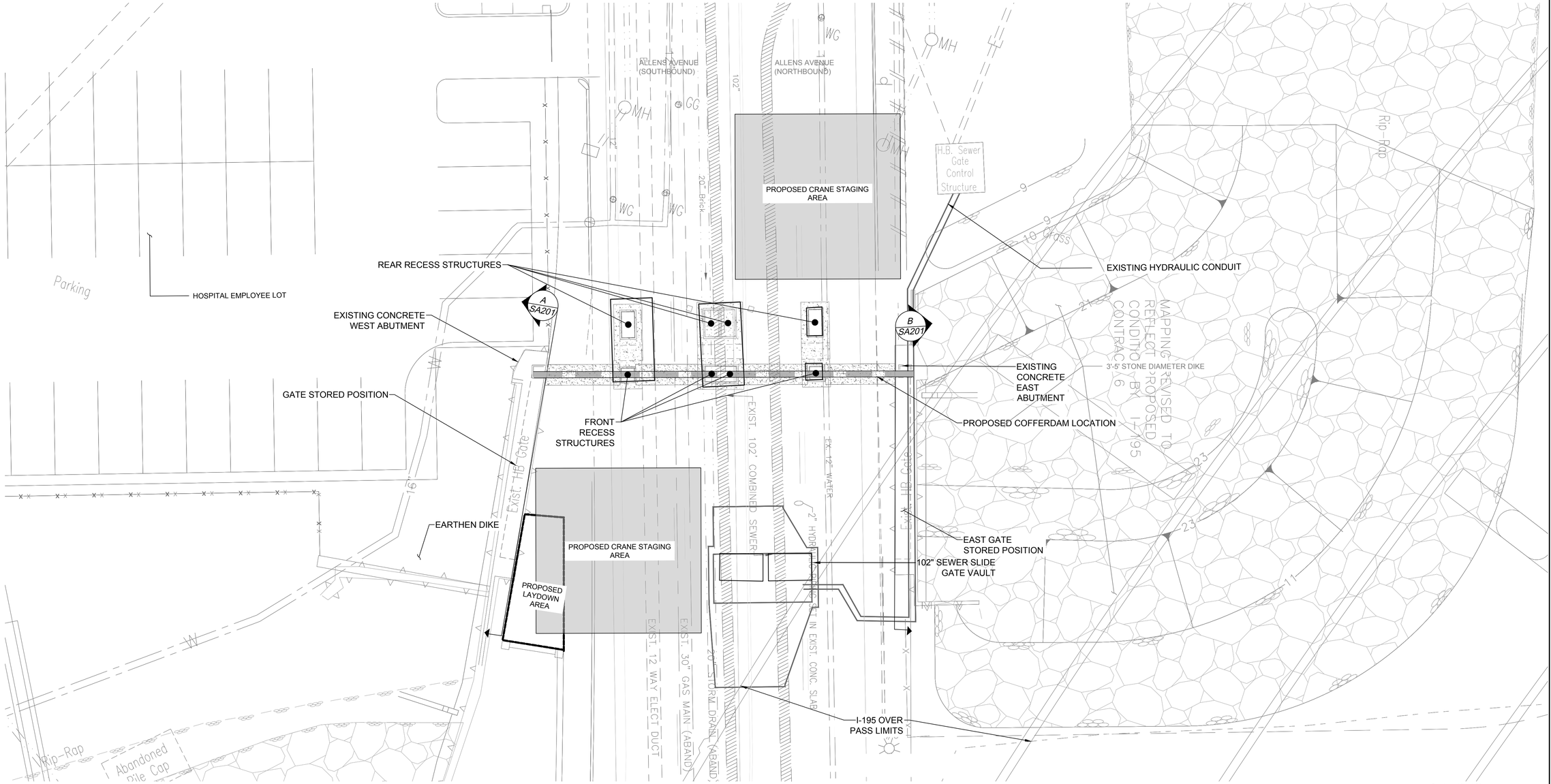
1	5/10/2024	90% IFP

PROJECT NO.:	24040.00
DATE:	AUGUST 2024
SCALE:	AS NOTED
DESIGNED BY:	JPN
CHECKED BY:	BMD
DRAWN BY:	CD/LMC
APPROVED BY:	TDT

OVERALL EXISTING SITE PLAN

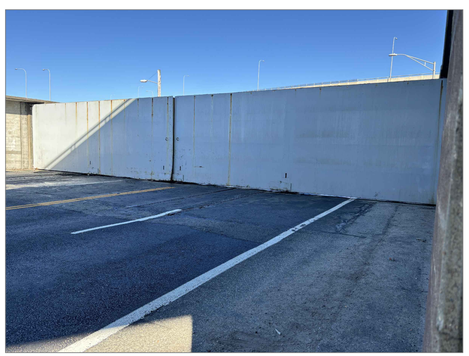
SHEET NO.:
G-101
3 OF 18

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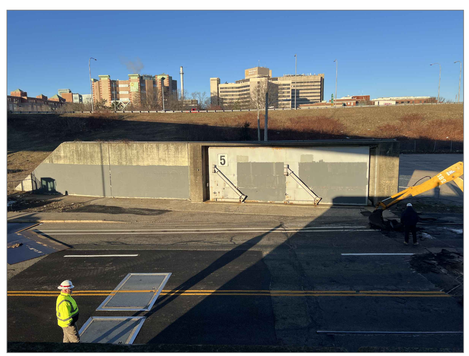


EXISTING LAYOUT SITE PLAN - ALLENS AVE

SCALE: 1" = 10'



SOUTHERN VIEW OF DEPLOYED GATES



WEST GATE IN STORED POSITION



EAST GATE IN STORED POSITION

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HURRICANE BARRIER STREET GATE REPAIRS

PROVIDENCE, RHODE ISLAND

CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS

REVISIONS:		
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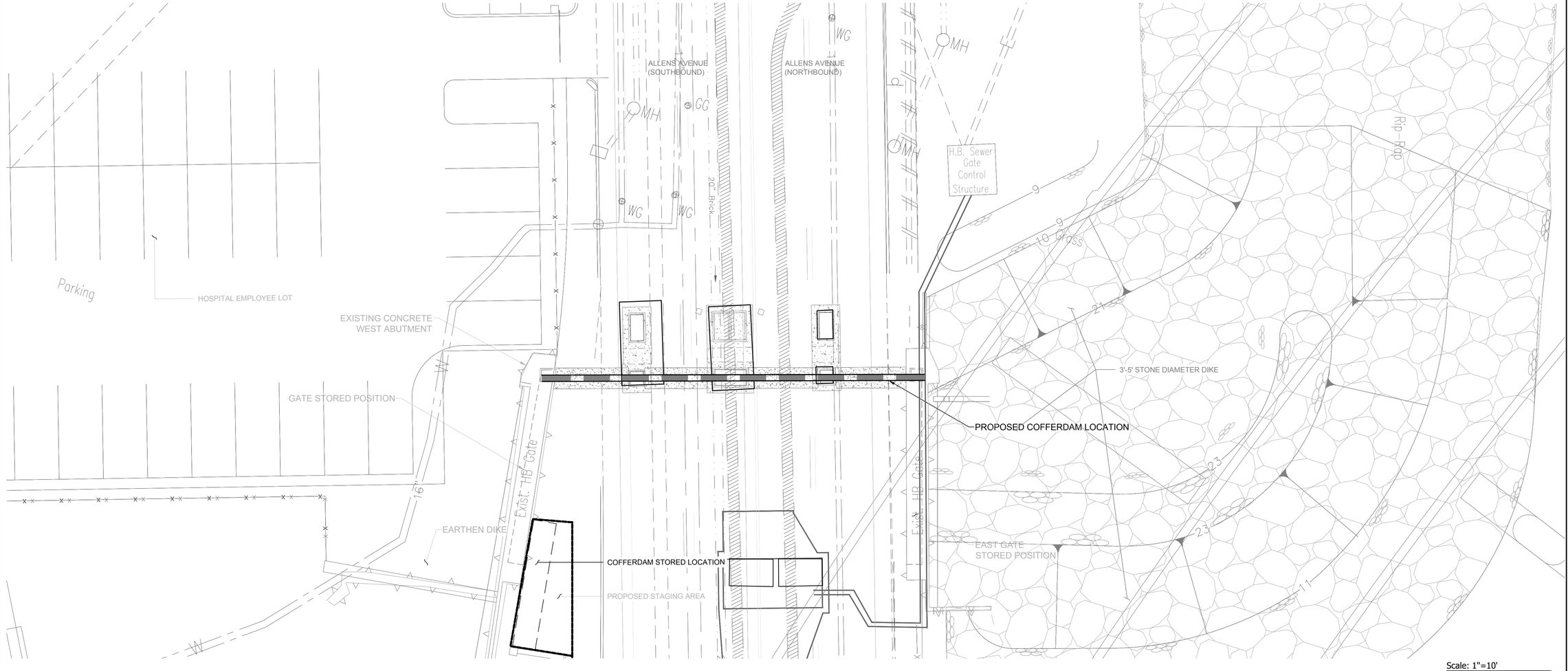
PROJECT NO.:	24040.00
DATE:	AUGUST 2024
SCALE:	AS NOTED
DESIGNED BY:	JPN
CHECKED BY:	BMD
DRAWN BY:	CD/LMC
APPROVED BY:	TDT

LAYOUT AND SITE PLAN ALLENS AVENUE

SHEET NO.:

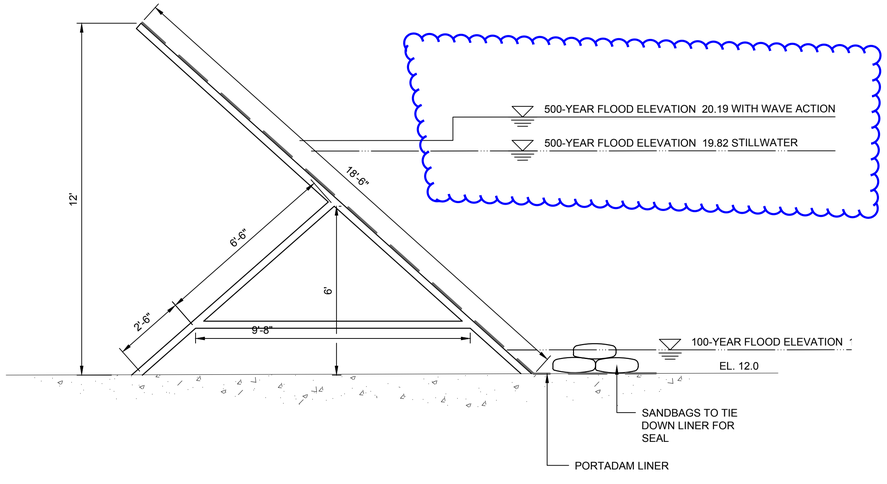
GA101

J:\24040\24 Jobs\24040.00 PVD_HURRICANE BARRIER GATE REPAIRS-R01\DWGS\GA101 LAYOUT AND SITE PLAN ALLENS AVENUE.dwg



EXISTING LAYOUT SITE PLAN - ALLENS AVE

SCALE: 1" = 10'



PORTADAM DETAIL

SCALE: 3/8"=1'-0"

FLOOD PREPARATION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR THE FLOOD CONTROL, IN THE CASE OF A STORM EVENT, TO SUPPLEMENT THE FLOOD PROTECTION LOST BY THE REMOVAL OF A VEHICULAR GATE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LOSS AND DAMAGE DUE TO A FAILURE OF ANY COFFERDAMS OR DIVERSION STRUCTURES CONSTRUCTED DURING THE WORK.
3. ANY NECESSARY COFFERDAMS AND DIVERSIONS SHALL BE DESIGNED BY THE CONTRACTOR AND BEAR THE STAMP OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF RHODE ISLAND. APPROVAL BY THE OWNER AND ENGINEER IS REQUIRED PRIOR TO INSTALLATION. ALL DIVERSIONS SHALL BE INSTALLED AND REMOVED IN THEIR ENTIRETY AT NO ADDITIONAL COST TO THE OWNER.
4. CONTRACTOR SHALL INSTALL PORTADAM TO ELEVATION 24.0 TO EXCEED THE HEIGHT OF THE 500-YEAR STORM
5. PREPARATIONS SHALL BE MADE WITH THE MANUFACTURER/SUPPLIER TO BE ON STANDBY IF A STORM APPROACHES TO BE READY TO MOBILIZE AND DEPLOY WITHIN 48 HOURS OF THE CITY'S NOTICE

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HURRICANE BARRIER STREET GATE REPAIRS

PROVIDENCE, RHODE ISLAND

CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS

REVISIONS:		
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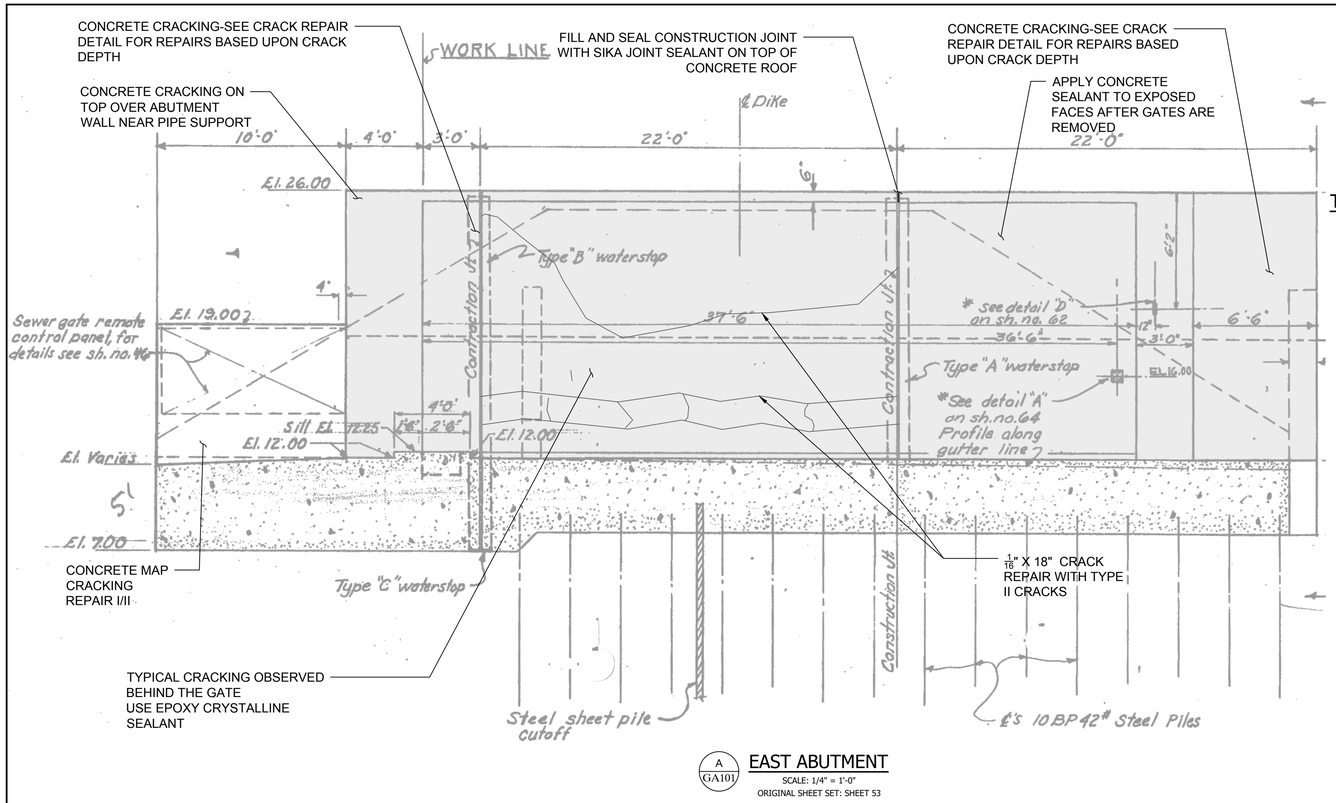
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DATE:	AUGUST 2024
SCALE:	AS NOTED
DESIGNED BY:	JPN
CHECKED BY:	BMD
DRAWN BY:	CD/LMC
APPROVED BY:	TDT

EMERGENCY ACTION PLAN ALLENS AVENUE

SHEET NO.:
GA102

5 OF 18

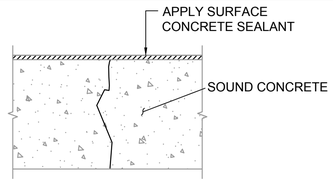
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A / GA101 **EAST ABUTMENT**

SCALE: 1/4" = 1'-0"

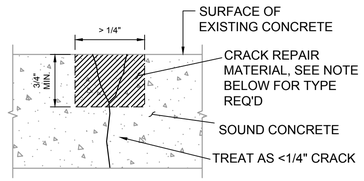
ORIGINAL SHEET SET: SHEET 53



TYPE I- CONCRETE COATING CRACK REPAIRS <= 1/32"

SCALE: NOT TO SCALE

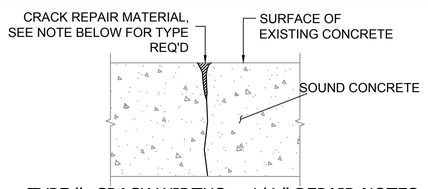
1. SURFACE SHALL BE CLEAN AND FREE OF DUST AND DEBRIS
2. PREPARE SURFACE PER SEALANT MANUFACTURERS INSTRUCTIONS



TYPE III - CRACK WIDTHS >1/4" REPAIR NOTES:

SCALE: NOT TO SCALE

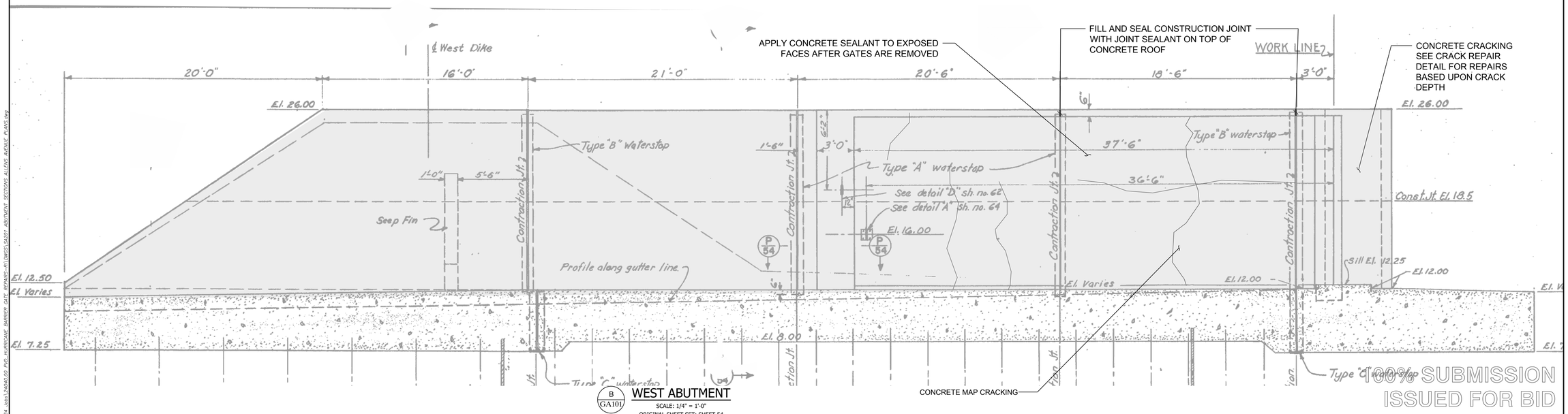
1. SAW CUT LOOSE CONCRETE TO A 3/4" MINIMUM DEPTH AND UNTIL CRACK IS 1/4" OR LESS IN WIDTH.
2. IF CRACK EXTENDS BEYOND SAW CUT, TREAT CRACK WITH INJECTION REPAIR AS SHOWN
3. PATCH CRACK WITH SIKATOP 123 PLUS OR APPROVED EQUAL.
4. CRACK REPAIR SHALL BE COMPLETED IN ACCORDANCE WITH ALL MANUFACTURERS RECOMMENDATIONS FOR INSTALLATION OF THE APPROVED SEALANT.
5. THE CONTRACTOR SHALL PROVIDE MEASURES TO PROTECT SURROUNDING AREAS FROM EXCESS REPAIR MATERIAL.
6. EXCESS REPAIR MATERIAL SHALL BE REMOVED FROM THE FACE OF THE EXISTING CONCRETE.
7. CONTRACTOR SHALL NOTIFY ENGINEER AFTER THE CRACK IS CLEANED BUT PRIOR TO REPAIR MATERIAL INSTALLATION.



TYPE II- CRACK WIDTHS < 1/4 " REPAIR NOTES:

SCALE: NOT TO SCALE

1. PRESSURE INJECT WITH EPOXY RESIN ADHESIVE (SIKADUR 35, HI-MOD LV LPL OR APPROVED EQUAL).
2. SURFACE SEALANT SHALL BE SIKADUR 33 OR APPROVED EQUAL.
3. SEALANT SHALL BE GROUND TO MATCH EXISTING FINISH WHEN HARDENED.



B / GA101 **WEST ABUTMENT**

SCALE: 1/4" = 1'-0"

ORIGINAL SHEET SET: SHEET 54

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SCALE ADJUSTMENT GUIDE

0" 1"

HURRICANE BARRIER
STREET GATE REPAIRS
PROVIDENCE, RHODE ISLAND

CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS

REVISIONS:		
1	5/10/2024	90% IFP

PROJECT NO.:	24040.00
DATE:	AUGUST 2024
SCALE:	AS NOTED
DESIGNED BY:	JPN
CHECKED BY:	BMD
DRAWN BY:	CD/LMC
APPROVED BY:	TDT

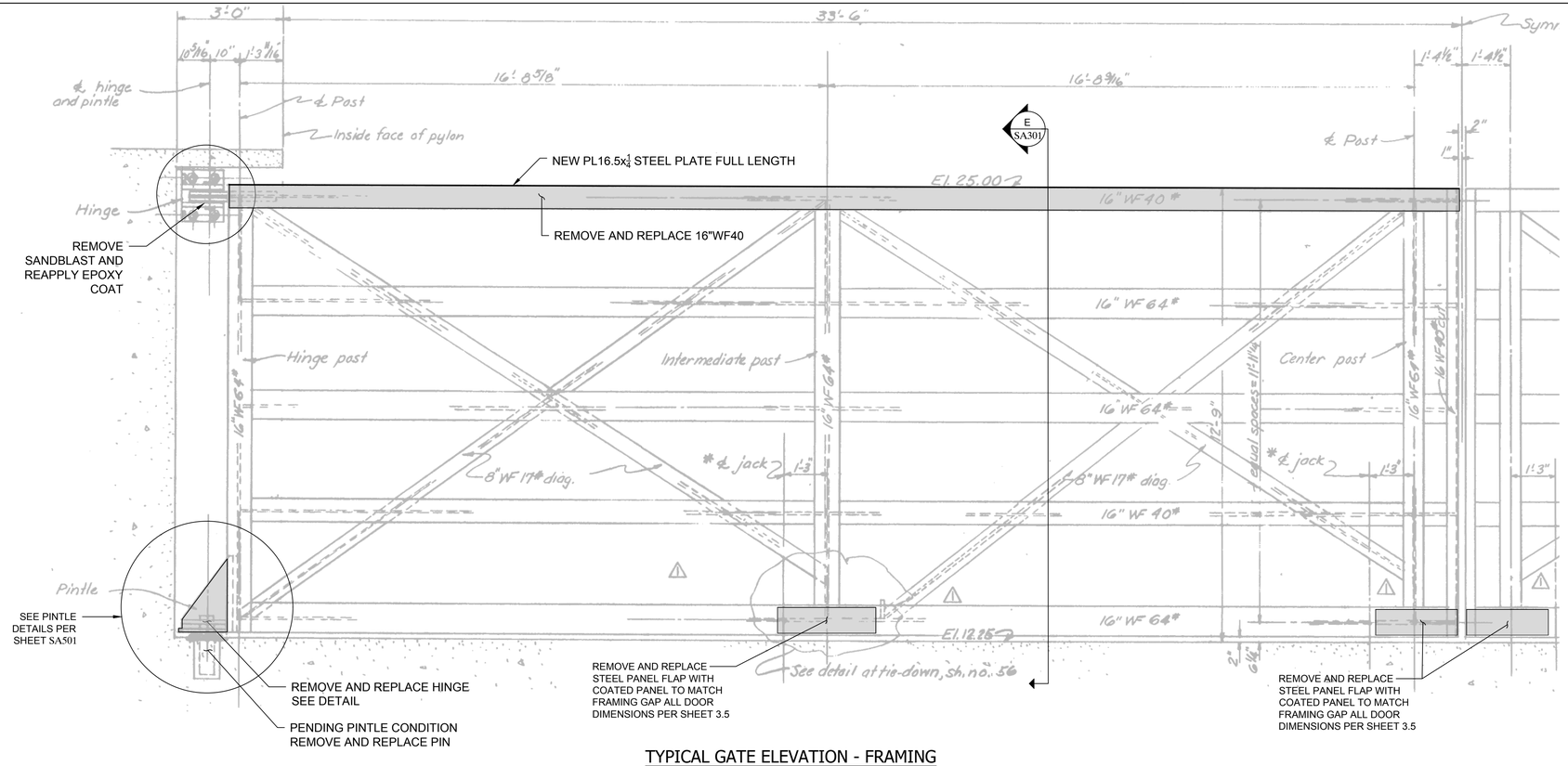
ABUTMENT SECTIONS
ALLENS AVENUE
PLANS

SHEET NO.:

SA201

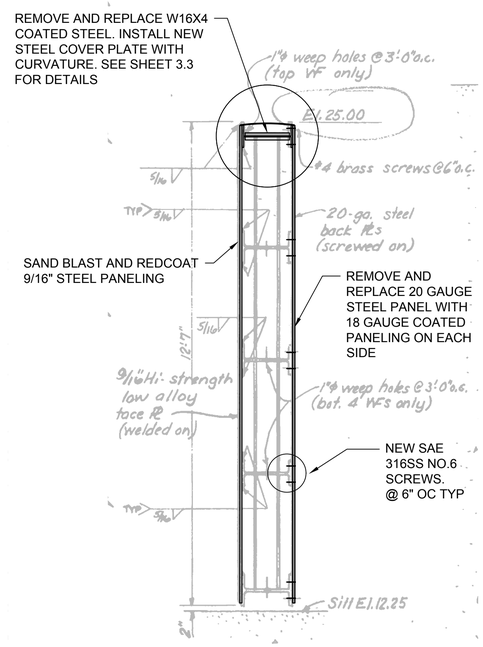
6 OF 18

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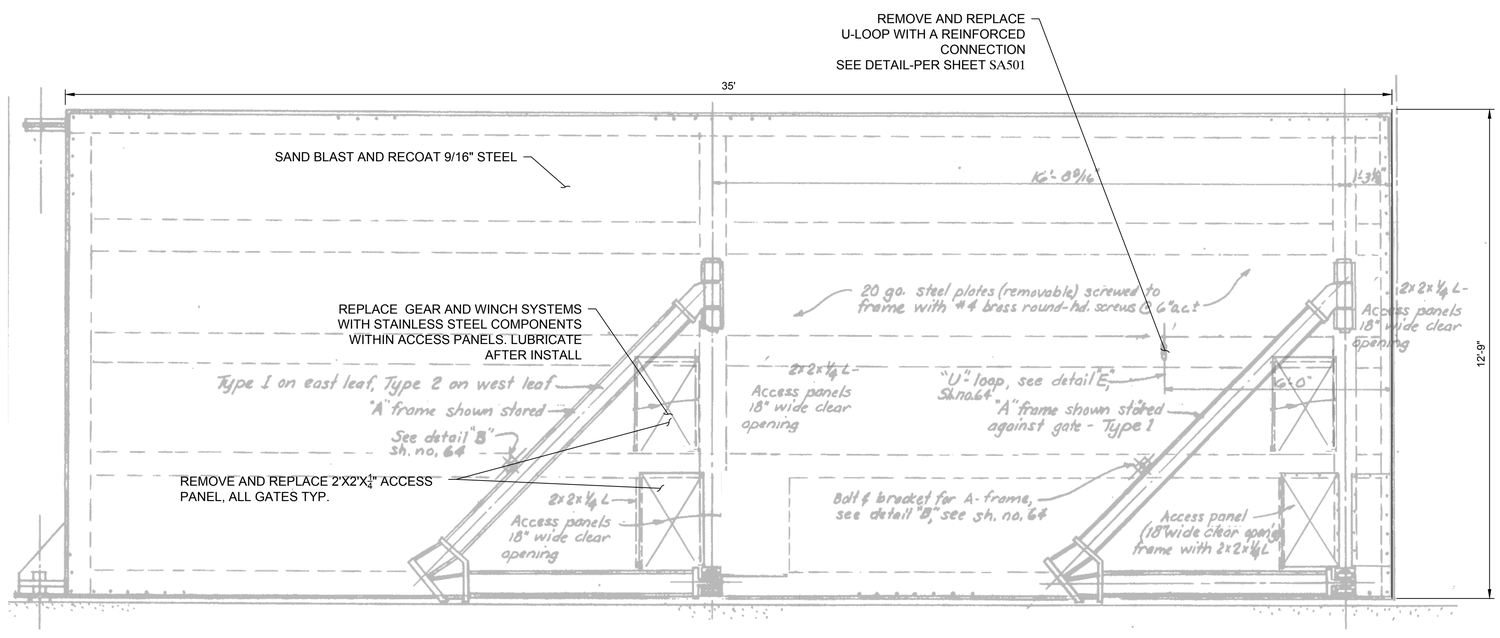
TYPICAL GATE ELEVATION - FRAMING

SCALE: 1/2" = 1'-0"
ORIGINAL SHEET SET: SHEET 57



E / SA301 SECTION

SCALE: 1/2" = 1'-0"
ORIGINAL SHEET SET SHEET 57



TYPICAL REAR GATE ELEVATION

SCALE: 1/2" = 1'-0"
ORIGINAL SHEET SET: SHEET 57

NOTES:

1. SAND BLAST AND RECOAT ALL INTERIOR/EXTERIOR STEEL MEMBERS/COMPONENTS. INCLUDING 9/16" STEEL PLATE TO REMAIN IN PLACE, UNLESS STATED OTHERWISE.
2. 20 GAUGE STEEL PANELING ALL EXPOSED FACE IN THE STORED POSITION SHALL BE REMOVED AND REPLACED WITH 18 GAUGE COATED (ALL SIDES) STEEL

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SCALE ADJUSTMENT GUIDE
0" 1"

HURRICANE BARRIER STREET GATE REPAIRS

PROVIDENCE, RHODE ISLAND
PROVIDENCE DEPARTMENT OF PUBLIC WORKS
CITY OF PROVIDENCE

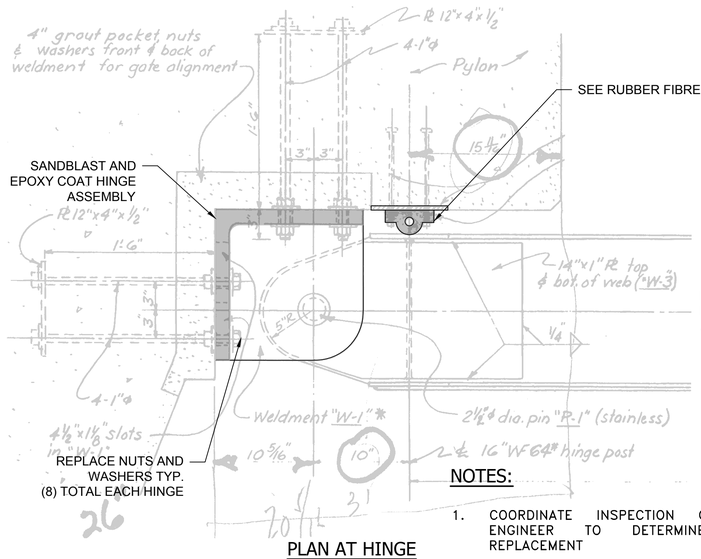
REVISIONS:		
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APPROVED BY:	TDT

GATE PLAN
ALLENS
AVENUE

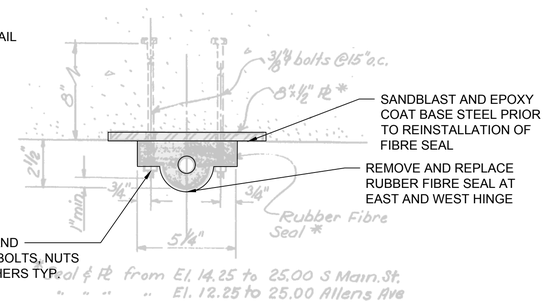
SHEET NO.:
SA301

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PLAN AT HINGE

SCALE: 1½"=1'-0"
ORIGINAL SHEET SET: SHEET 54

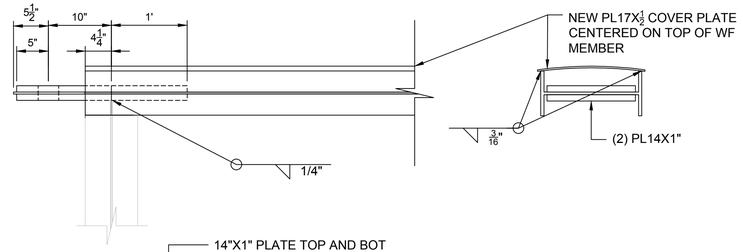


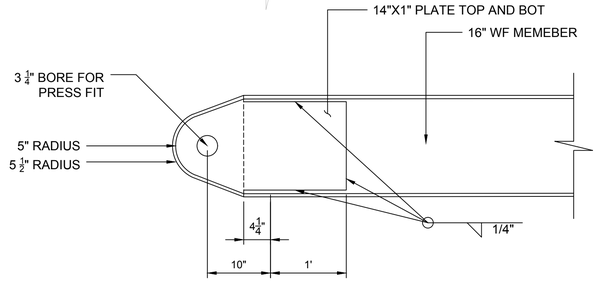
RUBBER FIBRE SEAL DETAIL

SCALE: ½"=1'-0"
ORIGINAL SHEET SET: SHEET 65

NOTES:

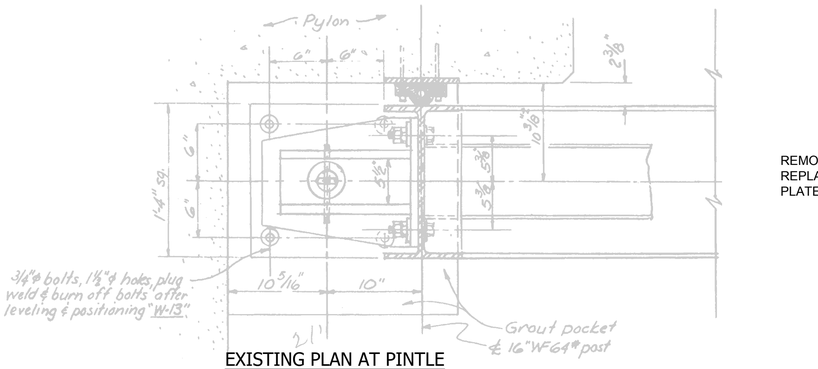
1. COORDINATE INSPECTION OF BOLT WITH ENGINEER TO DETERMINE NEED FOR REPLACEMENT





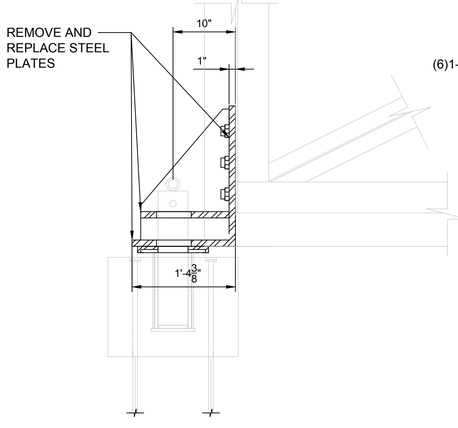
W3 DETAIL

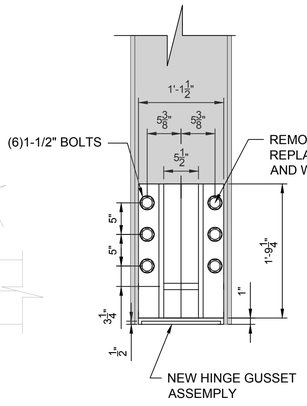
SCALE: 1"=1'-0"



EXISTING PLAN AT PINTLE

SCALE: 1½"=1'-0"
ORIGINAL SHEET SET: SHEET 58



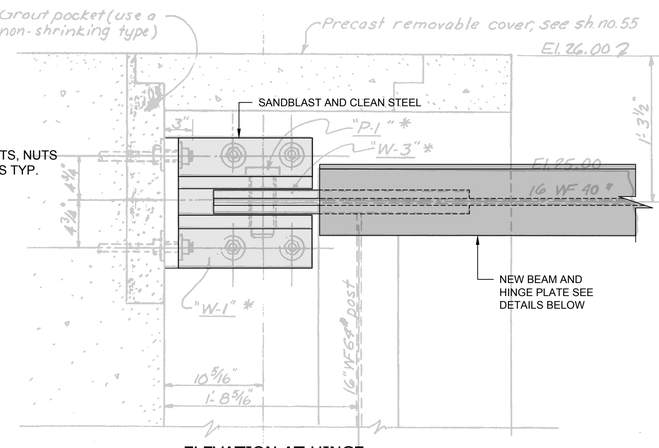


NOTES:

1. CONTRACTOR SHALL SUBMIT SHOP DRAWING FOR FABRICATION OF NEW S.S. PIN WITH LEAD TIME TO BE HELD ON STANDBY UNTIL POST-DOOR REMOVAL INSPECTION IS COMPLETED

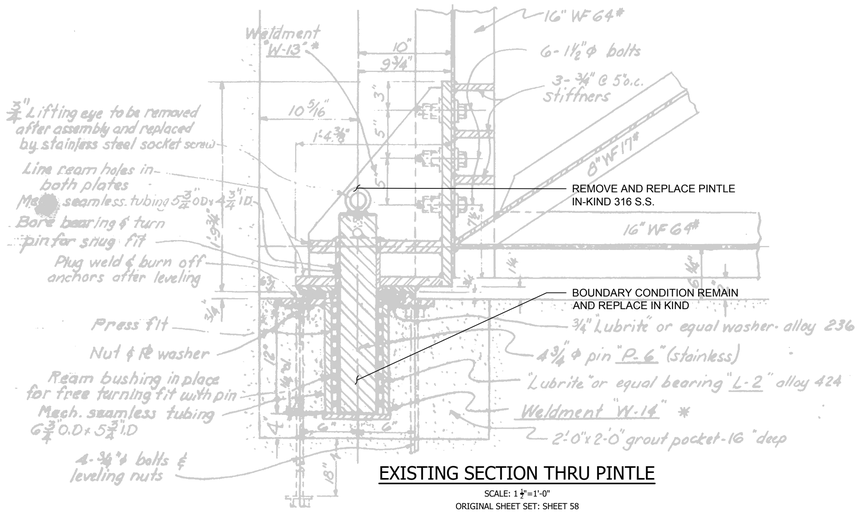
PROPOSED HINGE GUSSET ASSEMBLY REPLACEMENT

SCALE: 1"=1'-0"



ELEVATION AT HINGE

SCALE: 1½"=1'-0"
ORIGINAL SHEET SET: SHEET 58



EXISTING SECTION THRU PINTLE

SCALE: 1½"=1'-0"
ORIGINAL SHEET SET: SHEET 58

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SCALE ADJUSTMENT GUIDE
0" 1"

HURRICANE BARRIER
STREET GATE REPAIRS
PROVIDENCE, RHODE ISLAND
CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS

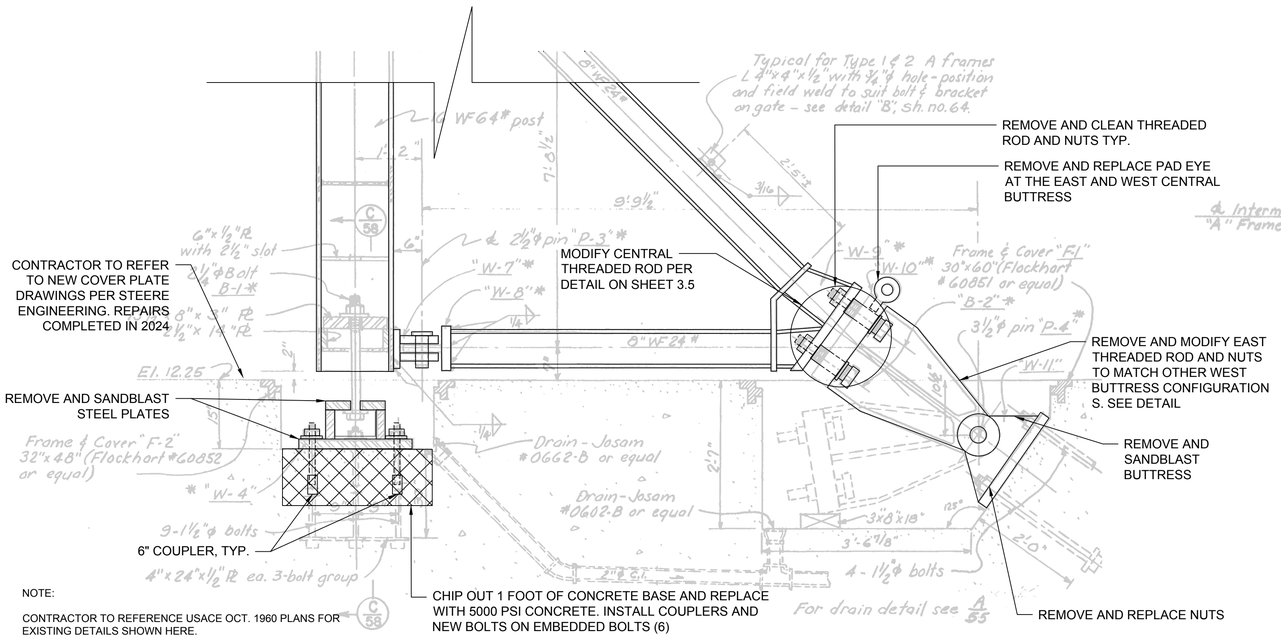
REVISIONS:		
1	5/10/2024	90% IFP

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APPROVED BY:	TDT

GATE DETAILS
ALLENS AVENUE

SHEET NO.:
SA501

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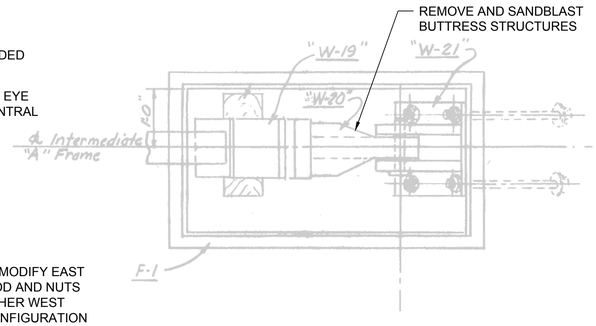
NOTE:

CONTRACTOR TO REFERENCE USACE OCT. 1960 PLANS FOR EXISTING DETAILS SHOWN HERE.

FOR MODIFICATIONS TO THE ROAD COVERS (FRAMES AND PLATES) COMPLETED IN 2024 REFERENCE STEER DESIGN PLANS

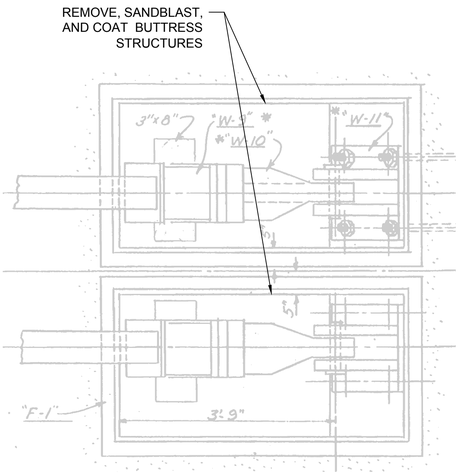
TYPICAL A-FRAME REPAIRS (BASED ON TYPE 1)

SCALE: ¾"=1'-0"
ORIGINAL SHEET SET: SHEET 49



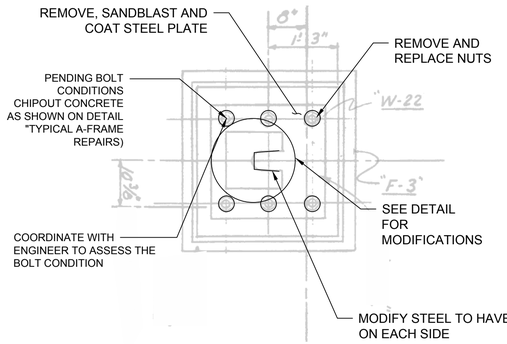
EAST AND WEST REAR RECESS

SCALE: ¾"=1'-0"
ORIGINAL SHEET SET: SHEET 49



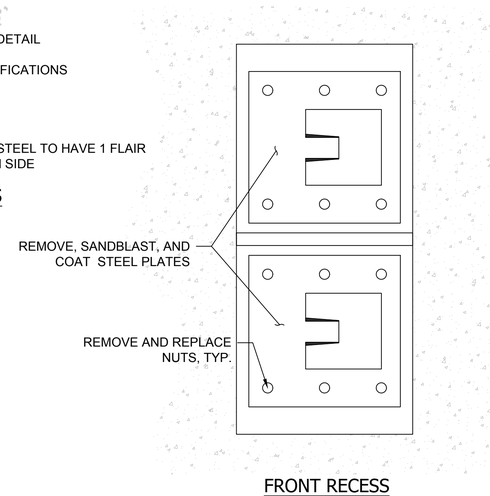
REAR RECESS

SCALE: ¾"=1'-0"
ORIGINAL SHEET SET: SHEET 49



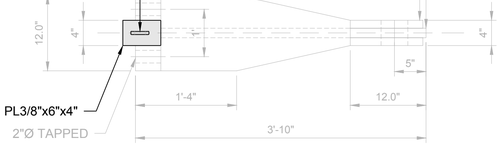
EAST AND WEST FRONT RECESS

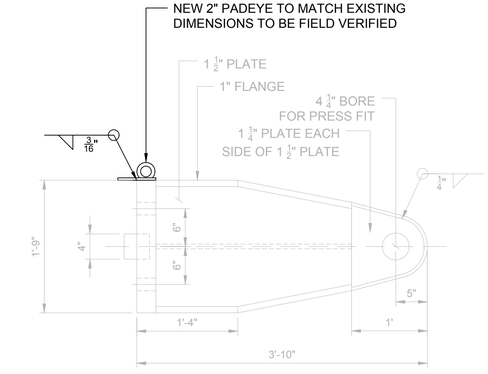
SCALE: ¾"=1'-0"
ORIGINAL SHEET SET: SHEET 49



FRONT RECESS

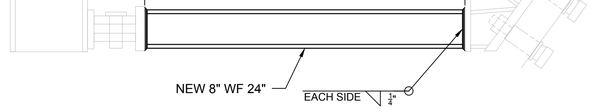
SCALE: 1"=1'-0"





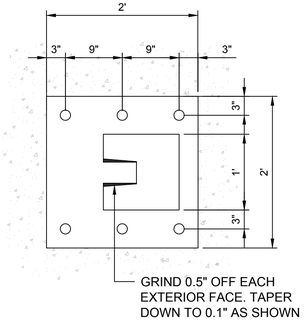
PAD EYE DETAIL

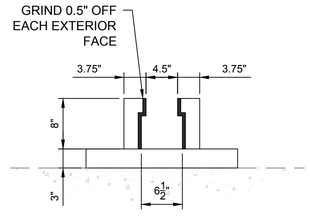
SCALE: 1"=1'-0"



TYPICAL A-FRAME BEAM REPLACEMENT ON ALL TYPE 2 A FRAMES

SCALE: ¾"=1'-0"





TYPICAL RECESS MODIFICATION

SCALE: 1"=1'-0"

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SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING.

HURRICANE BARRIER
STREET GATE REPAIRS
PROVIDENCE, RHODE ISLAND
CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS

REVISIONS:		
1	5/10/2024	90% IFP

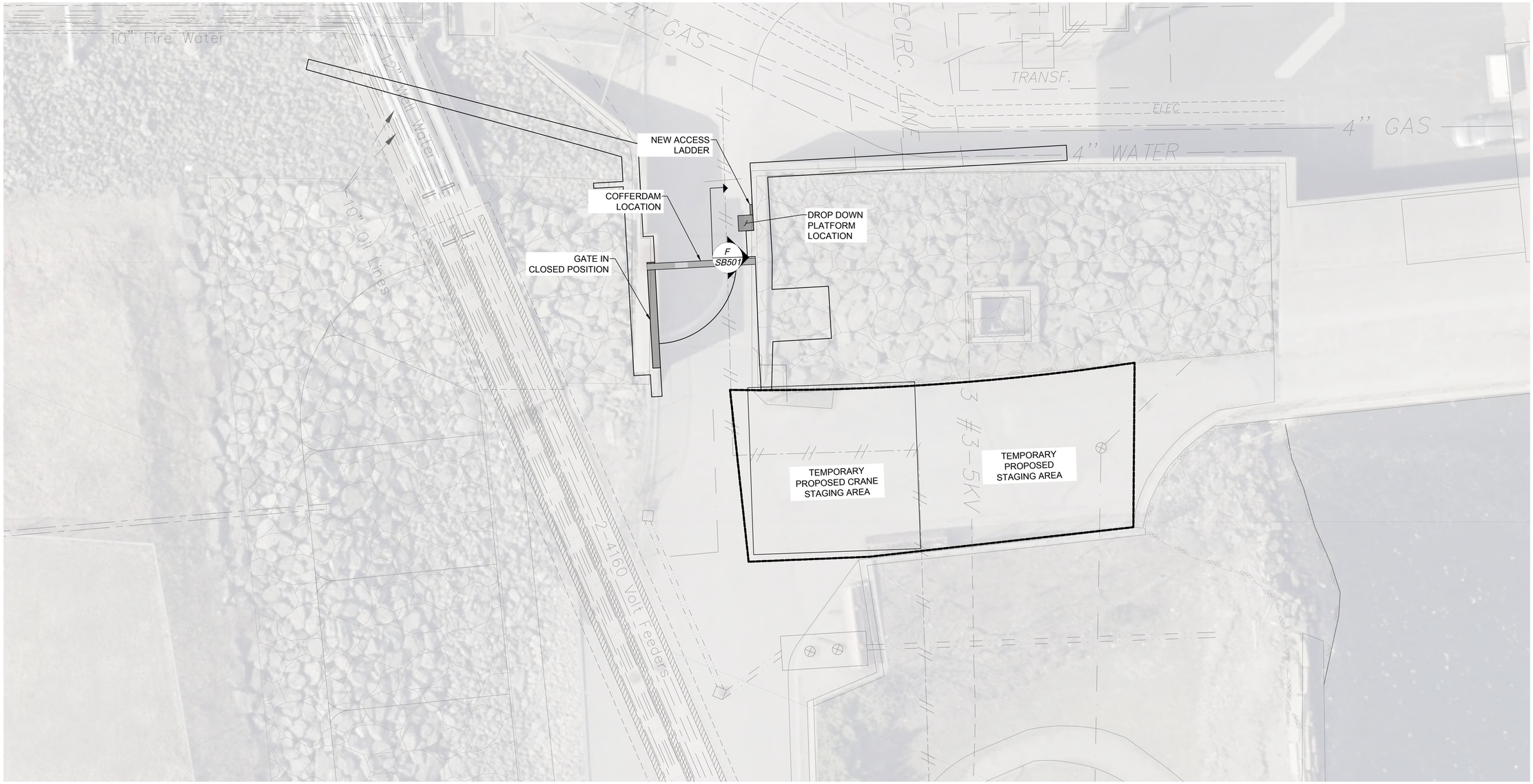
PROJECT NO.:	24040.00
DATE:	AUGUST 2024
SCALE:	AS NOTED
DESIGNED BY:	JPN
CHECKED BY:	BMD
DRAWN BY:	CD/LMC
APPROVED BY:	TDT

A-FRAME DETAILS
ALLENS AVENUE

SHEET NO.:
SA502

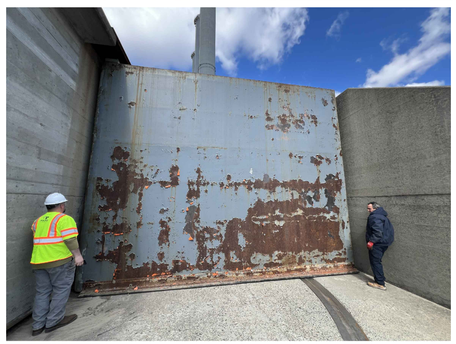
9 OF 18

J:\JOBS\24 Jobs\24040.00 PVD_HURRICANE BARRIER GATE REPAIRS-BY OWNER\SA502 A-FRAME DETAILS ALLENS AVENUE.dwg



Scale: 1"=10'
0 5' 10' 20'

EXISTING SITE PLAN - MANCHESTER STREET STATION
SCALE: 1" = 10'



SOUTHERN VIEW OF DEPLOYED GATE



WESTERN VIEW OF GATE IN STORED POSITION

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HURRICANE BARRIER
STREET GATE REPAIRS
PROVIDENCE, RHODE ISLAND
CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS

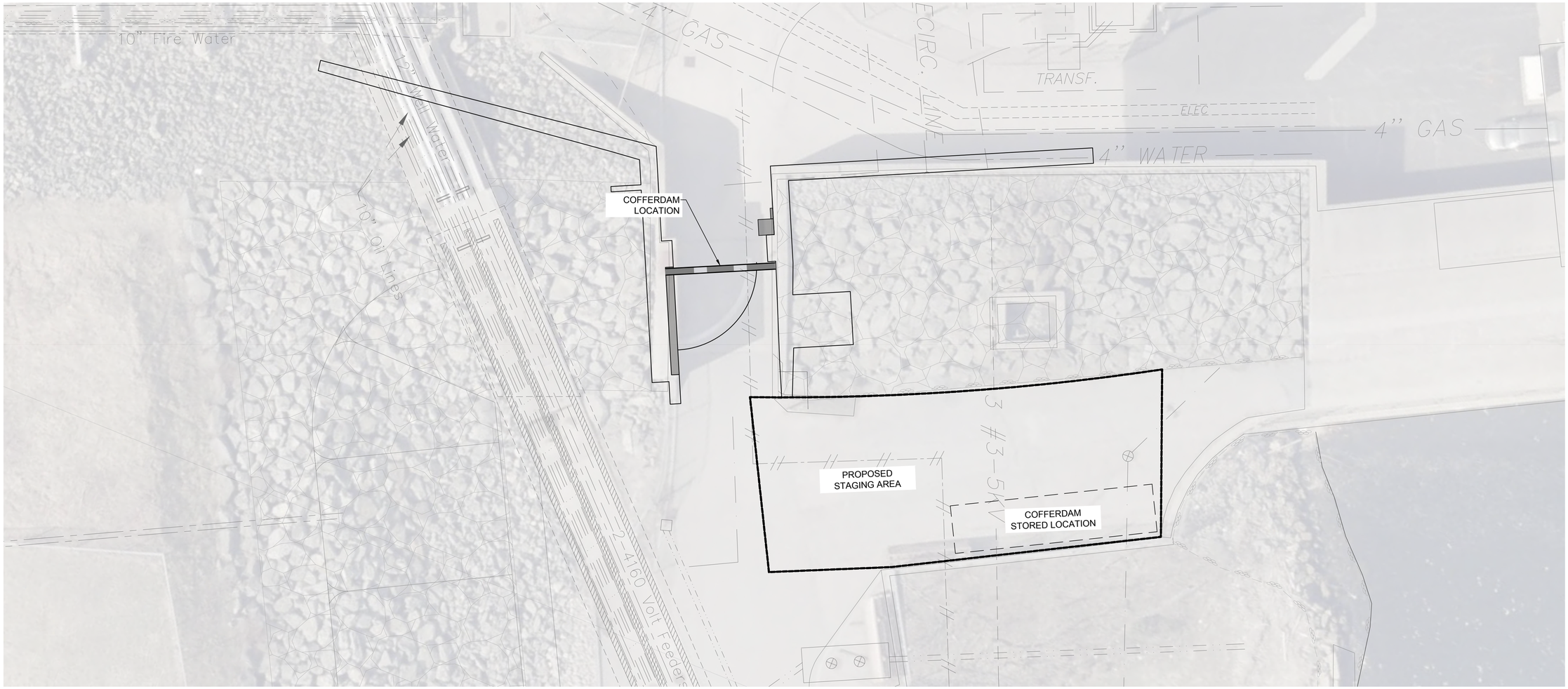
REVISIONS:		
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EXISTING SITE PLAN
MANCHESTER
STREET STATION

SHEET NO.:
GB101
10 OF 18

J:\JOBS\24 Jobs\24040.00 PVD_HURRICANE BARRIER GATE REPAIRS-RI\LDWGS\GB101 EXISTING SITE PLAN_MANCHESTER STREET STATION.dwg

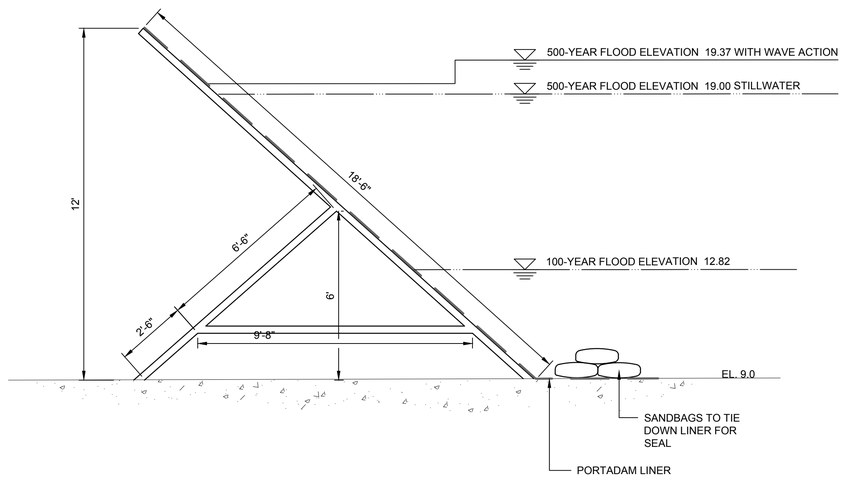


EXISTING SITE PLAN - MANCHESTER STREET STATION

SCALE: 1" = 10'

Scale: 1"=10'

0 5' 10' 20'



PORTADAM DETAIL

SCALE: 3/8"=1'-0"

FLOOD PREPARATION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR THE FLOOD CONTROL, IN THE CASE OF A STORM EVENT, TO SUPPLEMENT THE FLOOD PROTECTION LOST BY THE REMOVAL OF A VEHICULAR GATE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LOSS AND DAMAGE DUE TO A FAILURE OF ANY COFFERDAMS OR DIVERSION STRUCTURES CONSTRUCTED DURING THE WORK.
3. ANY NECESSARY COFFERDAMS AND DIVERSIONS SHALL BE DESIGNED BY THE CONTRACTOR AND BEAR THE STAMP OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF RHODE ISLAND. APPROVAL BY THE OWNER AND ENGINEER IS REQUIRED PRIOR TO INSTALLATION. ALL DIVERSIONS SHALL BE INSTALLED AND REMOVED IN THEIR ENTIRETY AT NO ADDITIONAL COST TO THE OWNER.
4. CONTRACTOR SHALL INSTALL PORTADAM TO ELEVATION 21.0 TO EXCEED THE HEIGHT OF 500-YEAR STORM.
5. PREPARATIONS SHALL BE MADE WITH THE MANUFACTURER/SUPPLIER TO BE ON STANDBY IF A STORM APPROACHES TO BE ABLE TO MOBILE AND DEPLOY WITHIN 48 HOURS OF THE CITY'S NOTICE.

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HURRICANE BARRIER
STREET GATE REPAIRS
PROVIDENCE, RHODE ISLAND
CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS

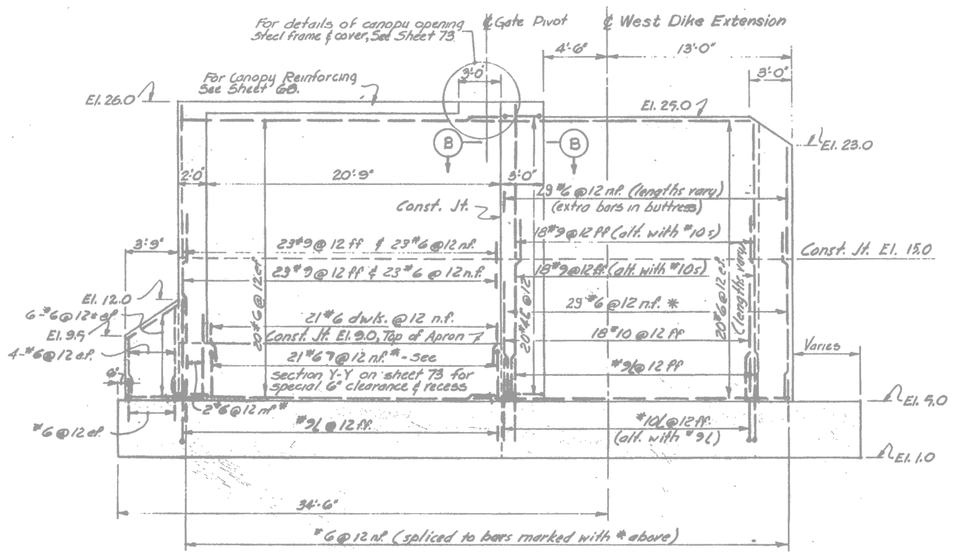
REVISIONS:		
1	5/10/2024	90% IFP

PROJECT NO.:	24040.00
DATE:	AUGUST 2024
SCALE:	AS NOTED
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APPROVED BY:	TDT

EMERGENCY ACTION PLAN MANCHESTER STREET STATION

SHEET NO.:
GB102
11 OF 18

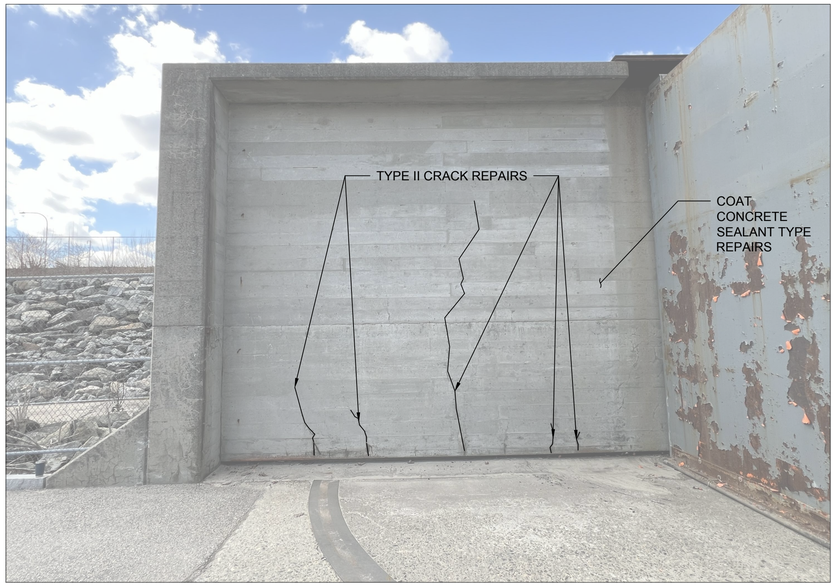
J:\JOBS\24 Jobs\24040.00 PVD_HURRICANE BARRIER GATE REPAIRS-IN\DWGS\GB102 EMERGENCY ACTION PLAN MANCHESTER STREET STATION.dwg



SECTION C-C

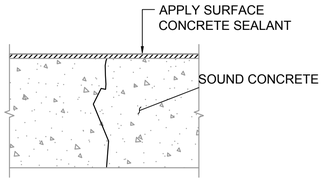
SCALE: 1/4"=1'-0"

ORIGINAL SHEET SET: SHEET 69



WEST ABUTMENT ELEVATION PHOTO

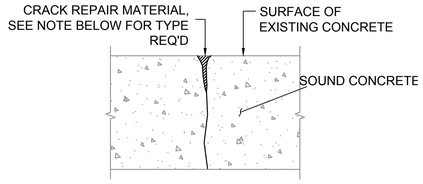
SCALE: NOT TO SCALE



TYPE I- CONCRETE COATING CRACK REPAIRS <= 1/32"

SCALE: NOT TO SCALE

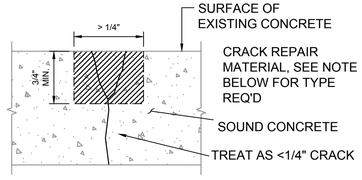
1. SURFACE SHALL BE CLEAN AND FREE OF DUST AND DEBRIS
2. PREPARE SURFACE PER SEALANT MANUFACTURERS INSTRUCTIONS



TYPE II- CRACK WIDTHS < 1/4 " REPAIR NOTES:

SCALE: NOT TO SCALE

1. PRESSURE INJECT WITH EPOXY RESIN ADHESIVE (SIKADUR 35, HI-MOD LV LPL OR APPROVED EQUAL).
2. SURFACE SEALANT SHALL BE SIKADUR 33 OR APPROVED EQUAL.
3. SEALANT SHALL BE GROUND TO MATCH EXISTING FINISH WHEN HARDENED.



TYPE III - CRACK WIDTHS >1/4" REPAIR NOTES:

SCALE: NOT TO SCALE

1. SAW CUT LOOSE CONCRETE TO A 3/4" MINIMUM DEPTH AND UNTIL CRACK IS 1/4" OR LESS IN WIDTH.
2. IF CRACK EXTENDS BEYOND SAW CUT, TREAT CRACK WITH INJECTION REPAIR AS SHOWN
3. PATCH CRACK WITH SIKATOP 123 PLUS OR APPROVED EQUAL.
4. CRACK REPAIR SHALL BE COMPLETED IN ACCORDANCE WITH ALL MANUFACTURERS RECOMMENDATIONS FOR INSTALLATION OF THE APPROVED SEALANT.
5. THE CONTRACTOR SHALL PROVIDE MEASURES TO PROTECT SURROUNDING AREAS FROM EXCESS REPAIR MATERIAL.
6. EXCESS REPAIR MATERIAL SHALL BE REMOVED FROM THE FACE OF THE EXISTING CONCRETE.
7. CONTRACTOR SHALL NOTIFY ENGINEER AFTER THE CRACK IS CLEANED BUT PRIOR TO REPAIR MATERIAL INSTALLATION.

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SCALE ADJUSTMENT GUIDE

0" 1"

HURRICANE BARRIER
STREET GATE REPAIRS
PROVIDENCE, RHODE ISLAND
CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS

REVISIONS:		
1	5/10/2024	90% IFP

PROJECT NO.:	24040.00
DATE:	AUGUST 2024
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DESIGNED BY:	JPN
CHECKED BY:	BMD
DRAWN BY:	CD/LMC
APPROVED BY:	TDT

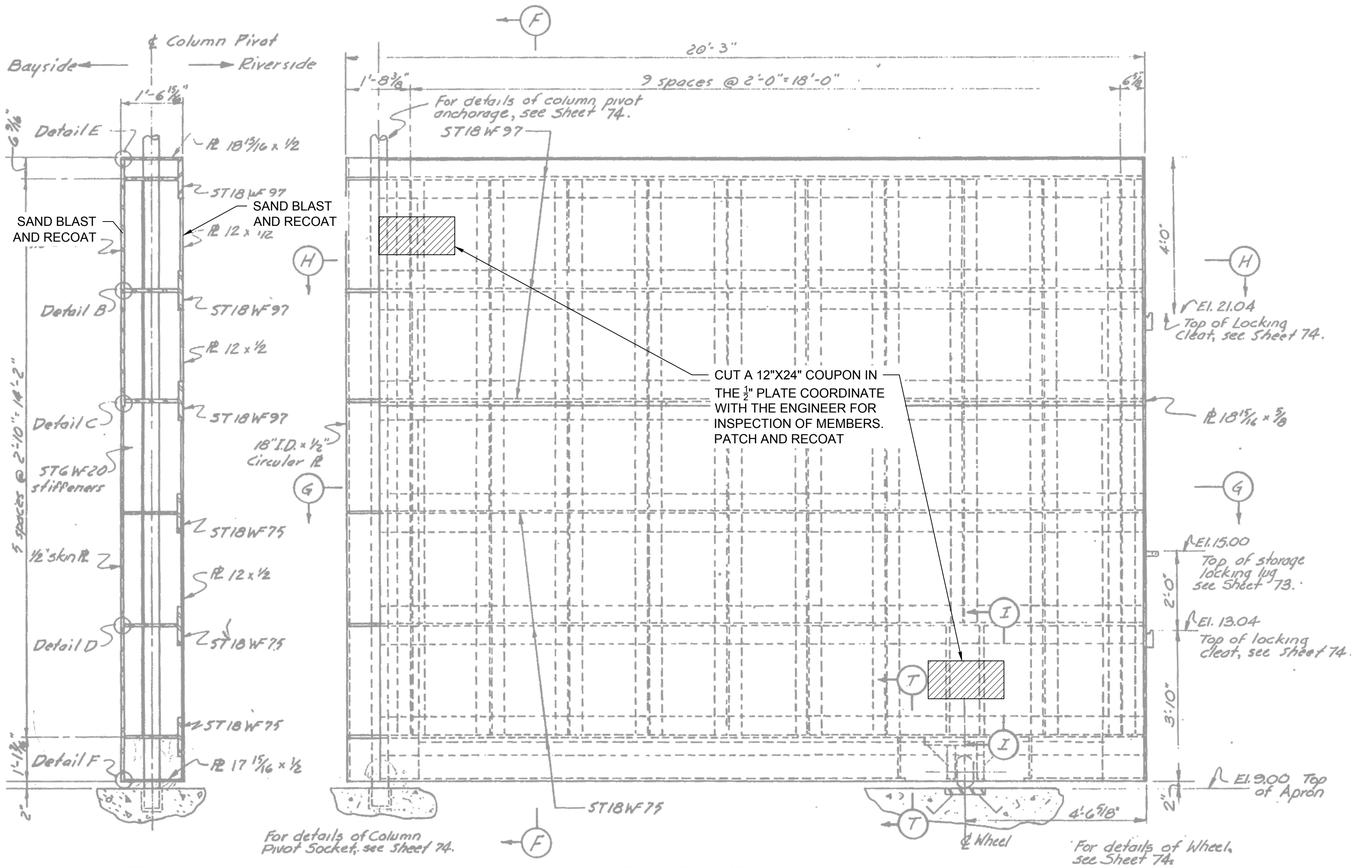
ABUTMENT ELEVATIONS MANCHESTER STREET STATION

SHEET NO.:

SB201

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J:\JOBS\24 Jobs\24040.00 PVD HURRICANE BARRIER GATE REPAIRS-RI\DWGS\SB201 ABUTMENT ELEVATIONS MANCHESTER STREET STATION.dwg



SECTION F-F

SCALE: 1/2"=1'-0

ORIGINAL SHEET SET: SHEET 72

ELEVATION OF BAYSIDE FACE

SCALE: 1/2"=1'-0

ORIGINAL SHEET SET: SHEET 72

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SCALE ADJUSTMENT GUIDE

0" 1"

HURRICANE BARRIER
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CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS

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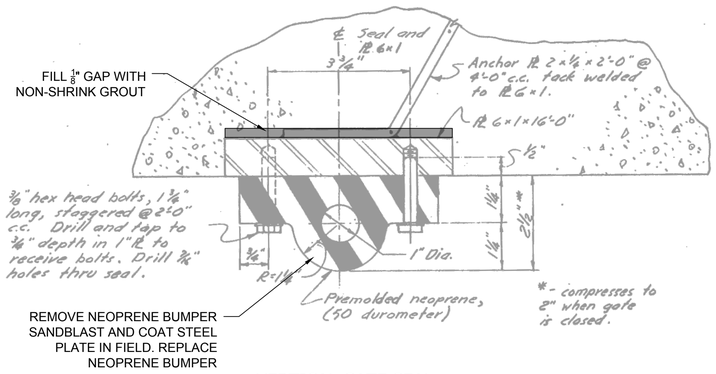
PROJECT NO.:	24040.00
DATE:	AUGUST 2024
SCALE:	AS NOTED
DESIGNED BY:	JPN
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GATE SECTION
MANCHESTER STREET
STATION

SHEET NO.:
SB301

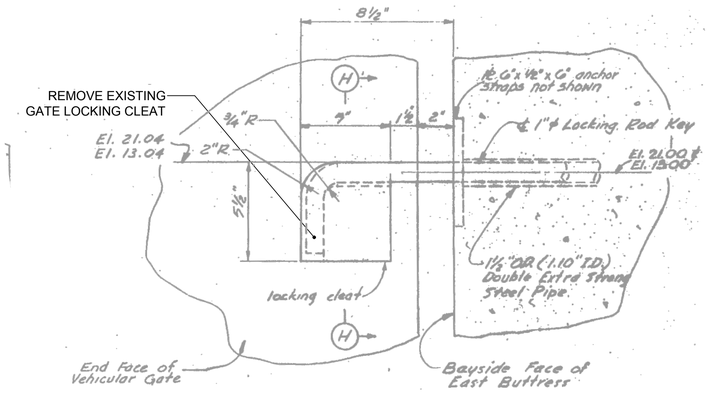
13 OF 18

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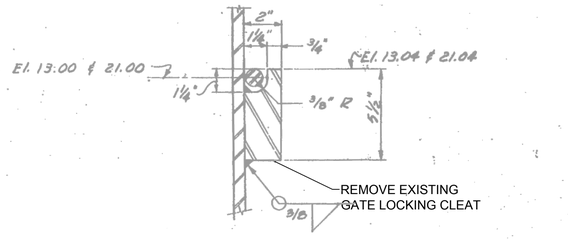
VERTICAL GATE SEAL

SCALE: 6"=1'-0"
ORIGINAL PLAN SET: SHEET 73



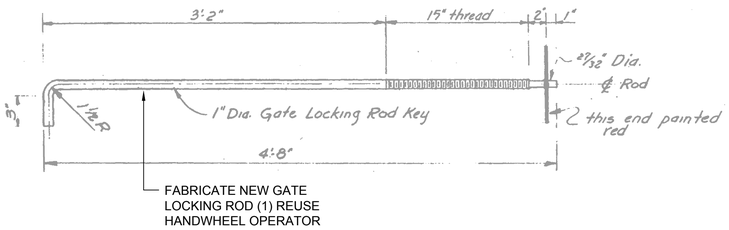
EXISTING SECTION G-G

SCALE: 3"=1'-0"
ORIGINAL SHEET SET: SHEET 74



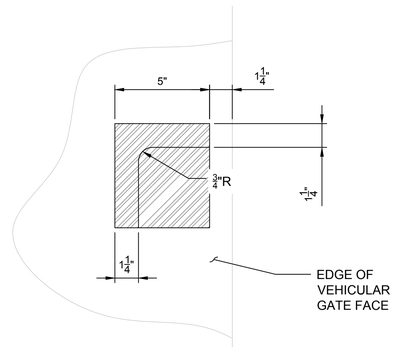
EXISTING SECTION H-H

SCALE: 3":=1'-0"
ORIGINAL SHEET SET: SHEET 74



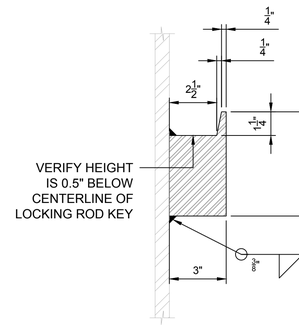
LOCKING ROD KEY

SCALE: 1 ½ "=1'-0"
ORIGINAL SHEET SET: SHEET 74



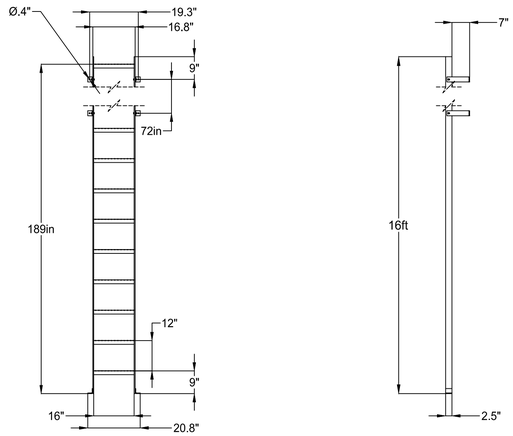
NEW GATE LOCKING CLEAT

SCALE: 2":=1'-0"



PROPOSED SECTION H-H

SCALE: 2":=1'-0"

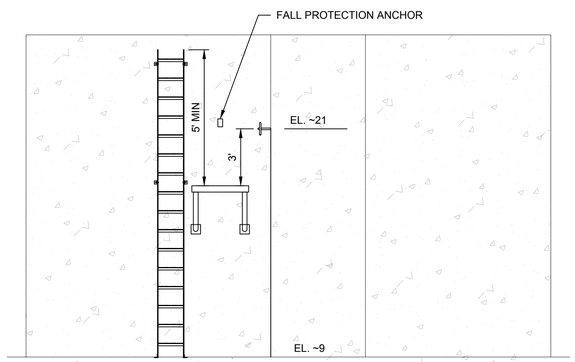


NOTE:

LADDER SHOWN IS BASED UPON McMASTER-CARR 350LBS CAPACITY 16" POWDER-COATED STEEL WALL MOUNT, MODEL 7981T14. PRE-APPROVED ALTERNATIVES WILL BE CONSIDERED

NEW FIXED LADDER

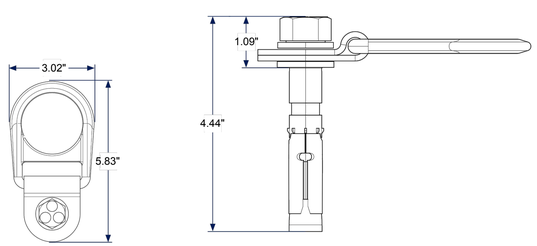
SCALE: NTS



F GB101

VALVE ACCESS PLATFORM LAYOUT

SCALE: 1/4"=1'-0"



DBI SALA FALL PROTECTION ANCHOR

SCALE: NTS

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0" 1"

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PROVIDENCE, RHODE ISLAND
CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS

REVISIONS:		
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PROJECT NO.:	24040.00
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APPROVED BY:	TDT

GATE DETAILS
MANCHESTER STREET STATION

SHEET NO.:
SB501

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NOTES:

1. ALL SIDEWALKS SHALL REMAIN OPEN AT ALL TIMES EXCEPT WHEN THE SIDEWALK REPLACEMENT OPERATION REQUIRES THEIR CLOSURE.
2. WHILE ONSITE, THE CONTRACTOR SHALL ALLOW FOR SAFE PEDESTRIAN PASSAGE THROUGH THE WORK SPACE AT ALL TIMES DURING THE WORK. A TRAFFIC PERSON MUST BE PROVIDED TO ASSIST AND SAFELY GUIDE PEDESTRIANS THROUGH THE WORK SPACE WHEN THE WORK RESTRICTS OR BLOCKS PEDESTRIANS FROM USING THE EXISTING SIDEWALKS AND OTHER EXISTING PEDESTRIAN WALKWAYS.
3. THE PVC PLASTIC PIPE BARRICADE SHALL BE EQUIPPED WITH TYPE A WARNING LIGHTS IN ACCORDANCE WITH SECTION 6F.83 OF THE MOST RECENT EDITION OF THE MUTCD, INCLUDING ALL REVISIONS AND ADDENDA.
4. ALL TEMPORARY TRAFFIC CONTROL SET-UPS AND DEVICES AND THEIR INSTALLATION, MAINTENANCE, AND REMOVAL SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) WITH ALL REVISIONS, AND THE LATEST EDITION OF THE "RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" WITH ALL REVISIONS.
5. ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF WORK.
6. ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE REMOVED AS SOON AS PRACTICAL WHEN THEY ARE NO LONGER NEEDED. WHEN WORK IS SUSPENDED FOR SHORT PERIODS OF TIME, TEMPORARY TRAFFIC CONTROL DEVICES THAT ARE NO LONGER APPROPRIATE SHALL BE REMOVED OR COVERED.
7. DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
8. MINIMUM LANE WIDTH IS TO BE 11 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF THE CHANNELIZATION DEVICES.
9. ACCESS TO ALL BUSINESSES AND RESIDENTIAL DRIVEWAYS WITHIN THE WORK AREA SHALL BE MAINTAINED AT ALL TIMES.
10. TEMPORARY CONSTRUCTION SIGNS SHALL BE PLACED BEHIND THE BACK OF SIDEWALK, OR BEHIND THE EDGE OF PAVEMENT WHERE THERE IS NO SIDEWALK. THE CONTRACTOR SHALL ENSURE THAT A 36" UNOBSTRUCTED MINIMUM CLEARANCE IS PROVIDED AT ALL TIMES AT SIDEWALKS OPEN TO PEDESTRIANS. WHERE THERE IS INSUFFICIENT WIDTH, THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER TO PROVIDE MOUNTED SIGNS WITH THE BOTTOM OF THE SIGN OVERHANG NO LESS THAN 84" HIGH IN ORDER TO MEET ADA STANDARDS.
11. TEMPORARY CONSTRUCTION ADVANCED WARNING SIGNS POSTED ON MINOR ROADS INTERSECTING STREETS SHOWN IN THE "TYPICAL CLOSURE AT SIDE OF "T" INTERSECTION" DETAIL, MAY BE PLACED 100 FT APART.
12. WHERE A SIDE STREET OR RAMP INTERSECTS THE WORK ZONE, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN ACCORDRANC EWITH PART 6 OF THE MUTCD.
13. THE LONGITUDINAL CHANNELING DEVICES SHALL BE POSITIONED SUCH THAT THERE ARE NO GAPS ACROSS THE ENTIRE WIDTH OF THE SIDEWALK.
14. THE LONGITUDINAL CHANNELING DEVICES USED FOR THE SIDEWALK CLOSURE SHALL HAVE A DETECTABLE EDGE IN ACCORDANCE WITH SECTION 6F.74 OF THE MOST RECENT EDITION OF THE MUTCD, INCLUDING ALL REVISIONS AND ADDENDA.
15. THE CONTRACTOR SHALL PROVIDE NECESSARY ACCESS FOR FIRE APPARATUS AND OTHER EMERGENCY VEHICLE THROUGH THE WORK ZONE AT ALL TIMES.
16. RHODE ISLAND HOSPITAL EMPLOYEE LOT E-2 ALLENS AVENUE ENTRANCE/EXIT SHALL BE CLOSED. EMPLOYEE LOT E-2 EDDY STREET ENTRANCE/EXIT SHALL REMAIN OPEN AT ALL TIMES.
17. COLLIER POINT PARK ENTRANCE/EXIT SHALL REMAIN OPEN AT ALL TIMES.

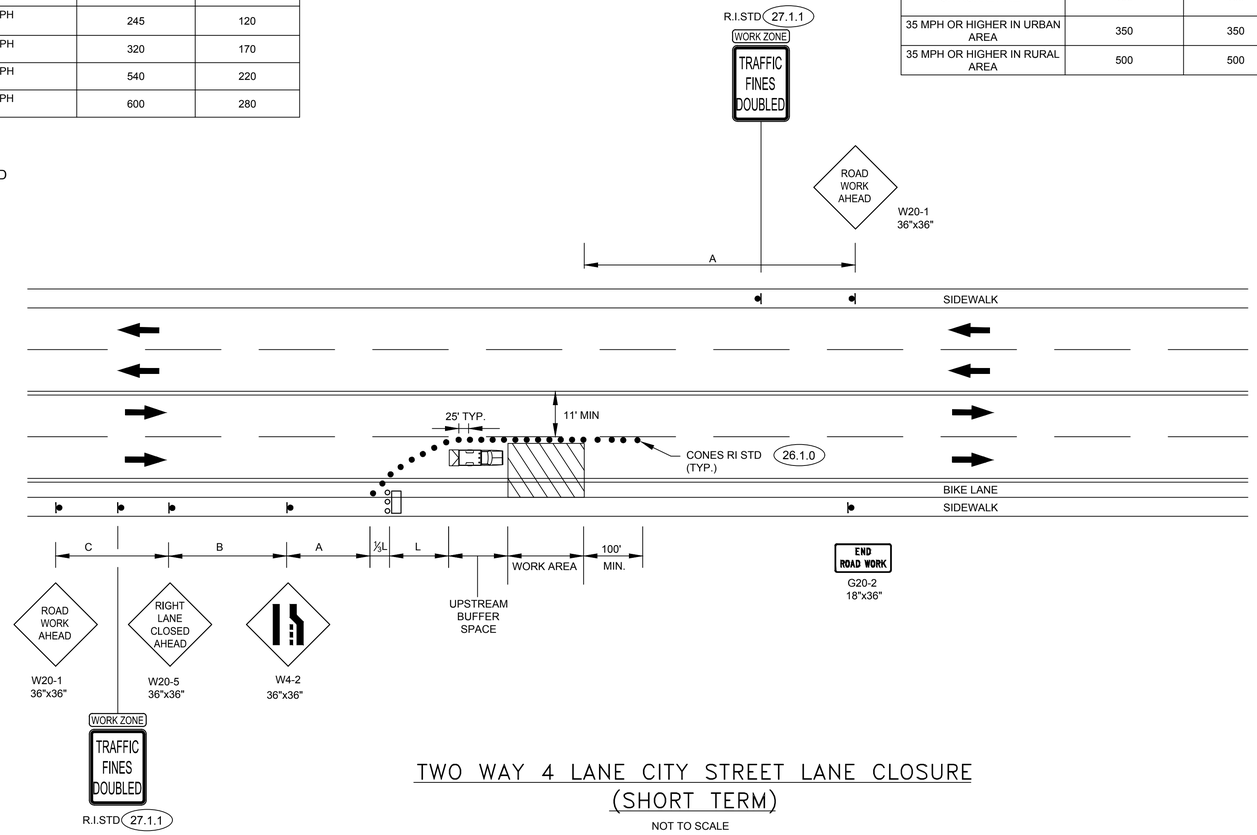
TAPER AND BUFFER LENGTHS		
SPEED LIMIT	TAPER LENGTH * (L) (FEET)	BUFFER SPACE ** (FEET)
25 MPH	125	55
30 MPH	180	85
35 MPH	245	120
40 MPH	320	170
45 MPH	540	220
50 MPH	600	280

* REQUIRED

** SUGGESTED

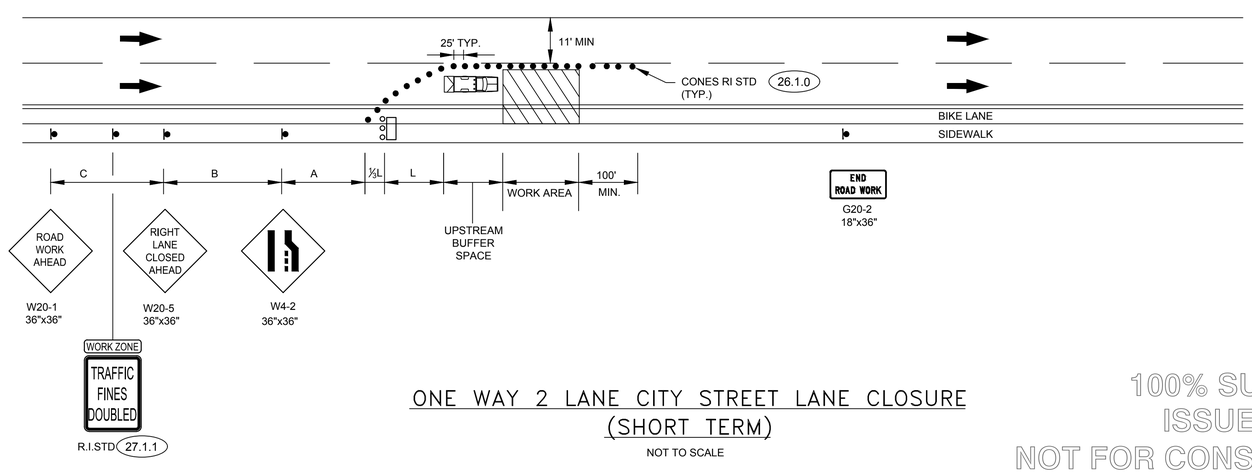
SPEED (S)	TAPER LENGTH (L) IN FEET
40 MPH OR LESS	$L = WS^2/60$
45 MPH OR MORE	$L = WS$

MINIMUM ADVANCE WARNING SIGN SPACING			
POSTED SPEED LIMIT & LOCATION	DISTANCE BETWEEN SIGNS (FEET)		
	A	B	C
30 MPH OR LESS IN URBAN OR RURAL AREA	100	100	100
35 MPH OR HIGHER IN URBAN AREA	350	350	350
35 MPH OR HIGHER IN RURAL AREA	500	500	500



TWO WAY 4 LANE CITY STREET LANE CLOSURE
(SHORT TERM)

NOT TO SCALE



ONE WAY 2 LANE CITY STREET LANE CLOSURE
(SHORT TERM)

NOT TO SCALE

RIDOT LEGEND:

- BARRELS 40' SPACING R.I. STD. 26.2.0
- FLAGPERSON/POLICE OFFICER
- FLUORESCENT TRAFFIC CONE R.I. STD. 26.1.0
- PLASTIC PIPE BARRICADE R.I. STD. 26.3.0
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN
- WORK ZONE
- TRUCK WITH ARROW AND ATTENUATOR
- ARROW PANEL
- TEMPORARY 6' CHAIN LINK FENCE, R.I. STD. 31.2.0
- TEMPORARY IMPACT ATTENUATOR
- TEMPORARY MEDIAN BARRIER R.I. STD. 40.5.0
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

100% SUBMISSION
ISSUED FOR BID
NOT FOR CONSTRUCTION

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508-543-1755

SCALE ADJUSTMENT GUIDE
0" 1"

HURRICANE BARRIER
STREET GATE REPAIRS
PROVIDENCE, RHODE ISLAND
CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS

REVISIONS:		
1	5/10/2024	90% IFP

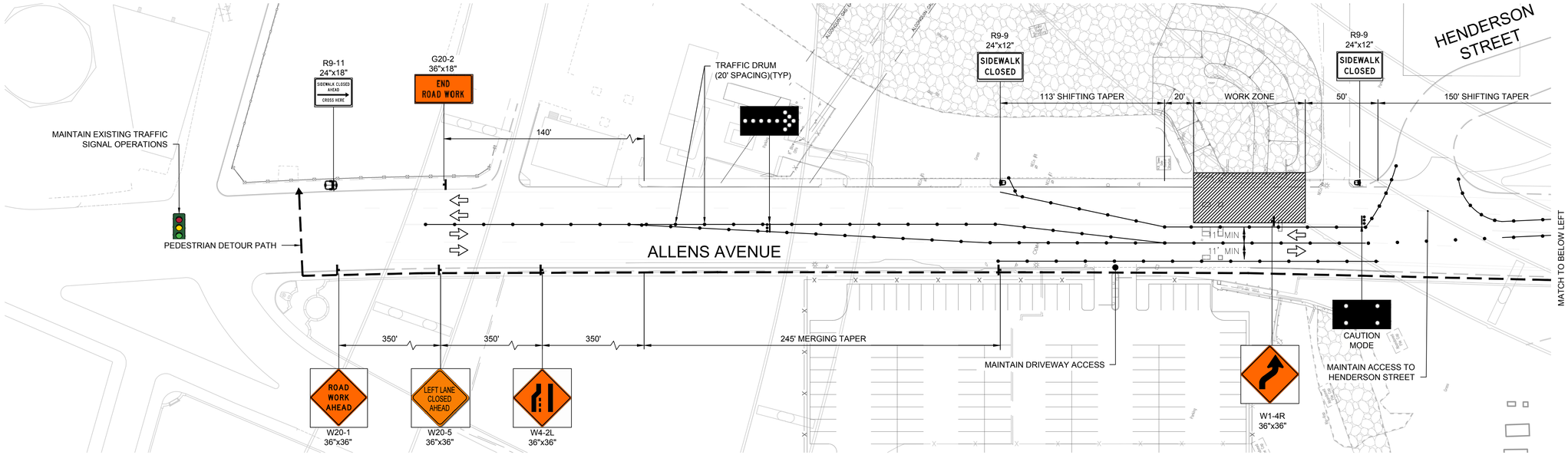
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DATE:	AUGUST 2024
SCALE:	AS NOTED
DESIGNED BY:	HM
CHECKED BY:	DLH
DRAWN BY:	AWB
APPROVED BY:	DLH

TEMPORARY TRAFFIC CONTROL PLAN NO. 1

SHEET NO.:

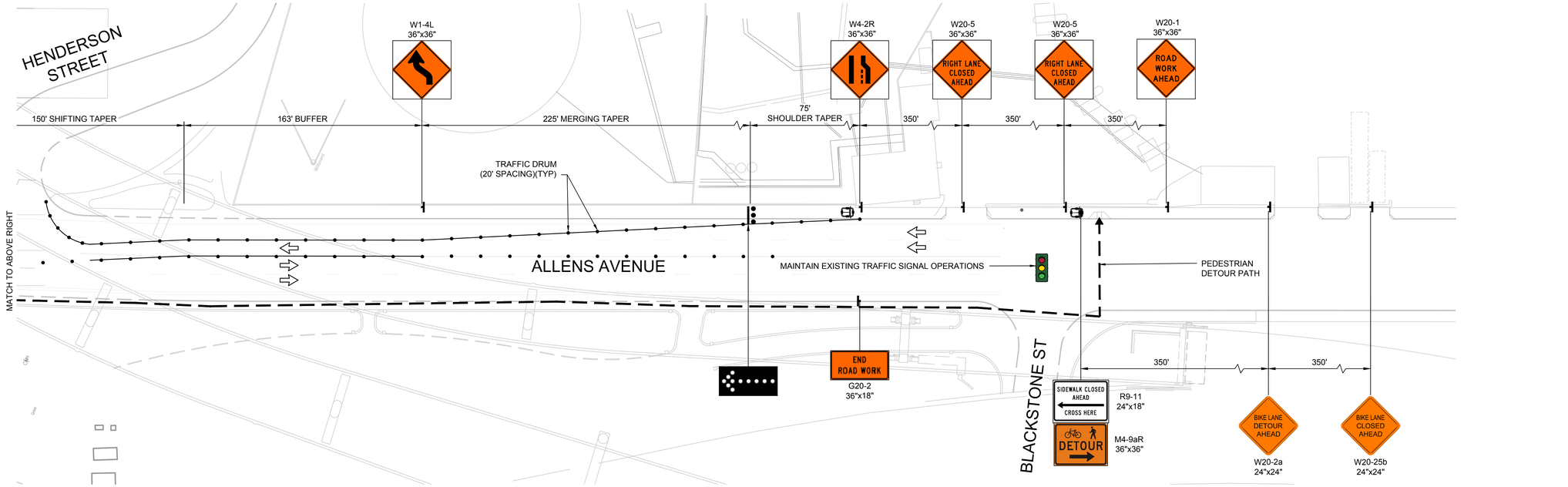
X-101

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NB LANE CLOSURE PLAN 1A - ALLENS AVENUE

SCALE: 1" = 40'



NB LANE CLOSURE PLAN 1B - ALLENS AVENUE

SCALE: 1" = 40'

Scale: 1"=40'

0 20' 40' 80'

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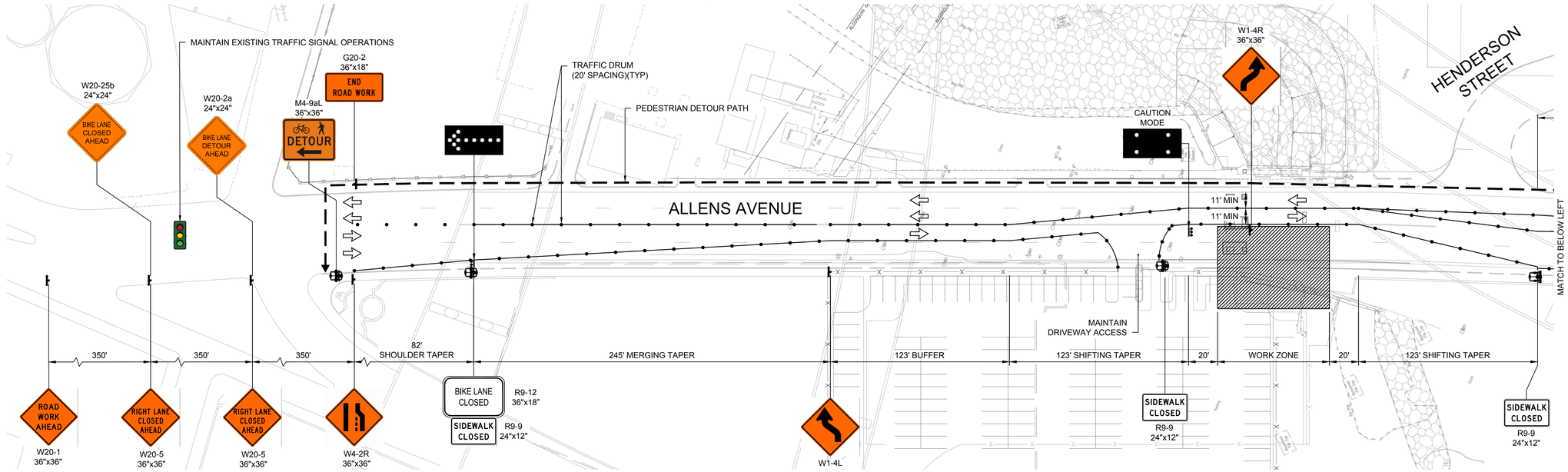
TEMPORARY
TRAFFIC CONTROL
PLAN NO. 2

SHEET NO.:

X-102

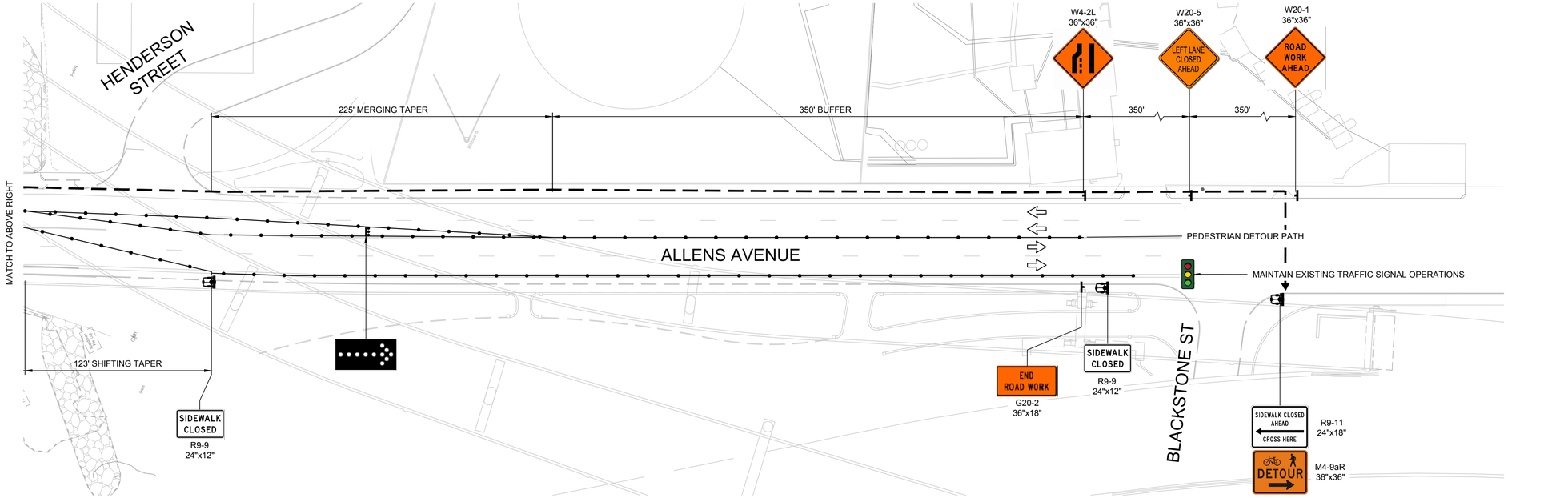
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SB LANE CLOSURE PLAN 2A - ALLENS AVENUE

SCALE: 1" = 40'



SB LANE CLOSURE PLAN 2B - ALLENS AVENUE

SCALE: 1" = 40'

Scale: 1"=40'

0 20' 40' 80'

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REVISIONS:		
1	5/10/2024	90% IFP

PROJECT NO.:	24040.00
DATE:	AUGUST 2024
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DESIGNED BY:	HM
CHECKED BY:	DLH
DRAWN BY:	AWB
APPROVED BY:	DLH

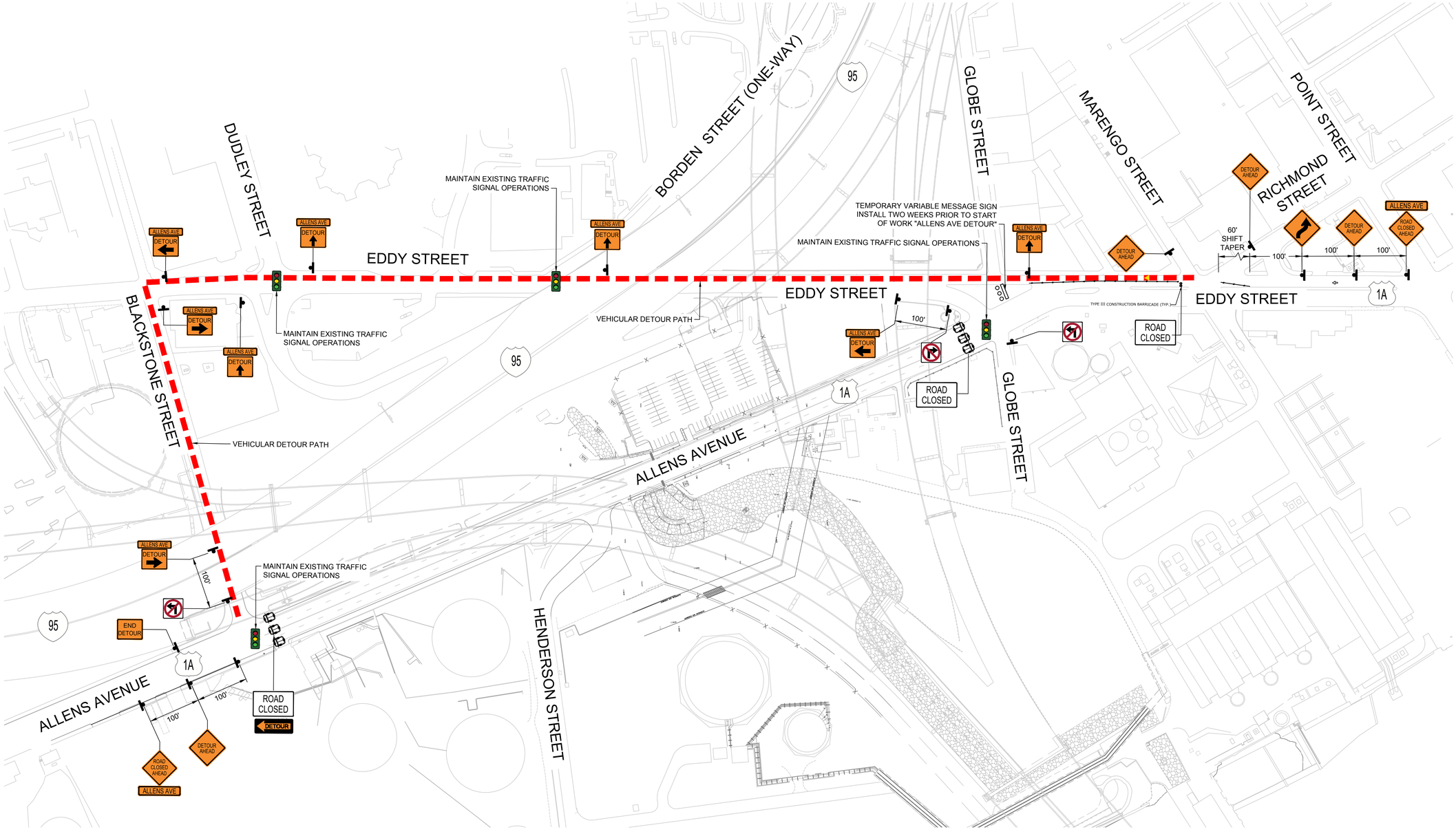
TEMPORARY
TRAFFIC CONTROL
PLAN NO. 3

SHEET NO.:

X-103

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V:\2081\24 Jobs\24040.00 PVD_HURRICANE BARRIER GATE REPAIRS-RI\DWGS\X-103 TEMPORARY TRAFFIC CONTROL PLAN NO. 3.dwg



DETOUR PLAN - ALLENS AVENUE

SCALE: 1" = 100'

Scale: 1"=100'

0 50' 100' 200'

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HURRICANE BARRIER STREET GATE REPAIRS

PROVIDENCE, RHODE ISLAND

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PROJECT NO.:	24040.00
DATE:	AUGUST 2024
SCALE:	AS NOTED
DESIGNED BY:	HM
CHECKED BY:	HM
DRAWN BY:	AWB
APPROVED BY:	KMD

TEMPORARY TRAFFIC CONTROL PLAN NO. 4

SHEET NO.:

X-104

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APPENDIX E:

HISTORIC DRAWINGS OF VEHICULAR HURRICANE BARRIERS

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ZIDELL

HURRICANE PROTECTION PROJECT

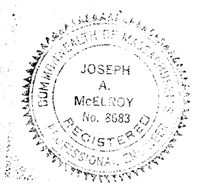
FOX POINT HURRICANE BARRIER

PROVIDENCE, RHODE ISLAND

VOLUME 2

PLANS FOR THE CONSTRUCTION OF

THE BARRIER AND APPURTENANT STRUCTURES





U.S. Army Engineer Division, New England
Corps of Engineers Waltham, Mass.

FEBRUARY 1961

All drawings in this folio have been reduced to one half the original scale

CORPS OF ENGINEERS

FOX POINT HURRICANE BARRIER

PROVIDENCE, RHODE ISLAND

GENERAL CONTRACT

JBM

VOLUME 1

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REVISION	DATE	DESCRIPTION			
1	11-5-61	Dwg FP-1-1369, Sh. 210 added	RJD	RJ	
2	9-3-61	Dwg. FP-1-1360 Sh. 209 added.	RJD	RJ	
3	5-17-61	Index to Drawings revised (Add #2)	RJD	RJ	
4	6-13-61	Index to Drawings revised (Add #1)	RJD	RJ	

U.S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
WALTHAM, MASS

DES BY KHW | DR BY KHW | CK BY KHW

FOX POINT HURRICANE BARRIER

INDEX TO DRAWINGS

PROJECT ENGINEER

APPROVAL RECOMMENDED: CHIEF, DESIGN BRANCH

APPROVED: CHIEF, ENGINEERING DIVISION

PROVIDENCE RHODE ISLAND

DATE FEB. 1961

SCALE

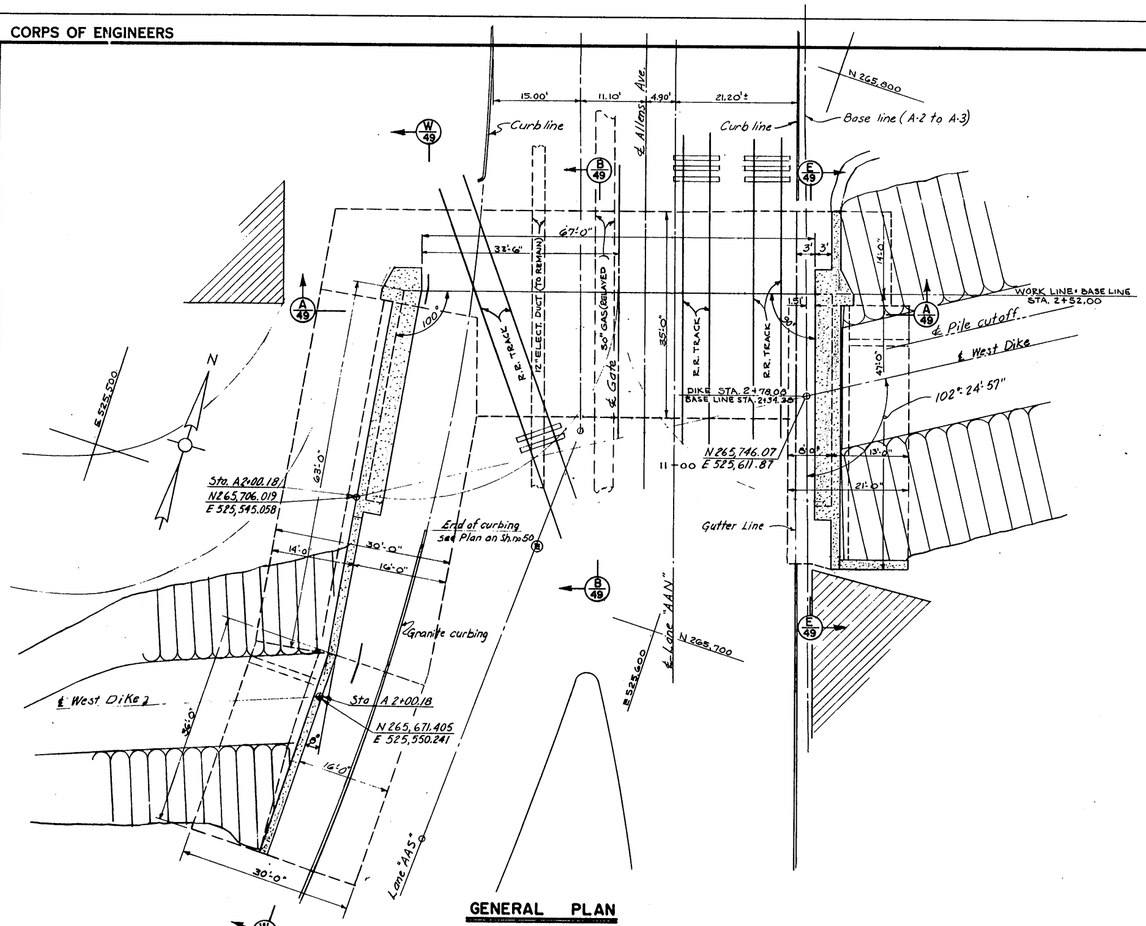
SPEC NO CIV ENG 19-016-61-23

DRAWING NUMBER FP-1-1150

SHEET 1

CORPS OF ENGINEERS

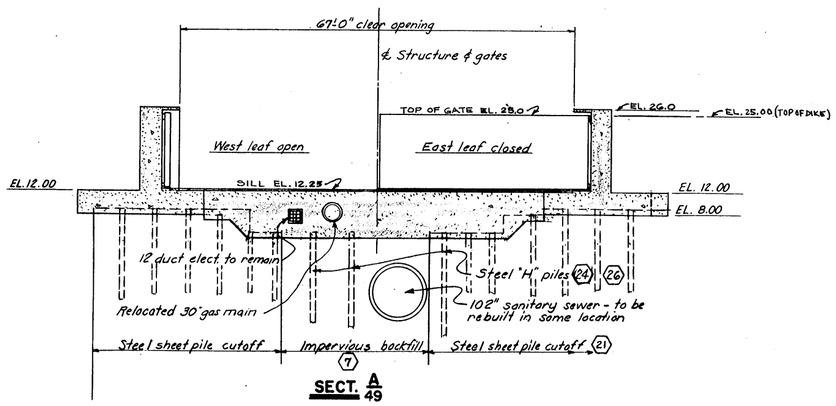
U. S. ARMY



GENERAL PLAN

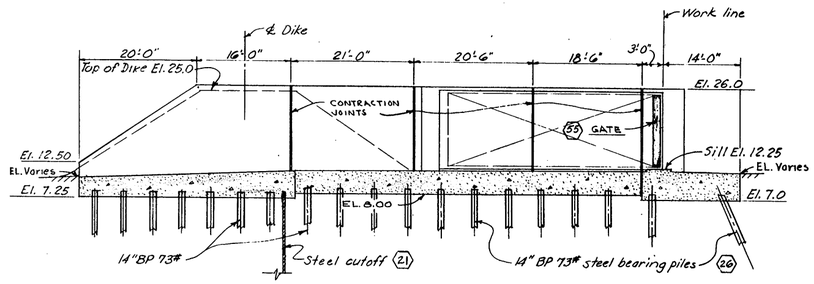
SCALE: 1"=10'

10' 0 10' 20'



SECT. A 49

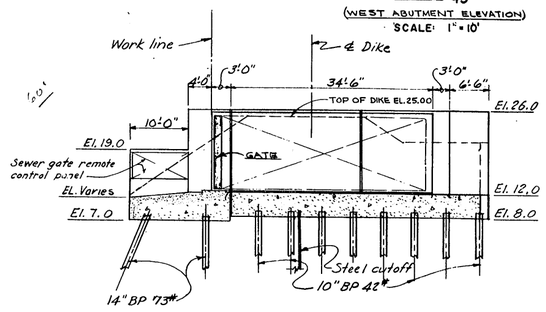
SCALE: 1"= 10'



SECT. W 49

(WEST ABUTMENT ELEVATION)

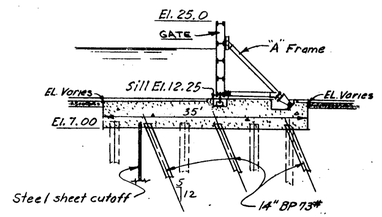
SCALE: 1"=10'



SECT. E 49

(EAST ABUTMENT ELEVATION)

SCALE: 1"=10'



SECT. B 49

(SHOWING GATE CLOSED)

SCALE: 1"=10'

NOTES:

1) Elevations refer to mean sea level datum.
2) Omitted
3) Chamfer all exposed corners 1"
4) All reinforcing bars shall have 4" clear cover unless otherwise noted.
5) All work will be paid for under the following item nos:

Structure Excavation and Backfill (8)
Steel Sheet Pile Cutoff (21)
Steel Bearing Pile 10 BP 42 (24)
Steel Bearing Pile 14 BP 73 (26)
Concrete (50)
Cement (53)
Steel Reinforcement (54)
Vehicular Gate (55)

6) For utility relocation work see sh. no 37
7) For finish contours see sh. no. 29

REVISION	DATE	DESCRIPTION	BY

FENTON G. KEYES ASSOCIATES
CONSULTING ARCHITECT — ENGINEERS
PROVIDENCE 3, R. I. BOSTON 24, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 54, MASS.

DES. BY L.B.&J.L. | DR. BY H.L.L. | CK. BY L.B.

SUBMITTED
ARCHITECT ENGINEER

PROJECT ENGINEER

APPROVAL RECOMMENDED
CHIEF, DESIGN BRANCH

APPROVAL RECOMMENDED
CHIEF, P & R BRANCH

APPROVED
CHIEF, ENGINEERING DIVISION

FOX POINT HURRICANE BARRIER

ALLENS AVENUE VEHICULAR GATE GENERAL PLAN & ELEVATIONS

PROVIDENCE RHODE ISLAND

DATE FEB. 1961

SCALE: 1" = 10'-0" | SPEC. NO. CIV. ENG. 19-060-61-23

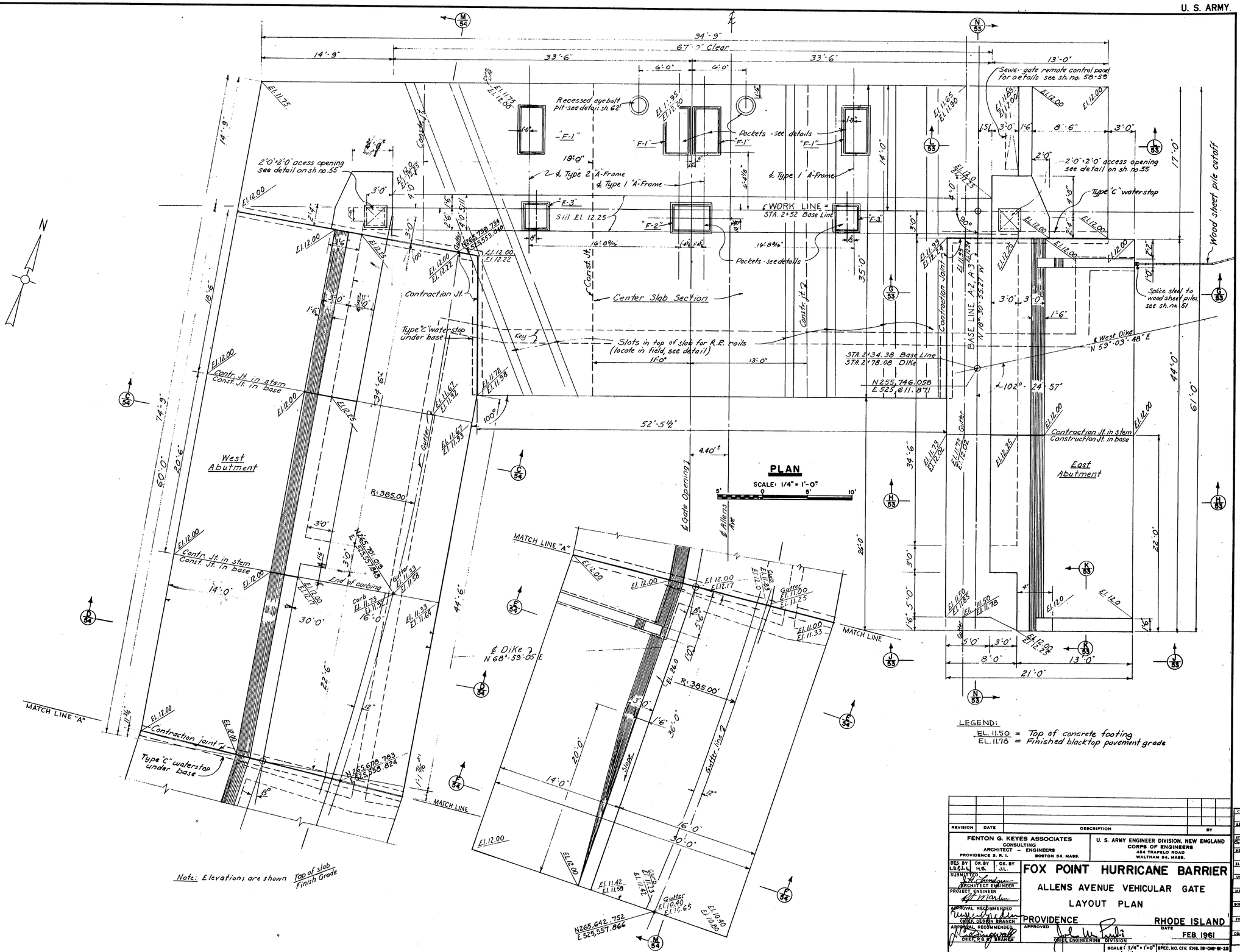
DRAWING NUMBER
FP-1-1198

SHEET 49

ARCH. STRUC. MECH. ELEC. CIVIL DRAFT. SOILS FDN. GRAPH.

CORPS OF ENGINEERS

U. S. ARMY



REVISION	DATE	DESCRIPTION	BY

FENTON G. KEYES ASSOCIATES
CONSULTING ARCHITECT - ENGINEERS
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U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
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WALTHAM 54, MASS.

DES. BY L.S.C.L. | DR. BY H.S. | CK. BY J.L.

SUBMITTED: Architect Engineer

PROJECT ENGINEER

APPROVAL RECOMMENDED: Chief, Design Branch

APPROVAL RECOMMENDED: Chief, P & R Branch

FOX POINT HURRICANE BARRIER

ALLENS AVENUE VEHICULAR GATE

LAYOUT PLAN

PROVIDENCE RHODE ISLAND

APPROVED: Chief, Engineering Division

DATE: FEB. 1961

SCALE: 1/4" = 1'-0" | SPEC. NO. CIV. ENG. 19-ORI-61-23

DRAWING NUMBER FP-1-1199

SHEET 50

CIV. | ARCH. | STRUC. | MECH. | ELEC. | UTIL. | MAT'L. | BOILS | FIRE | DRAFT

50

ANDREW T. JENNINGS CO., BOSTON, MASS.

CORPS OF ENGINEERS

U. S. ARMY

Note: Straps for "tension" piles required on all piles in center slab except 4 at west side.

94'-9"

4'-11" 5'-4" 5'-4" 5'-4" 5'-4" 4'-0" 6'-6" 6'-6" 16'-0" 4'-0" 4'-0" 7'-0" 5'-6" 5'-6" 5'-6" 4'-0"

6'-0" 4'-0" 1'-0" 3'-0"

No straps on these 4 piles

12" Duct electrical to remain

30" gas main to be relaid in same position ±

12'-0" 4'-0" 6'-0" 6'-0" 35'-0"

WORK LINE

12" water to be lowered below bot. of slab

102" San. Sewer to be relaid

Contraction Joint

Vertical steel sheet pile cutoff

Contraction Jt.

6'-0" 3'-0" 3'-0" 4'-0"

Weed sheet piles

Splice steel to wood sheet piles, (see Specifications)

6'-0" min.

Stop cutoff to clear utilities in this area see sheet 26

Vertical steel sheet pile cutoff

1'-6"x2'-0" key

2'-0" Min typ.

6'-0" 6'-0"

Concrete Key in lieu of cutoff length to be determined in field see Sect. A/53

Piling not interlocked at this junction

All piles in Center Slab Section are 14 BP 73#

Piling not interlocked at these junctions.

8'-3" batter Elev. 3

8 rows 10 BP 42# Piles

7 spaces @ 5'-4" = 37'-4"

PLAN

SCALE: 1/4" = 1'-0"

12 on 3 battered steel sheet pile cutoff

9 spaces @ 5'-10" = 52'-6" - 10 rows 14 BP 73# Piles

2'-11" 2'-6" 6'-0" 3'-0" 16'-0" 11'-0" 11'-0" 8'-0" 8'-0" 3'-0"

Construction Joint

Provide straps on these "tension" piles see detail sheet 53

Construction Jt.

MATCH LINE

2'-11"

2'-6"

Construction Jt.

Piling not interlocked at this junction

MATCH LINE

MATCH LINE

Construction Jt.

3'-6"

2'-6" 19°

6'-0"

Vertical steel sheet pile cutoff

6 spaces @ 5'-0" = 30'-0" 7 rows 14 BP 73# Piles

2'-6"

2'-6" 7'-6" 4'-0" 12'-6" 3'-6"

Provide straps on these "tension" piles see detail sheet 53

MATCH LINE

Welding clamps

A A B B

5/32" R

1/32" to 1/16"

1/4"

1/16" to 1/8"

5/32"

1/32" to 1/16"

SECTION A-A SECTION B-B

H-PILE BUTT-WELDED SPLICE

NO SCALE

Provide straps on these "tension" piles see detail sheet 53

1.49 5.51'

2'-0" 7'-0" 3'-0" 7'-0" 2'-0"

4'-8" 4'-0"

SCALE: 1/4" = 1'-0"

6' 0 6' 10

General Notes:

At water and gas lines drive the sheet pile cutoff and the bearing piles during the reconstruction of these lines.

At angle points in the sheet pile cutoff drive the 1st batter sheet pile tight against the vertical face of sheeting.

All batter piles are battered 12 on 5.

⊞ denotes pile orientation of all piles in a group, and direction of batter. Bottom El. of steel cutoffs is El.-10.00.

Exact location of existing utilities to be determined in the field and pile spacing adjusted where necessary.

REVISION	DATE	DESCRIPTION	BY

FENTON G. KEYES ASSOCIATES
CONSULTING ARCHITECT – ENGINEERS
PROVIDENCE 3, R. I. BOSTON 54, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 54, MASS.

DES. BY L.B.&J.L. | DR. BY H.B. | CH. BY L.B.

SUBMITTED
ARCHITECT – ENGINEER

PROJECT ENGINEER

APPROVAL RECOMMENDED
CHIEF, DESIGN BRANCH

APPROVAL RECOMMENDED
CHIEF, P. & C. BRANCH

APPROVED
CHIEF, ENGINEERING DIVISION

FOX POINT HURRICANE BARRIER

ALLENS AVENUE VEHICULAR GATE

PILE PLAN

PROVIDENCE RHODE ISLAND

DATE FEB. 1961

SCALE AS SHOWN | SPEC. NO. CIV. ENG. 19-016-61-23

DRAWING NUMBER FP-1-1200

SHEET 51

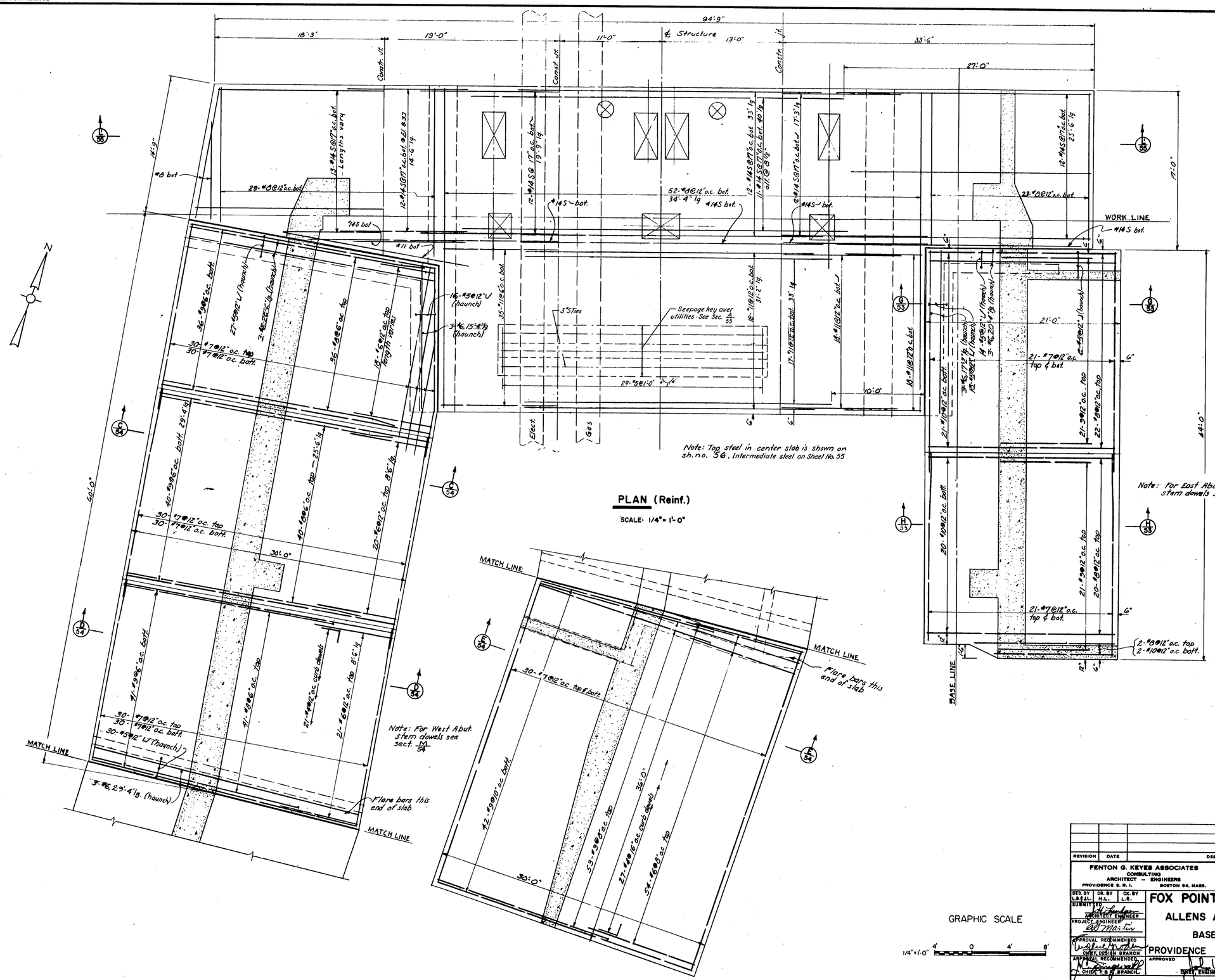
CIVIL ARCH. STRUC. MECH. ELEC. UTIL. MATL. BORLS FDN. DRAFT.

51

ANDREW T. JOHNSON CO., BOSTON, MASS.

CORPS OF ENGINEERS

U. S. ARMY



REVISION	DATE	DESCRIPTION	BY

FENTON G. KEYES ASSOCIATES
CONSULTING ARCHITECT — ENGINEERS
PROVIDENCE R. I. BOSTON 34, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
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424 TRAPELO ROAD
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DES. BY L.B.F.Jr. | DR. BY M.L. | CK. BY L.B.

SUBMITTED
ARCHITECT ENGINEER

PROJECT ENGINEER
Col. Martin

APPROVAL RECOMMENDED
CHIEF, DESIGN BRANCH

APPROVAL RECOMMENDED
CHIEF, R & M BRANCH

APPROVED
CHIEF, ENGINEERING DIVISION

FOX POINT HURRICANE BARRIER

ALLENS AVENUE VEHICULAR GATE

BASE PLAN REINFORCING

PROVIDENCE RHODE ISLAND

DATE FEB. 1961

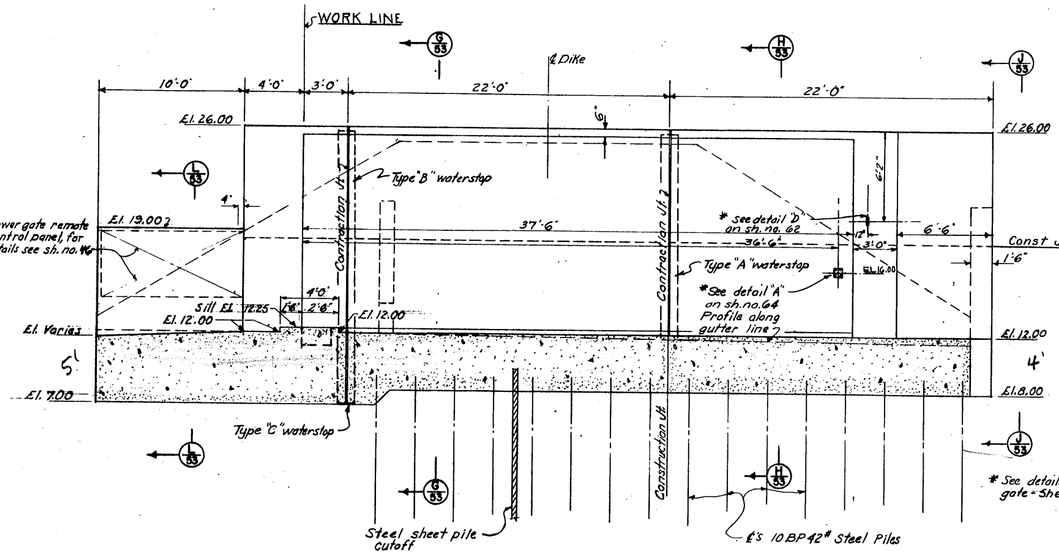
SCALE AS SHOWN | SPEC. NO. CIV. ENG. 19-01-61-23

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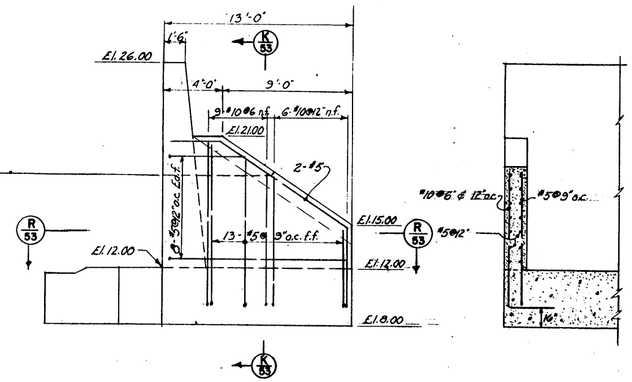
SHEET 52

CIV-1 ARCH. STRUC. MECH. ELEC. VITL. MATS. SOILS FDN. DRAFT.

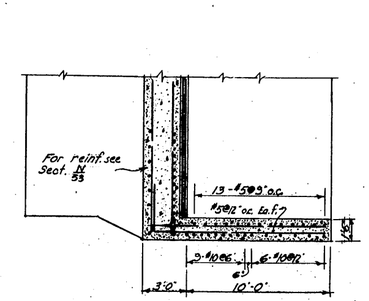
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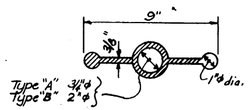
SECT. N 50 (Conc.)



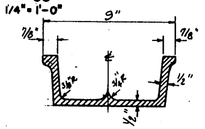
SECT. K 53
SCALE: 1/4" = 1'-0"



SECT. R 53
SCALE: 1/4" = 1'-0"

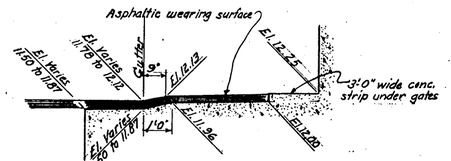


TYPES "A" & "B"

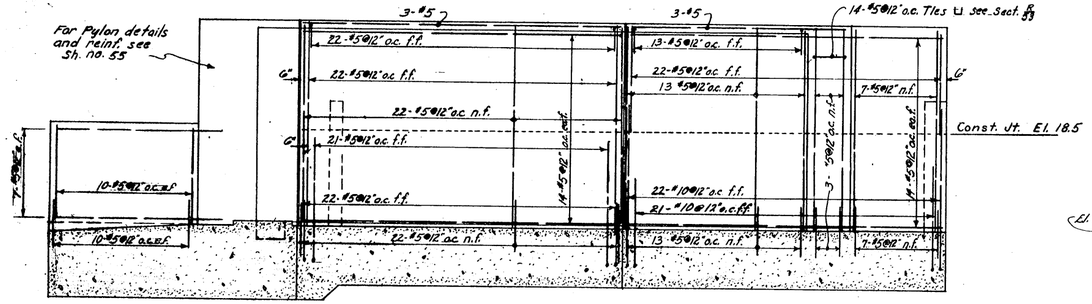


TYPE "C"

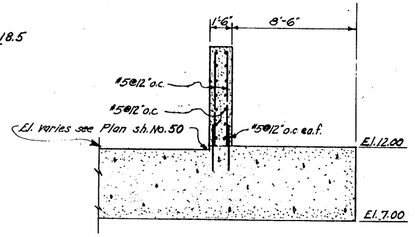
WATER STOPS
SCALE: 3" = 1'-0"



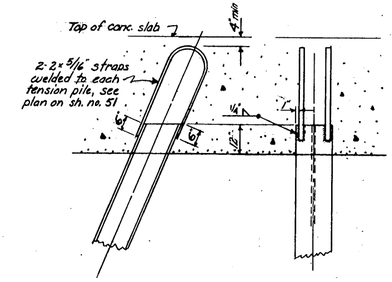
DETAIL Z
N.T.S.



SECT. N 50 (Reinf.)
SCALE: 1/4" = 1'-0"

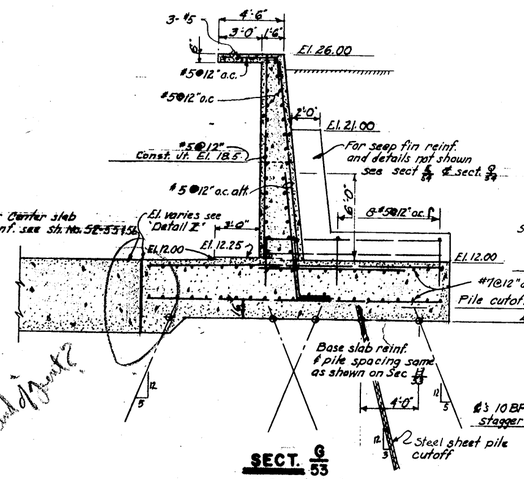


SECT. L 53
SCALE: 1/4" = 1'-0"

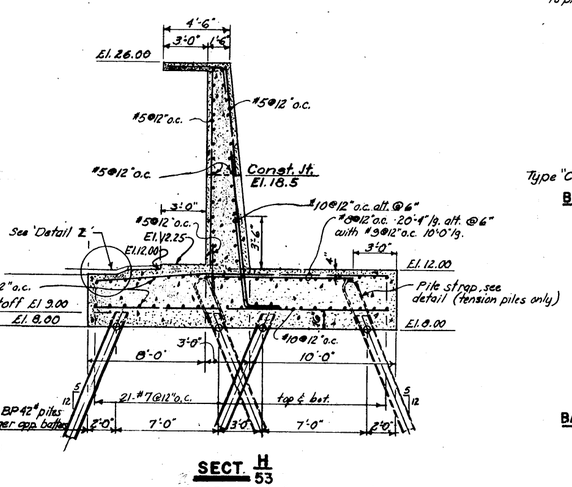


PILE STRAP ANCHORAGE

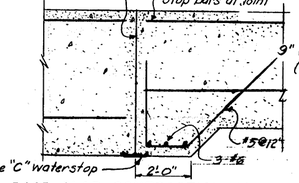
NOTES
For notes on steel reinf. see Sheet 68



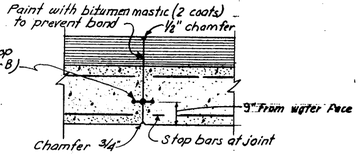
SECT. G 53
SCALE: 1/4" = 1'-0"



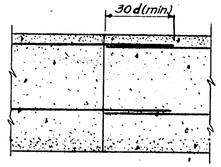
SECT. H 53
SCALE: 1/4" = 1'-0"



BASE SLAB CONTRACTION JOINT



WALL STEM CONTRACTION JOINT



BASE SLAB CONSTRUCTION JOINT

JOINT DETAILS
SCALE: 1/2" = 1'-0"

GRAPHIC SCALES

¼" = 1'-0"

½" = 1'-0"

3" = 1'-0"

REVISION	DATE	DESCRIPTION	BY

FENTON G. KEYES ASSOCIATES
CONSULTING ARCHITECT – ENGINEERS
PROVIDENCE R. I. BOSTON 24, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
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DES. BY L.B.J. | DR. BY B.R. | CK. BY J.K.L.

SUBMITTED: [signature] ARCHITECT ENGINEER

PROJECT ENGINEER: [signature]

APPROVAL RECOMMENDED: [signature] CHIEF, DESIGN BRANCH

APPROVAL RECOMMENDED: [signature] CHIEF, R & D BRANCH

APPROVED: [signature] CHIEF, ENGINEERING DIVISION

FOX POINT HURRICANE BARRIER

ALLENS AVENUE VEHICULAR GATE

EAST ABUTMENT

PROVIDENCE RHODE ISLAND

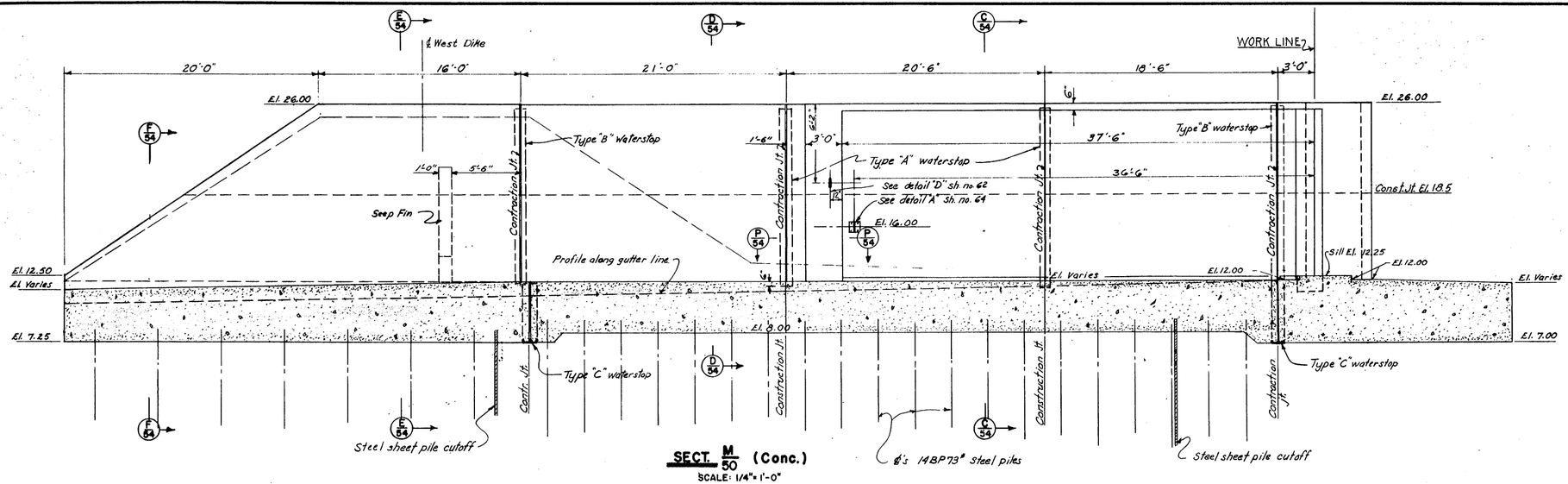
DATE: FEB. 1961

SCALE AS SHOWN | SPEC. NO. CIV. ENG. 19-010-61-23

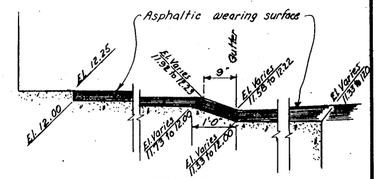
DRAWING NUMBER FP-1-1202

SHEET 53

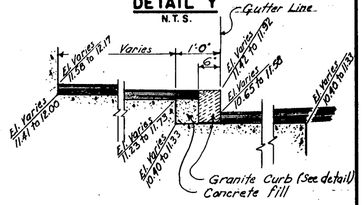
CIVIL | ARCH. | STRUC. | MECH. | ELEC. | UTIL. | MATS. | SOILS | FIRE | DRAFT



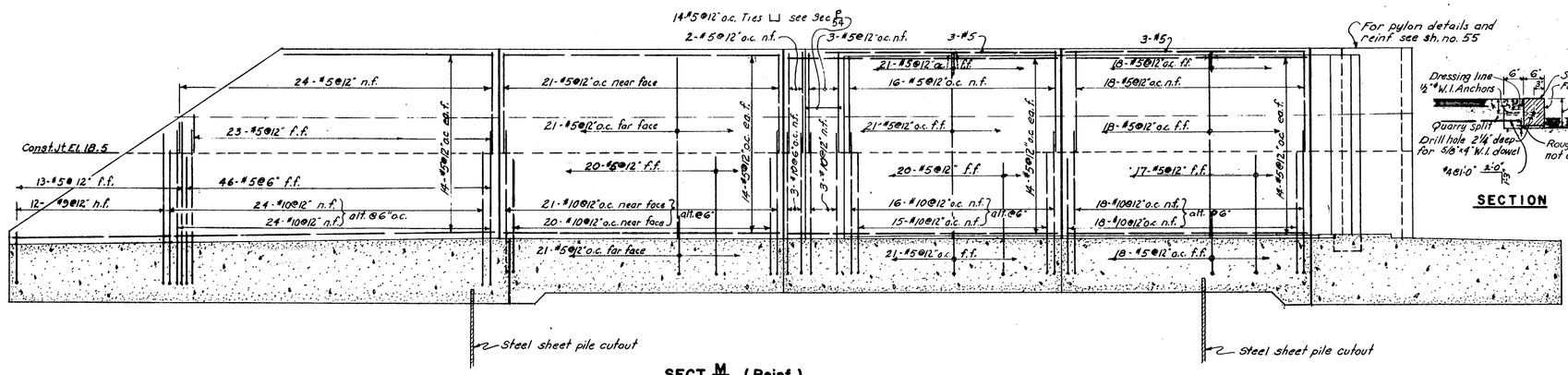
SECT. M/50 (Conc.)
SCALE: 1/4"= 1'-0"



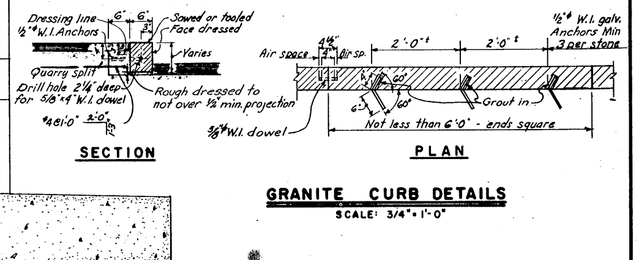
DETAIL Y
N.T.S.



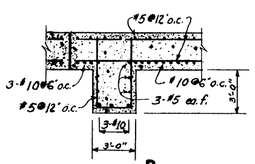
DETAIL X
N.T.S.



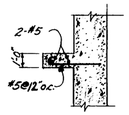
SECT. M/50 (Reinf.)
SCALE: 1/4"= 1'-0"



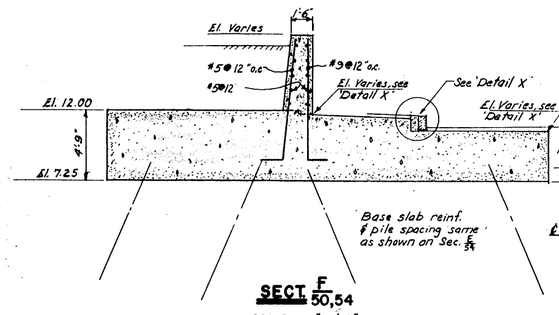
GRANITE CURB DETAILS
SCALE: 3/4"= 1'-0"



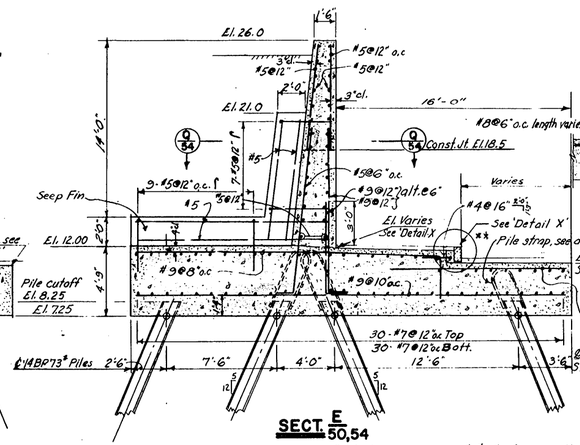
SECT. P/54
SCALE: 1/4"= 1'-0"



SECT. Q/54
SCALE: 1/4"= 1'-0"

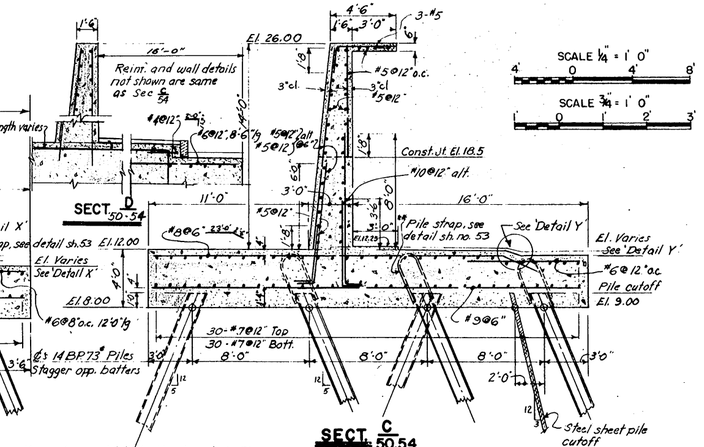


SECT. F/50,54
SCALE: 1/4"= 1'-0"



SECT. E/50,54
SCALE: 1/4"= 1'-0"

** On tension piles only, see detail of pile plan sh. No. 51.



SECT. C/50,54
SCALE: 1/4" = 1'-0"

SCALE 1/4" = 1' 0"
4' 0 4' 8'

SCALE 3/4" = 1' 0"
0 1' 2' 3'

NOTES:
1. For notes on steel reinf. see sh. 86.
2. n.f. = near face
f.f. = far face
ea.f. = each face

REVISION	DATE	DESCRIPTION	BY

FENTON G. KEYES ASSOCIATES
CONSULTING ARCHITECT — ENGINEERS
PROVIDENCE R. I. BOSTON 54, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 54, MASS.

DES. BY L.S.-I.L. | DR. BY H.B. | CK. BY L.B.

SUBMITTED
ARCHITECT ENGINEER

PROJECT ENGINEER

APPROVAL RECOMMENDED
CHIEF, DESIGN BRANCH

APPROVAL RECOMMENDED
CHIEF, ENGINEERING BRANCH

APPROVED
CHIEF, ENGINEERING DIVISION

DATE FEB. 1961

FOX POINT HURRICANE BARRIER
ALLENS AVENUE VEHICULAR GATE
WEST ABUTMENT
PROVIDENCE RHODE ISLAND

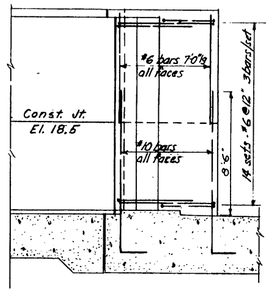
SCALE: AS SHOWN | SPEC. NO. CIV. ENG. 19-016-61-23

DRAWING NUMBER FP-1-1203

SHEET 54

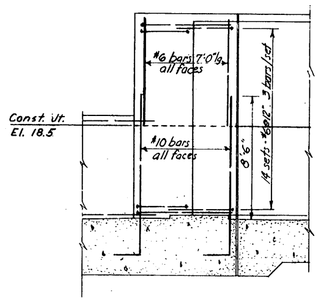
CIVIL | ARCH. | STRUC. | MECH. | ELEC. | UTIL. | MATL. | SOILS | FIST | DRAFT.

54



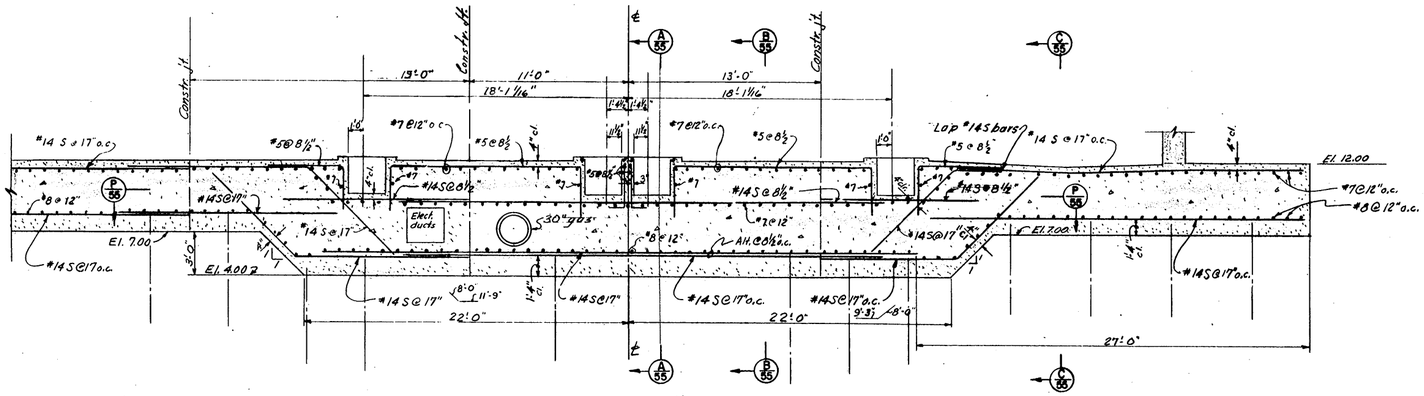
EAST ELEVATION

SCALE: 1/4" = 1'-0"



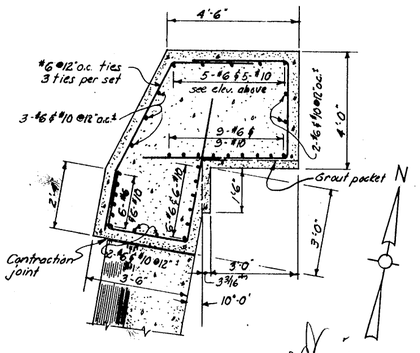
WEST ELEVATION

SCALE: 1/4" = 1'-0"



SECTION L/52

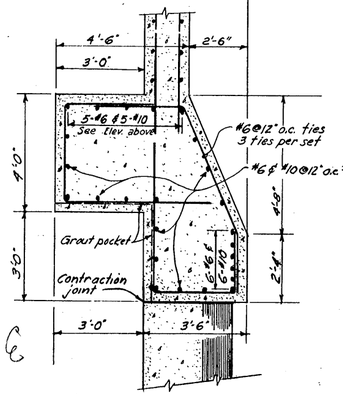
SCALE: 1/4" = 1'-0"



PLAN

SCALE: 1/2" = 1'-0"

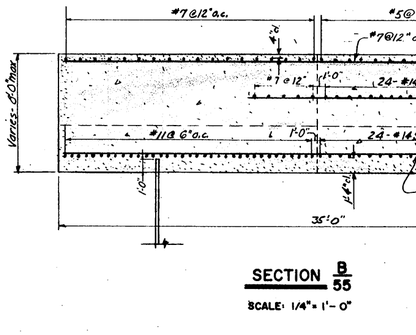
WEST PYLON



PLAN

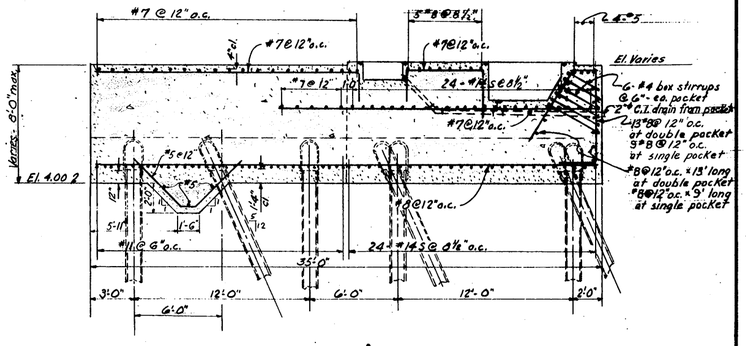
SCALE: 1/2" = 1'-0"

EAST PYLON



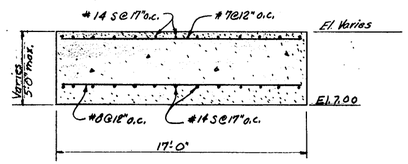
SECTION B/55

SCALE: 1/4" = 1'-0"



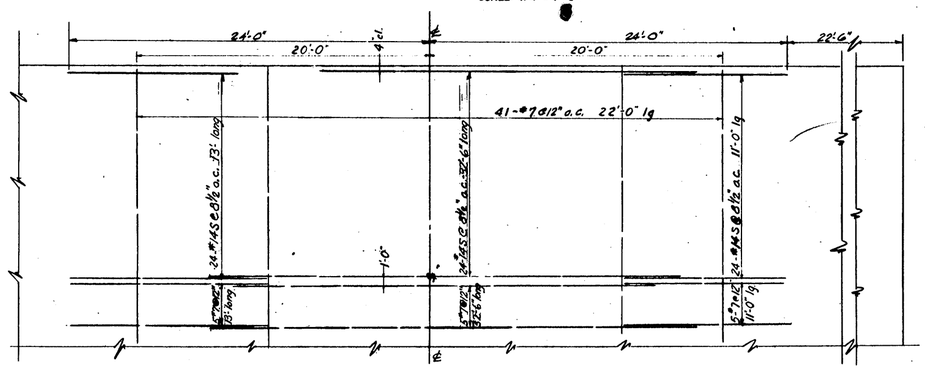
SECTION A/55

SCALE: 1/4" = 1'-0"



SECTION C/55

SCALE: 1/4" = 1'-0"

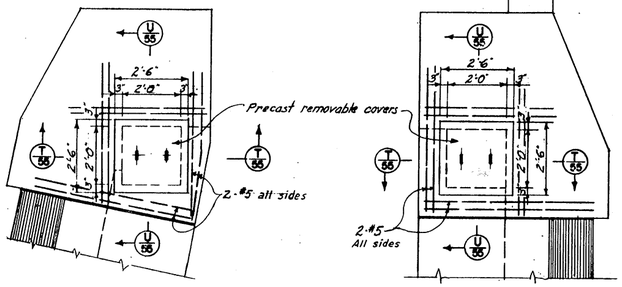


SECTION P/55

INTERMEDIATE BASE STEEL

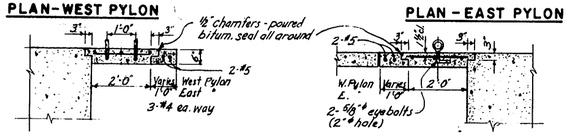
SCALE: 1/4" = 1'-0"

5' 0 5' 10'



PLAN-WEST PYLON

PLAN-EAST PYLON

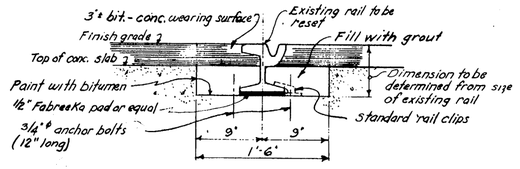


SECT. T/55

SECT. U/55

ACCESS OPENING DETAILS

SCALE: 1/2" = 1'-0"



RAIL SLOT DETAIL

SCALE: 1 1/2" = 1'-0".

1' 0 1' 2' 3' 4' 5'

REVISION	DATE	DESCRIPTION	BY

FENTON G. KEYES ASSOCIATES
CONSULTING ARCHITECT — ENGINEERS
PROVIDENCE 3, R. I.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 54, MASS.
BOSTON 54, MASS.

DES. BY R.B.J.H. | DR. BY R.L. | CK. BY A.B.

SUBMITTED
ARCHITECT — ENGINEER

PROJECT ENGINEER

APPROVAL RECOMMENDED
CHIEF, DESIGN BRANCH

APPROVAL RECOMMENDED
CHIEF, P.E.R. BRANCH

FOX POINT HURRICANE BARRIER

ALLENS AVENUE VEHICULAR GATE

CENTER BASE SLAB & PYLONS

PROVIDENCE RHODE ISLAND

APPROVED
CHIEF, ENGINEERING DIVISION

DATE
FEB. 1961

SCALE AS SHOWN | SPEC. NO. CIV. ENG. 19-018-61-23

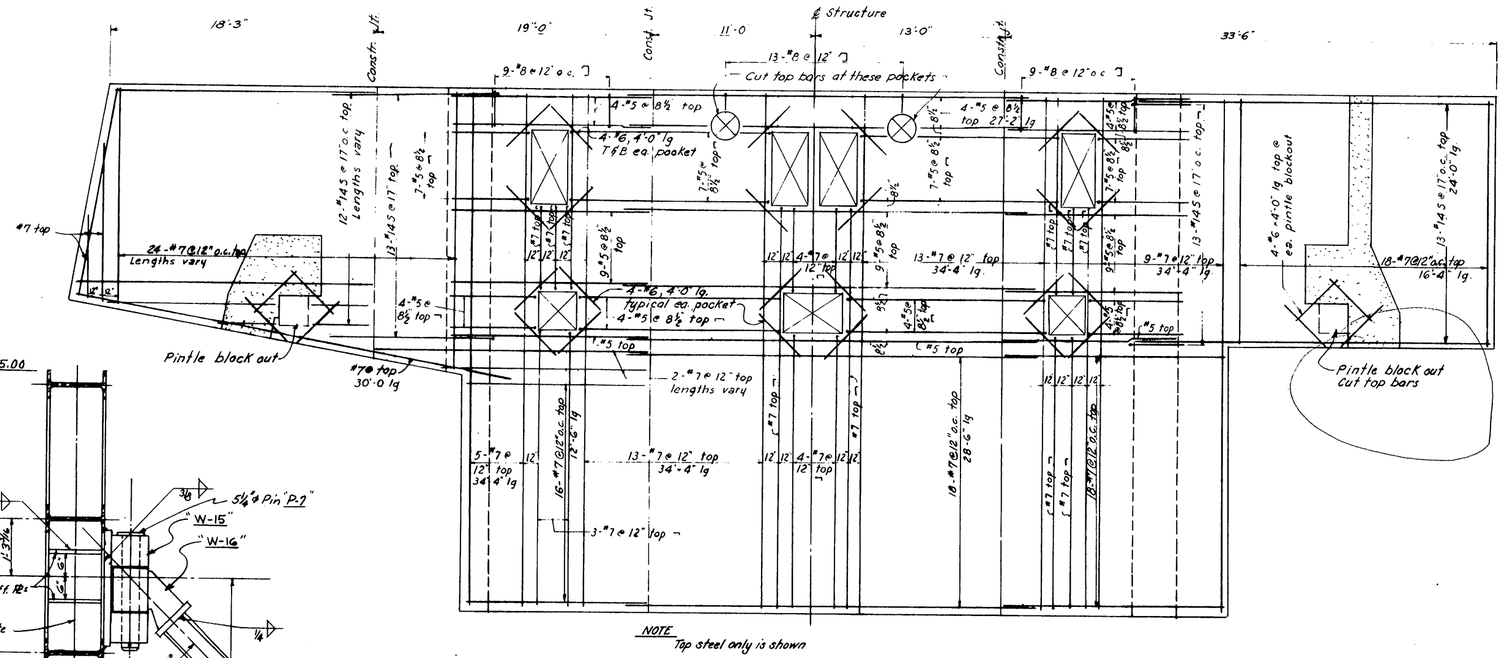
DRAWING NUMBER
FP-I-1204

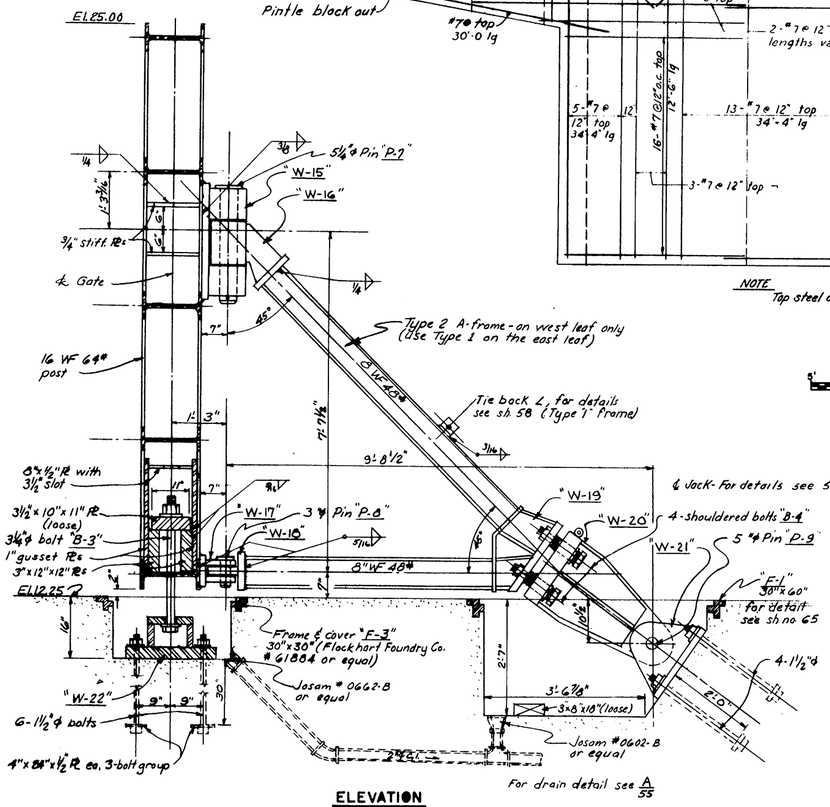
SHEET 55

CIV'L | ARCH. | STRUC. | MECH. | ELEC. | UTIL. | MAT'LS. | SOILS | FIRE | DRAFT

CORPS OF ENGINEERS

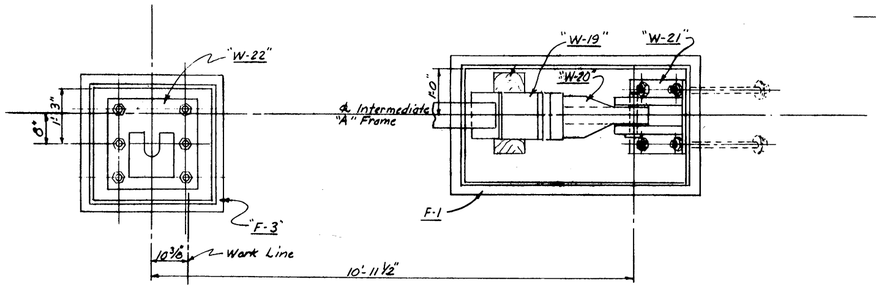
U. S. ARMY





ELEVATION

Note: For Weldment & Pin details see sh. no. 59



FRONT REAR

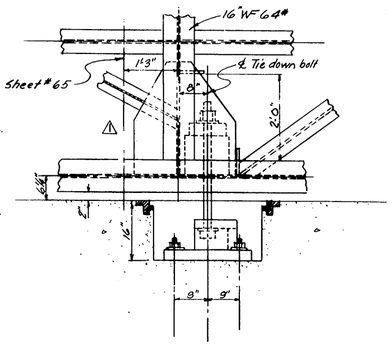
PLAN

INTERMEDIATE "A" - FRAME DETAILS - TYPE "2"

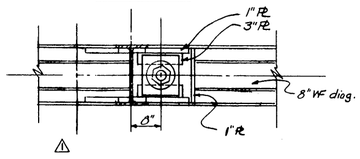
SCALE: 3/4" = 1'-0"

PLAN (Reinf.)

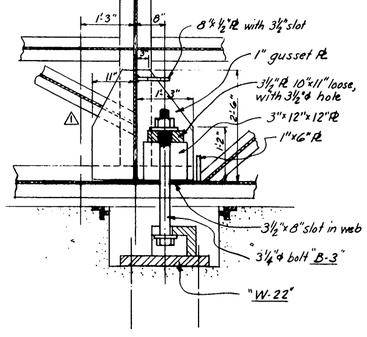
SCALE: 1/4" = 1'-0"



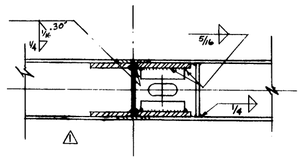
ELEVATION



PLAN



VERTICAL SECTION



HORIZ. SECTION

DETAILS - TIE DOWN AT INTERMEDIATE POSTS

SCALE: 3/4" = 1'-0"

REVISION	DATE	DESCRIPTION	BY
⚠	3-20-61	Details revised (Adv. #11)	

FENTON G. KEYES ASSOCIATES
CONSULTING ARCHITECT - ENGINEERS
PROVIDENCE 3, R. I. BOSTON 24, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 54, MASS.

DES. BY L.B.S.M. | DR. BY H.L. | CK. BY J.L.

SUBMITTED
ARCHITECT ENGINEER
PROJECT ENGINEER

APPROVAL RECOMMENDED
CHIEF, DESIGN BRANCH
APPROVAL RECOMMENDED
CHIEF, P & C BRANCH

FOX POINT HURRICANE BARRIER

ALLENS AVENUE VEHICULAR GATE

CENTER SLAB & DETAILS

PROVIDENCE, RHODE ISLAND

APPROVED
CHIEF, ENGINEERING DIVISION

DATE FEB. 1961

SCALE AS SHOWN | SPEC. NO. CIV. ENG. 19-016-61-23

DRAWING NUMBER FP-1-1205

SHEET 56

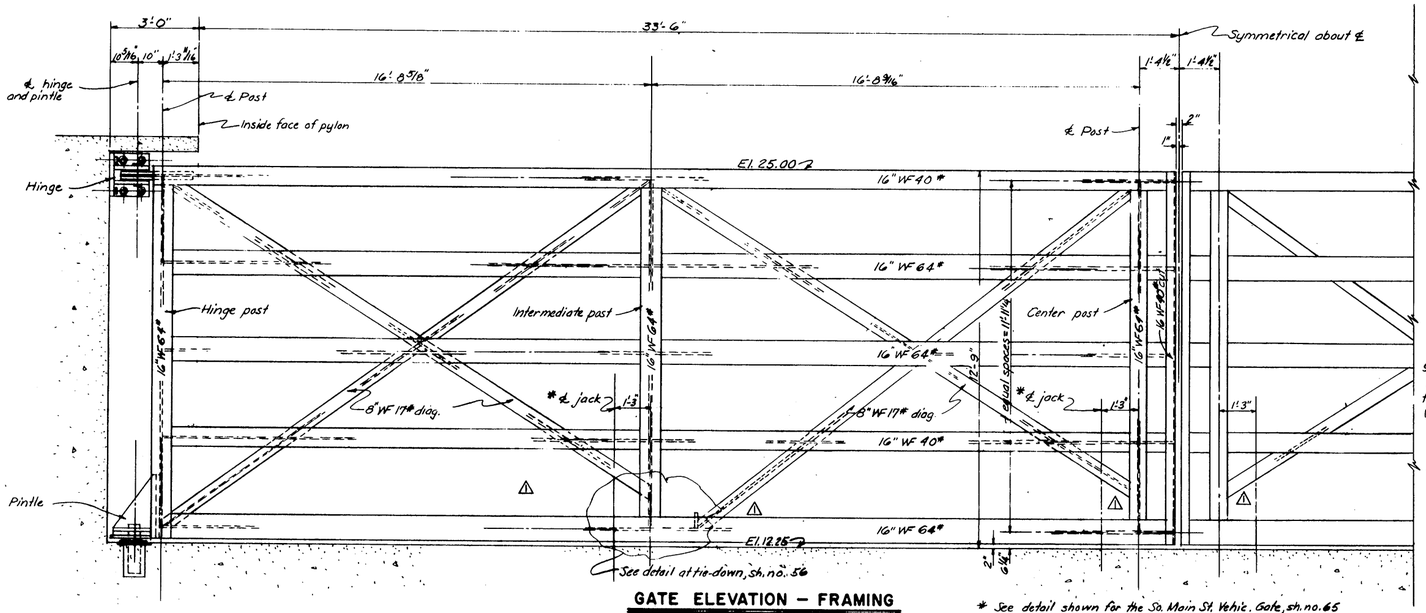
CIVIL | ARCH. | STRUC. | MECH. | ELEC. | UTIL. | MAT'S | BORING | MISC. | DRAFT

⚠2 ⚠2

56

CORPS OF ENGINEERS

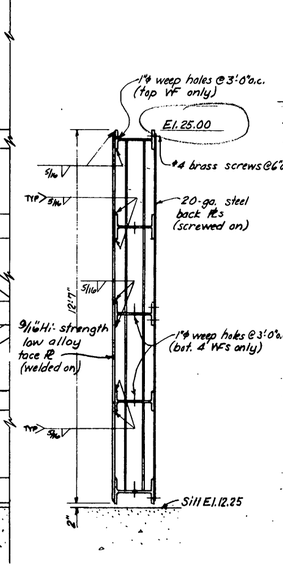
U. S. ARMY



GATE ELEVATION – FRAMING

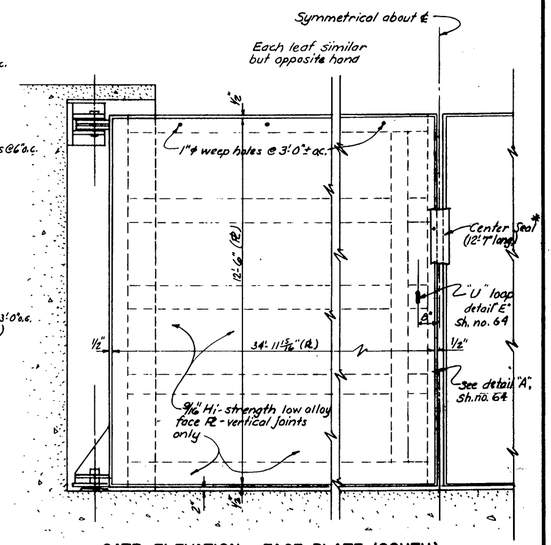
SCALE: 1/2" = 1'-0"

* See detail shown for the So. Main St. Vehic. Gate, sh. no. 65



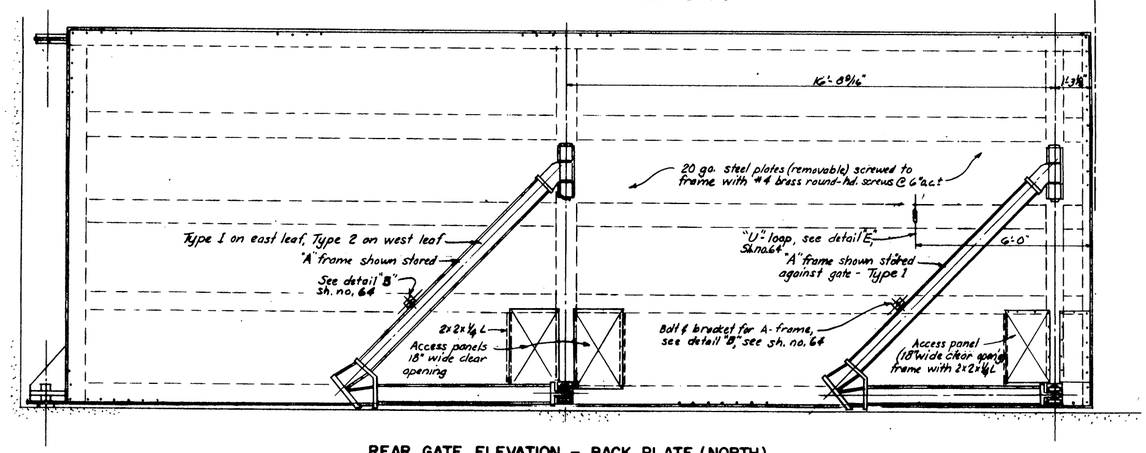
SECTION

SCALE: 1/2" = 1'-0"



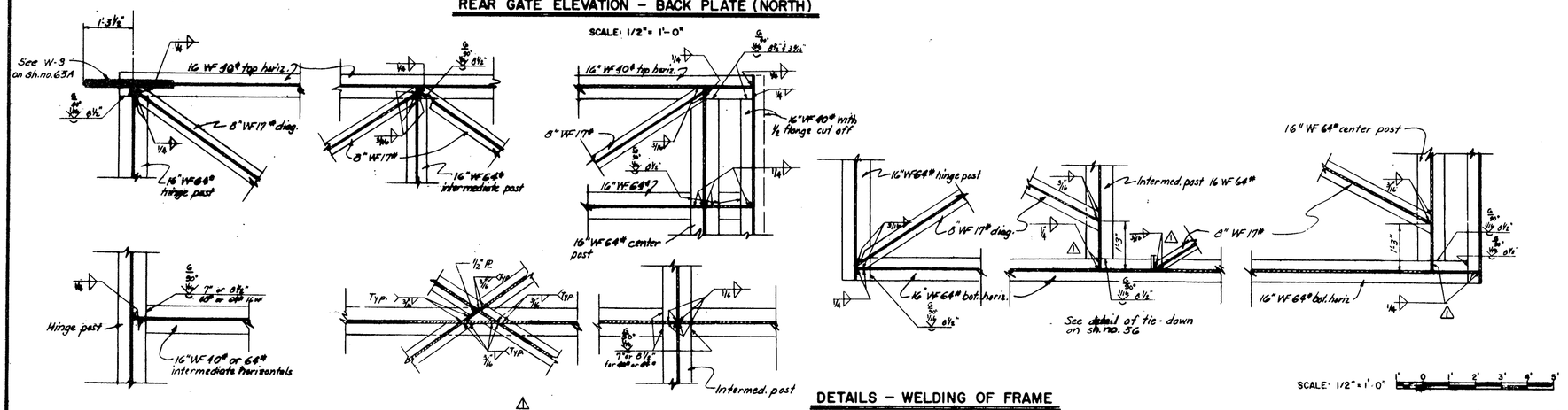
GATE ELEVATION – FACE PLATE (SOUTH)

SCALE: 1/2" = 1'-0"



REAR GATE ELEVATION – BACK PLATE (NORTH)

SCALE: 1/2" = 1'-0"



DETAILS – WELDING OF FRAME

SCALE: 3/4" = 1'-0"

SCALE: 1/2" = 1'-0"

SCALE 3/4" = 1'-0"

NOTES

All structural steel for gate framing shall conform to A.S.T.M. A 36-60. All welding shall conform to the American Welding Society Standard Specifications for Welded Highway & Railway Bridges using A 36 steel in lieu of A 373 steel.

High-strength low-alloy face PL shall be of steel conforming to A.S.T.M. 242-55.

REVISION	DATE	DESCRIPTION	BY
1	3-20-61	Deleted [illegible]	

FENTON G. KEYES ASSOCIATES
CONSULTING ARCHITECT – ENGINEERS
PROVIDENCE R. I. BOSTON 34, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 54, MASS.

DES. BY [illegible] DR. BY WS CK. BY L.B.

SUBMITTED [signature] ARCHITECT - ENGINEER

PROJECT ENGINEER [signature]

APPROVAL RECOMMENDED [signature] CHIEF, DESIGN BRANCH

APPROVAL RECOMMENDED [signature] CHIEF, P & O BRANCH

APPROVED [signature] CHIEF, ENGINEERING DIVISION

FOX POINT HURRICANE BARRIER

ALLENS AVENUE VEHICULAR GATE

GATE FRAMING & DETAILS

PROVIDENCE RHODE ISLAND

DATE FEB. 1961

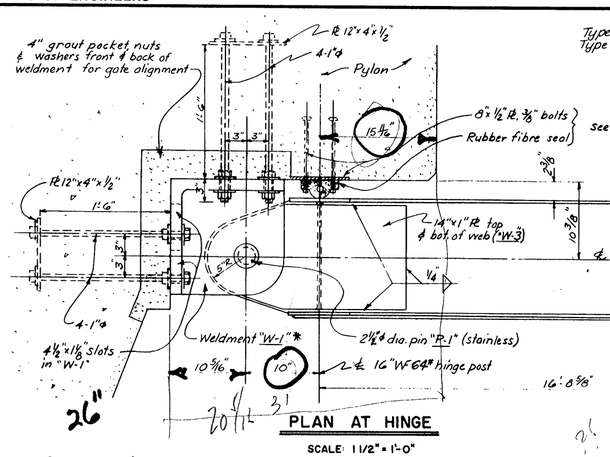
SCALE AS SHOWN SPEC. NO. CIV. ENG. 19-018-61-23

DRAWING NUMBER FP-1-1206

SHEET 57

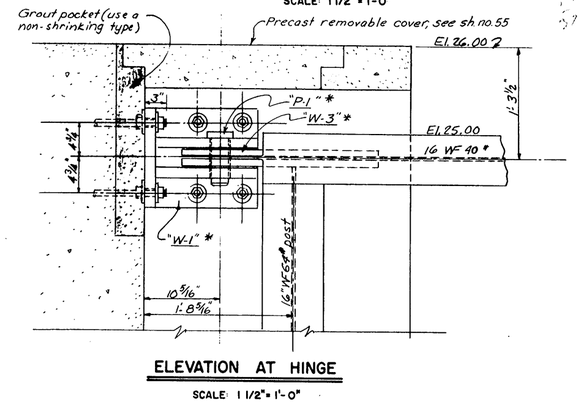
CH. E. ARCH. STRUC. ELEC. MECH. PLBG. SANIT. DUCTS FIRE DRAFT

57



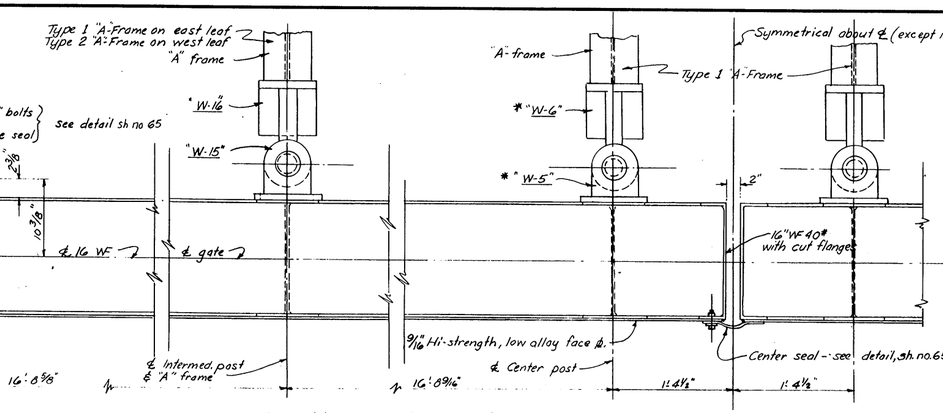
PLAN AT HINGE

SCALE: 1 1/2" = 1'-0"



ELEVATION AT HINGE

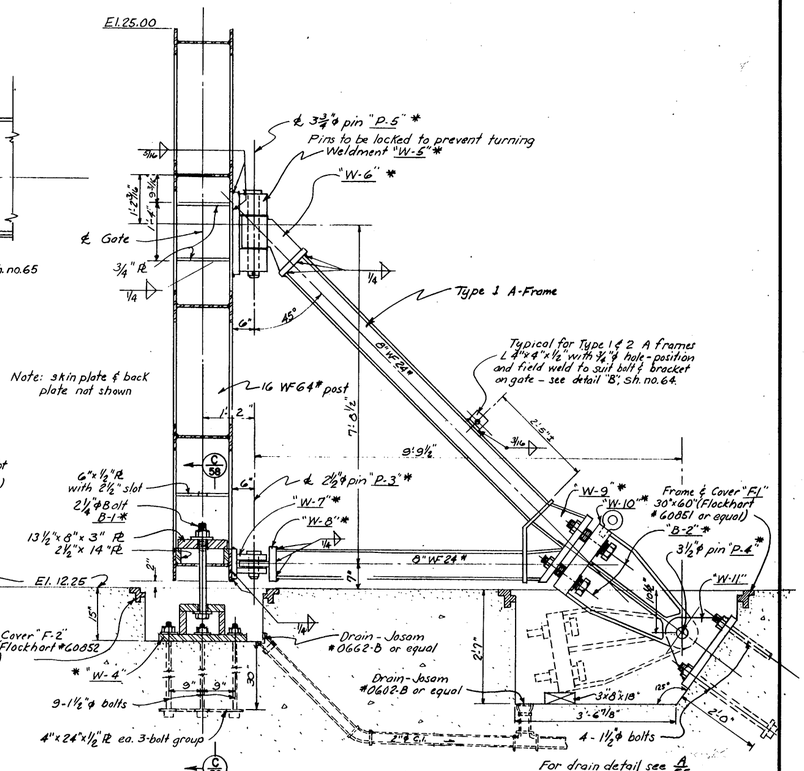
SCALE: 1 1/2" = 1'-0"



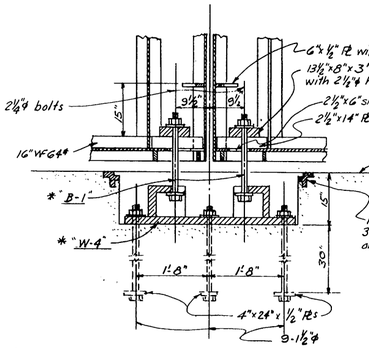
* See detail shown for the South Main St. Vehic. gate, sh. 65A

PLAN AT CENTER (TOP)

SCALE: 1 1/2" = 1'-0"

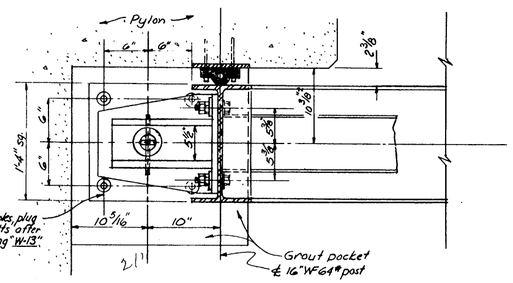


Note: Skin plate & back plate not shown



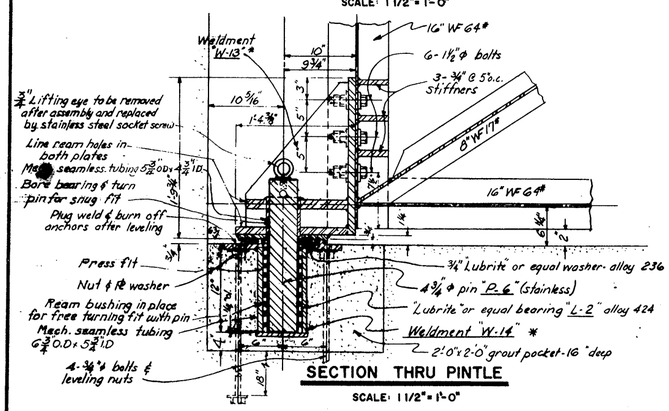
SECTION C/58

Lifting eye to be replaced by stainless steel socket screw



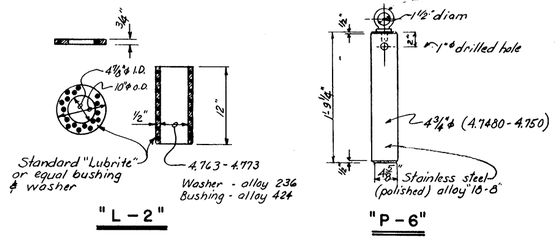
PLAN AT PINTLE

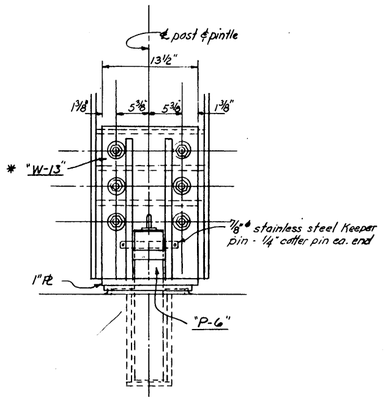
SCALE: 1 1/2" = 1'-0"



SECTION THRU PINTLE

SCALE: 1 1/2" = 1'-0"

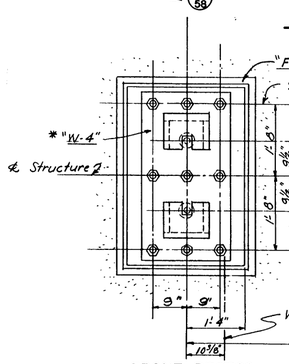




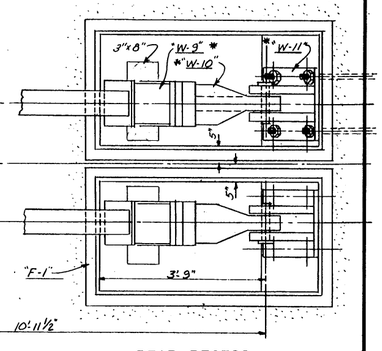
ELEVATION AT PINTLE

SCALE: 1 1/2" = 1'-0"

Note: For details of W-1, 3, 4, 5, 6, 7, 8, 9, 10, P-1, 3, 4, 85, B-1, B-2, see Sh. no. 65A. For details of W-15 & 16, see Sh. no. 59.



FRONT RECESS



REAR RECESS

ELEVATION

2 - REQ'D.

PLAN

CENTER "A" FRAME DETAILS - TYPE I

SCALE: 3/4" = 1'-0"

SCALE: 3/4" = 1'-0" 1' 0 1' 2' 3'

SCALE: 1 1/2" = 1'-0" 12" 9" 6" 3" 0 6" 12"

REVISION	DATE	DESCRIPTION	BY

FENTON G. KEYES ASSOCIATES
CONSULTING ARCHITECT — ENGINEERS
PROVIDENCE R. I. BOSTON 54, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 54, MASS.

DES. BY	DR. BY	CK. BY
L.B.S.jr.	M.L.	J.L.H.B.

SUBMITTED: ARCHITECT ENGINEER
PROJECT ENGINEER
APPROVAL RECOMMENDED: CHIEF, DESIGN BRANCH
APPROVAL RECOMMENDED: CHIEF, ENGINEERING BRANCH
APPROVED: CHIEF, ENGINEERING DIVISION

FOX POINT HURRICANE BARRIER

ALLENS AVENUE VEHICULAR GATE

DETAILS NO. 1

PROVIDENCE RHODE ISLAND

DATE FEB. 1961

SCALE AS SHOWN | SPEC. NO. CIV. ENG. 19-018-61-23

DRAWING NUMBER FP-1-1207

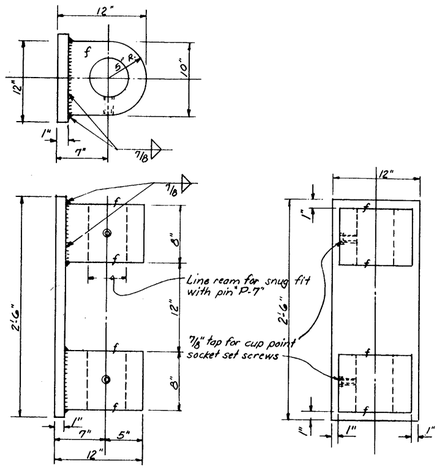
SHEET 58

CIVIL | ARCH. | STRUC. | MECH. | ELEC. | UTIL. | MAT. | SOILS | TIME | DRAF.

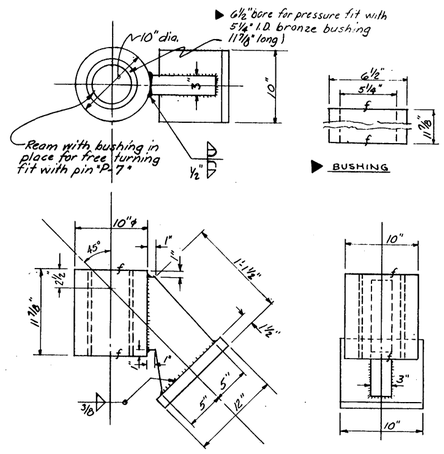
ARMORY T. JOHNSON CO., BOSTON, MASS.

CORPS OF ENGINEERS

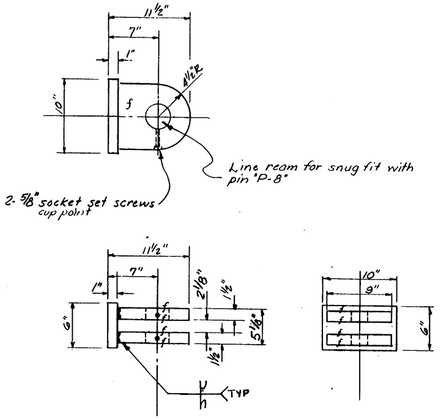
U. S. ARMY



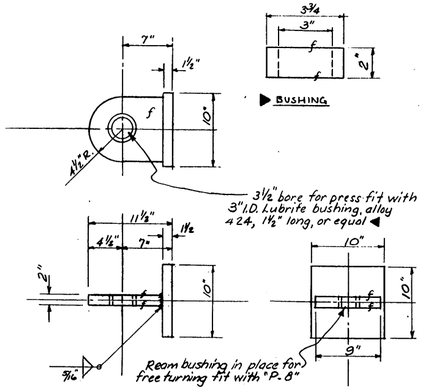
"W - 15"



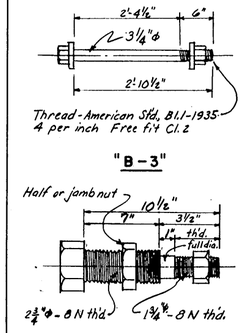
"W - 16"



"W - 17"

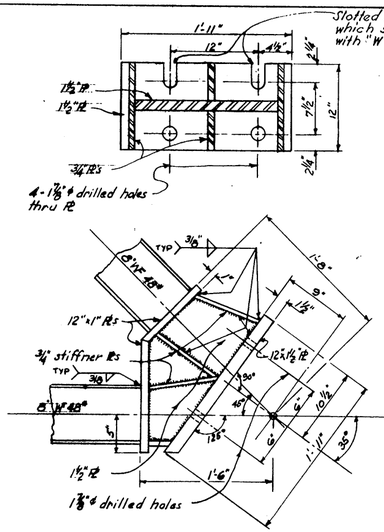


"W - 18"

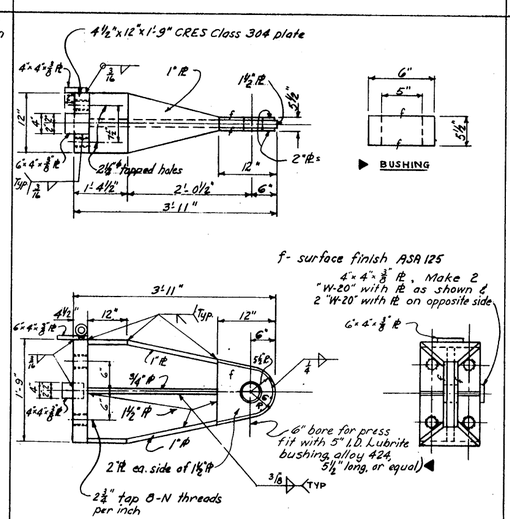


MACHINED BOLTS & NUTS

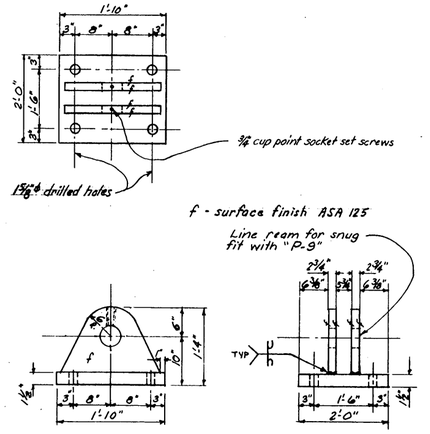
CRES CLASS 304



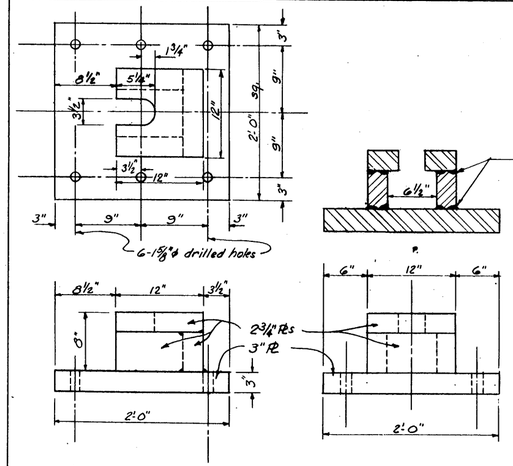
"W - 19"



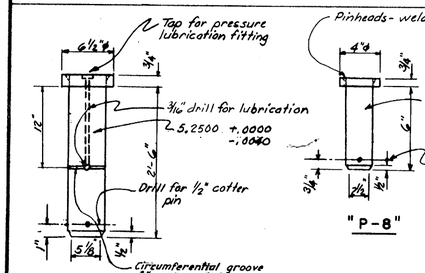
"W - 20"



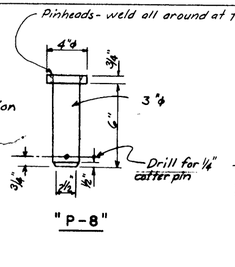
"W - 21"



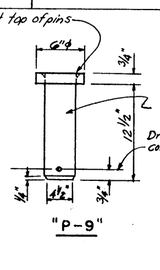
"W - 22"



"P-7"



"P-8"



"P-9"

FIT - running fit for all pins

TOLERANCES:

Nom. Dia.	Min.	Max.
3"ø	2.9985	3.000
5"ø	4.9980	5.000
5¼"ø	5.2480	5.250

Note: All pins to be stainless steel alloy "18-8", surface finish ASA 63 Burnish surfaces of pins in contact with bronze bushings.

PINS

General Notes

▶ BUSHINGS:-

Fit - press fit into weldments
Finish - inside surface finish ASA 125
Tolerances:

Nom. Dia. (I.D.)	Min.	Max.
3"ø	3.009	3.017
5"ø	5.013	5.023
5¼"ø	5.252	5.254

WELDMENTS - use weldable steel A-373-54T for all R's. Milled edges - of R's in contact for welding to meet ASA 500.

FINISH - to meet the American Standards Association surface roughness requirements as defined in A.S.A. B46.1-55, Surface Roughness, Waviness and Lay, Part I.

REVISION	DATE	DESCRIPTION	BY

FENTON G. KEYES ASSOCIATES
CONSULTING ARCHITECT - ENGINEERS
PROVIDENCE 8, R. I. BOSTON 34, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 54, MASS.

DES. BY L.D. | DR. BY HL. | CK. BY JL.

SUBMITTED: Lt. Col. ARCHITECT ENGINEER

PROJECT ENGINEER: Colonel

APPROVAL RECOMMENDED: CHIEF, ERIEN BRANCH

APPROVAL RECOMMENDED: CHIEF, P & P BRANCH

APPROVED: CHIEF, ENGINEERING DIVISION

DATE: FEB. 1961

FOX POINT HURRICANE BARRIER
ALLENS AVENUE VEHICULAR GATE
DETAILS NO. 2

PROVIDENCE RHODE ISLAND

SCALE NOT TO SCALE | SPEC. NO. CIV. ENG. 19-016-61-23

DRAWING NUMBER FP-1-1208

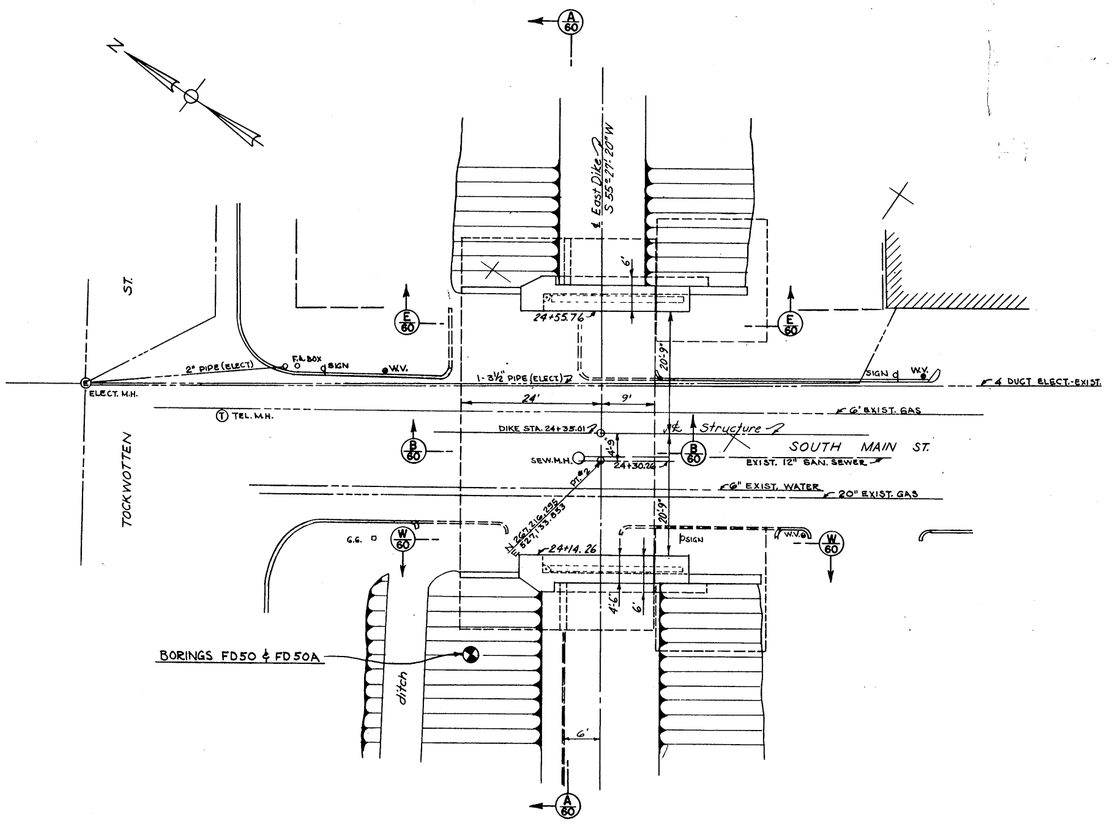
SHEET 59

CIVIL | ARCH. | STRUC. | MECH. | ELEC. | UTIL. | MATL. | NOTES | FIRE | DRAFT.

ARTHUR T. ADDISON CO., BOSTON, MASS.

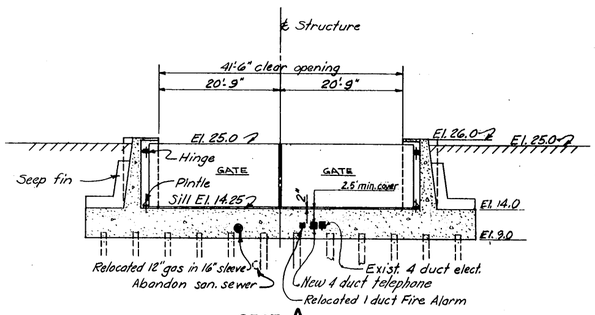
CORPS OF ENGINEERS

U. S. ARMY



GENERAL PLAN

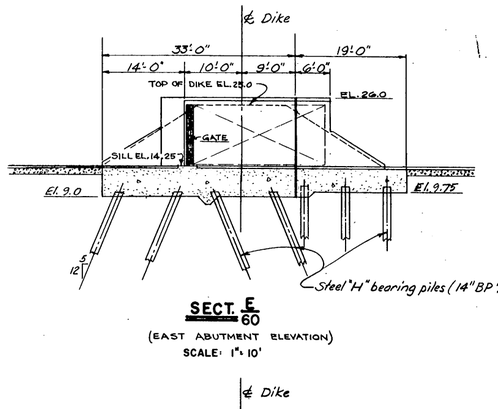
SCALE: 1" = 10'



SECT. A/60

(SHOWING GATES CLOSED)

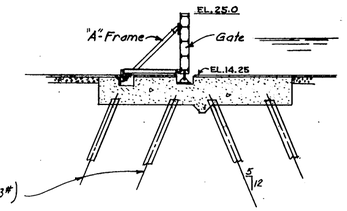
SCALE: 1" = 10'



SECT. E/60

(EAST ABUTMENT ELEVATION)

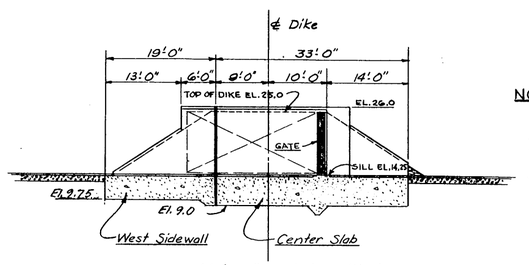
SCALE: 1" = 10'



SECT. B/60

(SHOWING GATE CLOSED)

SCALE: 1" = 10'



Note: piles not shown, this view

SECT. W/60

(WEST ABUTMENT ELEVATION)

SCALE: 1" = 10'

GRAPHIC SCALE

1" = 10' 10' 0 10' 20'

NOTES:

1) Elevations refer to mean sea level datum.
2) All concrete shall be 3000 p.s.i. at 28 days.
3) Chamfer all exposed corners 1".
4) All reinforcing bars shall have 4" clear cover unless otherwise noted.
5) All work will be paid for under the following item no's:
   - Structure Excavation and Backfill (8)
   - Steel Bearing Pile 14 BP 73 (26)
   - Concrete (60)
   - Cement (53)
   - Steel Reinforcement (54)
   - Vehicular Gate (51)
6) For utility relocation work see sh. nos. 4 & 37. For finish contours see sh. no. 30.

REVISION	DATE	DESCRIPTION	BY

FENTON G. KEYES ASSOCIATES
CONSULTING ARCHITECT – ENGINEERS
PROVIDENCE 3, R. I. BOSTON 24, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 24, MASS.

DES. BY	DR. BY	CK. BY
L.A.K.	H.L.	L.B.

SUBMITTED: [signature] ARCHITECT - ENGINEER

PROJECT ENGINEER: [signature]

APPROVAL RECOMMENDED: [signature] CHIEF, DESIGN BRANCH

APPROVAL RECOMMENDED: [signature] CHIEF, P. & R. BRANCH

FOX POINT HURRICANE BARRIER

SOUTH MAIN STREET VEHICULAR GATE

PLAN & ELEVATIONS

PROVIDENCE RHODE ISLAND

APPROVED: [signature] CHIEF, ENGINEERING DIVISION

DATE: FEB. 1961

SCALE: 1" = 10' SPEC. NO. CIV. ENG. 19-016-61-23

DRAWING NUMBER FP-1-1209

SHEET 60

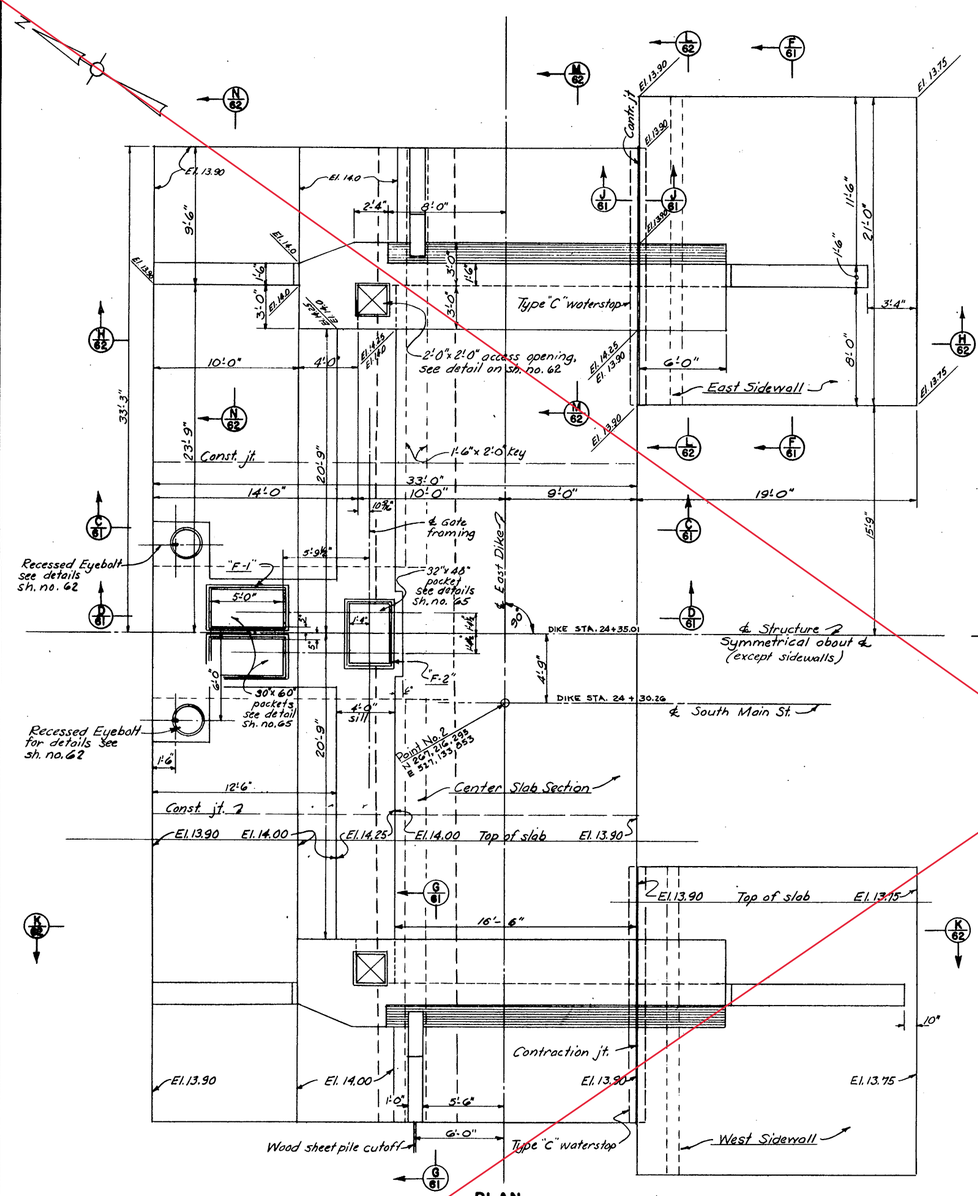
CIVIL | ARCH. | STRUC. | MECH. | ELEC. | UTIL. | MAT'LS. | BOR'S. | FILE | DRAFT.

60

ARMBRUST, JOHNSON CO., DODGE, MASS.

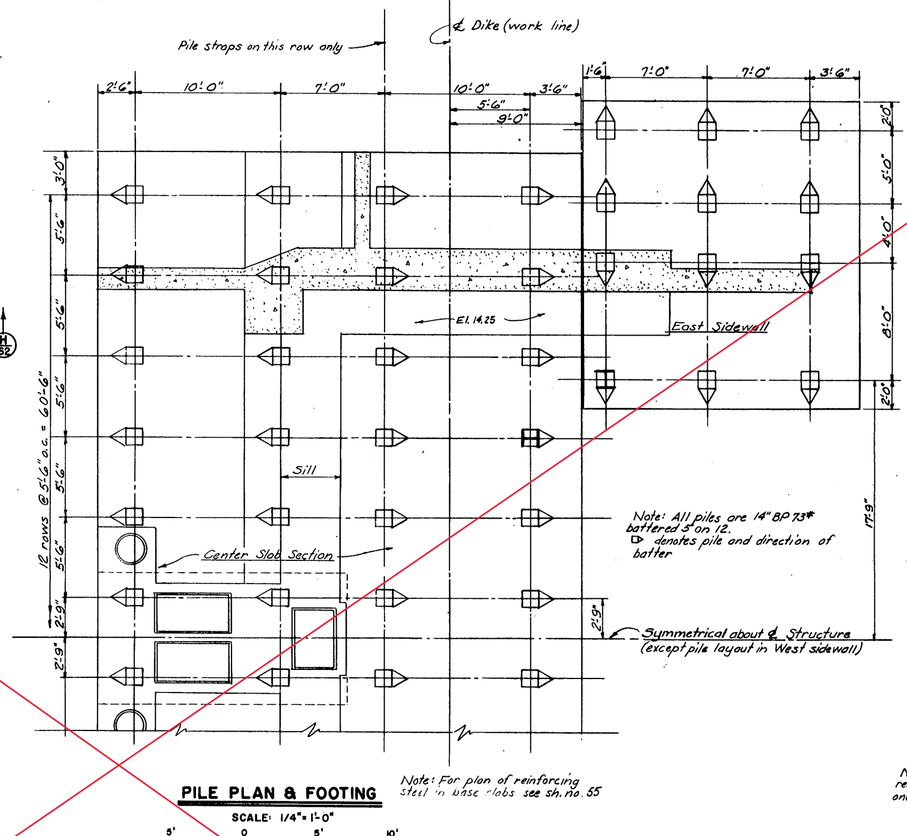
CORPS OF ENGINEERS

U. S. ARMY



PLAN

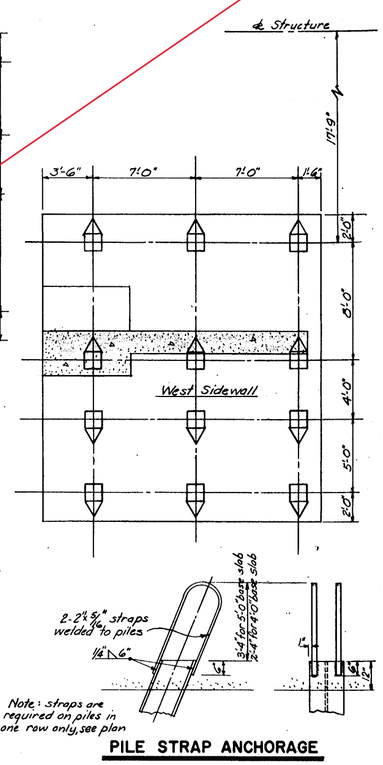
SCALE: 1/4"= 1'-0"



PILE PLAN & FOOTING

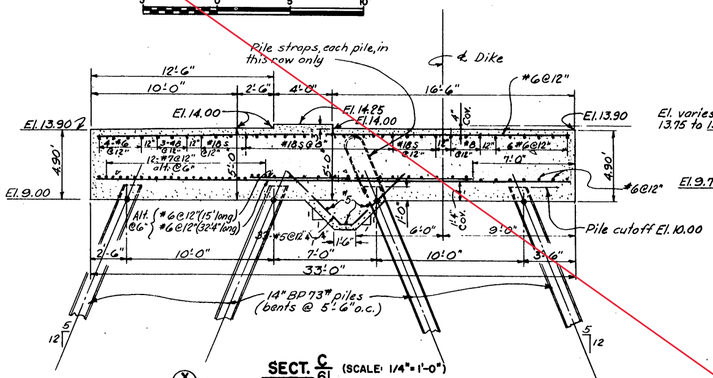
SCALE: 1/4"= 1'-0"

Note: For plan of reinforcing steel in base slabs see sh. no. 55

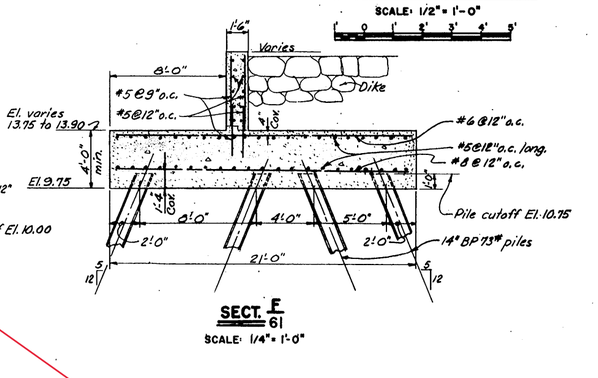


PILE STRAP ANCHORAGE

SCALE: 1/2"= 1'-0"

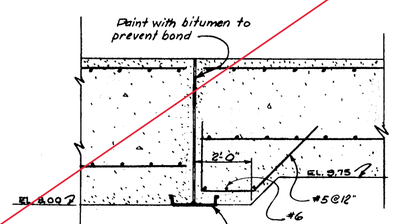


SECT. C 61 (SCALE: 1/4"= 1'-0")



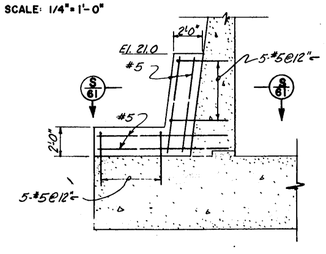
SECT. E 61

SCALE: 1/4"= 1'-0"



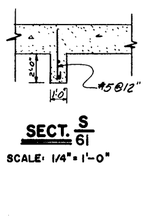
SECT. J 61

SCALE: 1/2"= 1'-0"



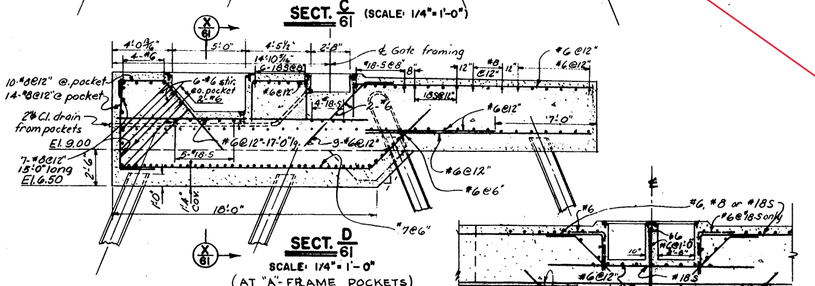
SECT. G 61

SCALE: 1/4"= 1'-0"



SECT. S 61

SCALE: 1/4"= 1'-0"



SECT. D 61

SCALE: 1/4"= 1'-0"

(AT "A"-FRAME POCKETS)

SECTION X 61 (SCALE: 1/4"= 1'-0")

REVISION	DATE	DESCRIPTION	BY

FENTON G. KEYES ASSOCIATES
CONSULTING ARCHITECT ENGINEERS
PROVIDENCE R. I. BOSTON 54, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 54, MASS.

DES. BY	DR. BY	CK. BY
F.G.K.	H.L.	L.B.

SUBMITTED
ARCHITECT ENGINEER

PROJECT ENGINEER

APPROVAL RECOMMENDED
CHIEF, DESIGN BRANCH

APPROVAL RECOMMENDED
CHIEF, R & D BRANCH

FOX POINT HURRICANE BARRIER

SOUTH MAIN STREET VEHICULAR GATE
BASE & PILE PLANS

PROVIDENCE RHODE ISLAND

APPROVED DATE FEB. 1961

CHIEF, ENGINEERING DIVISION

SCALE AS SHOWN | SPEC. NO. CIV. ENG. 19-096-61-22

DRAWING NUMBER
FP-1-1210

SHEET 61

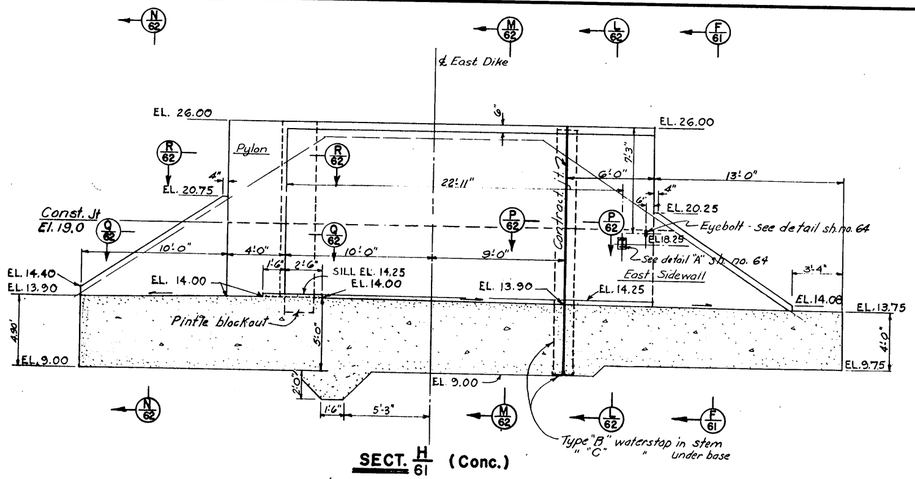
CIVIL, ARCH., STRUC., MECH., ELEC., UTIL., NAT'L., BOILS, FIRE, DRAFT

61

ARTHUR T. JOHNSON CO., BOSTON, MASS.

CORPS OF ENGINEERS

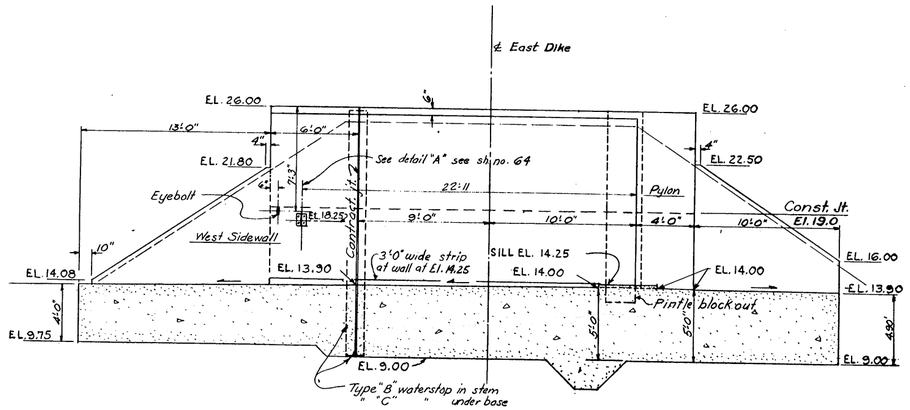
U. S. ARMY



SECT. H/61 (Conc.)

(EAST ABUTMENT & SIDEWALL)

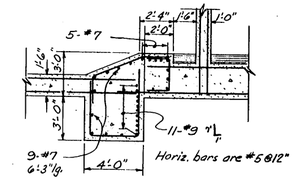
SCALE: 1/4" = 1'-0"



SECT. K/61 (Conc.)

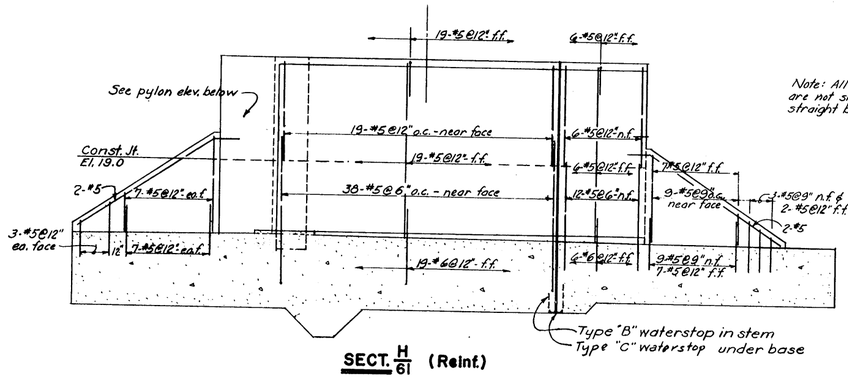
(WEST ABUTMENT & SIDEWALL)

SCALE: 1/4" = 1'-0"



SECT. Q/62

SCALE: 1/4" = 1'-0"

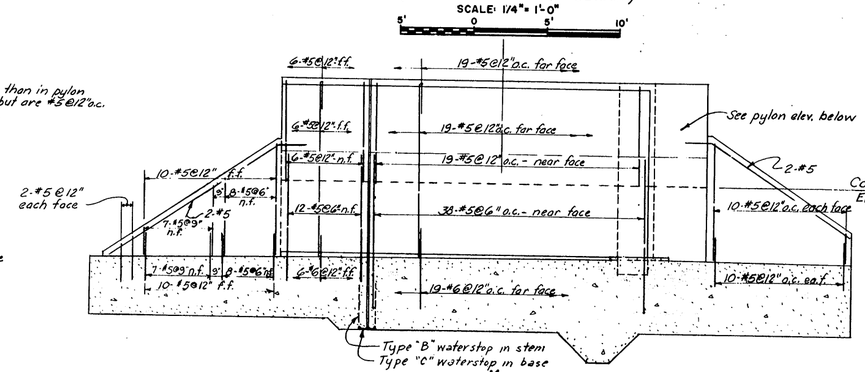


Note: All horiz. bars other than in pylon are not shown for clarity, but are #3@12" o.c. straight bars in each face.

Note:
n.f. = near face
f.f. = far "
ea.f. = each "

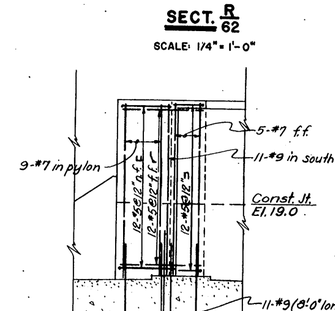
SECT. H/61 (Reinf.)

SCALE: 1/4" = 1'-0"



SECT. K/61 (Reinf.)

SCALE: 1/4" = 1'-0"



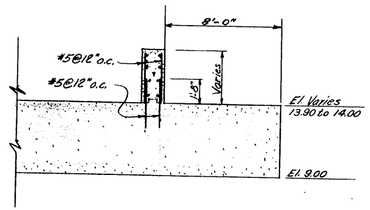
SECT. R/62

SCALE: 1/4" = 1'-0"

PYLON ELEVATION (Reinf.)

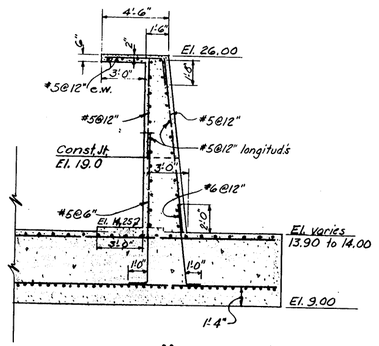
(EAST SHOWN - WEST OPP. HAND)

SCALE: 1/4" = 1'-0"



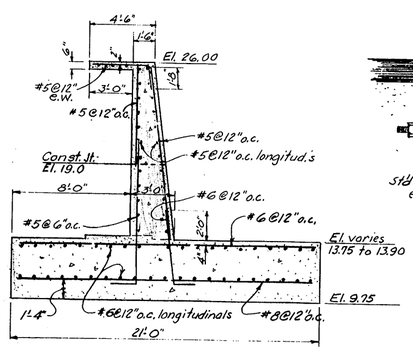
SECT. N/62

SCALE: 1/4" = 1'-0"



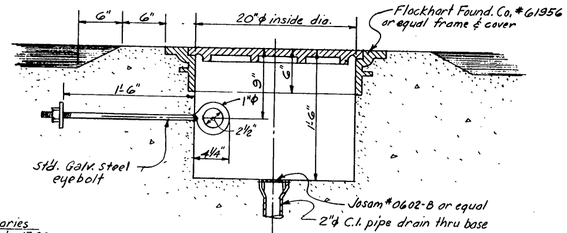
SECT. M/62

SCALE: 1/4" = 1'-0"



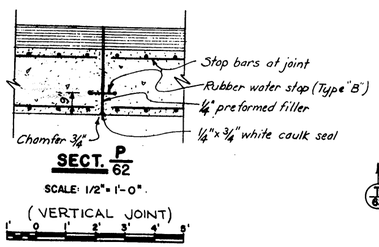
SECT. L/62

SCALE: 1/4" = 1'-0"



BASE RECESSED EYEBOLT DETAIL

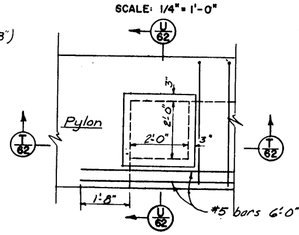
SCALE: 1 1/2" = 1'-0"



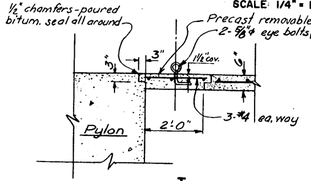
SECT. P/62

SCALE: 1/2" = 1'-0"

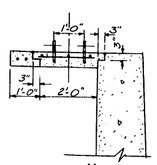
(VERTICAL JOINT)



PLAN



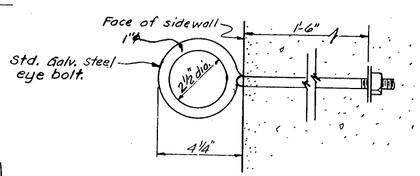
SECT. T/62



SECT. U/62

ACCESS OPENING DETAILS

SCALE: 1/2" = 1'-0"



WALL EYEBOLT DETAIL

NOT TO SCALE

NOTES:

1. For notes on steel Reinf. see sheet 68

REVISION	DATE	DESCRIPTION	BY

FENTON G. KEYES ASSOCIATES
CONSULTING ARCHITECT — ENGINEERS
PROVIDENCE 3, R. I. BOSTON 34, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 54, MASS.

DES. BY	DR. BY	CK. BY
L.P.S.L.	H.S.	J.L.

SUBMITTED
ARCHITECT ENGINEER
PROJECT ENGINEER
APPROVAL RECOMMENDED
CHIEF, DESIGN BRANCH
APPROVAL RECOMMENDED
CHIEF, P. & R. BRANCH

FOX POINT HURRICANE BARRIER

SOUTH MAIN STREET VEHICULAR GATE ABUTMENTS & SIDEWALLS

PROVIDENCE RHODE ISLAND

APPROVED
CHIEF, ENGINEERING DIVISION
DATE FEB' 1961

SCALE AS SHOWN | SPEC. NO. CIV. ENG. 19-018-61-226

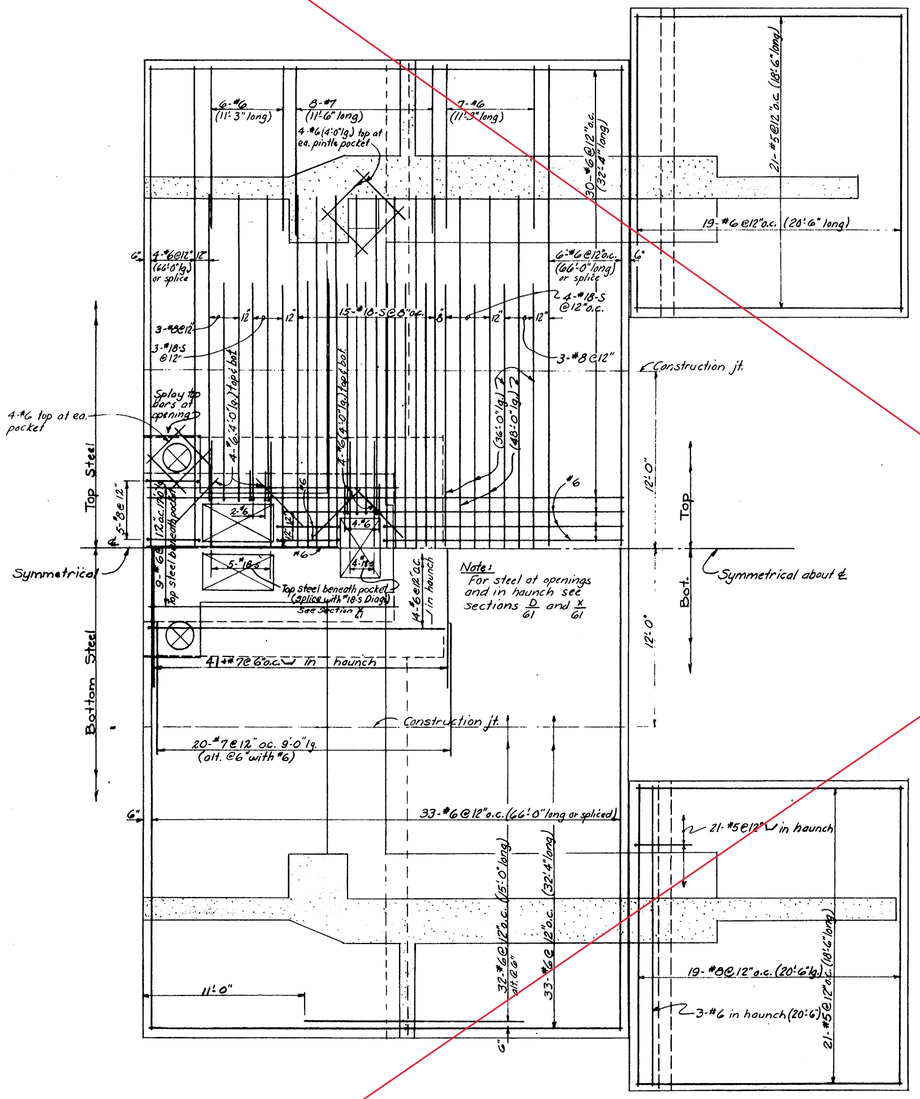
DRAWING NUMBER
FP-1-1211

SHEET 62

CIVIL | ARCH. | STR'L. | MECH. | ELEC. | UTIL. | MAT'L. | SOILS | PLMB. | DRAFT.

CORPS OF ENGINEERS

U. S. ARMY



PLAN - FOOTING REINFORCEMENT

SCALE: 1/4" = 1'-0"

4' 0 4' 8'

REVISION	DATE	DESCRIPTION	BY

FENTON G. KEYES ASSOCIATES
CONSULTING ARCHITECT — ENGINEERS
PROVIDENCE 2, R. I. BOSTON 54, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 54, MASS.

DES. BY C.G. | DR. BY M.P. | CK. BY J.L.

SUBMITTED ARCHITECT - ENGINEER

PROJECT ENGINEER

APPROVAL RECOMMENDED CHIEF, DESIGN BRANCH

APPROVAL RECOMMENDED CHIEF, P & C BRANCH

FOX POINT HURRICANE BARRIER

SOUTH MAIN STREET VEHICULAR GATE

CENTERBASE & DETAILS

PROVIDENCE RHODE ISLAND

APPROVED CHIEF, ENGINEERING DIVISION

DATE FEB 1961

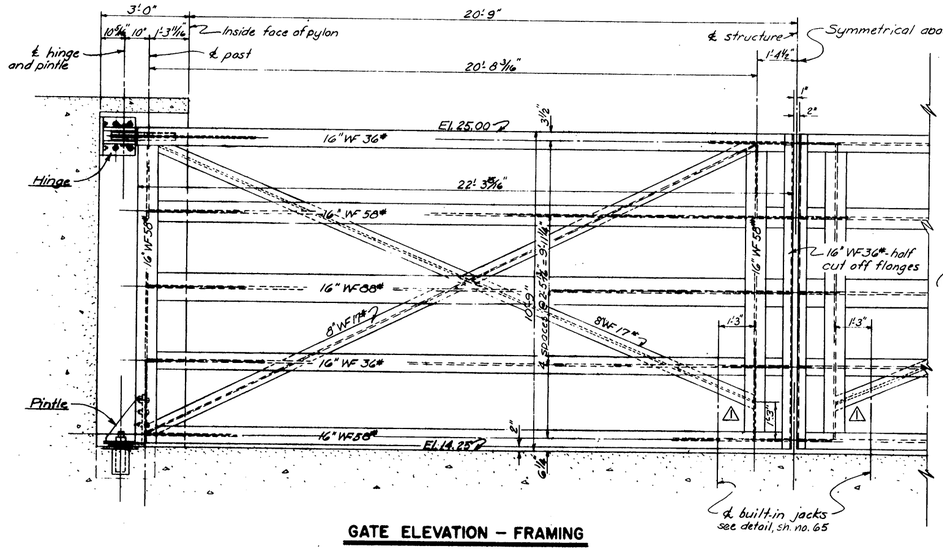
SCALE 1/4"=1'-0" | SPEC. NO. CIV. ENG. 19-014-61-23

DRAWING NUMBER FP-1-1212

SHEET 63

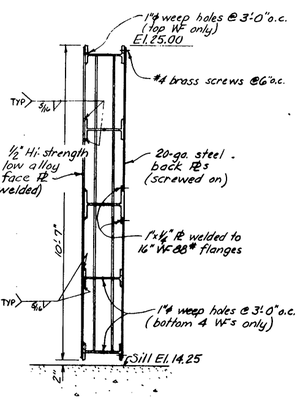
CIVIL | ARCH. | STRUC. | MECH. | ELEC. | UTIL. | MAT'L. | SCALE | FILE | DRAFT.

63

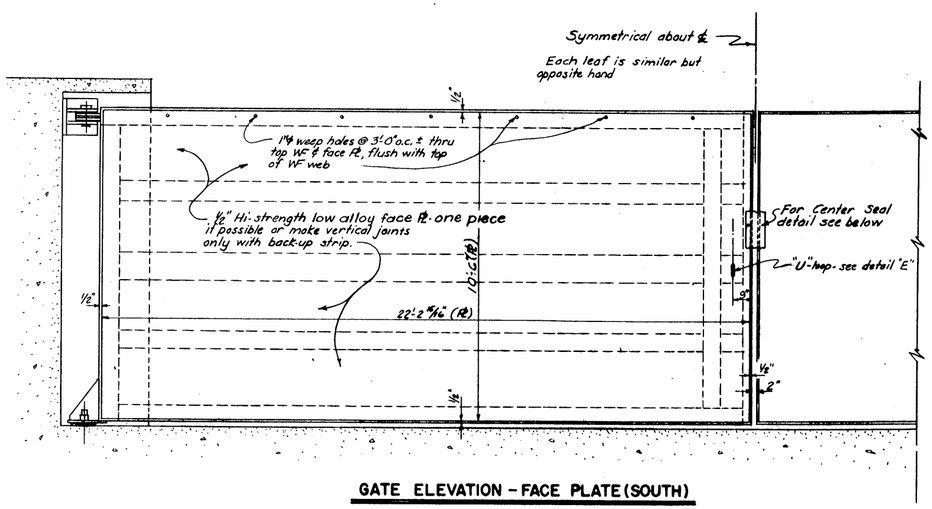


GATE ELEVATION – FRAMING

SCALE: 1/2" = 1'-0"

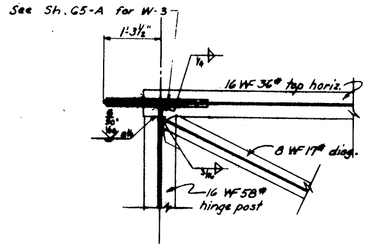


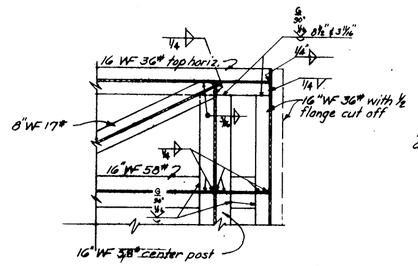
SECTION

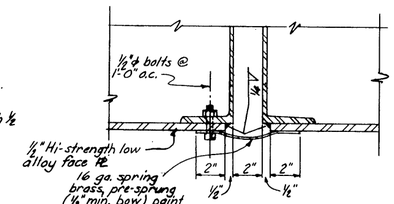


GATE ELEVATION – FACE PLATE (SOUTH)

SCALE: 1/2" = 1'-0"



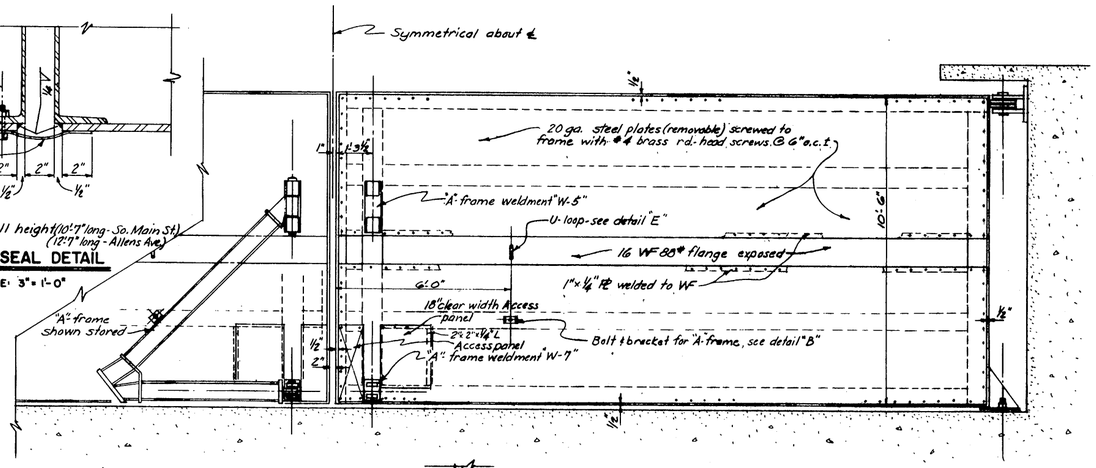




Note: To extend full height (10'-7" long - So. Main St) (12'-9" long - Allens Ave.)

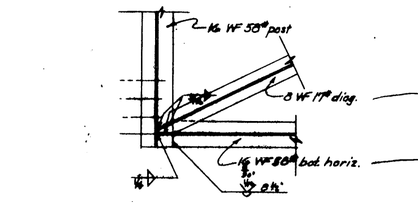
CENTER SEAL DETAIL

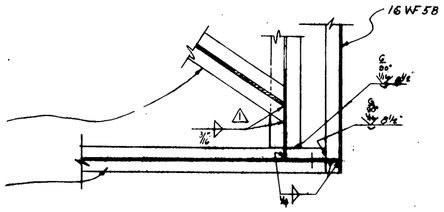
SCALE: 3" = 1'-0"

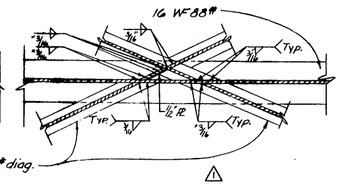


REAR GATE ELEVATION – BACK PLATE (NORTH)

SCALE: 1/2" = 1'-0"



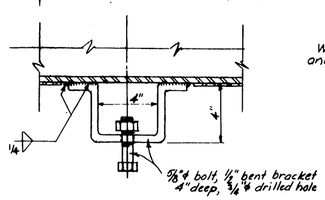




Note: clip L's for assembly not shown

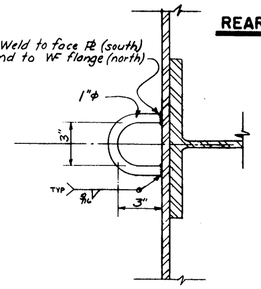
DETAILS – WELDING OF FRAME

SCALE: 3/4" = 1'-0"



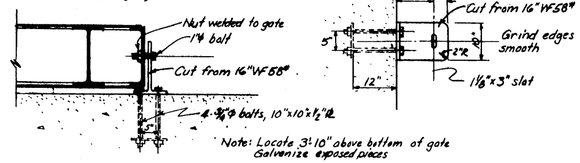
DETAIL "B"

SCALE: 3" = 1'-0"



"U" LOOP – DETAIL "E"

SCALE: 3" = 1'-0"



Note: Locate 31'-10" above bottom of gate
Galvanize exposed pieces

DETAIL "A"

SCALE: 3/4" = 1'-0"

SCALE: 1/2" = 1'-0" 1' 0 1' 2' 3' 4' 5'

SCALE: 3/4" = 1'-0" 1' 0 1' 2' 3'

SCALE: 3" = 1'-0" 3" 0 3" 6" 9"

REVISION	DATE	DESCRIPTION	BY
1	3-20-61	Details revised (Add'l #1)	

FENTON G. KEYES ASSOCIATES
CONSULTING ARCHITECT – ENGINEERS
PROVIDENCE 3, R. I. BOSTON 64, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 54, MASS.

DES. BY S.S.H.Jr. | DR. BY H.A. | CK. BY L.B.

SUBMITTED: DISTRICT ENGINEER

PROJECT ENGINEER

APPROVAL RECOMMENDED: CHIEF, DESIGN BRANCH

APPROVAL RECOMMENDED: CHIEF, P&R BRANCH

APPROVED: CHIEF, ENGINEERING DIVISION

FOX POINT HURRICANE BARRIER

SOUTH MAIN STREET VEHICULAR GATE

GATE FRAMING & DETAILS

PROVIDENCE RHODE ISLAND

DATE FEB 1961

SCALE AS SHOWN | SPEC. NO. CIV. ENG. 19-018-61-23

DRAWING NUMBER FP-1-1213

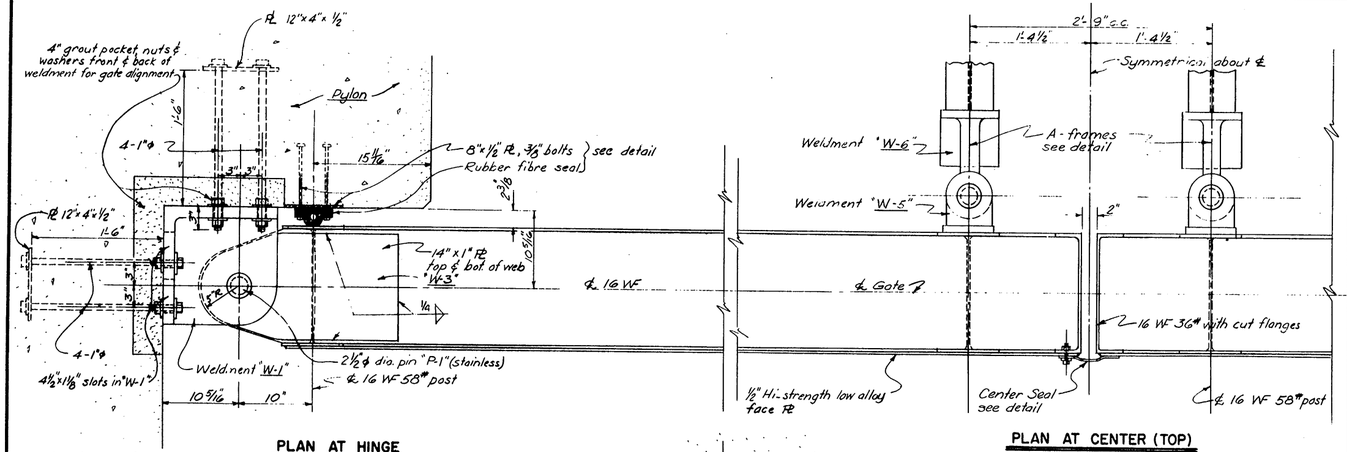
SHEET 64

CIVIL | ARCH. | STRUC. | MECH. | ELEC. | UTIL. | MATS. | SOILS | FDN. | DRAFT.

64

CORPS OF ENGINEERS

U. S. ARMY

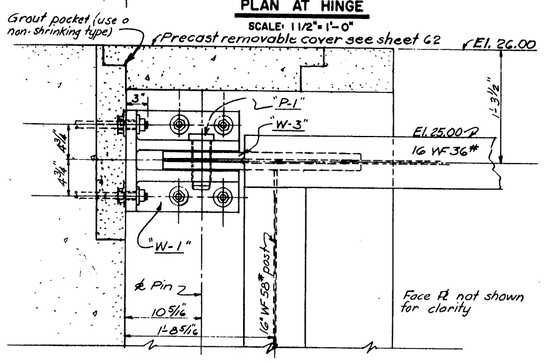


PLAN AT HINGE

SCALE: 1 1/2" = 1'-0"

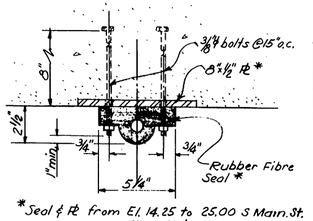
PLAN AT CENTER (TOP)

SCALE: 1 1/2" = 1'-0"



ELEVATION AT HINGE

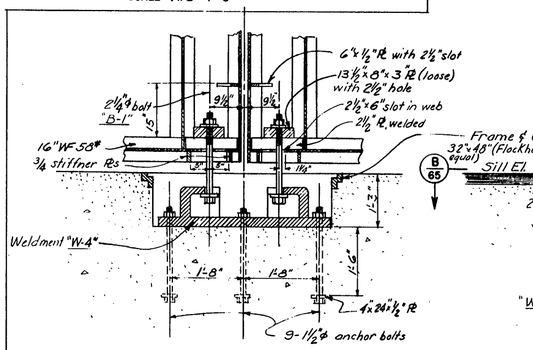
SCALE: 1 1/2" = 1'-0"



* Seal & PL from El. 14.25 to 25.00 S Main St.
" " " " El. 12.25 to 25.00 Allens Ave

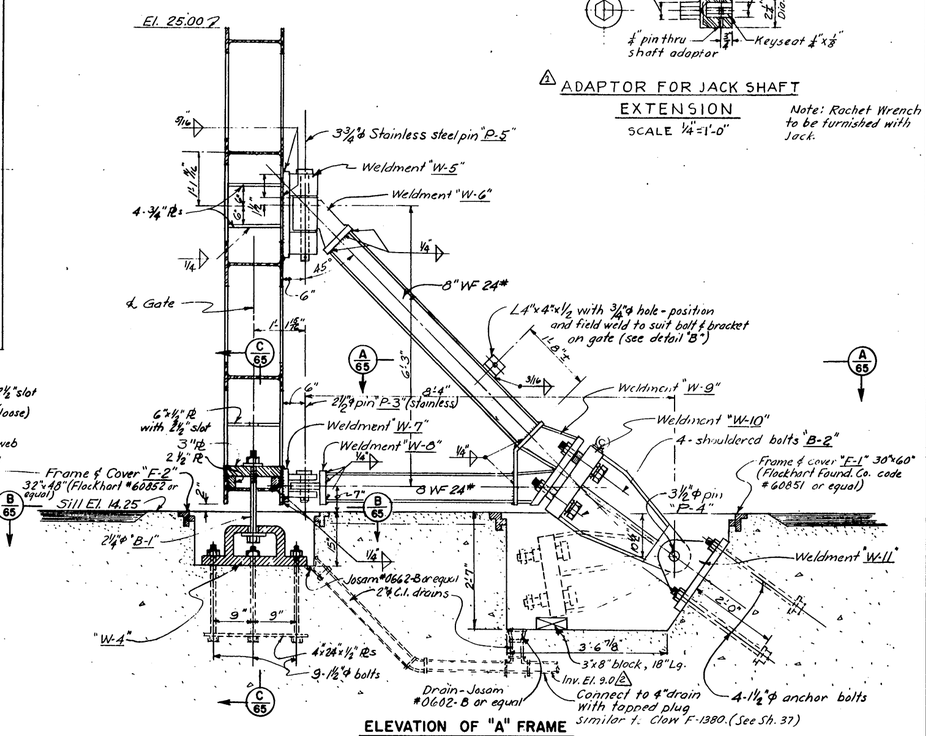
RUBBER FIBRE SEAL DETAIL

SCALE: 3" = 1'-0"



SECTION C/65

SCALE: 3/4" = 1'-0"

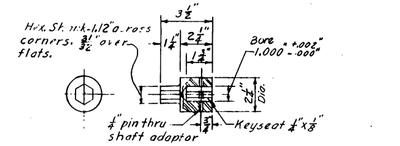


ELEVATION OF "A" FRAME

2 REQ'D

SCALE: 3/4" = 1'-0"

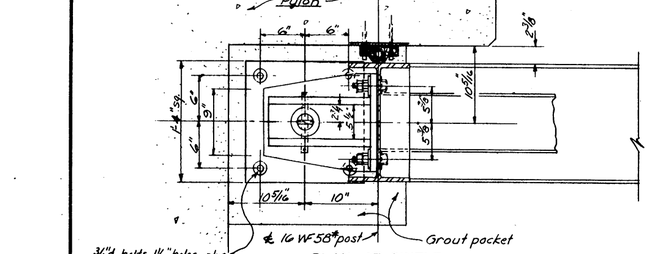
Note: For Weldment details see Sheet No. 65A



△ ADAPTOR FOR JACK SHAFT EXTENSION

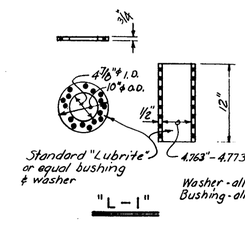
SCALE 1½" = 1'-0"

Note: Rachet Wrench to be furnished with Jack.

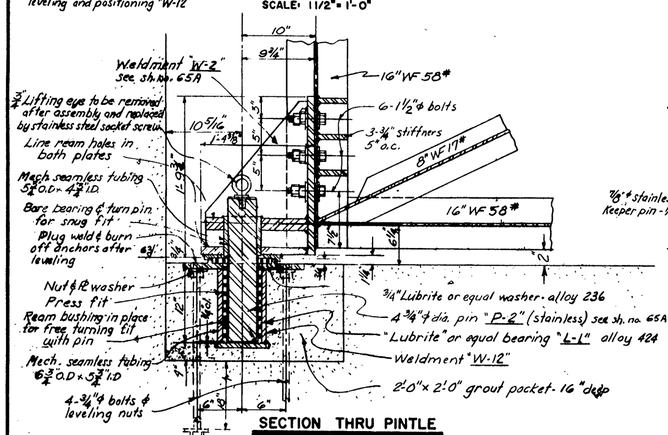


PLAN AT PINTLE

SCALE: 1 1/2" = 1'-0"

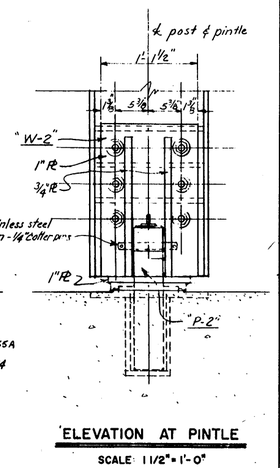


"L-1"



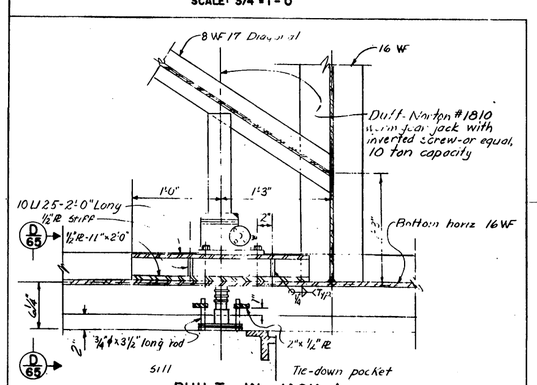
SECTION THRU PINTLE

SCALE: 1 1/2" = 1'-0"



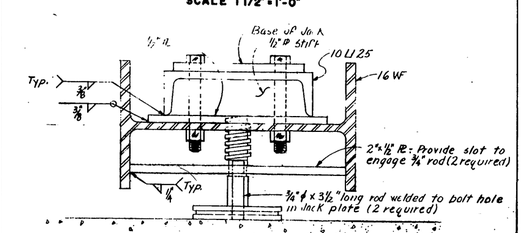
ELEVATION AT PINTLE

SCALE: 1 1/2" = 1'-0"



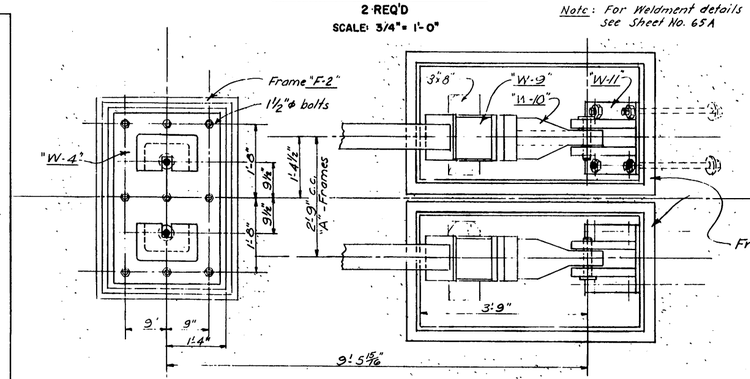
BUILT IN JACK △

SCALE 1 1/2" = 1'-0"



SECTION D/65 △

SCALE 3" = 1'-0"



SECTION B/65

SCALE: 3/4" = 1'-0"

(AT FRONT SUPPORT RECESS)

SECTION A/65

SCALE: 3/4" = 1'-0"

(AT REAR SUPPORT RECESS)

SCALE: 3/4" = 1'-0"

SCALE: 1 1/2" = 1'-0"

SCALE: 3" = 1'-0"

REVISION	DATE	DESCRIPTION	BY
△2	3-30-61	Adaptor detail and notes added. (Add # 3)	
△1	3-20-61	Jack revised & section added. (Add # 1)	

FENTON G. KEYES ASSOCIATES
CONSULTING ARCHITECT — ENGINEERS
PROVIDENCE R. I.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 54, MASS.

DES. BY: L.S.L. | DR. BY: M.L. | CK. BY: L.S.

SUBMITTED: ARCHITECT ENGINEER

PROJECT ENGINEER

APPROVAL RECOMMENDED: CHIEF, DESIGN BRANCH

APPROVAL RECOMMENDED: CHIEF, P & C BRANCH

FOX POINT HURRICANE BARRIER

SOUTH MAIN STREET VEHICULAR GATE

DETAILS

PROVIDENCE — RHODE ISLAND

APPROVED: CHIEF, ENGINEERING DIVISION — DATE: FEB. 1961

SCALE AS SHOWN | SPEC. NO. CIV. ENG. NB-018-61-22

DRAWING NUMBER: FP-1-1214

SHEET 65

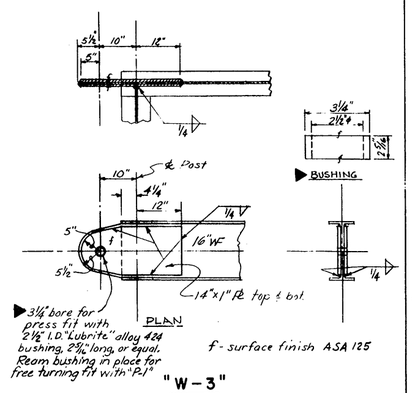
CIVIL | ARCH. | STRUC. | MECH. | ELEC. | UTIL. | HAS | BOH & | FIRE | DRAFT

65

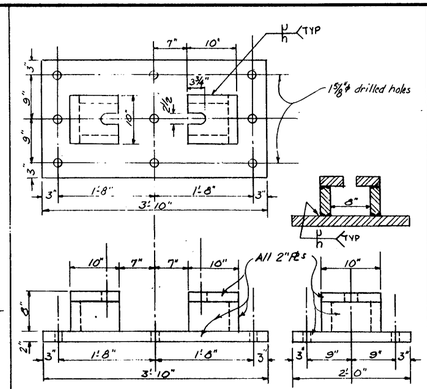
HOY, Jamaica Rd., Boston, Mass.

CORPS OF ENGINEERS

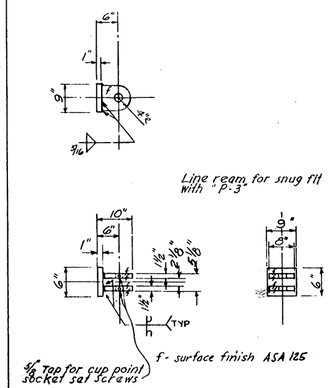
U. S. ARMY



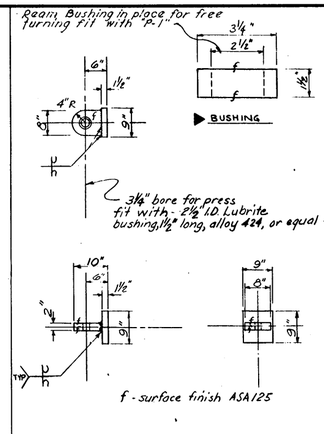
"W-3"



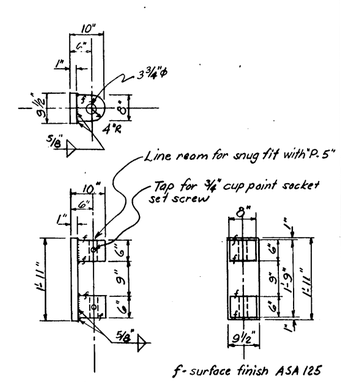
"W-4"



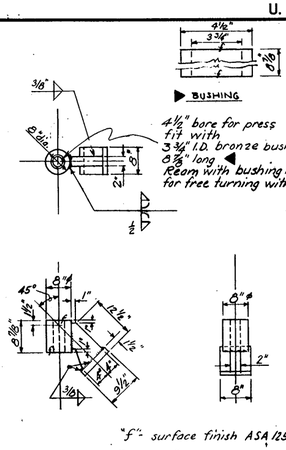
"W-7"



"W-8"

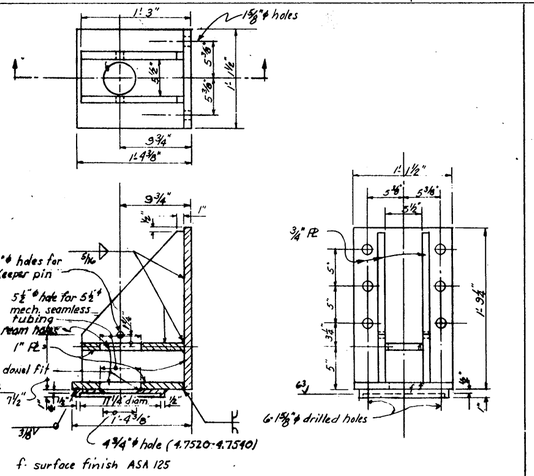


"W-5"

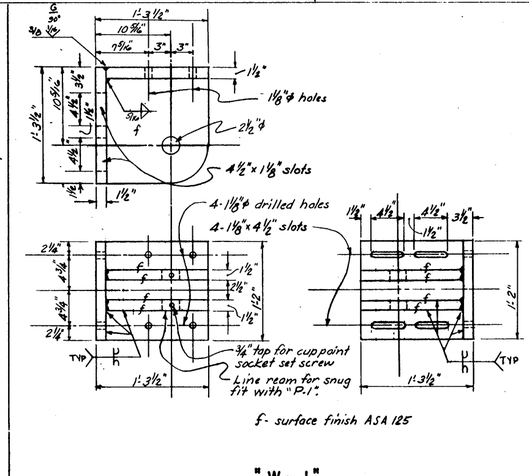


"f"- surface finish ASA 125

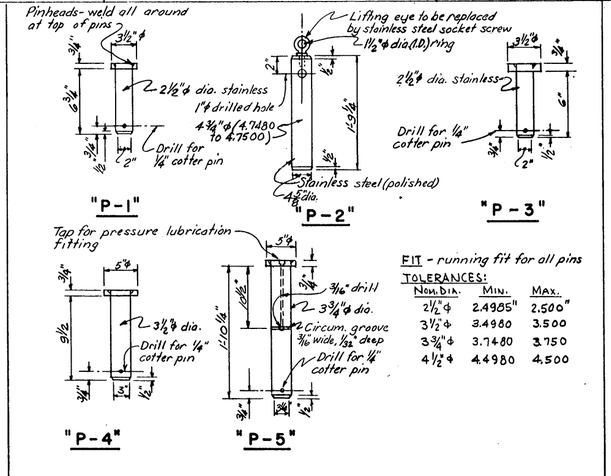
"W-6"



"W-2" & "W-13"



"W-1"



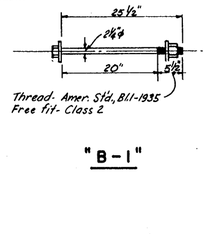
FIT - running fit for all pins

TOLERANCES:

Nom. Dia.	Min.	Max.
2½"ϕ	2.4985"	2.500"
3½"ϕ	3.4980	3.500
3¾"ϕ	3.7480	3.750
4½"ϕ	4.4980	4.500

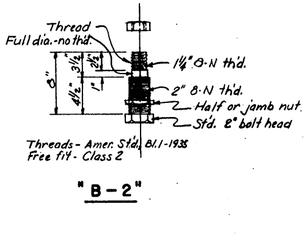
PINS

Note: All pins to be stainless steel alloy 18-8, surface finish ASA 63. Burnish surface of pins in contact with bronze bushings.



Thread- Amer. Std., B.I.I-1935
Free fit- Class 2

"B-1"

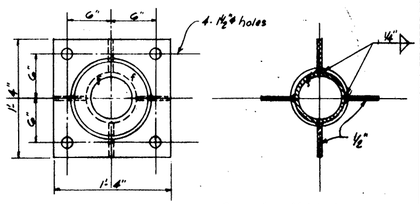


Threads- Amer. Std. B.I.1-1935
Free fit- Class 2

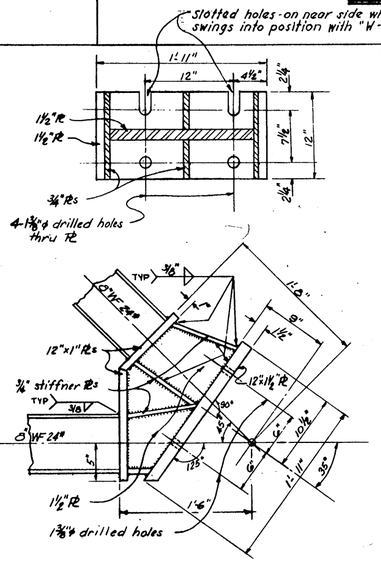
"B-2"

MACHINED BOLTS & NUTS

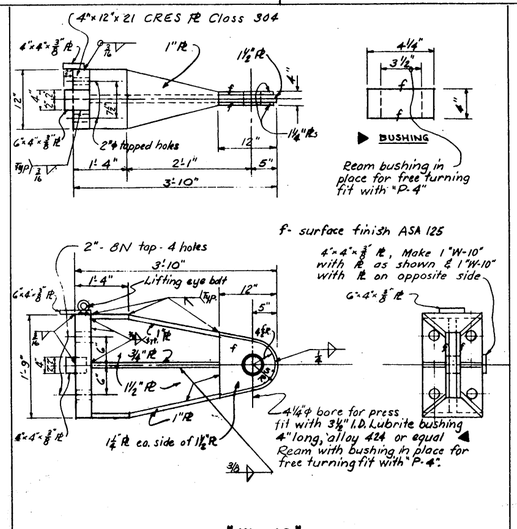
CRES CLASS 304



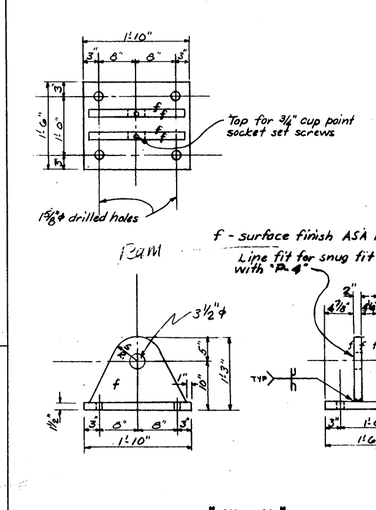
"W-12" & "W-14"



"W-9"



"W-10"



"W-11"

General Notes

▶ BUSHINGS -

Fit - press fit into weldments

Finish - inside surface finish ASA 125

Tolerances:

Nom. Dia. (I.D.)	Min.	Max.
2½"ϕ	2.509"	2.517"
3½"ϕ	3.510	3.521
3¾"ϕ	3.752	3.754

WELDMENTS - use weldable steel A-373-56T for all fl's.

Milled edges of fl's in contact for welding to meet ASA 500

FINISH - to meet the American Standards Association surface roughness requirements as defined in A.S.A. B46.1-55, Surface Roughness, Waviness and Lay, Part I.

All weldments shall be stress heat-treated in accordance with ¶ 512 of Stand. Specs. for Welded Highway and Railway Bridges.

REVISION	DATE	DESCRIPTION	BY

FENTON G. KEYES ASSOCIATES
CONSULTING ARCHITECT - ENGINEERS
PROVIDENCE 3, R. I. BOSTON 84, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS.
424 TRAPELO ROAD
WALTHAM 84, MASS.

DES. BY L.B.S. Jr. | DR. BY M.L. | CK. BY L.B.

SUBMITTED
ARCHITECT ENGINEER

PROJECT ENGINEER

APPROVAL RECOMMENDED
CHIEF, DESIGN BRANCH

APPROVAL RECOMMENDED
CHIEF, S & A.R. BRANCH

FOX POINT HURRICANE BARRIER

SOUTH MAIN STREET VEHICULAR GATE

WELDMENTS

PROVIDENCE RHODE ISLAND

APPROVED
CHIEF, ENGINEERING DIVISION

DATE FEB. 1961

SCALE NOT TO SCALE SPEC. NO. CIV. ENG. 19-096-62-2

DRAWING NUMBER FP-1-1214 A

SHEET 65A

CIVIL | ARCH. | STRUC. | MECH. | ELEC. | UTIL. | MAT. | BORE | PLAT. | DRAFT.

CORPS OF ENGINEERS

U. S. ARMY

Note:
For continuation of utilities, see Sheets 6 & 39.

N 266,700

E 526,100

N 266,800

E 526,200

E 526,300

COOLING WATER CANAL

Approximate Harbor line

New 30" R.C.C.P., (40) see Sheet 28.

Turn Around Area (33)

New Drop Inlet, see Sheet 28

(39) Limit of Paving

Drainage Ditch

2'-0"

7'-0"

℄ Elec. Duct (73) (67)

28'-7"

23'-9"

West Dike Wingwall

4" Galv.

4" Ct. Water (ball joints)

Wingwall Footing

Protection Stone (75-150 lbs.) (19)

Slope 1:1.5

Stone Fill

Cont. 24"

10" Storm Drain, see Sheet 6B.

Obser. Riser

Monolith Footing

Access Rd. Light, see Sh. 173

Top El. 25.0

Top of Slope

131°-09'-20" E

Sta. 12+57.72

℄ West Dike N 47°-11'-20" E

10'-0"

1:1.5

21'-0"

1'-6"

3'-0"

14'-0"

Roadway (33)

2'-5"

℄ Core

Top El. 25.0

Narragansett Electric Vehicular Gate shown in Closed Position

Top of Slope

Slope 1:1.5

Armor Stone (2-3 ton) (19)

W.P. #1A

30'-3"

Vehicular Gate Apron

Top El. 26.0

1 on 1.5 Slopes

3'-6"

Gate shown in Storage Position (58)

Toe of Slope

N 266,600

Existing Conc. Fuel Pump Foundation

Narragansett Electric Vehicular Gate Monolith (20) (33) (34)

Exist. timber posts

Exist. filler pipes

Existing Conc. Fuel Pump Foundation

Limit of Paving (33)

Existing Breaker House & Pile Foundations

Remove existing conc-rete wall cap and stone wall as necessary for West Abutment construction and replace with similar const-ruction. (2) (16)

Remove existing timber dock as necessary for construction of the West Abutment and replace with similar construction. (1)

(73) Fencing

E 5'-0"

A/28

Limit of Paving (33)

Elec.

Water

Gas

8" Sleeve

Mech. Coupg.

See Detail 'A', Sh. 37

Obser. Riser Inv. El. 2.5

Tel.

4" Sleeve

Exp. Joint

Face of Wall

Top El. 25.0

W.P. #1

Exp. Joints

℄ West Dike Extension

Top of Slope

Armor Stone (2-3 ton) (19)

Conveyor Support Protective Wall, see Sheet 70.

Slope 1:1.5

Toe of slope

West Dike Extension

New Sewer M.H. Inv. El. 5.0

6" C.I. Sewer

For continuation see Sh. No. 8

Slope

Ramp retaining Wall, see Sh. No. 78

℄ Existing Overhead Coal Conveyor System

10'-0"

53'-1" West Abutment for details, see Sh. 79

Outline of 5'-0" Tremie Conc. Slab & ℄ Steel Sheet Pile Cofferdam, see Sh. 19. (5)

Existing Temporary By-Pass Wall, for use under this Contract, see Section 9, "Cofferdams" of the Specifications

Closure Sections, Cooling Water Canal Wall (29) (30) (31)

See details on Sheets 92 & 93

For reconstructed shore treatment in this area, see Sheet 20.

34'-10"

Flap valve, Inv. El. -20

1'-0"

16'-0"

5'-0"

8" Sleeve

MK 91-2 Railing (62)

9" Gate Valve & Box

Mech. Coupling

10'-0"

4'-0"

5'-0"

Electrical Manhole #3

C.I. Conduit

W.P. #3

Paved Riverside Deck (33)

For M.H. drainage piping see Sheet 169.

1" Conduit to Access Rd. light

Wrap all pipes in this walk with ½" thickness of felt.

℄ Pumps & Reference Line of River Structure N 62°-16'-34.9" E

8" Sleeves

Mech. Coupg.

℄ Gas by others

Pipe Support Beams

4" Sleeves

2" Tel.

Mech. 2" Coupg. See Detail 'B', Sh. 37

Mech. Coupg.

℄ C.I. Water

8" Sleeves

Stop Gate Shelter (72)

For pipe installation details see Sheet 37.

℄ Cooling Water Intake Gates

Mech. Coupg.

Mech. Coupg.

10" Sleeves

6" C.I. Sewer S = 0.10

10" Sleeve, Inv. El. 6.0

Concrete Sloped Face

For structural layout, details & elevations of pipe support beams, see Sheets 75 thru 79.

MK 91-1 Railing (62)

Expansion Joint

Pumping Station

44'-0"

41'-0"

16'-0"

7'-5"

10'-0"

9'-7"

6'-0"

7'-5"

COORDINATES FOR WORKING POINTS

Point	N. Coordinate	E. Coordinate	Station
W.P. #1	266 664.05	526 149.33	12+94.85
W.P. #2	266 679.16	526 180.20	13+34.52
W.P. #3	266 717.38	526 232.16	14+13.39
W.P. #3	266 740.18	526 293.54	14+66.34

PLAN

Coal Conveyor

Elevation Varies

Top of West Dike Extension, El. 25.0

Top of West Abutment, El. 25.0

Brick Facing

Top of Concrete

Concrete

Sloped Concrete Face

Top of West Dike El. 25.0

El. 26.0

Gate Monolith (50) (33) (34)

Armor Stone (2-3 ton) (19)

Seep Fin

Top of West Dike Wingwall

Existing Grade

Apron Grade @ El. 9.0

Conveyor Support Protective Wall

Armor Stone (2-3 ton) (19)

(62) Railing

El. 10.5

El. 11.6

El. 12.0

El. 14.0

Cooling Water Intakes

Mean Sea Level El. 0.00

Armor Stone (½-1 ton) (17)

3

1

Riprap (300 lb max.) (14)

Cast-in-Place Conc. Cap

Top of Footings, El. 5.0

For Splicing requirement see Specifications

Wood Sheet Piling Foundation Cutoff (20)

El. -18.0, bottom of Cutoffs

(21) Steel Sheet Piling Wall with Conc. Cap - Ramp Retaining Wall

(21) Steel Sheet Piling Foundation Cutoff

El. -18.00

El. -19.00

Sta. 13+70

El. 24.00 ℄

3'-0" thick concrete wall, cast within West Abutment cofferdam, see Sheet 78, Ramp Retaining Wall

Steel Sheet Piling Foundation Cutoff (21)

El. -38.0, Bottom of Cutoff

SCALE 1" = 10'-0"

10' 0 10' 20'

ELEVATION

NOTES:

1. Main Barrier Reference Line coincides with the ℄ Pumps in the Pumping Station and extends from W.P. #1 on the West shore to W.P. #3 on the East shore.
2. For Foundation Piling and Steel Sheet Piling Foundation Cutoff, see Sheet 67.
3. For location and treatment of utilities in the West Abutment Area, see Sheets 76, 77, 78 and 168.
4. For details of cofferdams and other temporary construction, see Sheet 19.
5. For soil & foundation conditions, see Sheets 9 & 10.
6. For details of the Cooling Water Canal West closure sections, see Sheets 92 & 93.
7. For limits of New Paving, see Sheet 29.
8. Locations of existing pile foundations in the Breaker House Area are taken from the following drawings of the New England Power Service Company: B-2069, B-2090, B-2091 and B-2092.
9. For details of West Dike construction, see Sheets 24, 26 & 27.
10. For extent of River Excavation, see Sheet 17.
11. For details of Riprap and shore protection, see Sheets 20 & 21.
12. All wall sleeves shall be std. weight steel pipe.

REVISION	DATE	DESCRIPTION
1	10-5-62	Wall revised for truck access.

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WALTHAM, MASS.

DES. BY GRA | DR. BY CRD | TR. BY GRA

SUBMITTED _____ ARCHITECT - ENGINEER

PROJECT ENGINEER

APPROVAL RECOMMENDED _____ CHIEF, DESIGN BRANCH

APPROVED _____ CHIEF, ENGINEERING DIVISION

FOX POINT HURRICANE BARRIER

WEST ABUTMENT AREA

GENERAL PLAN & ELEVATION

PROVIDENCE RHODE ISLAND

APPROVED _____ DATE MAY 1962

SCALE 1" = 10'-0" | SPEC. NO. CIV. ENG. 10-006-61-23

DRAWING NUMBER FP-1-1215

SHEET 66

THIS SUPERSEDES DRAWING FP-1-1215 DATED FEB. 1961

66

CORPS OF ENGINEERS

U. S. ARMY

Top West Dike Ext. Pile Cap

El. 5.0 ?

El. 2.0 ?

El. 1.0

Embed first section of Cutoff sheet piling 4" into West Abutment West Wall (21)

West Abutment (50) (53) (54)

El. -18.0 ?

Steel Sheet Piling Foundation Cutoff for West Dike Extension Retaining Wall (21)

El. -23.0

El. -24.0

(5) Tremie Slab

El. -28.0

El. -29.0

Butt tight against transverse line of Cutoff sheet piling (21)

Cofferdam sheet piling with "double tee" to remain in place for Foundation Cutoff (5)

SECTION C-C

SCALE: 1/8" = 1'-0"

WEST DIKE WINGWALL (25) (30A) (50) (53) (54)

37'-0"

19'-0"

2'-0"

3 @ 5'-0" = 15'-0"

2'-0"

2'-0"

6 @ 5'-0" = 34'-0"

39'-0"

2'-0"

Provide straps on these tension piles - See Detail A

10'-2"

6'-10"

1'-8"

1'-8"

2'-0"

3'-6"

1'-9"

1'-9"

11'-11"

32'-2"

26'-4"

1'-11"

10 spaces @ 4'-6" = 45'-0"

Provide straps on these tension piles - See Detail A

Existing Breaker House Footings and Pile Groups

Alter direction to avoid Breaker House piling.

alter direction to avoid Breaker House piling

(25) (30A) WEST DIKE EXTENSION (53) (54) (56)

48'-10"

Three 6 piles and sheet pile foundation cutoff of the West Dike Extension are to be driven within West Abutment

Outline of 5' Tremie Conc. Slab (5) (& of Steel Sheet Piling for cofferdam, See Sheet 19)

34'-10"

16'-0"

5'-0"

4'-0"

3'-0"

25°

21'-7"

3'-9" 3'-9"

Sta. 14+64.98 N 10 #3

10 spaces @ 4'-6" = 45'-0"

44'-0"

94'-0"

℄ Pumps & Reference Line of River Structures N 62° 16' 34.9" E

Sta. 14+64.96 N 10 #2

94°-44'-3"

℄ West Dike Extension

95°-16'-

45'-0"

B

C

1'-0" min.

"double tee" section at this location, to remain in place, see Sheet 19.

Piling not interlocked at this joint

Steel Sheet Piling Foundation Cutoff driven vertical

Contractor to verify location of existing Conveyor Support in the field.

Alter direction of piles along this line as indicated so that leads clear conveyor overhead. △

(21) Steel Sheet Piling Foundation Cutoff

"single tee" section at this location, to remain in place, see Sheet 19.

This row of piles driven at same time as those for Pumping Station △

Steel Sheet Piling Foundation Cutoff driven battered at a 12 on 7 batter: 9 spaces @ 4'-10" = 43'-6"

1'-0" min.

2'-0"

2'-7"

7'-5"

46'0"

53'-1"

WEST ABUTMENT (27) (30A)

Outline of 5' Tremie Conc. Slab (℄ of Steel Sheet Piling for cofferdam, see Sheet 19) (5)

SCALE 3/4" = 1'-0"

SCALE 1/8" = 1'-0"

Superseded

(21) Steel Sheet Piling Foundation Cutoff to connect to Impervious Core & Wood Sheet Pile Cutoff of West Dike

℄ West Dike N 67° 11' 20.05" E

Secure steel sheet pile to wood sheet pile & puncture before driving.

1'-0" min.

Sta. 13+34.52 WP #1

34'-6"

10 spaces @ 4'-6" = 45'-0"

9'-9"

(21) Steel Sheet Piling Foundation Cutoff driven vertical

3'-0"

9'-0"

3'-0"

10'-6"

4'-10"

6'-6"

6 spaces @ 4'-6" = 27'-0"

10'-0"

4'-9"

3'-0"

3'-10"

32'-2"

2'-0"

42'-0"

catwalk 2'-6" 6'-0" conveyor

NARRAGANSETT ELECTRIC VEHICULAR GATE MONOLITH (25) (30A) (53) (54) (56)

PILE PLAN

El. 10 bottom of West Dike Extension ?

El. 2.0

(50) (53) (54) West Wall of West Abutment

Sheet Piling Foundation Cutoff below West Dike Extension Retaining Wall (21)

15.0'±

El. -18.0 ?

El. -23.0

El. -24.0 bottom of West Abutment

El. -28.0 bottom of tremie slab for cofferdam

12

5

Sheet Piling Foundation Cutoff along West Wall of West Abutment (21)

Sheet Piling Foundation Cutoff below West Dike Extension Retaining Wall

El. -38.0

SECTION B-B

SCALE: 1/8" = 1'-0"

2 #3 2" x 5/16" bent as shown welded to steel piles

1/4"

Steel H-Bearing Pile

ELEVATION A-A

SCALE: 3/4" = 1'-0"

3'6" Rise, 5'0" Base (48) For 4:7 Batter (48)

2 #3 2" x 5/16" bent as shown welded to steel piles

6

1'-0"

5

12

Bottom of Pile Cap

Steel H-Bearing Piles battered downstream

(A)

DETAIL A (25) (27)

(FOR PILES BATTERED DOWNSTREAM)
(UNLESS OTHERWISE NOTED)
SCALE 3/4" = 1'-0".

PILE LEGEND

I Vertical Pile

Pile Battered North

Pile Battered South

NOTES:

1. Foundation Piling for the West Abutment shall be 14BP89 sections. The cut-off plane is thru El. -23.0.
2. Foundation Piling for the West Dike Wingwall, the Narragansett Electric Vehicular Gate Monolith and the West Dike Extension Retaining Wall shall be 12BP53 sections. The cutoff plane is thru El. 2.0.
3. For profile of Steel Sheet Piling Foundation Cutoff, see Sheet 26.
4. Location of existing pile foundations of Breaker House & Conveyor Support are taken from New England Power Service Co. Drawing Nos. B-2069, B-2091 and B-2092 and are not guaranteed to be correct.
5. For pile splice details, see Sheet 95.

REVISION	DATE	DESCRIPTION	BY
△	3-2C-61	Piles under conveyor revised. (Add #1.)	GRD

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424 TRAPELO ROAD
WALTHAM 54, MASS.

DES. BY GRA | DR. BY CRD | CH. BY

SUBMITTED: Chief, Engineering Division
ARCHITECT ENGINEER
PROJECT ENGINEER
APPROVAL RECOMMENDED: Chief, Design Branch
APPROVED: Chief, Engineering Division
DATE FEB 1961

FOX POINT HURRICANE BARRIER

WEST ABUTMENT AREA

PILE PLAN

PROVIDENCE RHODE ISLAND

SCALE 1/8" = 1'-0" SPEC. NO. CIV-CNE-19-01

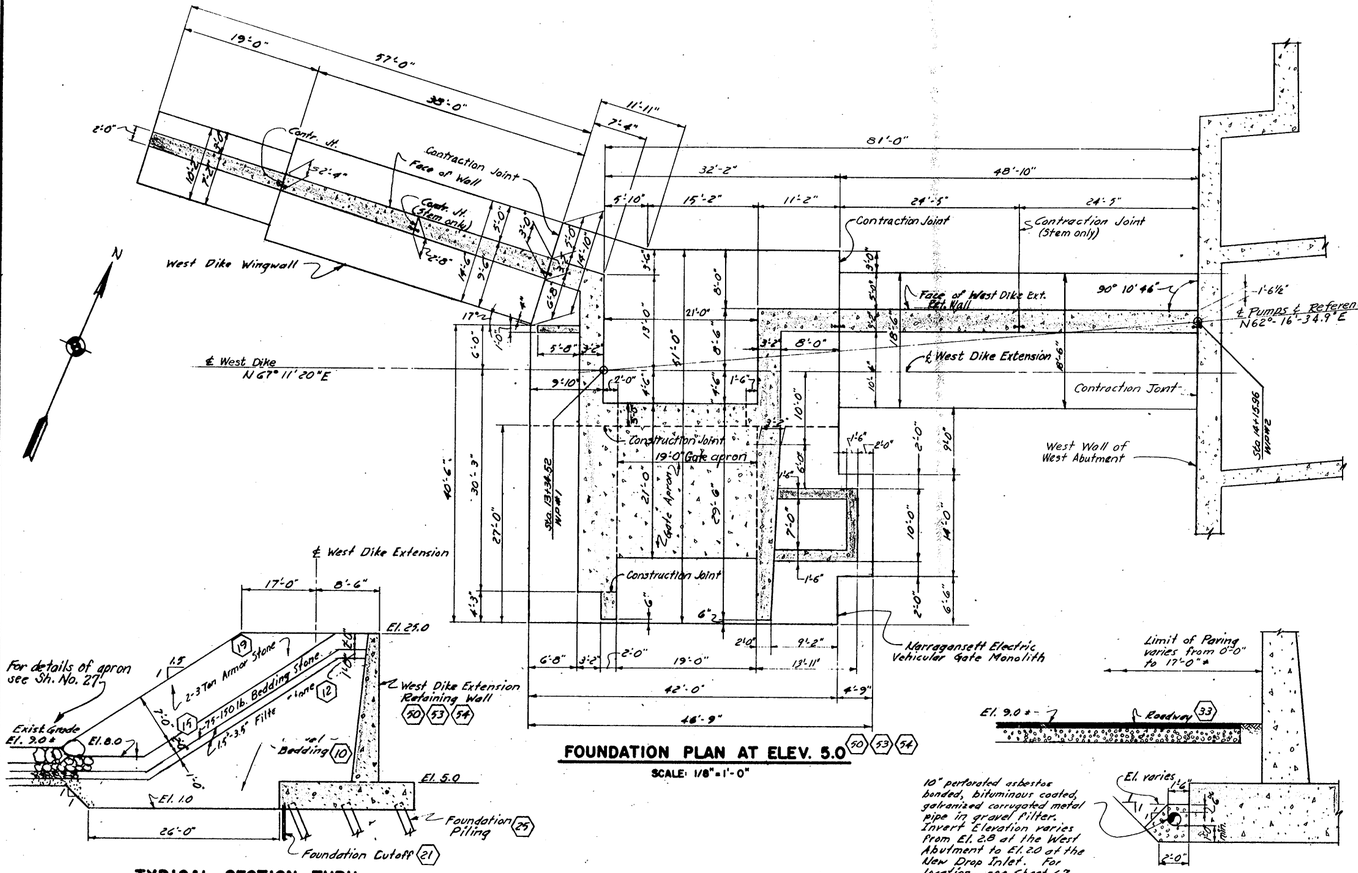
DRAWING NUMBER
FP-1-1216

SHEET 67

67

CORPS OF ENGINEERS

U. S. ARMY



FOUNDATION PLAN AT ELEV. 5.0 (50) (53) (54)

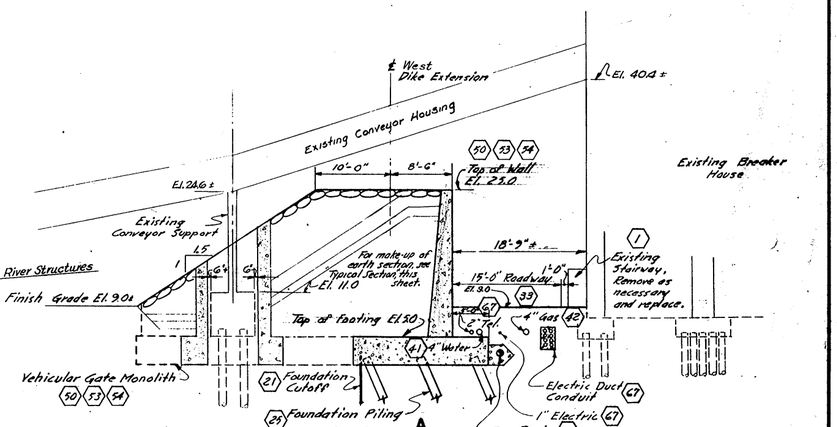
SCALE: 1/8" = 1'-0"

DRAIN DETAIL (40)

SCALE: 1/4" = 1'-0"

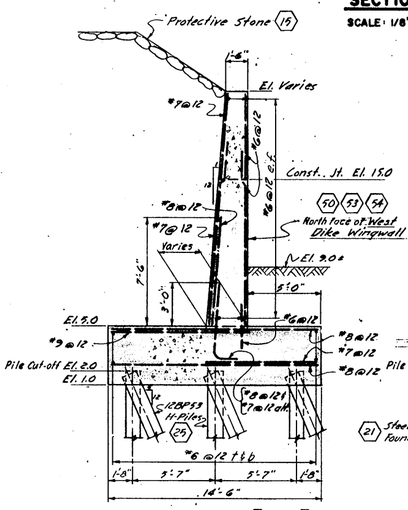
TYPICAL SECTION THRU WEST DIKE EXTENSION

SCALE: 1/8" = 1'-0"



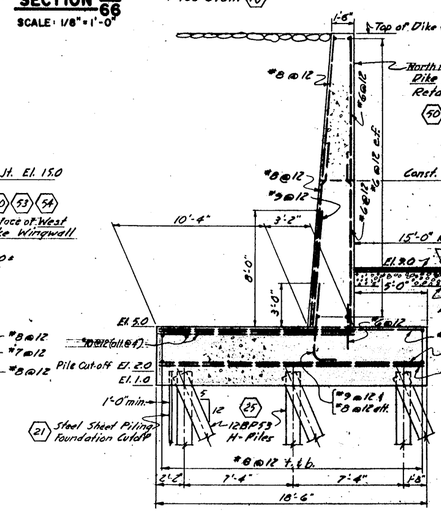
SECTION A 66

SCALE: 1/8" = 1'-0"



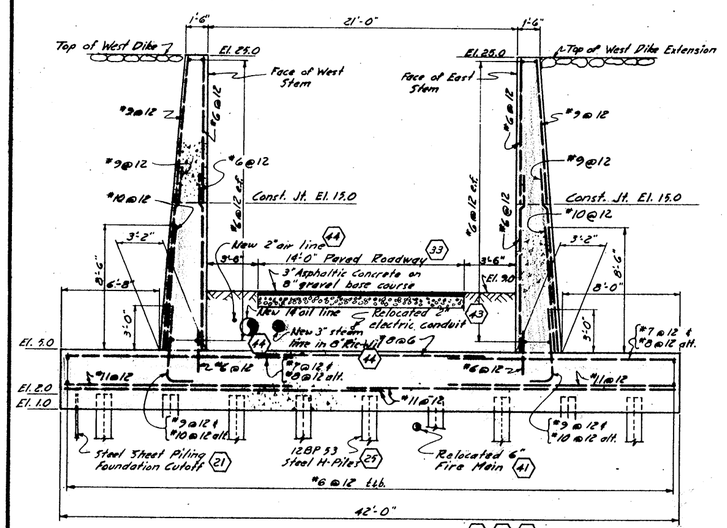
SECTION E 66 & E 71

SCALE: 1/4" = 1'-0"



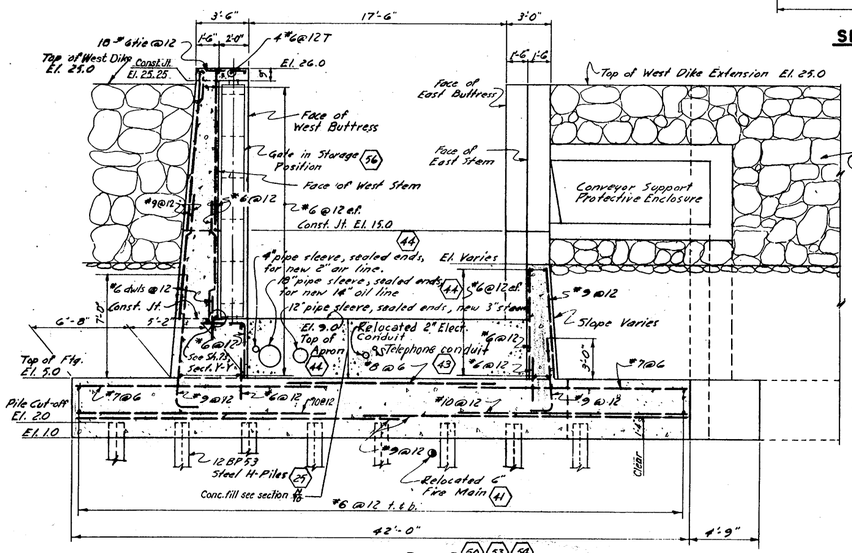
SECTION B 66 & B 71

SCALE: 1/4" = 1'-0"



SECTION C 66 & C 70

SCALE: 1/4" = 1'-0"



SECTION D 66 & D 70

SCALE: 1/4" = 1'-0"

SCALE 1/8" = 1'-0"

SCALE 1/4" = 1'-0"

NOTES:

1. For layout of Foundation Piles & Steel Sheet Piling Foundation Cutoff, see Sheet 67.
2. For details of West Dike construction, see Sheets 24, 26 & 27.
3. For details of the Vehicular Gate, see Sheets 72, 73 & 74.
4. Details of existing Narragansett Electric Co. Breaker House & Conveyor, and their respective pile foundations are based on New England Power Service Co. Drawing Nos. B-2069, B-2090, B-2091, B-2092 and RL-1343 and are not guaranteed to be correct.
5. For details of contraction joints, see Sheet 53.
6. For details of utilities passing thru and adjacent to new construction, see Sheets 39 & 168.
7. All reinforcement steel splices & laps to be 30 dia. unless otherwise noted.
8. Concrete protection of steel reinf. shall be 6" min. in base, 3" in walls, unless otherwise noted.
9. For details of contraction joints see sheet No. 53.

REVISION	DATE	DESCRIPTION	BY

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SUBMITTED
ARCHITECT-ENGINEER

PROJECT ENGINEER

APPROVAL RECOMMENDED
CHIEF, DESIGN BRANCH

APPROVAL RECOMMENDED
CHIEF, R.E.D. BRANCH

APPROVED
CHIEF, ENGINEERING DIVISION

DATE FEB. 1961

FOX POINT HURRICANE BARRIER
NARRA. ELEC. VEHICULAR GATE MONOLITH, WEST DIKE WINGWALL & EXTENSION
FOUNDATION PLAN & SECTIONS

PROVIDENCE RHODE ISLAND

SCALE: AS SHOWN | SPEC. NO. CIV. ENG. 18-014-61-23

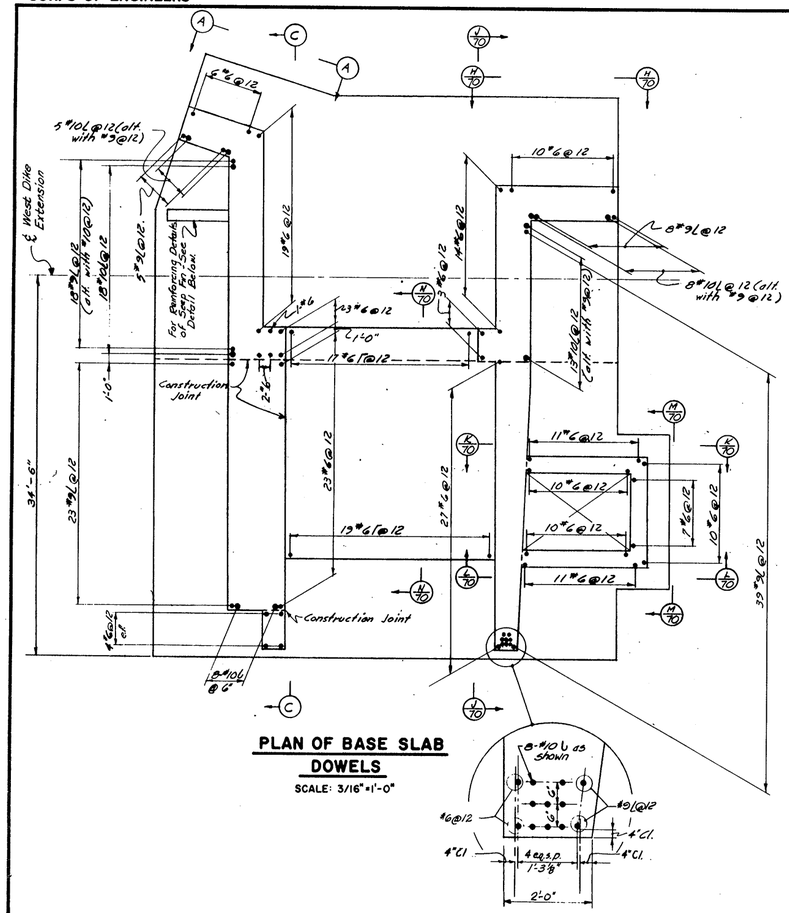
DRAWING NUMBER
FP-1-1217

SHEET 68

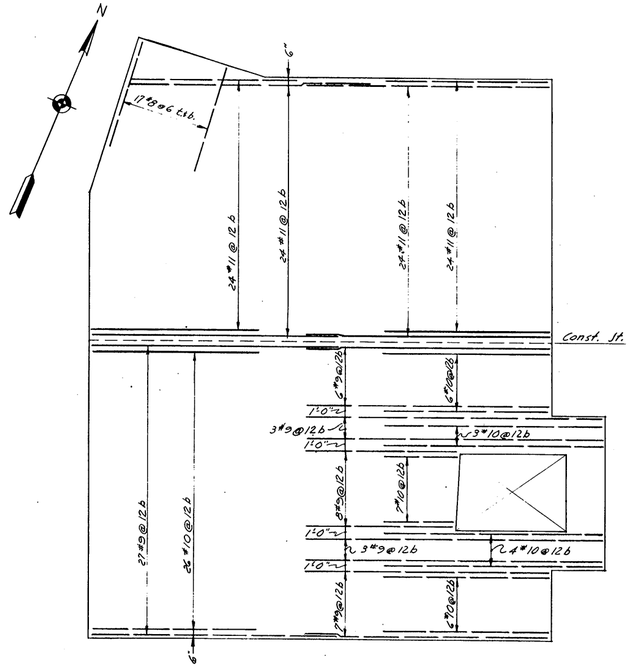
CIVIL | ARCH. | ELEC. | MECH. | STRUC. | MATL. | SOILS | FDN. | QUANT.

CORPS OF ENGINEERS

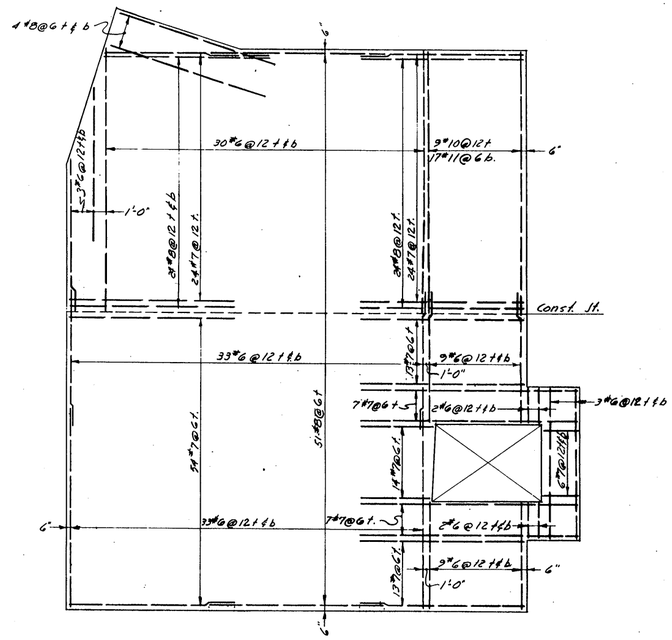
U. S. ARMY



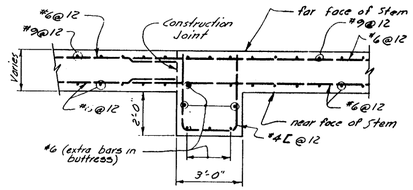
PLAN OF BASE SLAB
DOWELS
SCALE: 3/16"=1'-0"



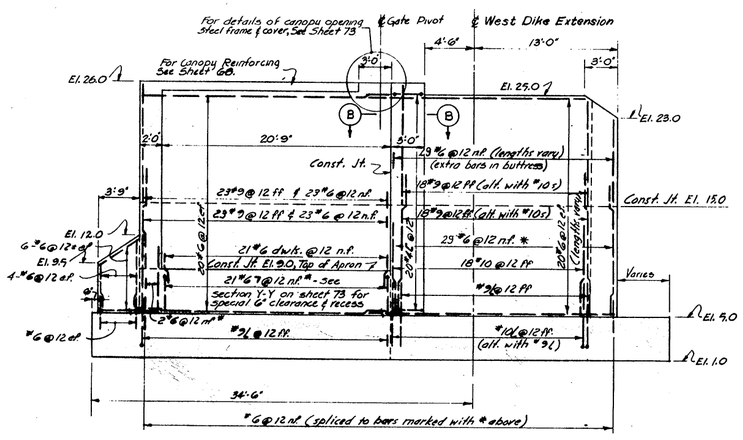
PLAN OF BASE SLAB - MAIN BOTTOM REINFORCING
SCALE: 3/16" = 1'-0"



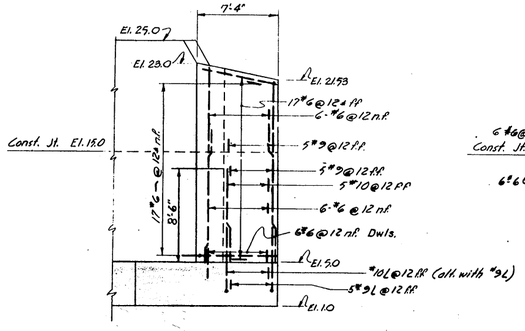
PLAN OF BASE SLAB - MAIN TOP REINFORCING & TEMPERATURE REINFORCING
SCALE: 3/16"=1'-0"



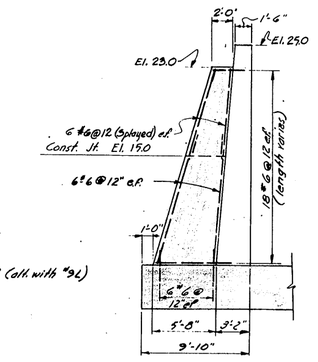
SECTION B-B
SCALE: 3/8"=1'-0"



SECTION C-C
SCALE: 3/16"=1'-0"



SECTION A-A
SCALE: 3/16"=1'-0"



SEEP FIN DETAIL
SCALE: 3/16"=1'-0"

SCALE 3/16"=1'-0"
0 4' 8' 12'

SCALE 3/8"=1'-0"
0 4'

NOTES:

1. All work on this sheet is to be paid under Items (50) (53) (54)
2. For notes on steel reinf. see Sh. 68

REVISION	DATE	DESCRIPTION	BY

CHARLES A. MAGUIRE & ASSOCIATES
ENGINEERS
PROVIDENCE, R. I. BOSTON, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 54, MASS.

DES. BY	DR. BY	CK. BY
GRA	CRD	GRA

SUBMITTED: ARCHITECT - ENGINEER
PROJECT ENGINEER
APPROVAL RECOMMENDED: CHIEF, DESIGN BRANCH
APPROVAL RECOMMENDED: CHIEF, ENGR. BRANCH
APPROVED: CHIEF, ENGINEERING DIVISION
DATE: FEB. 1961

FOX POINT HURRICANE BARRIER
NARRAGANSETT ELECTRIC
VEHICULAR GATE MONOLITH
REINFORCING DETAILS NO. I

PROVIDENCE RHODE ISLAND

SCALE AS SHOWN | SPEC. NO. CIV. ENG.-19-016-61-23

DRAWING NUMBER
FP-1-1218

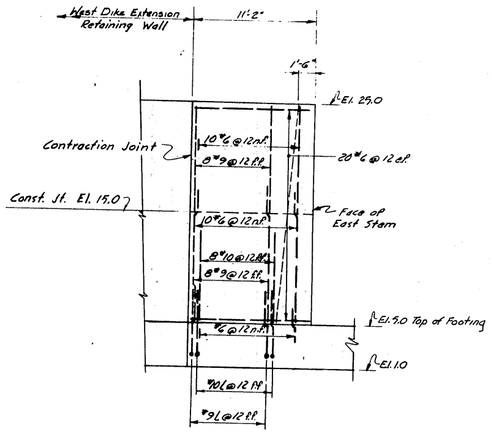
SHEET 69

CIVIL | ARCH. | STRUC. | ELEC. | MECH. | UTIL. | MAT'L | SOILS | FIRE | DRAFT

BERNARD T. JOHNSON CO., BOSTON, MASS.

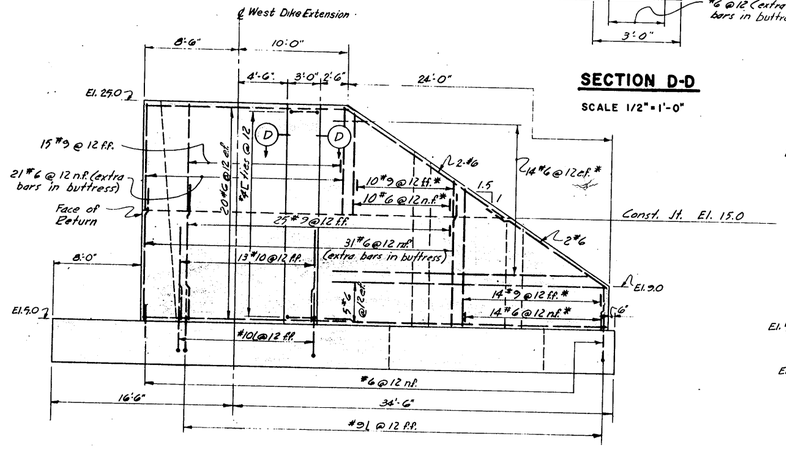
CORPS OF ENGINEERS

U. S. ARMY



SECTION H 69

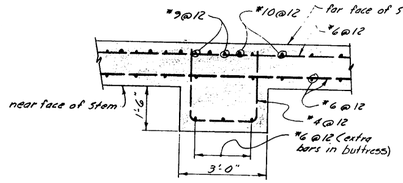
SCALE 3/16"= 1'-0"



SECTION J 69

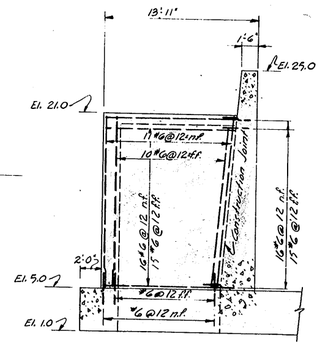
SCALE 3/16"= 1'-0"

* lengths vary



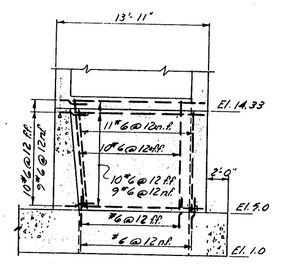
SECTION D-D

SCALE 1/2"= 1'-0"



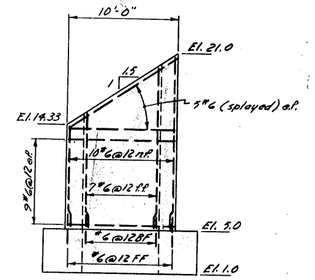
SECTION K 69

SCALE 3/16"= 1'-0"



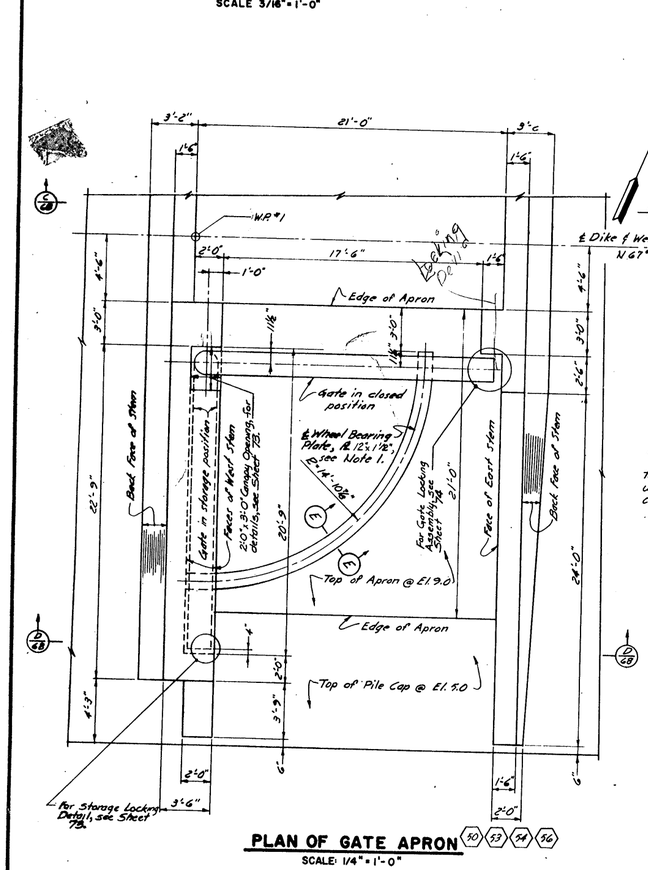
SECTION L 69

SCALE 3/16"= 1'-0"



SECTION M 69

SCALE 3/16"= 1'-0"

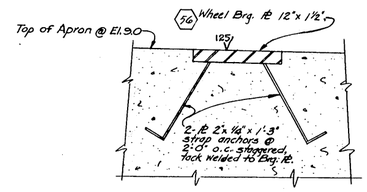


PLAN OF GATE APRON (50) (53) (54) (56)

SCALE: 1/4"= 1'-0"

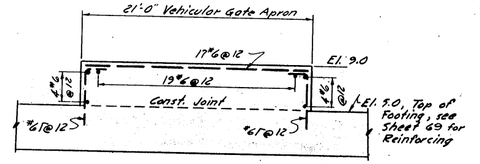
Note:
Finish concrete surface of apron to a tolerance of +0.0 to -1/4" from El. 9.0, except under gate seal in closed condition, where concrete shall be finished to El. 9.0 exact.

17'-6
20'-3
17'-6
3



SECTION E-E

SCALE: 1 1/2"= 1'-0"



SECTION N 69

SCALE: 3/16"= 1'-0"

NOTES:

1. The wheel bearing plate is to be of corrosion resisting steel
2. All work on this sheet is to be paid under Items (50) (53) (54), except as shown.
3. For notes on steel reinf. see Sheet 68

SCALE 3/16"= 1'-0"

SCALE 1/2"= 1'-0"

SCALE 1/4" = 1'-0"

SCALE 1 1/2" = 1'-0"

REVISION	DATE	DESCRIPTION	BY

CHARLES A. MAGUIRE & ASSOCIATES
ENGINEERS
PROVIDENCE, R. I. BOSTON, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 54, MASS.

DES. BY GRA | DR. BY ARGRA | CK. BY JAC

SUBMITTED
ARCH-ENG. ENGINEER

PROJECT ENGINEER

APPROVAL RECOMMENDED
CHIEF, DESIGN BRANCH

APPROVAL RECOMMENDED
CHIEF, ENG. R. BRANCH

APPROVED
CHIEF, ENGINEERING DIVISION

FOX POINT HURRICANE BARRIER
NARRAGANSETT ELECTRIC
VEHICULAR GATE MONOLITH
REINFORCING DETAILS NO. 2

PROVIDENCE RHODE ISLAND

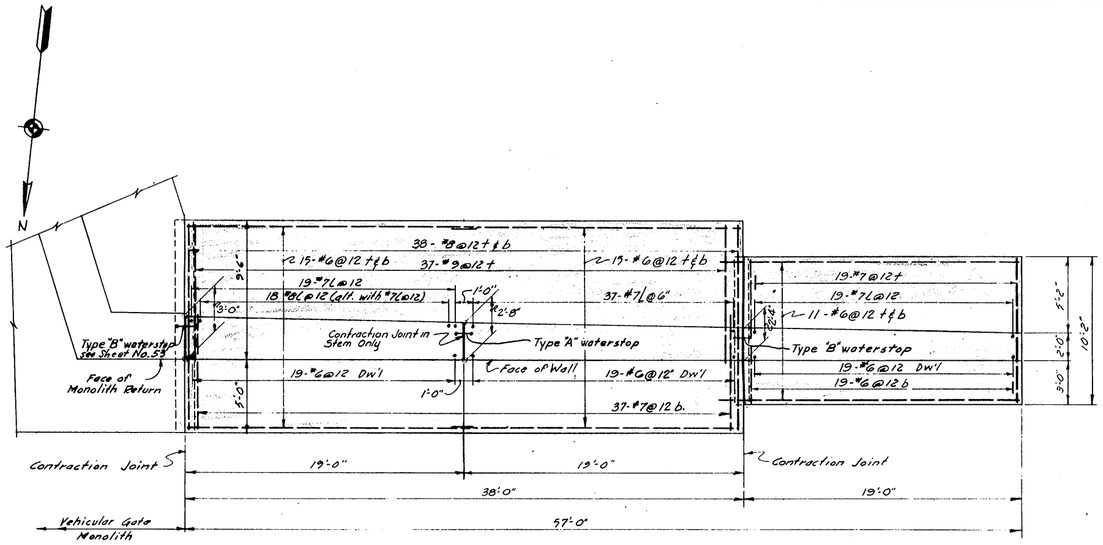
DATE FEB. 1961

SCALE AS SHOWN | SPEC. NO. CIV. ENG. 19-018-61-23

DRAWING NUMBER
FP-1-1219

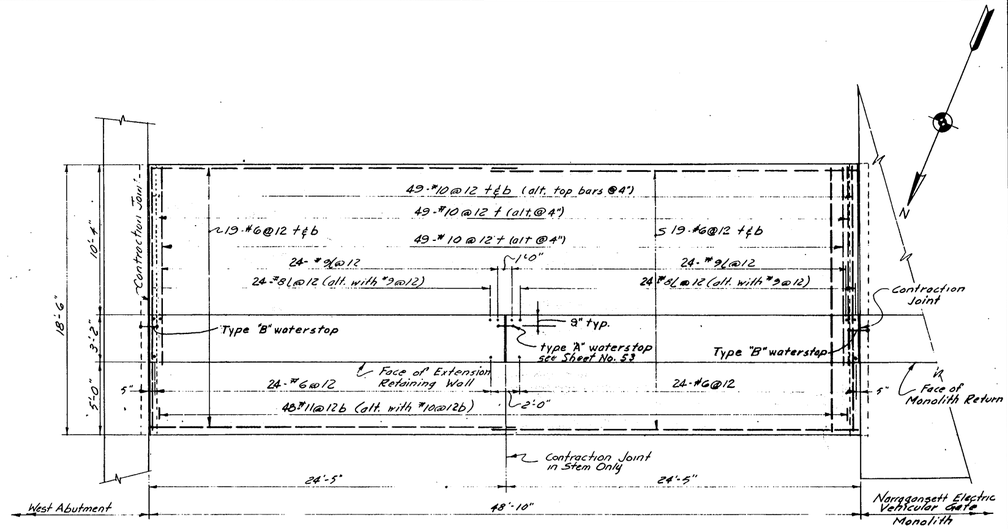
SHEET 70

CIVIL | ARCH. | PEDEC | MECH. | ELEC. | UTIL. | MAT'S | SOILS | FIRE | DRAFT



FOOTING PLAN

SCALE 1/4"= 1'-0"



FOOTING PLAN

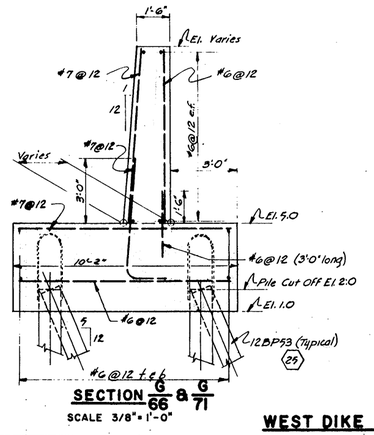
ELEVATION

SCALE 1/4"= 1'-0"

ELEVATION

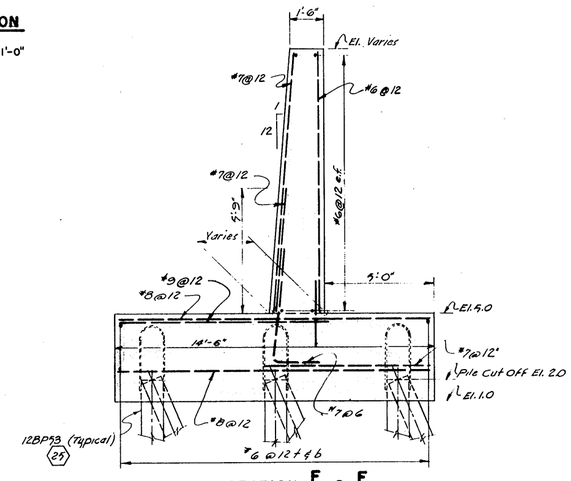
WEST DIKE EXTENSION RETAINING WALL

SCALE 1/4"= 1'-0"



SECTION G/66 & G/71

SCALE 3/8"= 1'-0"



SECTION F/66 & F/71

SCALE 3/8"= 1'-0"

WEST DIKE WINGWALL

SCALE 1/4"= 1'-0"

SCALE 3/8"= 1'-0"

NOTES:

1. For details of Contraction Joints, see Sheet 53.
2. For notes on steel reinf. see Sheet 68
3. All work on this sheet is to be paid under Items (50) (53) (54), except as shown.

REVISION	DATE	DESCRIPTION	BY

CHARLES A. MAGUIRE & ASSOCIATES ENGINEERS PROVIDENCE, R. I. BOSTON, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND CORPS OF ENGINEERS 424 TRAPELO ROAD WALTHAM 54, MASS.

DES. BY	DR. BY	CK. BY
GRA	AR	J.P.G.

SUBMITTED: ARCHITECT - ENGINEER

PROJECT ENGINEER

APPROVAL RECOMMENDED: CHIEF, E & R BRANCH

APPROVAL RECOMMENDED: CHIEF, ENGINEERING DIVISION

APPROVED

FOX POINT HURRICANE BARRIER

WEST DIKE WINGWALL & EXTENSION REINFORCING DETAILS

PROVIDENCE RHODE ISLAND

DATE FEB. 1961

SCALE AS SHOWN SPEC. NO. CIV. ENG. 9-016-61-23

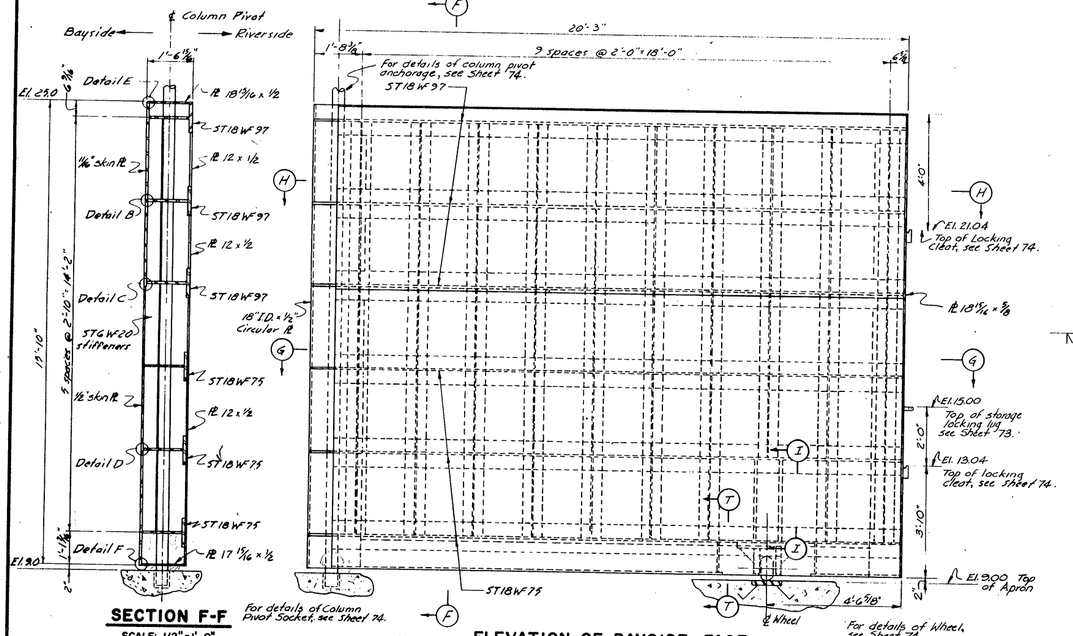
DRAWING NUMBER FP-1-1220

SHEET 71

CIVIL ARCH. STRUC. ELEC. MECH. VEH. MAT'S. BOILS FIRE DRAFT

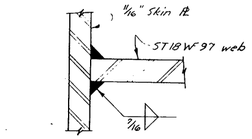
CORPS OF ENGINEERS

U. S. ARMY

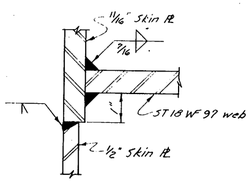


SECTION F-F
SCALE: 1/2" = 1'-0"

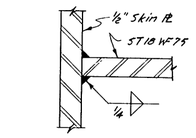
ELEVATION OF BAYSIDE FACE
SCALE: 1/2" = 1'-0"



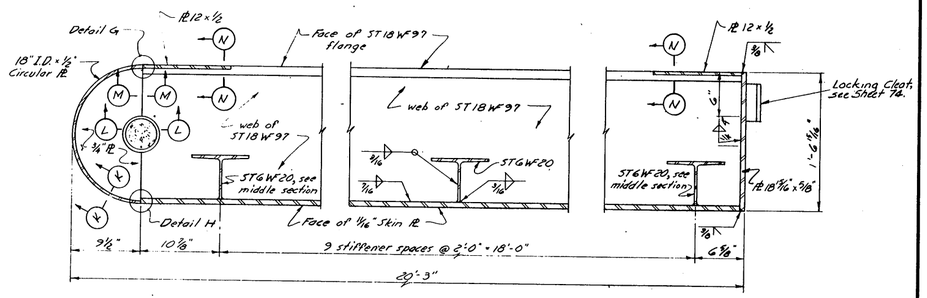
DETAIL B
HALF SIZE



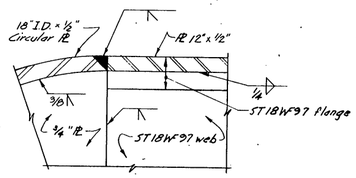
DETAIL C
HALF SIZE



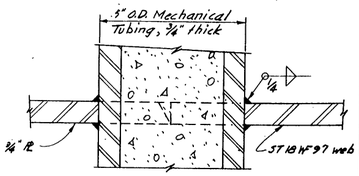
DETAIL D
HALF SIZE



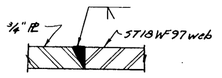
SECTION H-H
SCALE: 1 1/2" = 1'-0"



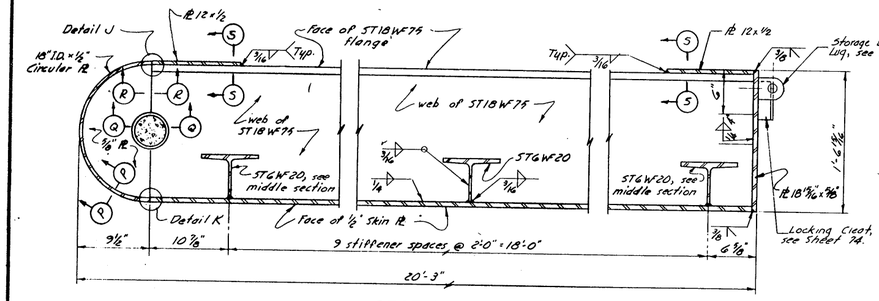
DETAIL G
HALF SIZE



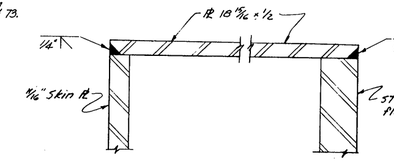
SECTION L-L
HALF SIZE



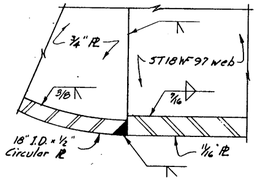
SECTION M-M
HALF SIZE



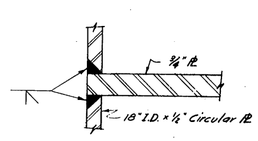
SECTION G-G
SCALE: 1 1/2" = 1'-0"



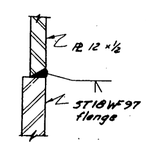
DETAIL E
HALF SIZE



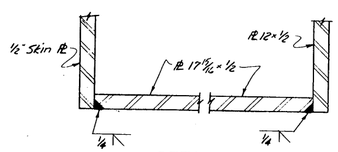
DETAIL H
HALF SIZE



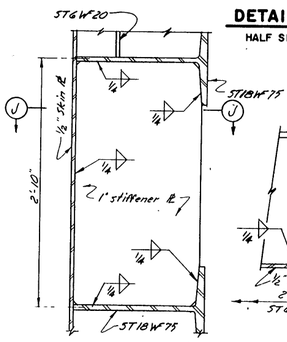
SECTION K-K
HALF SIZE



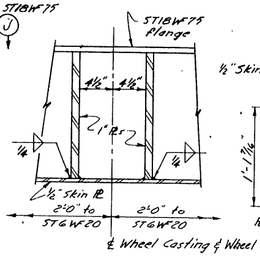
SECTION N-N
HALF SIZE



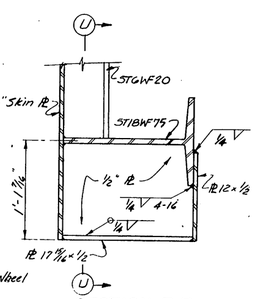
DETAIL F
HALF SIZE



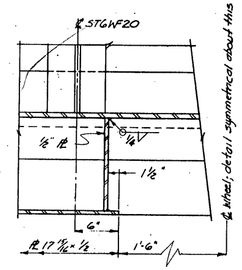
SECTION I-I
SCALE: 1 1/2" = 1'-0"



SECTION J-J
SCALE: 1 1/2" = 1'-0"

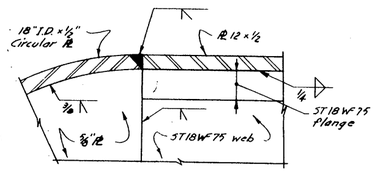


SECTION T-T
SCALE: 1 1/2" = 1'-0"

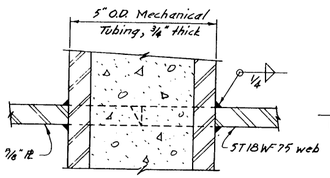


SECTION U-U
SCALE: 1 1/2" = 1'-0"

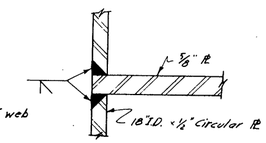
℄ Wheel; detail symmetrical about this ℄



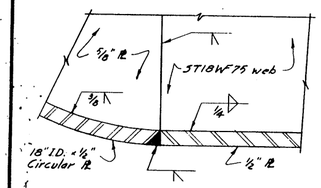
DETAIL J
HALF SIZE



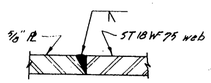
SECTION Q-Q
HALF SIZE



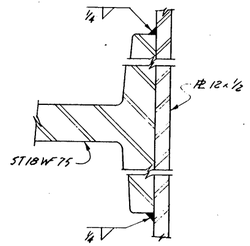
SECTION P-P
HALF SIZE



DETAIL K
HALF SIZE



SECTION R-R
HALF SIZE



SECTION S-S
HALF SIZE

NOTES:

1. The following members of the Narragansett Electric Vehicular Gate are to be fabricated from high strength low alloy structural steel, A.S.T.M. designation A-242-55:
   9/16" & 1/2" Skin plates
   ST 18 WF 97 & ST 18 WF 75 horizontal stiffeners
   ST 6 WF 20 Vertical stiffeners
2. All other structural steel is to be structural carbon steel A.S.T.M. designation A-36, except as noted.
3. For "Elevation of Riverside Face", showing 20 gage sheet steel covering, see Sheet 79.
4. All work on this sheet is to be paid under Item (56)

SCALE 1/2" = 1'-0"
1' 0 1' 2' 3' 4' 5'

SCALE 1 1/2" = 1'-0"
12" 9" 6" 3" 0 6" 12"

HALF SIZE
2" 1" 0 2" 4"

REVISION	DATE	DESCRIPTION	BY

CHARLES A. MAGUIRE & ASSOCIATES ENGINEERS
PROVIDENCE, R. I. BOSTON, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 54, MASS.

DES. BY	DR. BY	CK. BY
ARG/RA	CRD	JHD

SUBMITTED
ARCHITECT ENGINEER
PROJECT ENGINEER
APPROVAL RECOMMENDED
CHIEF, DESIGN BRANCH
APPROVAL RECOMMENDED
CHIEF, PLAN B. BRANCH

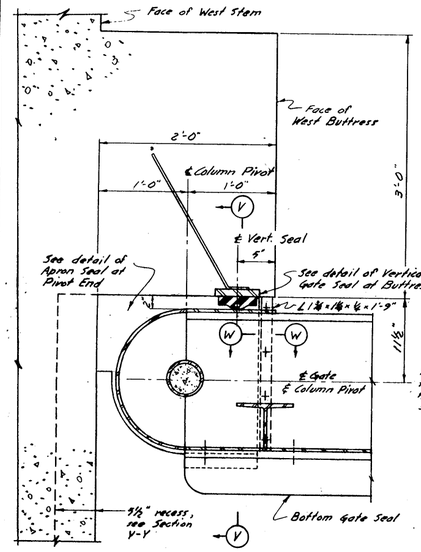
FOX POINT HURRICANE BARRIER
NARRAGANSETT ELECTRIC VEHICULAR GATE
STRUCTURAL DETAILS NO. 1
PROVIDENCE RHODE ISLAND

APPROVED
CHIEF, ENGINEERING DIVISION
DATE FEB 1961

SCALE AS SHOWN
SPEC. NO. CIV. ENG. 19-016-61-23
DRAWING NUMBER FP-1-1221
SHEET 72

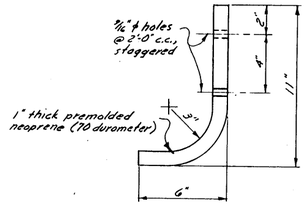
CIVIL
ARCH.
STRUC.
MECH.
ELEC.
VISL.
MAT'L.
SOILS
FIRE

ARGUS T. JOHNSON CO., BOSTON, MASS.



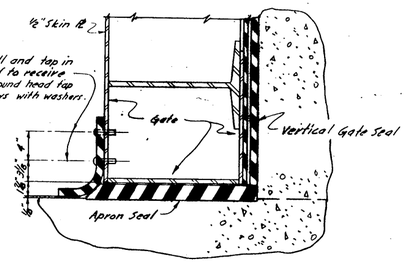
DETAIL AT WEST BUTTRESS - GATE CLOSED

SCALE: 1 1/2" = 1'-0"



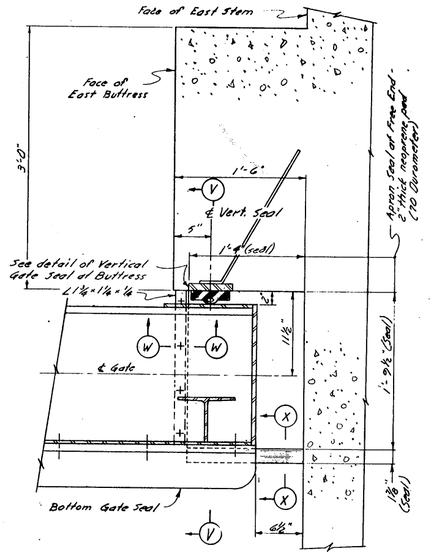
SEAL AT BOTTOM OF DOWNSTREAM FACE OF GATE

SCALE: 3" = 1'-0"



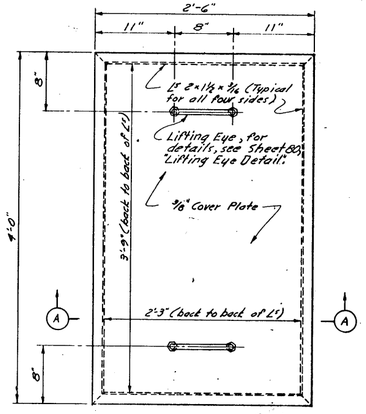
SECTION V-V

SCALE: 1 1/2" = 1'-0"

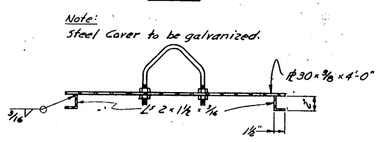


DETAIL AT EAST BUTTRESS - GATE CLOSED

SCALE: 1 1/2" = 1'-0"



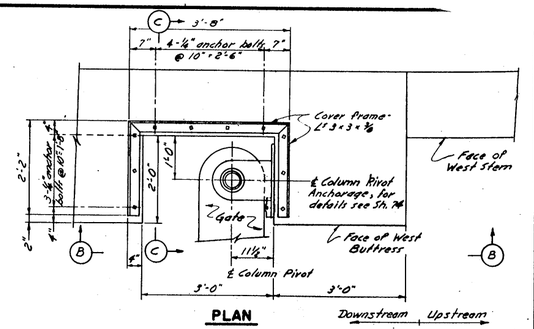
PLAN



SECTION A-A

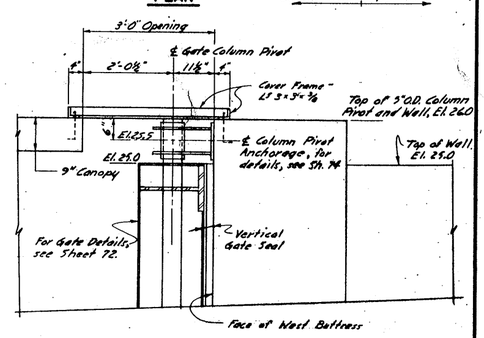
STEEL COVER FOR CANOPY OPENING

SCALE: 1 1/2" = 1'-0"

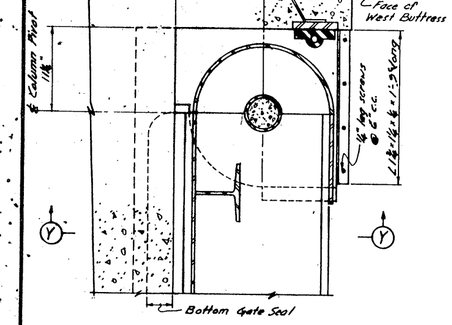


PLAN

Downstream Upstream

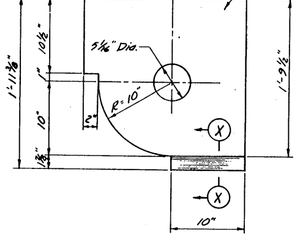


ELEVATION B-B



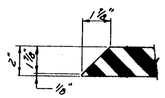
DETAIL AT WEST BUTTRESS - GATE IN STORAGE

SCALE: 1 1/2" = 1'-0"



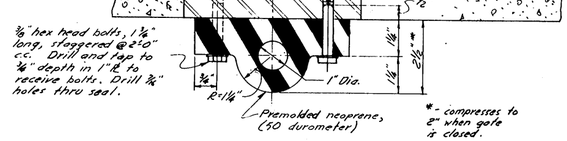
APRON SEAL AT PIVOT END

SCALE: 1 1/2" = 1'-0"



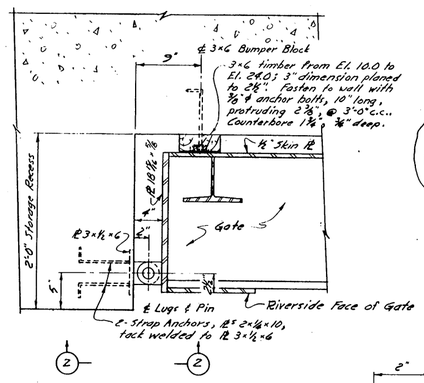
SECTION X-X

SCALE: 3" = 1'-0"



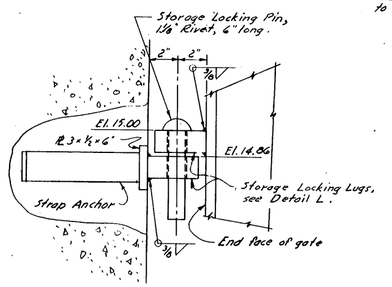
VERTICAL GATE SEAL

HALF SIZE



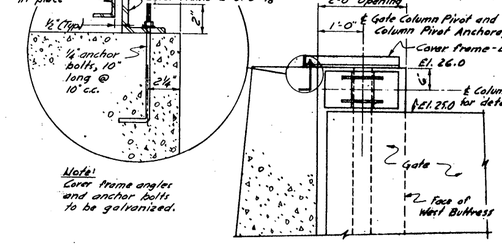
HORIZONTAL SECTION ABOVE ELEV. 15.0

SCALE: 1 1/2" = 1'-0"



ELEVATION Z-Z

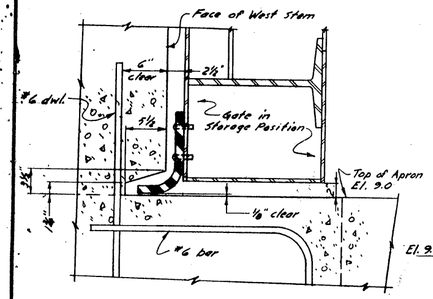
SCALE: 3" = 1'-0"



SECTION C-C

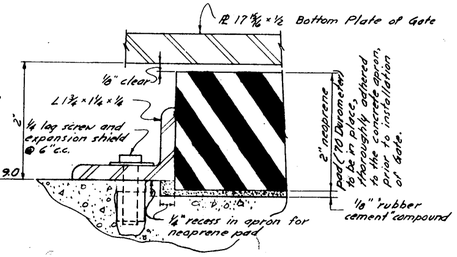
CANOPY OPENING DETAILS

SCALE: 3/4" = 1'-0"



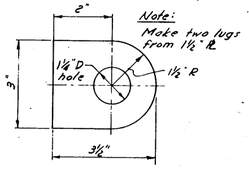
SECTION Y-Y

SCALE: 1 1/2" = 1'-0"



SECTION W-W

FULL SIZE



DETAIL L

HALF SIZE

STORAGE LOCKING DETAIL

SCALE 3/4" = 1'-0"

SCALE 1 1/2" = 1'-0"

SCALE 3" = 1'-0"

HALF SIZE

FULL SIZE

NOTES:

1. All work on this sheet is to be paid under Item (74)

REVISION	DATE	DESCRIPTION	BY

CHARLES A. MAGUIRE & ASSOCIATES ENGINEERS
PROVIDENCE, R. I. BOSTON, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND CORPS OF ENGINEERS
424 TRAPELO ROAD WALTHAM 54, MASS.

DES. BY	DR. BY	CK. BY
C.E.A	C.A.D	J.F.C.

SUBMITTED: ARCHITECT-ENGINEER
PROJECT ENGINEER
APPROVAL RECOMMENDED: CHIEF, DESIGN BRANCH
APPROVAL RECOMMENDED: CHIEF, R.&R. BRANCH
APPROVED: CHIEF, ENGINEERING DIVISION
DATE: FEB. 1961

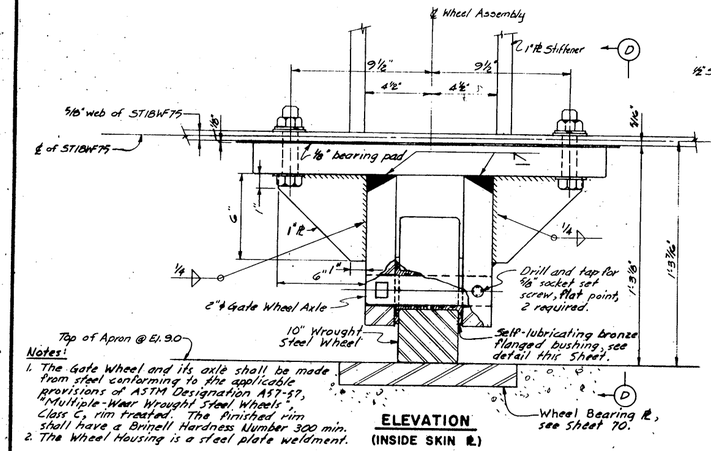
FOX POINT HURRICANE BARRIER
NARRAGANSETT ELECTRIC VEHICULAR GATE
STRUCTURAL DETAILS NO. 2
PROVIDENCE RHODE ISLAND

SCALE AS SHOWN | SPEC. NO. CIV. ENG. 19-016-61-25

DRAWING NUMBER FP-1-1222

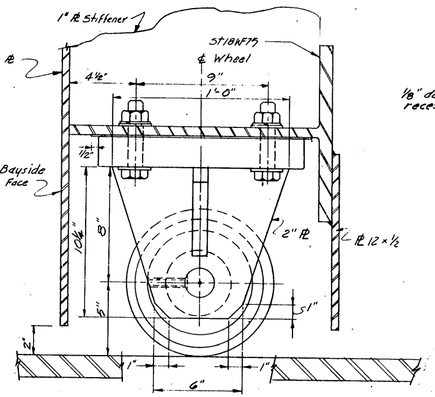
SHEET 73

CIVIL | ARCH. | STRUC. | MECH. | ELEC. | UTIL. | HAT'S | BOATS | FIRE | D.I.T.

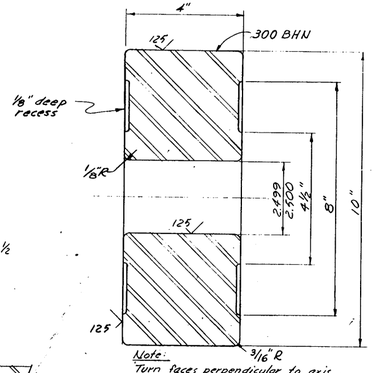


Notes:
1. The Gate Wheel and its axle shall be made from steel conforming to the applicable provisions of ASTM Designation A57-57, "Multiple-Wear Wrought Steel Wheels", Class C, rim treated. The finished rim shall have a Brinell Hardness Number 300 min.
2. The Wheel Housing is a steel plate weldment.

ELEVATION
(INSIDE SKIN ℓ)

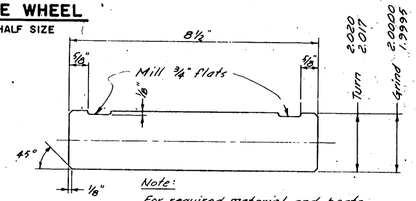


SECTION D-D



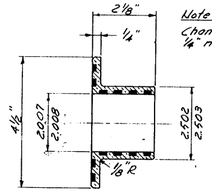
Note:
Turn faces perpendicular to axis of axle.

GATE WHEEL
HALF SIZE



Note:
For required material and heat-treatment, see Specifications.

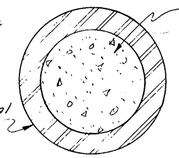
GATE WHEEL AXLE
HALF SIZE



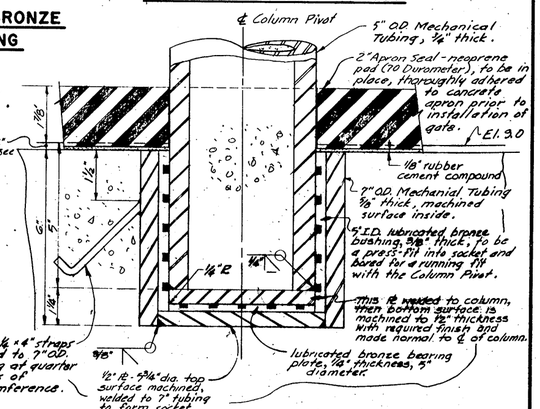
Note:
Chamfer all sharp edges. ¼" max. radius.

SELF-LUBRICATING BRONZE FLANGED BUSHING
HALF SIZE

Note:
Make two bushings as detailed above for a press fit into wheel hub and bored for a running fit on a fixed shaft.



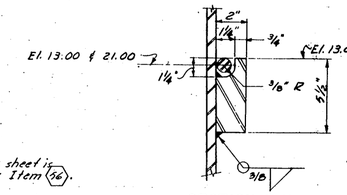
SECTION THRU COLUMN PIVOT



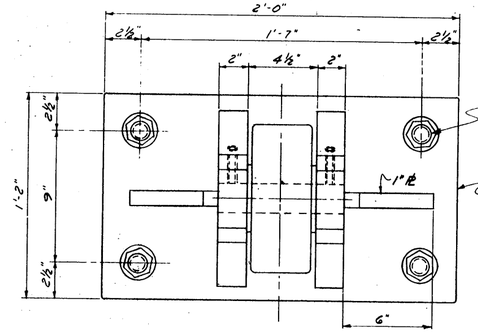
VERTICAL SECTION THRU ℄ COLUMN PIVOT

COLUMN PIVOT SOCKET
HALF SIZE

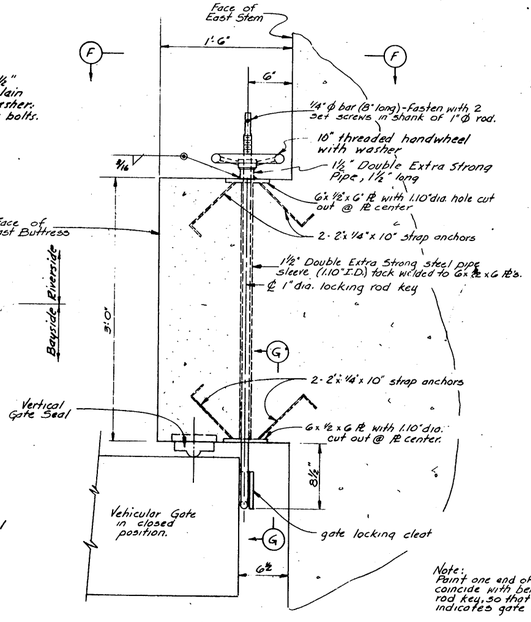
SECTION G-G
SCALE: 3" = 1'-0"



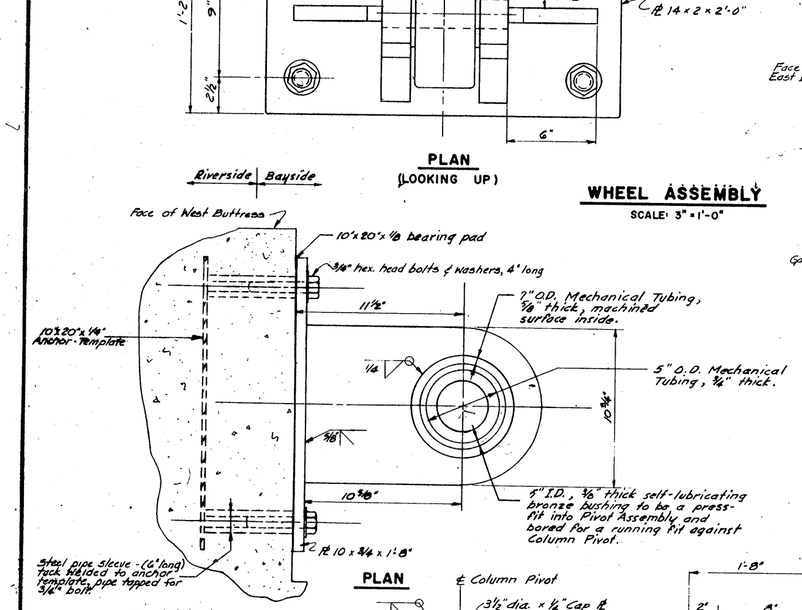
SECTION H-H
SCALE: 3" = 1'-0"



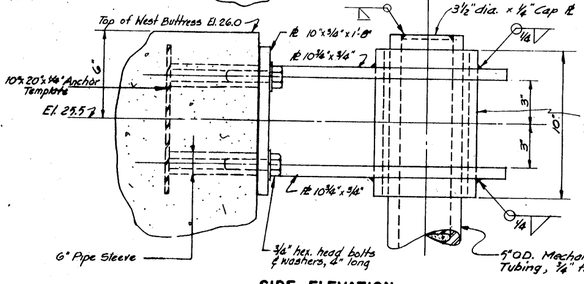
PLAN
(LOOKING UP)



HORIZONTAL SECTION ABOVE ELEV. 21.0
SCALE: 1 1/2" = 1'-0"

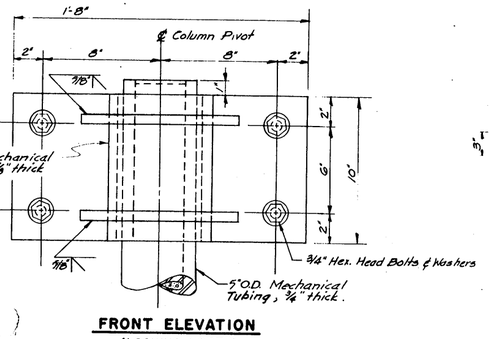


PLAN

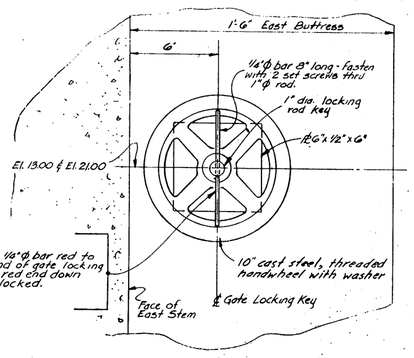


SIDE ELEVATION
(LOOKING EAST)

COLUMN PIVOT ASSEMBLY
SCALE: 3" = 1'-0"



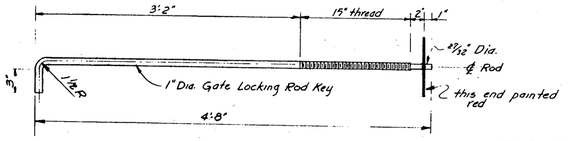
FRONT ELEVATION
(LOOKING NORTH)



Note:
Paint one end of ⅛" ℓ bar red to coincide with bend of gate locking rod key, so that red end down indicates gate locked.

SECTION F-F
SCALE: 3" = 1'-0"

NOTE:
1. All work on this sheet is to be paid under Item 36.



LOCKING ROD KEY
SCALE: 1 1/2" = 1'-0"

GATE LOCKING ASSEMBLY

SCALE 1 1/2" = 1'-0"
12" 9" 6" 3" 0 6" 12"

SCALE 3" = 1'-0"
3" 0 3' 6" 9"

HALF SIZE
2" 1" 0 2" 4"

MACHINE FINISHES FOR SURFACES IN CONTACT WITH SELF-LUBRICATING BRONZE BUSHINGS

Steel surfaces which are to be machined shall receive the specific finish recommended by the manufacturer of the self-lubricating bronze bushings and bearing plates.

REVISION	DATE	DESCRIPTION	BY

CHARLES A. MAGUIRE & ASSOCIATES ENGINEERS
PROVIDENCE, R. I. BOSTON, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 54, MASS.

DES. BY C.A.M. DR. BY A.E. CK. BY J.M.A.
SUBMITTED: Director, ARCHITECT ENGINEER
PROJECT ENGINEER: Marlow
APPROVAL RECOMMENDED: Chief, Design Branch
APPROVAL RECOMMENDED: Chief, A/E Branch
APPROVED: Chief, Engineering Division
DATE: FEB 1961

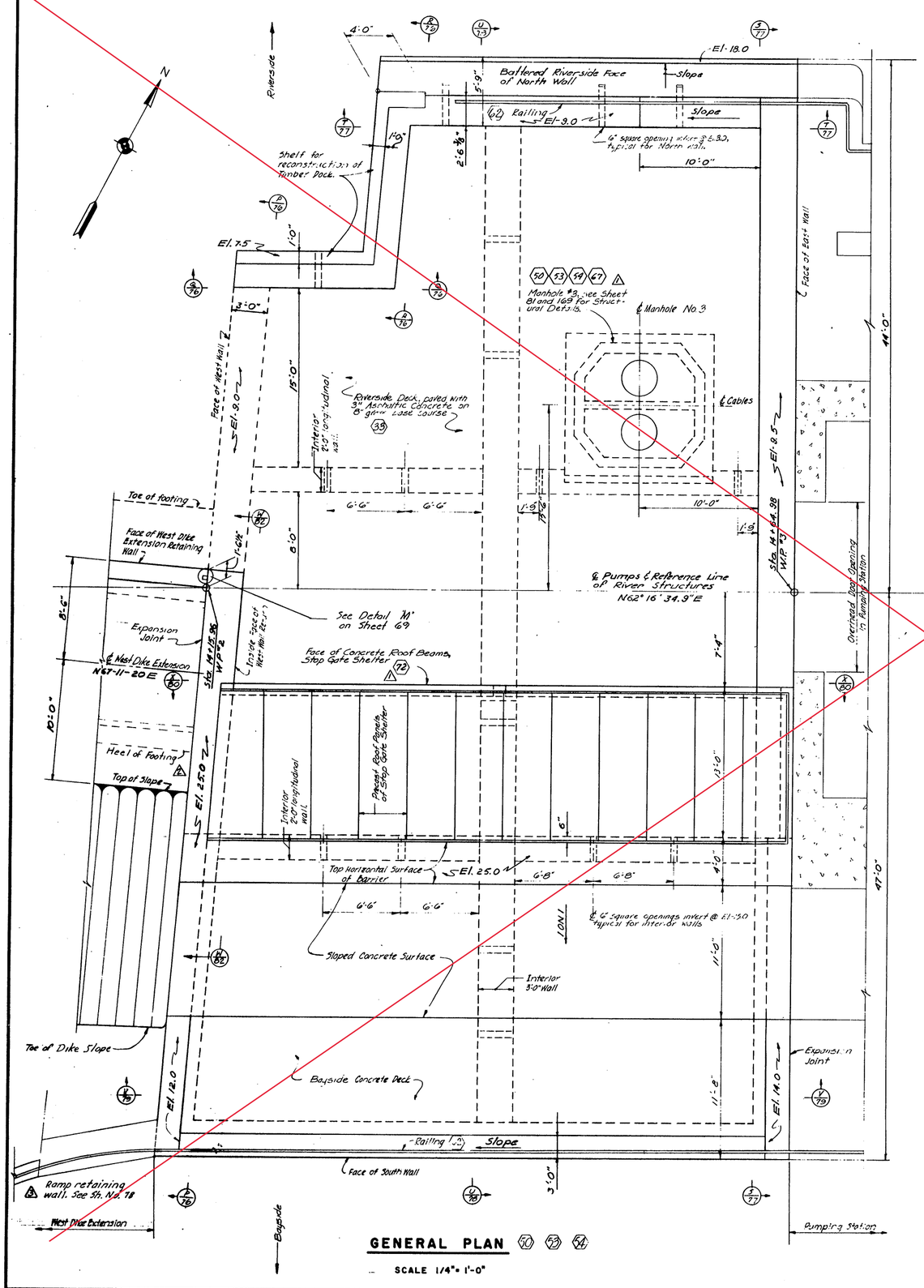
FOX POINT HURRICANE BARRIER
NARRAGANSETT ELECTRIC VEHICULAR GATE
STRUCTURAL DETAILS NO. 3
PROVIDENCE RHODE ISLAND

SCALE AS SHOWN SPEC. NO. CIV. ENG. 19-018-61-23
DRAWING NUMBER FP-1-1223
SHEET 74

CIVIL ARCH. STR'L C. MECH. ELEC. MAT'L SOILS FIRE

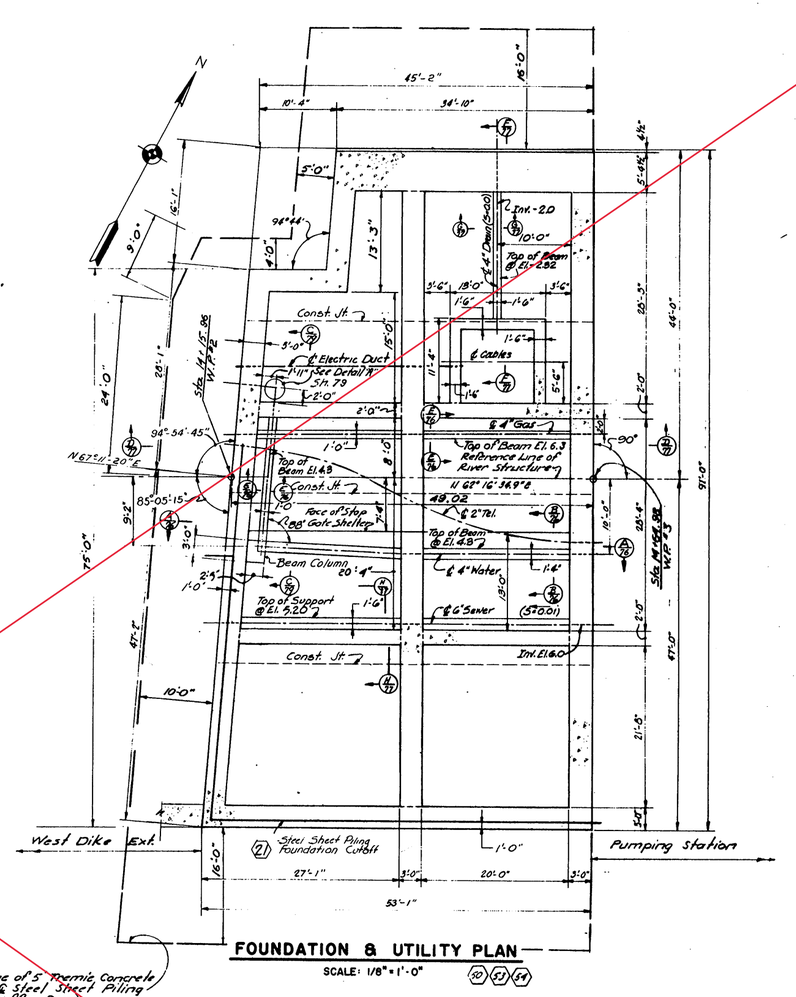
CORPS OF ENGINEERS

U. S. ARMY



GENERAL PLAN (50) (53) (54)

SCALE 1/4"= 1'-0"



FOUNDATION & UTILITY PLAN

SCALE: 1/8"= 1'-0" (50) (53) (54)

NOTES

1. For Joint between West Abutment & Retaining Wall, see Sheet 53 & 71.
2. For layout of utilities passing through West Abutment, see Sheet 66
3. For layout of Foundation Piling & Steel Sheet Piling Foundation Cutoff, see Sheet 67.
4. For details of Stop-Gate shelter construction, see Sheet 80.
5. For details of Railing, see Sheet 91.
6. For details of riprap & shore protection, see Sheets 20 & 21.
7. For detail of the Expansion Joint between the West Abutment and the Pumping Station, see Sheet 113.

SCALE 1/8"= 1'-0"

SCALE 1/4"= 1'-0"

REVISION	DATE	DESCRIPTION	
3	10-5-62	Wall revised for truck access	
2	6-14-62	Floodwall modified	
1	5-17-61	Pay items added & revised (Add #1)	

CHARLES A. MAGUIRE & ASSOCIATES ENGINEERS
PROVIDENCE, R. I. BOSTON, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM 54, MASS.

DES. BY C.C.L. | DR. BY C.A.D.N.M. | CK. BY C.A.S.D.

SUBMITTED: ARCHITECT ENGINEER

PROJECT ENGINEER

APPROVAL RECOMMENDED: CHIEF, DESIGN BRANCH

APPROVAL RECOMMENDED: CHIEF, P. & R. BRANCH

APPROVED: CHIEF, ENGINEERING DIVISION

FOX POINT HURRICANE BARRIER

WEST ABUTMENT

GENERAL PLAN & FOUNDATION PLAN

PROVIDENCE RHODE ISLAND

DATE: FEB. 1961

SCALE AS SHOWN | SPEC. NO. CIV. ENG. 18-016-61-23

DRAWING NUMBER FP-1-1224

SHEET 75

CIVIL, ARCH., STRUC., MECH., ELEC., HYD., MAT'L, SOILS, FIRE, LAND, PLAN, DRAFT

75

ARCHIVE T. JOHNSON CO., BOSTON, MASS.