

REQUEST FOR PROPOSALS

FOR

Pier A Railing Restoration/Rehabilitation:

General Contractor Services

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I. SUMMARY

Battery Park City Authority d/b/a Hugh L. Carey Battery Park City Authority ("BPCA" or the "Authority"), a New York State public benefit corporation created pursuant to the New York State Public Authorities Law, is seeking to retain a firm to provide BPCA with repair, restoration and replacement services for safety railings and associated components along the pedestrian promenade that surrounds the perimeter of Pier A (collectively, the "Railings") in furtherance of the Pier A Railings Restoration/Rehabilitation Project (the "Project"), as more fully set forth in this Request for Proposals ("RFP") and its attachments.

A summary of BPCA's structure, mission, and history, as well as the Battery Park City project area, may be viewed at: http://bpca.ny.gov/. Public information regarding BPCA's finances, budget, internal controls, guidelines, and policies may be viewed at: http://bpca.ny.gov/public-information/. Information relating to the Battery Park City Parks Conservancy Corporation ("BPCPC"), BPCA's affiliate, may be viewed at: http://bpcparks.org/. Minority-Owned Business Enterprises ("MBE"), Women-Owned Business Enterprises ("WBE"), and Service-Disabled Veteran-Owned Business Enterprises ("SDVOB") are encouraged to submit Proposals.

II. OVERVIEW

BPCA hereby requests proposals (individually, a "Proposal" and collectively, the "Proposals") from general contractors (individually, a "Proposer," and collectively, the "Proposers") to provide BPCA with construction services necessary to complete the Project. These services include, but are not limited to, the following work (the "Work"), all of which shall be done in accordance with the scope of work (the "Scope of Work," attached hereto as Exhibit A) and the Pier A Railings Rehabilitation Drawings and Specifications (the "Construction Documents," attached hereto as Exhibit B): 1) conducting of a field investigation and surveying of all existing Pier A Railings (the "Railings") to document the re-finishing, repair, or replacement work observationally determined to be required, in order to ensure consistency of such observations with the re-finishing/repair/replacement instructions provided/illustrated in the Construction Documents; 2) repair and/or replace, re-attach and re-finish the Railings, including the in-rail lighting fixtures – which services include the provision of all labor, materials and equipment necessary to accomplish the same.

III. GENERAL PROVISIONS

This RFP, including attachments, exhibits, and any amendments or addenda is subject to the rights reserved by BPCA, including, but not limited to BPCA's right to:

- Reject any or all Proposals received in response to this RFP;
- Withdraw the RFP at any time, at BPCA's sole discretion;
- Make an award of the resulting Contract associated with this RFP in whole or in part;
- Disqualify any Proposer whose conduct and/or Proposal fails to conform to the requirements of this RFP;
- Seek clarifications and/or revisions of a Proposal or any part of a Proposal;
- Use information obtained by BPCA through site visits; interviews; investigation of a Proposer's qualifications, experience, ability or financial standing; and any other material or information provided by or received from the Proposer during the procurement process;
- Prior to BPCA's review of the Proposals, direct Proposers to submit Proposal modifications addressing subsequent amendments to the RFP;
- Request that one or multiple Proposers submit best and final offers ("BAFOs") subsequent to BPCA's review of the Proposals;
- Change any of this RFP's scheduled dates;
- Waive any non-material requirements;

- Negotiate contract terms with one or multiple Proposers in the Authority's sole discretion;
- Utilize any and all ideas submitted in the Proposals received;
- Require clarification at any time during the procurement process, and/or require correction of arithmetic or other apparent errors for the purpose of assuring a full and complete understanding of a Proposal and/or to determine a Proposer's compliance with the requirements of the RFP; and,
- Make non-material revisions to the Scope of Work following receipt of Proposals.

BPCA is not liable or responsible in any way for any expenses incurred in the preparation of a Proposal in response to this RFP. All information submitted in response to this RFP is subject to the Freedom of Information Law, Article 6 of the New York State Public Officers Law ("FOIL"), which requires public access to certain documents possessed by BPCA, unless a specific exemption applies. Proposers are responsible for identifying any information in their respective Proposals considered to be confidential and exempt from FOIL. BPCA, however, is obligated to disclose information consistent with the requirements of FOIL, NYS Public Officers Law Section 87.

IV. TIMETABLE & DESIGNATED CONTACT

A. Key Dates

Subject to change at BPCA's discretion, the following are key dates for this RFP:

- RFP issued: May 16, 2023
- Pre-Proposal Meeting: May 22, 2023 at 10 a.m. at BPCA's Offices (200 Liberty Street, 24th floor, New York, New York 10281)
- Project Site Walk-Through: May 22, 2023 at 11:15 a.m. (immediately following Pre-Proposal Meeting), at Pier A Plaza (22 Battery Place).
- Deadline to submit questions to BPCA: May 31, 2023 by 4:00 p.m. (by email only)
  All questions regarding this RFP should be submitted in writing via email to the "Designated Contact":
  MICHAEL LAMANCUSA, BPCA ASSISTANT CONTRACTING OFFICER; Battery Park City Authority, at MICHAEL.LAMANCUSA@bpca.ny.gov.
- BPCA's response to substantive questions: June 7, 2023 (by email)
- PROPOSAL DUE DATE: June 16, 2023 (the "Due Date") by 5:00 p.m.

B. Anticipated Project Duration/Right to Terminate

BPCA expects that the Project will begin in approximately August 2023 and last for up to ten (10) months, subject to a BPCA-approved contractor schedule. BPCA reserves the right to terminate the Contract at any time, with or without cause, in accordance with the terms of the Contract. BPCA's sample form of contract (the "Standard Form of Contract") is attached hereto as Exhibit D.

V. GENERAL REQUIREMENTS

A. Minimum Qualification Requirements

The following are the minimum qualification requirements for this RFP. Proposals that fail to meet these requirements will be rejected.

1) Proposer must have an office in New York State (a New York City office is preferred);

2) Proposer must be lawfully authorized to do business/perform specific services in New York State; and,

3) Proposer must have at least five (5) years of experience in providing general contracting services, and must have demonstrated experience with projects similar to this scope of work.

B. MBE/WBE/SDVOB Participation, Joint Ventures, and Sub-contracting Goals

Contractor requirements and procedures for business participation opportunities for New York State certified MBEs/WBEs/SDVOBs and equal employment opportunity requirements relating to minority group members and women are attached as Exhibit C. For questions relating to MBE/WBE/SDVOB participation, joint ventures and sub-contracting goals *only*, please contact the "MBE/WBE/SDVOB Designated Contact" Justin McLaughlin-Williams at justin.mclaughlin-williams@bpca.ny.gov or 212-417-2337.

C. Restricted Period

New York State's State Finance Law sections 139-j and 139-k apply to this RFP, restricting Proposers' contacts with BPCA. Proposers are restricted from making any contact (defined as oral, written or electronic communications with BPCA under circumstances where a reasonable person would infer that a communication was intended to influence BPCA's conduct or decision with respect to a procurement) relating to this RFP with anyone other than the Designated Contact, as specified in Section III.A., or MBE/WBE/SDVOB Designated Contact, as specified in Section IV.B., from the time of Proposer's receipt of notice of this RFP through the date of the Final Award as defined in BPCA's Procurement Guidelines (the "Restricted Period"). BPCA employees must record certain contacts during the Restricted Period, including, but not limited to, any oral or written communications that could reasonably be seen as intended to influence BPCA's conduct or award of this RFP. Upon notice of an improper contact, BPCA shall make a determination regarding the Proposer's eligibility to continue participating in this RFP.

D. Submission of Proposals

Proposals must be received by BPCA no later than 5:00 p.m. on June 16, 2023.

- Each Proposer must e-mail its Technical Proposal to the following e-mail address: technicalproposals@bpca.ny.gov. The Technical Proposal must be clearly labeled as "Proposal Enclosed – Pier A Railings Rehabilitation Project General Contractor Services"

- Each Proposer must also e-mail its Cost Proposal to the following e-mail address: costproposals@bpca.ny.gov. The Cost Proposal must be separately attached and clearly labeled as "Cost Proposal – Pier A Railings Rehabilitation Project General Contractor Services"

- **Each Proposer is responsible for the successful delivery and receipt of their Proposal. BPCA is not accepting Proposals sent via messenger, overnight courier, or certified mail to BPCA offices.** If a Proposer has already sent a Proposal via one of these methods, please e-mail the Proposal to the above e-mail address by the Due Date. If a Technical Proposal's file size is too large to submit by e-mail, the Proposer must make alternate electronic accommodations (e.g., linking to a file sharing website), which shall also be transmitted through technicalproposals@bpca.ny.gov. Please contact the Designated Contact prior to the Due Date in order to ensure successful transmission of the documents prior to the Due Date.

- **Proposals *must* arrive at the time and place specified herein. Please leave ample time for submission. Late Proposals, no matter the cause of their lateness, will NOT be accepted. Hard copy or faxed Proposals will NOT be accepted.** A Proposer may, after submitting a Proposal, amend its Proposal by submitting an amended Proposal, clearly labeled "Amended Proposal – Pier A Railings Rehabilitation Project General Contractor Services," as long as the amended Proposal is submitted by the Due Date.

E. Project Subject to New York State Prevailing Wage Requirements

This Project is subject to Labor Law 220, the New York State Prevailing Wage Law ("Prevailing Wage"). All labor employed on the Project must be paid the Prevailing Rate of Wage (the "Prevailing Wage Rate") as identified by the New York State Department of Labor ("NYSDOL"). Attached to this RFP as Exhibit E is a Prevailing Wage Schedule provided by the NYSDOL. Any discrepancy between the rates contained therein, and the rates which may be required by law, shall not relieve the selected Proposer from the requirement to pay the legally required rate, nor shall they entitle the selected Proposer to any additional compensation under the Contract.

VI. PROPOSAL FORMAT AND CONTENTS

A. Proposal Format

The submitted Proposal must be organized in accordance with the subheadings of Proposal contents set forth in this Section VI. Proposals shall be prepared to be printed on paper size no larger than standard 8 1/2" x 11" with a minimum font size of 11 point, with reasonable exceptions for charts, graphics and financial information. Proposal pages must be numbered, with the Proposer's name and "Pier A Railings Restoration/Rehabilitation – General Contractor Services" clearly marked on the cover of each of the Technical Proposal and the Cost Proposal.

The Proposal shall be separately packaged into two (2) components:

- A Technical Proposal containing the information required in Section VI. B ("Proposal Content"). The Technical Proposal shall be limited to thirty-five (35) pages. This page limit excludes the Proposal Cover Letter (defined in Section B, below) and the Required Attachments listed in Section VII. C ("Required Attachments"). Proposers should, however, submit a Proposal that provides the information requested in this RFP in a clear, concise, and complete manner. The Technical Proposal shall not include any cost or pricing information that is included in the Cost Proposal.

- A Cost Proposal containing the information required in Section IX ("Cost Proposal") of this RFP. There is no page limit for the Cost Proposal.

B. Proposal Content

In addition to the separately sealed Cost Proposal, described in Section IX. below, each Proposal must include the following in the order listed:

1) Cover Letter, signed by a person within the firm who is authorized to bind the Proposer, which includes representations that:

   (a) Except as disclosed in the Proposal, no officer or employee of the Proposer is directly or indirectly a party to or in any other manner interested financially or otherwise in this RFP;

   (b) Proposer satisfies all of the minimum qualification requirements in Section IV.A; and,

   (c) Proposer has reviewed BPCA's Standard Form of Contract, attached as Exhibit D to this RFP, and either has no objections or has detailed their objections in an appendix to their Proposal.

2) Executive Summary.

3) Responses to the Questions as well as all of the Information Required (Sections VI.A. and B.).

4) Required Attachments (Section VI. C.). Note that Mandatory Forms and resumes do not count toward the page limit.

BPCA reserves the right to reject any Proposals that fail to include any required item described in this Section V. B., including Cover Letters that are unsigned or fail to include each of the above representations (including an appendix, if applicable). As BPCA is currently only accepting electronic Proposal submissions, scans of documents requiring signatures and/or requiring notarization are acceptable.

VII. INFORMATION REQUIRED

A. Questions and Information Sought Relating to the Work

1) Describe your firm's background, services, size, and history as these factors are relevant to the Work, with an emphasis on projects adjacent to and/or over water.

2) Describe your proposed approach to, and methodology for, the Work, including any specific on-site materials/equipment laydown requirements determined to be necessary.

3) Please describe your experience performing projects that are similar in nature.

4) List each key member of the team you intend to assign to this engagement, and include for each listed individual: (a) area(s) of specialization; (b) title and/or position within your firm; and, (c) the services to be performed.

5) Identify the person who will be the lead Project Manager (the "Lead PM") and primary contact in providing services to BPCA, and any other persons who will be listed as a "key person" in any contract with BPCA.

6) Identify any subcontractors you intend to use for this engagement, and describe the services to be performed by each subcontractor.

7) Describe your proposed team's experience with similar work for other public entities, with an emphasis on New York State public entities.

8) Clearly identify any information in your Proposal that you believe to be confidential and exempt from FOIL, and state the reasons. Please note that this question is for informational purposes only, and BPCA will determine, in its sole discretion, whether requested documents are exempt from disclosure under FOIL.

9) Identify any and all exceptions taken to BPCA's Standard Form of Contract, attached as Exhibit E, explaining the reasons for such exceptions. Such exceptions must be detailed in an appendix to your Proposal labeled, "Appendix: Objections to BPCA Form of Contract." No exceptions to the Contract will be considered by BPCA after submission of the Proposals. BPCA maintains the right to reject Proposals based on non-conformance with the Standard Form of Contract.

10) Provide at least three (3) client references for whom your firm has performed similar work to that requested in this RFP. For each client, describe the Project, the Project's date, and services performed, and provide the name, address, and telephone number for a person at client's firm familiar with such work.

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B. Questions and Information Sought Relating to Proposer's Firm & Eligibility

1) Within the past three (3) years, have there been any significant developments in your firm such as changes in ownership or restructuring? Do you anticipate any significant changes in the near future? If so, please describe.

2) How does your firm identify and manage conflicts of interest?

3) Are there any potential conflict of interest issues posed by your firm's performance of the Work on behalf of BPCA?

4) Has your firm or have any of the firm's partners/employees been disciplined or censured by any regulatory body within the last five (5) years? If so, please describe the relevant facts.

5) Within the last five (5) years, has your firm, or a partner or employee in your firm, been involved in litigation or other legal proceedings relating to the provision of professional services? If so, please provide an explanation and the current status or disposition of the matter.

6) List any professional or personal relationships your firm's employees may have with BPCA's Board Members and/or employees, a list of which is attached hereto as Exhibit I.

7) If selected, will your firm assign any person to this engagement who was previously an employee of BPCA or BPCPC? If so, please: i) identify when (month and year) that person's employment at BPCA/BPCPC terminated, and ii) describe that person's involvement, if any, with matters related to this RFP during his/her employment at BPCA/BPCPC.

8) In the past five (5) years, have any public sector clients terminated their working relationship with your firm? If so, please provide a brief statement of the reasons. Provide the name of the client and provide a contact person, address and telephone number.

C. Required Attachments

1) Mandatory Forms:

Each Proposal must include a completed copy of all "Mandatory Forms" found at: https://bpca.ny.gov/wp-content/uploads/2015/03/Mandatory-Forms.pdf. The Mandatory Forms include the following:

a) NYS Standard Vendor Responsibility Questionnaire, notarized and signed by the individual(s) authorized to contractually bind the Proposer, indicating the signer's title/position within the firm.*

b) Certificate of No Change (if applicable).

c) Statement of Non-Collusion.

d) MBE/WBE/SDVOB Utilization Plans. Please note that all such plans must be submitted even if Proposer is an MBE/WBE/SDVOB.

e) Proposer's Affirmation of Understanding of and Agreement pursuant to State Finance Law 139-j(3) and 139-j(6)(b).

f) Proposer's Certification of Compliance with State Finance Law 139-k (5).

g) Proposer's Disclosure of Prior Non-Responsibility Determinations.

2) Response to the question regarding the use of New York State businesses set forth in Section XIV.

3) W-9 form.

4) Completed MBE/WBE and EEO Policy Statement and Diversity Practices Questionnaire (attached to this RFP as part of Exhibit C).

5) Financial Statements: Provide a copy of your firm's most recent Audited Financial Statements (within the last year). In the event you do not have audited financials you must provide a statement to that effect with your proposal, and summary financial information for the calendar year most recently ended.

6) Acknowledgement of Addenda: Attach a completed and signed Acknowledgement of Addenda Form, attached as Exhibit H, acknowledging receipt of all addenda to this RFP, if any, issued by BPCA before the Due Date. Addenda are posted by BPCA as necessary and can be found on the BPCA website at www.bpca.ny.gov. It is the responsibility of each Proposer to check the BPCA website for addenda and to review addenda prior to submitting any proposal in response to this RFP.

7) Appendices: Attach professional biographies for all biographies for all Project executives, Project Managers, and general foremen identified in your Proposal.

VII. INSURANCE AND BOND REQUIREMENTS

A. General Requirements

The total cost of the required insurance listed in Items B. and C., below, must be incorporated into the Cost Proposal. The additional insured protection afforded BPCA, BPCPC, and the State of New York must be on a primary and non-contributory basis. All policies must include a waiver of subrogation in favor of BPCA, BPCPC, and the State of New York, and no policies may contain any limitations / exclusions for New York Labor Law claims.

All of the carriers that provide the below required insurance must provide direct written notice of cancellation or non-renewal to BPCA, BPCPC, and the State of New York at least thirty (30) days before such cancellation or non-renewal is effective, except for cancellations due to non-payment of premium, in which case ten (10) days' written notice is acceptable.

B. Insurance Requirements for the Selected Proposer

The selected Proposer will be required to obtain and provide proof of the types and amounts of insurance listed below: (i) as a condition precedent to the award of the Contract; and (ii) continuing throughout the entire term of the Contract. The insurance policies listed below must also conform to the applicable terms of the Contract, as shown in the Standard Form of Contract, attached as Exhibit D.

- **Commercial General Liability Insurance**, written on ISO Form CG 00 01 or its equivalent and with no modification to the contractual liability coverage provided therein, shall be provided on an occurrence basis and limits shall not be less than:
  - $6,000,000 per occurrence
  - $7,000,000 general aggregate, which must apply on a per location/per project basis
  - $7,000,000 products/completed operations aggregate

BPCA, BPCPC, and the State of New York must be protected as additional insureds on ISO Form CG 2010 (11/85) or its equivalent on policies held by the selected Proposer and any of its subcontractors. Should the Proposer's work include construction activities of any kind, then the Proposer must maintain

Products/Completed Operations coverage for no less than three (3) years after the construction work is completed, and continue to include Additional Insured protection for BPCA, BPCPC, and the State of New York for the prescribed timeframe. When providing evidence of insurance, the Proposer must include a completed Acord 855 NY form. Securing the required limits via a combination of primary and umbrella/excess liability policies is allowed. The General Aggregate limit must apply on a per project basis on the primary General Liability policy should a combination of primary and Umbrella/Excess liability policies be utilized to secure the required total limits of coverage.

- **Automobile Liability Insurance** with a combined single limit of not less than $1,000,000. Coverage must apply to the Proposer's owned, hired, and non-owned vehicles and protect BPCA, BPCPC, and the State of New York as additional insureds.

- **Workers' Compensation, Employer's Liability, and Disability Benefits** shall not be less than statutory limits, including United States Longshore and Harbor Workers Act coverage as applicable to the operations of the Proposer.

- **Builder's Risk/Installation Floater Insurance** in an amount not less than one-hundred percent (100%) of the full contract price. Coverage must be written on ISO Special Form CP 10 30 04 02 or its equivalent on a completed value non-reporting basis and provide coverage for the Proposer, all subcontractors, BPCA, BPCPC, and the State of New York. Coverage must also include an agreed amount provision which eliminates any coinsurance provision, and include BPCA as a loss payee. Coverage must include the insurable interests of all subcontractors retained by the Proposer.

C. Insurance Requirements for all Subcontractors

Any subcontractor(s) utilized by the selected Proposer will be required to obtain the types and amounts of insurance listed below: (i) as a condition of commencing any Work; and (ii) continuing throughout the duration of such subcontractor's Work. The insurance policies listed below must also conform to the applicable terms of the Contract, as shown in the Standard Form of Contract, attached as Exhibit D.

- **Commercial General Liability Insurance**, written on ISO Form CG 00 01 or its equivalent and with no modification to the contractual liability coverage provided therein, shall be provided on an occurrence basis and limits shall not be less than:
  - $1,000,000 per occurrence
  - $2,000,000 general aggregate which must apply on a per location / per project basis
  - $2,000,000 products/completed operations aggregate

BPCA, BPCPC, and the State of New York must be protected as additional insureds on ISO Form CG 2010 (11/85) or its equivalent on policies held by all subcontractors. Should the subcontractor's work include construction activities of any kind then the subcontractor must maintain Products / Completed Operations coverage for no less than three years after the construction work is completed and continue to include additional insured protection for BPCA, BPCPC, and the State of New York for the prescribed timeframe. When providing evidence of insurance the subcontractor must include a completed Acord 855 NY form. Securing the required limits via a combination of primary and umbrella/excess liability policies is allowed.

- **Automobile Liability Insurance** with a combined single limit of not less than $1,000,000. Coverage must apply to the subcontractor's owned, hired, and non-owned vehicles and protect BPCA, BPCPC, and the State of New York as additional insureds.

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- **Workers' Compensation, Employer's Liability, and Disability Benefits** shall not be less than statutory limits, including United States Longshore and Harbor Workers Act coverage as applicable to the operations of the subcontractor.

- **Subcontractors will also be required to obtain all other insurances listed in Section VII. B., above, unless otherwise approved in writing by BPCA prior to commencement of any Subcontractor's work.**

D. Performance Bonds A performance bond will be required for this Project. Please provide a letter from your surety(ies) stating that you are able to provide both such bonds, as required in this RFP's Standard Form of Contract, attached as Exhibit D.

VIII. COST PROPOSAL: FORMAT AND REQUIRED INCLUSIONS

Each cost proposal (the "Cost Proposal") must state the total lump-sum cost for the performance of all Work. Please note that the Project is subject to the Prevailing Wage requirements contained in Labor Law 20. As stated in Section V. D. above, each Proposer must e-mail its Cost Proposal to the following e-mail address: costproposals@bpca.ny.gov. The submission must be clearly labeled as "Cost Proposal – Pier A Railings Restoration/Rehabilitation – General Contractor Services."

Proposer must submit with its Cost Proposal (the form of which is attached to this RFP as Exhibit F) an itemized cost for the Work, according to the Form of Bid Breakdown (attached to this RFP as Exhibit G). The total sum of the itemized list contained in the Form of Bid Breakdown should be equivalent to the lump-sum price contained in the Cost Proposal.

IX. SELECTION PROCESS

A. Evaluation

Each timely submitted Proposal will be reviewed for compliance with the form and content requirements of this RFP. A committee of BPCA employees selected by BPCA (the "Committee") will then review and evaluate the Proposals in accordance with the evaluation criteria set forth below. While only Committee members will score the evaluation criteria, the Committee may consult an outside expert for advisement on the evaluation of matters requiring technical expertise. Before final selection, BPCA must determine that the proposed selected Proposer is responsible, in accordance with applicable law and BPCA's Procurement Guidelines, which may be viewed at: http://bpca.ny.gov/public-information/.

B. Interviews

BPCA reserves the right to decide whether to interview any or all of the Proposers. The Committee may conduct interviews for many reasons, including to further assess a Proposer's ability to perform the Work or provide specific services, or to seek information related to any other evaluation criteria. The proposed Lead PM, as well all other key personnel proposed to perform the Work, must be available to participate in the interview.

C. Evaluation Criteria for Selection

Selection will be based upon the following criteria:

1) Technical Evaluation:
   - Approach to the Work – including methodologies, schedule, risk mitigation and safety protocols... 30%
   - Documented experience with comparable types of metal railing work..... 20%
   - Proposed staffing, including subcontractors 20%
   - Experience working in close proximity to a marine environment 20%

- Response to Diversity Practices Questionnaire 10%

2) Cost Proposal evaluation.

D. Basis for Contract Award

The Contract will be awarded to the highest technically rated Proposer whose Proposal is determined to be responsive and in the best interests of BPCA, subject to a determination that the Proposer is responsible and the Cost Proposal is fair, reasonable, and provides the best value to BPCA given the requirements of the Project.

X. NON-COLLUSION

By submitting a Proposal, each Proposer warrants and represents that any ensuing Contract has not been solicited or secured directly or indirectly in a manner contrary to the laws of the State of New York, and that said laws have not been violated and shall not be violated as they relate to the procurement or the performance of the Contract by any conduct, including the paying or giving of any fee, commission, compensation, gift, or gratuity or consideration of any kind, directly or indirectly, to any member of the board of directors, employee, officer or official of BPCA.

XI. IRAN DIVESTMENT ACT

By submitting a Proposal or by assuming the responsibility of any Contract awarded hereunder, each Proposer certifies that it is not on the "Entities Determined To Be Non-Responsive Bidders/Offerers Pursuant to The New York State Iran Divestment Act of 2012" list ("Prohibited Entities List") posted on the New York State Office of General Services website at: http://www.ogs.ny.gov/about/regs/docs/ListofEntities.pdf and further certifies that it will not utilize any subcontractor/consultant that is identified on the Prohibited Entities List on this Contract. The selected Proposer agrees that should it seek to renew or extend any Contract awarded hereunder, it must provide the same certification at the time the Contract is renewed or extended. The selected Proposer also agrees that any proposed assignee of the Contract will be required to certify that it is not on the Prohibited Entities List before BPCA may approve a request for assignment of the Contract.

During the term of any Contract awarded hereunder, should BPCA receive information that a person (as defined in State Finance Law §165-a) is in violation of the above-referenced certifications, BPCA will review such information and offer the person an opportunity to respond. If the person fails to demonstrate that it has ceased its engagement in the investment activity which is in violation of the New York State Iran Divestment Act of 2012 within 90 days after the determination of such violation, then BPCA shall take such action as may be appropriate and provided for by law, rule, or contract, including, but not limited to, seeking compliance, recovering damages, or declaring the selected Proposer in default of the awarded Contract.

BPCA reserves the right to reject any request for renewal, extension, or assignment for an entity that appears on the Prohibited Entities List prior to the renewal, extension, or assignment of the Contract, and to pursue a responsibility review with the selected Proposer should it appear on the Prohibited Entities List hereafter.

XII. ENCOURAGING USE OF NEW YORK STATE BUSINESSES IN CONTRACT PERFORMANCE

New York State businesses have substantial presence in State contracts and strongly contribute to the economies of the state and the nation. In recognition of their economic activity and leadership in doing business in New York State, Proposers for this Contract for commodities, services or technology are strongly encouraged and expected to consider New York State businesses in the fulfillment of the requirements of the Contract. Such partnering may be as subcontractors, suppliers, protégés or other supporting roles.

Proposers are strongly encouraged, to the maximum extent practical and consistent with legal requirements, to use responsible and responsive New York State businesses in purchasing commodities that are of equal quality and functionality and in utilizing services and technology. Furthermore, Proposers are reminded that they must continue to utilize small, minority and women-owned businesses, consistent with current State law.

Utilizing New York State businesses in State contracts will help create more private sector jobs, rebuild New York's infrastructure, and maximize economic activity to the mutual benefit of the contractor and its New York State business partners. New York State businesses will promote the contractor's optimal performance under the Contract, thereby fully benefiting the public sector programs that are supported by associated procurements.

Public procurements can drive and improve the State's economic engine through promotion of the use of New York businesses by its contractors. The State therefore expects bidders/proposers to provide maximum assistance to New York businesses in their contracts. The potential participation by all kinds of New York businesses will deliver great value to the State and its taxpayers.

Proposers can demonstrate their commitment to the use of New York State businesses by responding to the question below. Each proposer must include a response to this question with their proposal. Please note that a "yes" response requires supporting information. If yes, identify New York State businesses that will be used and attach identifying information.

Will New York State businesses be used in the performance of this contract? _____Yes _____No

***

EXHIBIT A
SCOPE OF WORK

I. Overview

Battery Park City Authority ("BPCA" or the "Authority"), has identified the need for repairs to certain metal fencing and railings (the "Railings") located along the waterside edge of the pedestrian promenade that surrounds the building at Pier A (the "Building") located at 22 Battery Place (the "Project Site"). Under this contract (the "Contract"), the firm selected by BPCA (the "Contractor") shall perform all required repairs, restoration and replacement of the Railings, in addition to all necessary repairs and/or replacements of the lighting fixtures embedded within the Railings (collectively, the "Work"). All Work shall be performed in accordance with the Contract documents, including but not limited to this Scope of Work and the Pier A Railings Rehabilitation Drawings and Specifications (the "Construction Documents," attached hereto as Exhibit B) which identify the existing conditions of each type of Railing, provide specifications for the Railings' repair, restoration and/or replacement, and include a photographic log and site map with a photo location key.

II. Scope of Services

Specifically, the Work shall be comprised of the following components to be performed in compliance with the Construction Documents:

General

- Provision of all labor, equipment, materials, and all services necessary for, and incidental to, the proper execution and completion of the tasks as described herein and in the Construction Documents; and,
- Provision of a BPCA-approved Project construction schedule.

Mobilization and Start-up

- Performance of a visual survey of all Railings to verify existing conditions, quantities and dimensions;
- Mobilization of all personnel, equipment and materials to the Project Site as needed. A laydown area for Project-related equipment and materials will be provided by BPCA in the vicinity of the Project Site;
- Storage of all Project-related equipment and materials in the laydown area(s) provided by BPCA, or as otherwise directed by BPCA;
- Installation of all NYC Department of Buildings-required construction fencing and signage, and securing of all permits required for performance of the Work; and,
- Provision to BPCA of site safety and site maintenance plans, which plans are subject to review and approval by BPCA prior to commencement of the Work.

Railing Replacement and Repair Work

- Adherence to the procedures outlined in the Construction Documents to clean and prepare the Railings' surfaces for repair painting;
- Removal of deteriorated Railings, and replacement of such deteriorated Railings with new Railings in accordance with the Construction Documents;
- Fabrication, furnishing and installation of required replacement Railings according to Drawing GA-4 of the Construction Documents, including but not limited to:
- Perimeter of existing railing cleaning and painting.
- Installation of new anchor bolts and lag bolts.
- Furnishing and installation of new Railings attachment hardware, anchor bolts and lag bolts as needed;

- Cleaning and preparation of all remaining Railings for painting; and,
- Painting of all railings using three (3) part marine paint in accordance with the Construction Documents.

Electrical Work

- Verification of existing Project Site conditions as compared to that illustrated and/or described in the Construction Documents;
- In coordination with BPCA's Parks Department, shutdown, disconnection and safely turning off of all electrical services;
- Removal of all existing lighting fixtures, wiring, and other Project Site elements affixed to the Railings (the "Affixed Elements"). Affixed Elements shall be salvaged in accordance with the Construction Documents, and stored off-site during construction in order to protect them from damage in coordination with BPCA's designated third-party engineer for the Project, Urban Engineers of New York, D.P.C. (the "Project Design Engineer"). The Project Design Engineer will coordinate with the Contractor and provide direction as to which, if any, of the Affixed Elements are suitable for reuse and reattachment to the refinished and replaced Railings. Any Affixed Elements not so used will be appropriately disposed of by Contractor; and,
- Adherence to the procedures outlined in the Construction Documents to repair or replace all wires, cables, conduits, raceways, fixtures, grounding conductors, and other items listed in the Construction Documents.

Project Completion, Demobilization & Close-Out

- Upon substantial completion of the Work, as verified by a site inspection by the Project Design Engineer and BPCA and documented by a certificate of substantial completion executed by the Contractor, the Project Design Engineer and BPCA, prompt performance of any remaining punch list items identified by a written punch list provided by the Project Design Engineer following the substantial completion inspection..
- Upon final completion of the Work, inclusive of all punch-list items, and acceptance of all Work by BPCA, demobilization from the Project Site, leaving the Site in a clean and satisfactory condition; and,
- Submission of as-built drawings to BPCA.

Incidental Items

- During all stages of the Work, Contractor shall ensure review of and, where applicable compliance with, all Project-related information available, including, but not limited to:
  - the Construction Documents;
  - drawings illustrating previous repairs;
  - investigation survey report(s);
  - geotechnical investigation/report; and,
  - tides and currents charts.

Additionally, Contractor shall Adhere to all of BPCA's safety and security policies at all times and, ensure provision and maintenance of safety measures and devices to ensure public safety and prevention of public access to the Work area, the pedestrian promenade, and the Building = for the duration of the Project.

Additional Considerations

The Contractor shall remove and properly dispose of, to an off-site location, all debris located within the Project Site that was generated during the performance of the Work – including, but not limited to, broken concrete, miscellaneous metals and debris, and other construction debris and miscellaneous trash.

In order to ensure compliance with the construction waste protocols set forth in BPCA's Green Guidelines (which may be viewed here: https://bpca.ny.gov/wp-content/uploads/2020/09/BPC-Green-Guidelines.pdf), the Contractor

shall develop and submit for BPCA's review and approval an Approach Plan for Construction & Demolition Waste Management Plan ("CDWMP"). Contractor's CDWMP shall ensure that the Work will be undertaken in such a manner as to reduce the amount of waste generated by the Project that is sent to landfill – including but not limited to: providing waste recycling, implementation of salvage or re-use goals, estimated types and quantities of materials and waste, proposed and intended disposal methods for the materials, intended procedures for handling the waste, and detailed instructions for subcontractors and laborers at the Project Site.

***

EXHIBIT B
PIER A RAILINGS REHABILITATION/RESTORATION
PROJECT DRAWINGS, SPECIFICATIONS, AND REPORT

[ATTACHED]

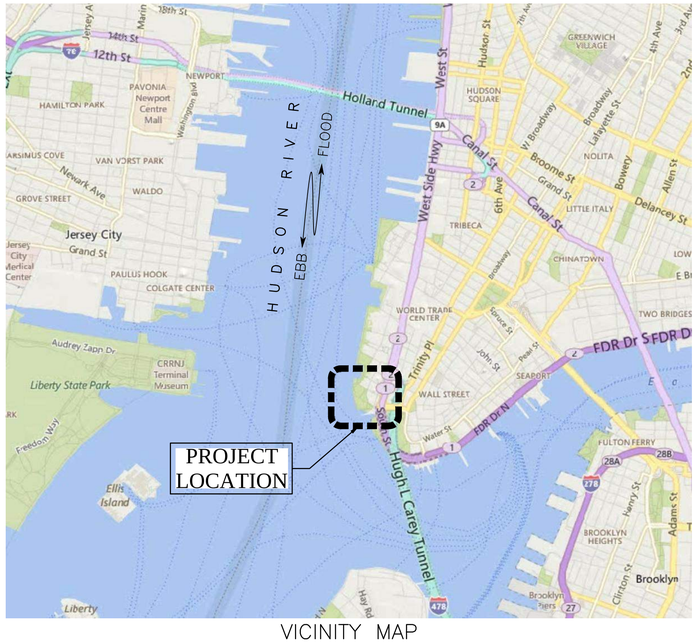
PIER A RAILINGS REHABILITATION

22 BATTERY PL., NEW YORK, NY 10004

FOR

BATTERY PARK CITY AUTHORITY

200 LIBERTY STREET, 24TH FLOOR,
NEW YORK, NY 10281



VICINITY MAP



DRAWING INDEX	
SHEET NUMBER	SHEET TITLE
GS–1	COVER SHEET
GN–1	GENERAL NOTES
GA–1	EXISTING HANDRAILS PLAN
GA–2	EXIST. HANDRAILS CONDITION PHOTOS–1 OF 2
GA–3	EXIST. HANDRAILS CONDITION PHOTOS–2 OF 2
GA–4	HANDRAILS REPLACEMENT LOCATION PLAN
S–1	NORTH APRON HANDRAILS REPLACEMENT DETAILS
S–2	SOUTH APRON HANDRAILS REPLACEMENT DETAILS
S–3	TYPICAL HANDRAILS DETAILS 1 OF 2
S–4	TYPICAL HANDRAILS DETAILS 2 OF 2
E–0	ELECTRICAL GENERAL NOTES & LEGENDS
E–1	ELECTRICAL WORK DEMOLITION PLAN
E–2	NEW LIGHITNG PLAN
E–3	ELECTRICAL WORK SCHEDULES
E–4	LIGHTING DETAILS



LOCATION MAP

ISSUE FOR BID

DATE: 04/20/22

NEW YORK STATE OF OPPORTUNITY. | Battery Park City Authority

BATTERY PARK CITY AUTHORITY
200 LIBERTY STREET, 24TH FLOOR,
NEW YORK, NY 10281
T: 212.417.2000

Urban Engineers of New York, D.P.C.
7 Penn Plaza, Suite 1800
New York, NY 10001
o. 212.736.9100

URBAN ENGINEERS

SEAL

BY:

DATE:

REV	DATE	DESCRIPTION	BY	CKD	APP'D
0	04/20/22	ISSUE FOR BID	AK	CFK	REM

NEW YORK, NY
BATTERY PARK CITY AUTHORITY
PIER A RAILINGS REHABILITATION

COVER SHEET

SCALE: AS NOTED	DESIGN BY: AK
DATE: 04/20/22	APPROVED BY: REM
	DRAWN BY: FYC
	CHECKED BY: AK
PROJECT NO.: 2020200179.007	
SHEET NUMBER: GS-1	
SHT. NO.: 1 OF 15	
DRAWING FILE NO.: GS-1 COV... .DWG	REV. NO.: 0

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DATE PRINTED: 4/20/2022 5:12:46 PM

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GENERAL NOTES

1. ALL WORK SHALL CONFORM WITH ALL FEDERAL, STATE, COUNTY AND LOCAL CODES HAVING JURISDICTION OVER SUCH WORK. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THAT PORTION OF WORK
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A SAFE CONSTRUCTION AREA, AND PROVIDING FOR UNOBSTRUCTED SAFE PEDESTRIAN FLOW AROUND THE CONSTRUCTION SITE.
3. THE CONTRACTOR SHALL PERFORM ON–SITE SAFETY INSPECTIONS THROUGHOUT THE FULL PROJECT DURATION AND REMEDY ANY SAFETY CONCERNS IMMEDIATELY.
4. DIMENSIONS SHOWN ON THESE CONTRACT PLANS HAVE BEEN OBTAINED FROM LIMITED FIELD SURVEY AND MAY NOT ACCURATELY REFLECT ACTUAL FIELD CONDITIONS. ACCORDINGLY, THE CONTRACTOR WILL BE RESPONSIBLE FOR MAKING FIELD MEASUREMENTS OF ALL EXISTING STRUCTURES IMPACTED BY THE NEW WORK TO ASSURE CONSISTENCY WITH THE PROPOSED CONSTRUCTION PLANS. THE CONTRACTOR SHALL FIELD VERIFY ACTUAL CONDITIONS, DIMENSIONS, CLEARANCES, ELEVATIONS, AND OTHER INFORMATION INDICATED IN THE DOCUMENTS PRIOR TO ORDERING ANY MATERIALS, COMMENCING ANY FABRICATIONS, OR PERFORMING ANY WORK. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY FIELD CONDITIONS WHICH MAY DIFFER FROM THAT REPRESENTED PRIOR TO COMMENCING WORK.
5. REQUEST BY THE CONTRACTOR FOR CHANGES TO THE LOCATION OR INSTALLATION OF STRUCTURES AS SHOWN ON THE PLANS AND DETAILED IN THE SPECIFICATIONS MUST BE MADE IN WRITING TO THE ENGINEER. SUCH CHANGES SHALL NOT BE APPROVED WHEN, IN THE SOLE JUDGMENT OF THE ENGINEER, FIELD CONDITIONS ALLOW THE WORK TO BE PERFORMED WITHIN THE LIMITS SPECIFIED OR WHEN SUCH REQUEST WOULD IMPACT ADJACENT UTILITIES (PUBLIC OR PRIVATE) WHOSE SUPPORT AND PROTECTION ARE PART OF THIS CONTRACT. APPROVAL WILL ONLY BE GIVEN AT NO EXTRA COST TO THE OWNER.
6. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS BEFORE CONSTRUCTION BEGINS.
7. HOURS OF WORK SHALL BE DEFINED IN THE CONTRACT DOCUMENTS. BATTERY PARK CITY AUTHORITY RESERVES THE RIGHT TO ADJUST THESE HOURS IN THE INTEREST OF PUBLIC SAFETY.
8. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OSHA REGULATIONS AND SAFETY PROCEDURES TO ENSURE PERSONNEL HEALTH AND SAFETY. THE CONTRACTOR MUST MAINTAIN A SAFE AND CLEAN WORKING ENVIRONMENT AND SHALL ASSURE PROPER PERSONAL PROTECTIVE EQUIPMENT FOR ALL PERSONAL AT ALL TIMES. IN AREAS WHERE PEDESTRIAN AND/OR VEHICULAR TRAFFIC MAY BE AFFECTED BY THE WORK, THE CONTRACTOR SHALL CORDON OFF THE WORK AREA.
9. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT ANY CONSTRUCTION DEBRIS FROM FALLING INTO THE WATER. ANY DEBRIS FALLING INTO THE WATER SHALL BE RECOVERED AND DISPOSED PROMPTLY AND PROPERLY.
10. ALL DRAWINGS INCLUDED MAY NOT ACCURATELY REFLECT ALL THE CURRENT CONDITIONS AT THE SITE. THE DETAILS PROVIDED ARE FOR GENERAL INFORMATION ONLY. BID PRICE FOR CONTRACT WORK SHALL BE BASED ON ACTUAL CONDITIONS TO BE VERIFIED BY THE CONTRACTOR IN FIELD.
11. WHERE THE PHRASE "EXISTING TO BE REMOVED" OR SIMILAR TERMINOLOGY IS IN CONTRACT DRAIWNGS, IT SHALL BE CONSTRUED TO MEAN "REMOVED BY CONTRACTOR".
12. EMPLOY CONSTRUCTION METHODS THAT KEEP DUST TO MINIMUM. SWEEP, VACUUM AND SPRINKLE WATER ON AFFECTED AREAS AS NEEDED TO ELIMINATE DUST LEAVING THE PROJECT AREA
13. IMMEDIATELY RESTORE ALL AREAS OUTSIDE THE LIMITS OF CONSTRUCTION, WHICH ARE DAMAGED BY THE CONTRACTORS OPERATIONS TO THEIR ORIGINAL CONDITION AND TO THE SATISFACTION OF THE ENGINEER AT NO COST TO THE OWNER.
14. CONTRACTOR SHALL ESTABLISH A STAGING AND STORAGE AREA THAT IS APPROVED BY BPCA. ALL MATERIAL AND EQUIPMENT SHALL BE STORED ONLY IN THE DESIGNATED STAGING AREA.
15. STAGING AREAS SHALL INCLUDE SILT FENCING AROUND THE PERIMETER, AND MEASURES TO PREVENT SEDIMENT TRACKING BY VEHICLES AND WORKERS OUTSIDE THE STAGING AREA
16. THE CONTRACTOR IS RESPONSIBLE FOR THE TIMELY SUBMISSION OF ALL APPLICABLE SUBMITTALS, SHOP DRAWINGS AND MOCK UP'S PRIOR TO COMMENCEMENT OF WORK. WORK PERFORMED WITHOUT THE ENGINEERS APPROVAL MAY BE SUBJECT TO REJECTION AT NO COST TO THE OWNER.

TIMBER

1. REPLACEMENT TIMBER SHALL BE SOUTHERN PINE – SELECT STRUCTURAL.
2. LEAD HOLES FOR LAG SCREW SHALL BE BORED AS FOLLOWS:
   A. THE CLEARANCE HOLE FOR THE SHANK SHALL HAVE THE SAME DIAMETER AS THE SHANK, AND THE SAME DEPTH OF PENETRATION AS THE LENGTH OF UNTHREADED SHANK. THE DRILL BIT LENGTH SHALL BE ⅛" LESS IN LENGTH AS IS REQUIRED TO ACCOMMODATE SHANK DEPTH.
   B. THE LEAD HOLE FOR THE THREADED PORTION SHALL HAVE A DIAMETER EQUAL TO 70% OF THE SHANK DIAMETER.
   C. THIS EQUIPMENT SHALL BE SUBMITTED EACH DAY TO THE FIELD ENGINEER FOR REVIEW PRIOR TO USE.
2. THE THREADED PORTION OF THE LAG SCREW SHALL BE INSERTED IN ITS LEAD HOLE BY TURNING WITH A WRENCH OR BY ROTATING EQUIPMENT, NOT BY DRIVING WITH A HAMMER.
3. SOAP OR OTHER LUBRICANT SHALL BE USED ON THE LAG SCREWS OR IN THE LEAD HOLES TO FACILITATE INSERTION AND PREVENT DAMAGE TO THE LAG SCREW.

STEEL AND MISCELLANEOUS STEEL

1. ALL STEEL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL. DESIGN, FABRICATION, AND ERECTION ARE TO BE GOVERNED BY THE LATEST REVISIONS OF:
   A. AISC STEEL CONSTRUCTION MANUAL
   B. AISC CODE OF STANDARD PRACTICE
   C. AWS D1.1 STRUCTURAL WELDING CODE
   D. RCSC SPECIFICATIONS FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS
2. STRUCTURAL AND MISCELLANEOUS STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING, U.N.O.:

HOLLOW STRUCTURAL SECTIONS (HSS):	ASTM A 500, MIN. FY=35 KSI
OTHER SHAPES, BARS AND PLATES:	ASTM A 36, Fy = 36 KSI
HEADED BOLTS:	ASTM A 325
ANCHOR BOLTS:	ASTM A 449
NUTS:	ASTM A 563
WASHERS:	ASTM F 436

3. IF OVERSIZED HOLES ARE USED, WASHERS MUST BE EXTRA THICK, AND MAY REQUIRE WELDING AS DIRECTED BY THE FIELD ENGINEER.
4. ALL MISCELLANEOUS METALS INCLUDING BOLTS, WASHERS, NUTS, ANGLES, INSERTS, PLATES, AND OTHER FABRICATIONS SHALL BE PAINTED.
5. THE TYPE, SIZE, SPACING, AND ALIGNMENT OF CONNECTING HARDWARE SHOWN ARE CRITICAL AND MUST BE MAINTAINED.
6. ALL WELDING SHALL CONFORM TO THE LATEST EDITION OF AWS D.1.1, U.N.O. ALL WELDS SHALL BE MADE WITH E70XX ELECTRODES, UNLESS HIGHER STRENGTH ELECTRODES ARE REQUIRED BY AWS D1.1. GENERALLY, ELECTRODES SHALL BE NEW OR BAKED AT THE START OF EACH SHIFT. FOLLOW THE ATMOSPHERIC EXPOSURE LIMITS AND BAKING REQUIREMENTS OF CLAUSE 5 OF AWS D1.1.
7. WELDING PERSONNEL AND PROCEDURES ARE TO BE QUALIFIED PER AWS D1.1, U.N.O.
8. MINIMUM SIZE OF FILLET WELDS SHALL BE $\frac{3}{16}$" U.N.O.
9. WHEN THE 'ALL–AROUND' WELDING SYMBOL IS USED AT AN END CONNECTION OF A ROLLED SHAPE, THE CONTRACTOR SHALL TERMINATE THE WELD AT EACH OF THE FLANGE EDGES, AND ONE WELD THICKNESS AWAY FROM EACH INTERSECTION OF THE WEB AND FLANGE, U.N.O.
10. DOWELS, BOLTS, REINFORCEMENT OR OTHER STEEL TO BE EMBEDDED IN CONCRETE SHALL BE INSTALLED USING HILTI KWIK HUS STEEL SCREW ANCHOR, OR APPROVED EQUAL.

PAINTING AND SURFACE PREPARATION

PAINT SYSTEM SHALL BE A THREE COAT SYSTEM CONSISTING OF ONE PRIMER COAT, INTERMEDIATE COAT AND TOP COAT. RUST–OLEUM HIGH PERFORMANCE 9800 SYSTEM, DTM URETHANE MASTIC CONJUNCTION WITH PRODUCT RECOMMENDED PRIMER.

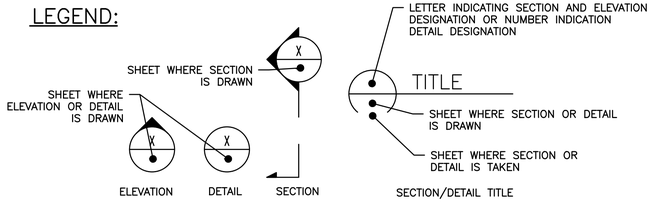
1. BARE STEEL SURFACE PREPARATION

(SSPC–SP–1) REMOVE ALL DIRT, GREASE, OIL, SALT AND CHEMICAL CONTAMINANTS BY WASHING THE SURFACE WITH KRUD KUTTER® ORIGINAL CLEANER DE–GREASER OR OTHER SUITABLE CLEANER. MOLD AND MILDEW AREAS MUST BE CLEANED WITH A CHLORINATED CLEANER OR BLEACH SOLUTION. RINSE WITH FRESH WATER AND ALLOW TO DRY. HAND TOOL (SSPC–SP–2) OR POWER TOOL (SSPC–SP–3) CLEAN TO REMOVE LOOSE RUST, SCALE, AND DETERIORATED PREVIOUS COATINGS TO OBTAIN A SOUND RUSTED SURFACE. FOR OPTIMUM CORROSION RESISTANCE, ABRASIVE BLAST TO COMMERCIAL GRADE SSPC–SP–6, WITH A BLAST PROFILE OF 1–2 MILS (25–50 mu). ALL WELD SPATTER SHOULD BE REMOVED ALONG WELD SEAMS,ROUGH WELDS SHOULD BE GROUND SMOOTH, AND ALL SHARP EDGES SHOULD BE GROUND TO A SMOOTH RADIUS.

2. EXISTING GALVANIZED STEEL SURFACE PREPARATION PAINT SYSTEM

(SSPC–SP–1) REMOVE ALL DIRT, GREASE, OIL, SALT AND CHEMICAL CONTAMINANTS BY WASHING THE SURFACE WITH KRUD KUTTER® ORIGINAL CLEANER DE–GREASER OR OTHER SUITABLE CLEANER. MOLD AND MILDEW AREAS MUST BE CLEANED WITH A CHLORINATED CLEANER OR BLEACH SOLUTION. RINSE WITH FRESH WATER AND ALLOW TO DRY. PREVIOUSLY COATED SURFACES MUST BE SOUND AND IN GOOD CONDITION. SMOOTH, HARD, GLOSSY OR AGED TWO–COMPONENT EPOXY COATINGS SHOULD BE SCARIFIED BY SANDING OR SWEEP BLASTING TO CREATE A SURFACE PROFILE.

LEGEND:



DEMOLITION NOTES:

1. ELECTRICAL – THE EXISTING LIGHTING FIXTURES – ALL EXISTING FIXTURES, WIRING ETC. SHALL BE REMOVED AND STORED PROPERLY TO PREVENT DAMAGE. CONTRACTOR SHALL SHUTDOWN AND DISCONNECT SERVICES PRIOR TO REMOVAL. THE CONTRACTOR SHALL RESUME SERVICES AFTER RE–INSTALLATION IS COMPLETED.
2. RAILING AND FASTENERS – THE EXISTING METAL RAILING TO BE REUSED, REMOVED AND RE–FINISHED IN SHOP. PAINT COLOR TO BE SELECTED BY BPCA. CONTRACTOR TO PROVIDE DETAILS FOR REINSTALLATION TO BE REVIEWED BY ENGINEER.
3. WHERE AN EXISTING UTILITY, SERVICE, EQUIPMENT, OR FACILITY IS DAMAGED, THE SAME SHALL BE REPAIRED TO ITS ORIGINAL CONDITION AT NO COST TO THE OWNER.
4. THE CONTRACTOR SHALL EXERCISE CARE WHEN HANDLING AND STORING EXISTING MATERIALS WHICH ARE CALLED OUT FOR TEMPORARY REMOVAL FOR THE PURPOSE OF CONDUCTING CONTRACT WORK. MATERIALS DAMAGED BY THE CONTRACTOR'S REMOVAL PROCESS SHALL BE FIXED OR REPLACED AT THE CONTRACTOR'S COST.
5. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER TO IDENTIFY MATERIALS TO BE REMOVED FROM THE PROJECT SITE AND SAVED BY THE OWNER. THE CONTRACTOR SHALL INCLUDE THE COST OF THIS COORDINATING WITH THE OWNER FOR HANDLING THESE MATERIALS IN THE BASE BID.
6. DISPOSE AND RECORD ALL EXTRACTED MATERIAL, WHICH IS NOT TO BE REUSED OR SAVED BY THE OWNER, OFF THE SITE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS UNLESS OTHERWISE SPECIFIED ELSEWHERE IN THE CONTRACT DOCUMENTS OR PLANS
7. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFETY OF PERSONNEL. DURING DEMOLITION OPERATIONS.

SURVEY NOTES

1. EXISTING UNDERGROUND AND OVERHEAD UTILITIES AS SHOWN HEREIN HAVE BEEN DETERMINED BY STANDARD SURVEYING METHODS AND AVAILABLE RECORDS. NEITHER THE EXACT LOCATION NOR THE INFORMATION OF THESE EXISTING UTILITIES IS GUARANTEED TO BE COMPLETE OR CORRECT.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHECK AND VERIFY ALL SITE CONDITIONS, BOTH ABOVE AND BELOW THE SURFACE, PRIOR TO COMMENCING WORK, ANY DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND ACTUAL FIELD CONDITIONS SHOULD BE BROUGHT TO THE ATTENTION OF BPCA AND THE ENGINEER IN WRITING, PRIOR TO THE COMMENCEMENT OF WORK.
3. THE EXISTING SUBSURFACE UTILITIES SHOWN ON THE CONTRACT PLANS ARE BASED ON AVAILABLE RECORDS AND SURVEY AND ARE NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. ADDITIONAL UTILITIES (ELECTRIC, GAS, TELEPHONE, ETC.) MAY HAVE BEEN INSTALLED PRIOR TO CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SUBSURFACE UTILITIES PRIOR TO THE START OF WORK. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS WORK.
4. THE CONTRACTOR IS ALERTED TO THE RULES AND REGULATIONS OF INDUSTRIAL CODE RULE 53 AND IS DIRECTED TO COMPLY. THE CITY SHALL NOT BE LIABLE FOR ANY COSTS INCURRED BY THE CONTRACTOR AS A RESULT OF THE COMPLIANCE, NONCOMPLIANCE OR IMPROPER COMPLIANCE, BY THE FRANCHISED OPERATORS OF UNDERGROUND FACILITIES, WITH SUB–PART 53–3 OF RULE 53 OF THE INDUSTRIAL CODE.
5. THE CONTRACTOR SHALL COORDINATE ACTIVITIES WITH ALL UTILITY COMPANIES WHOSE FACILITIES ARE LOCATED WITHIN THE PROJECT AREA.

ABBREVIATIONS

V.I.F. = VERIFY IN FIELD
U.N.O. = UNLESS NOTED OTHERWISE
N.I.C. = NOT IN CONTRACT
O.C. = ON CENTER

SUBMITTALS

CONTRACTOR SHALL SUPPLY ALL SUBMITTALS AS STATED IN THE PROJECT SPECIFICATIONS INCLUDING BUT NOT LIMITED TO:

1. HANDRAIL COMPONENTS DATA
2. BOLTS, NUTS AND WASHERS PRODUCT DATA
3. WELDING PRODUCT DATA
4. PAINTING SYSTEM PROCEDURES AND DATA

ISSUE FOR BID
DATE: 04/20/22

NEW YORK STATE OF OPPORTUNITY. | Battery Park City Authority
BATTERY PARK CITY AUTHORITY
200 LIBERTY STREET, 24TH FLOOR, NEW YORK, NY 10281
T: 212.417.2000

Urban Engineers of New York, D.P.C.
7 Penn Plaza, Suite 1800
New York, NY 10001
o. 212.736.9100
URBAN ENGINEERS

SEAL

BY:

DATE:

REV	DATE	DESCRIPTION	CKD	APD
0	04/20/22	ISSUE FOR BID	CFK	REM
			AK	BY

NEW YORK, NY
BATTERY PARK CITY AUTHORITY
PIER A RAILINGS REHABILITATION
GENERAL NOTES

SCALE: AS NOTED	DESIGN BY: AK
DATE: 04/20/22	APPROVED BY: REM
	DRAWN BY: FYC
	CHECKED BY: CFK
PROJECT NO.: 2020200179.007	
SHEET NUMBER: GN-1	
SHT. NO.: 2 OF 15	
DRAWING FILE NO.: GN-1 GEN... .DWG	REV. NO.: 0

DATE PRINTED: 11/11/2021 9:00:26 AM
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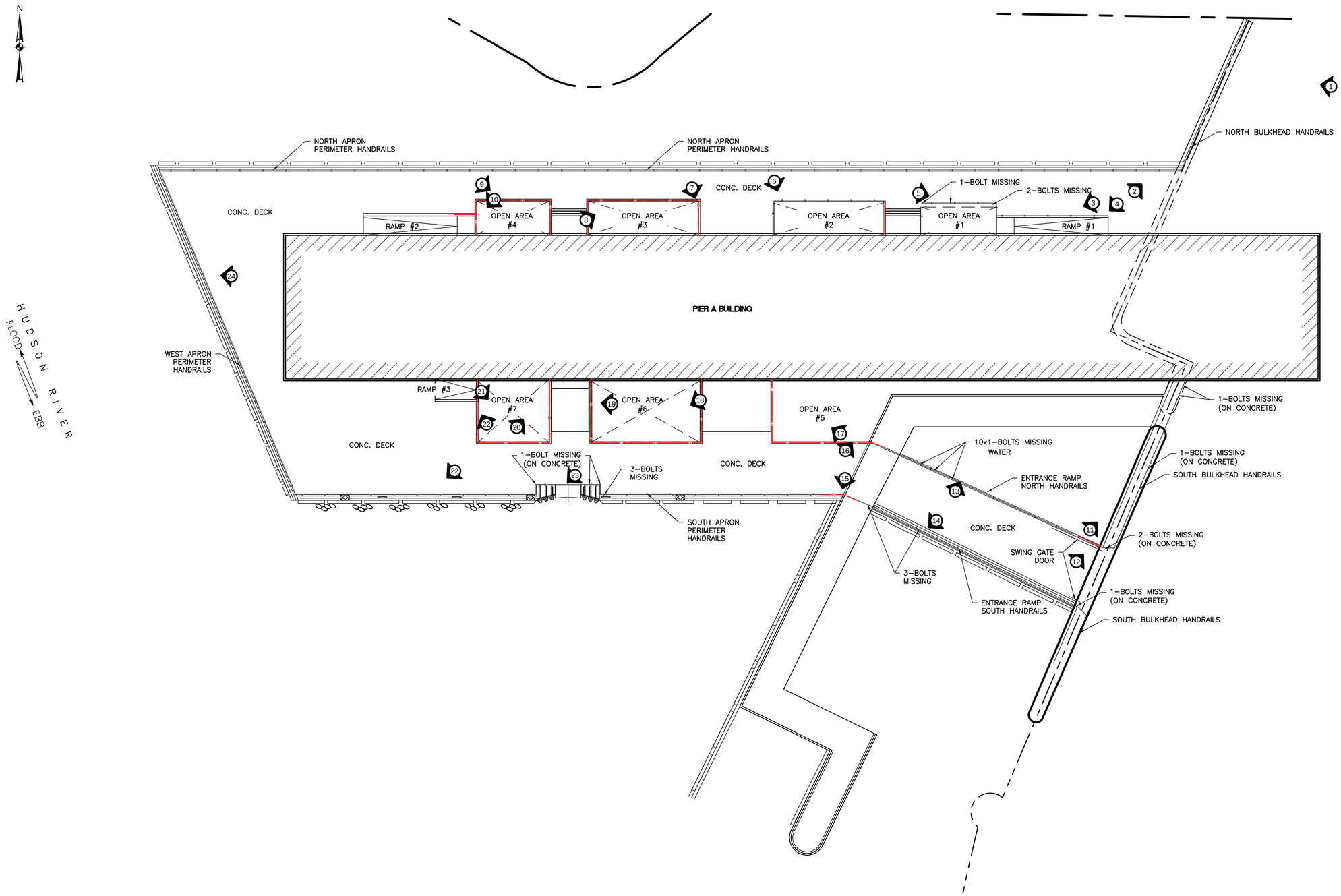

LEGEND:

DETERIORATED HANDRAILS

PHOTO LOCATION

EXISTING HANDRAILS PLAN

0 8' 16' 32'

NOTES:

1. FOR GENERAL NOTES SEE SHEET GN–1
2. ALL INDICATED EXISTING HANDRAILS CONDITION PHOTOS ON SHEET GA–2 & GA–3.
3. ALL MISSING BOLTS SHALL BE INSTALLED.
4. REPLACEMENT HANDRAILS LOCATIONS AND DETAIL ARE SHOWN IN SHEET GA–4, S–01 TO S–03.

ISSUE FOR BID

DATE: 04/20/22

NEW YORK STATE OF OPPORTUNITY. | Battery Park City Authority

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T: 212.417.2000

Urban Engineers of New York, D.P.C.
7 Penn Plaza, Suite 1800
New York, NY 10001
o. 212.736.9100

SEAL

BY:

DATE:

REV	DATE	DESCRIPTION	BY	CKD	APD
0	04/20/22	ISSUE FOR BID	AK	CFK	REM

NEW YORK, NY

BATTERY PARK CITY AUTHORITY

PIER A RAILINGS REHABILITATION

EXISTING HANDRAILS PLAN

SCALE: AS NOTED
DATE: 04/20/22
DESIGN BY: AK
APPROVED BY: REM
DRAWN BY: FYC
CHECKED BY: CFK
PROJECT NO.: 2020200179.007
SHEET NUMBER: **GA-1**
SHT. NO.: 3 OF 15
DRAWING FILE NO.: GA-1 EXI... .DWG
REV. NO.: 0

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DATE PRINTED: 4/14/2022 1:27:04 PM

ISSUE FOR BID

NORTH APRON HANDRAILS



PHOTO NO.1 NORTH BULKHEAD HANDRAILS



PHOTO NO.2 NORTH APRON PERIMETER HANDRAILS



PHOTO NO.3 RAMP#1 HANDRAILS



PHOTO NO.4 RAMP#1 HANDRAIL SUPPORT CRACKED TIMBER BOARD

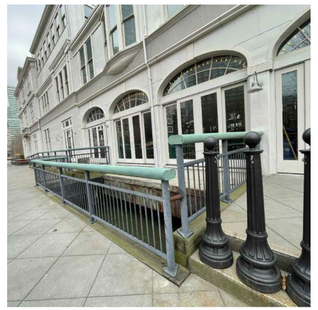

PHOTO NO.5 OPEN AREA #1 HANDRAILS



PHOTO NO.6 OPEN AREA #2 CORRODED HANDRAILS

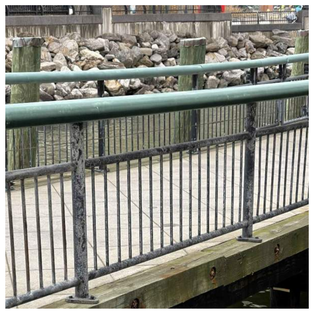

PHOTO NO.7 OPEN AREA #3 CORRODED HANDRAILS

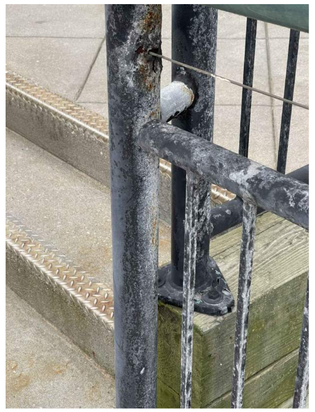

PHOTO NO.8 OPEN AREA #3 DETERIORATED HANDRAILS



PHOTO NO.9 OPEN AREA #4 CORRODED HANDRAILS



PHOTO NO.10 RAMP #2 CORRODED HANDRAILS

NOTES:

1. FOR GENERAL NOTES SEE SHEET GN-1
2. EXISTING HANDRAILS CONDITION PHOTOS ARE INDICATED ON SHEET GA-1.

ISSUE FOR BID

DATE: 04/20/22

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

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BY:

DATE:

REV	DATE	DESCRIPTION	BY	CKD	APD
0	04/20/22	ISSUE FOR BID	AK	CFK	REM

NEW YORK, NY

BATTERY PARK CITY AUTHORITY

PIER A RAILINGS REHABILITATION

EXISTING HANDRAILS CONDITION PHOTOS-1 OF 2

SCALE: AS NOTED
DESIGN BY: AK
APPROVED BY: REM
DATE: 04/20/22
DRAWN BY: FYC
CHECKED BY: CFK
PROJECT NO.: 2020200179.007
SHEET NUMBER: GA-2
SHT. NO.: 4 OF 15
DRAWING FILE NO.: GA-1 EXI... .DWG
REV. NO.: 0

S:\2020200179.007 PIER A RAILINGS\DWG\CURRENT\GA-1 EXISTING PIER & REPAIR PLAN.DWG

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ENTRANCE RAMP AND SOUTH APRON HANDRAILS

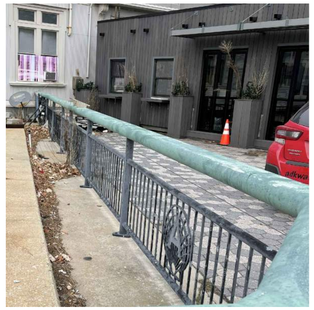

PHOTO NO.11 SOUTH BULKHEAD HANDRAILS



PHOTO NO.12 ENTRANCE RAMP NORTH CORRODED HANDRAIL



PHOTO NO.13 ENTRANCE RAMP NORTH ONE BOLT MISSED IN TEN COLUMN BASE PLATES



PHOTO NO.14 ENTRANCE TAMP SOUTH
THREE BOLT MISSED IN TWO COLUMN BASE PLATES



PHOTO NO.15 ENTRANCE RAMP SOUTH DAMAGED AND DETERIORATED HANDRAIL



PHOTO NO.16 OPEN AREA #5
DETERIORATED HANDRAILS

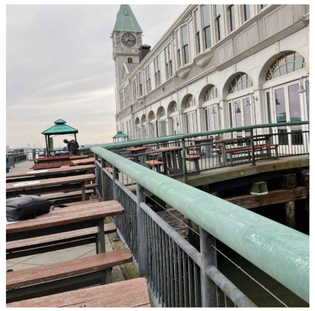

PHOTO NO.17 OPEN AREA #5 CORRODED HANDRAIL



PHOTO NO.18 OPEN AREA #6 DETERIORATED HANDRAIL



PHOTO NO.19 OPEN AREA #6 CORRODED HANDRAIL

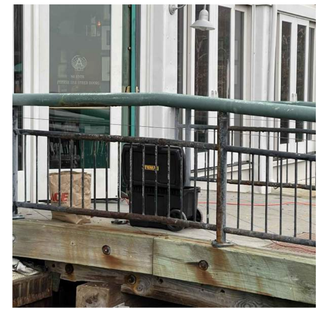

PHOTO NO.20 OPEN AREA #7 CORRODED HANDRAIL

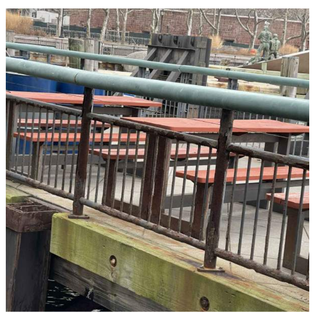

PHOTO NO.21 OPEN AREA #7
DETERIORATED HANDRAIL



PHOTO NO.22 OPEN AREA #7 CORRODED HANDRAIL



PHOTO NO.23 SOUTH PERIMETER HANDRAILS
DEFORMED PIPE TOP RAIL

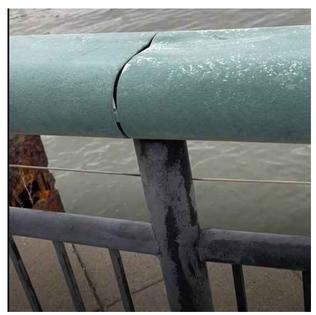

PHOTO NO.24 SOUTH PERIMETER HANDRAILS
DEFORMED PIPE TOP RAIL NEAR FENDERS



PHOTO NO.25 WEST PERIMETER HANDRAILS
LOSE AND LOST TENSION CABLE

NOTES:

1. FOR GENERAL NOTES SEE SHEET GN-1
2. EXISTING HANDRAILS CONDITION PHOTOS ARE INDICATED ON SHEET GA-1.

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DATE: 04/20/22

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7 Penn Plaza, Suite 1800
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BATTERY PARK CITY AUTHORITY
PIER A RAILINGS REHABILITATION

EXISTING HANDRAILS CONDITION PHOTOS-2 OF 2

SCALE: AS NOTED
DESIGN BY: AK
APPROVED BY: REM
DATE: 04/20/22
DRAWN BY: FYC
CHECKED BY: CFK
PROJECT NO: 2020200179.007
SHEET NUMBER: GA-3
SHT. NO.: 5 OF 15
DRAWING FILE NO.: GA-1 EXI... .DWG
REV. NO.: 0

S:\2020200179.007 PIER A RAILINGS\DWG\CURRENT\GA-1 EXISTING PIER & REPAIR PLAN.DWG

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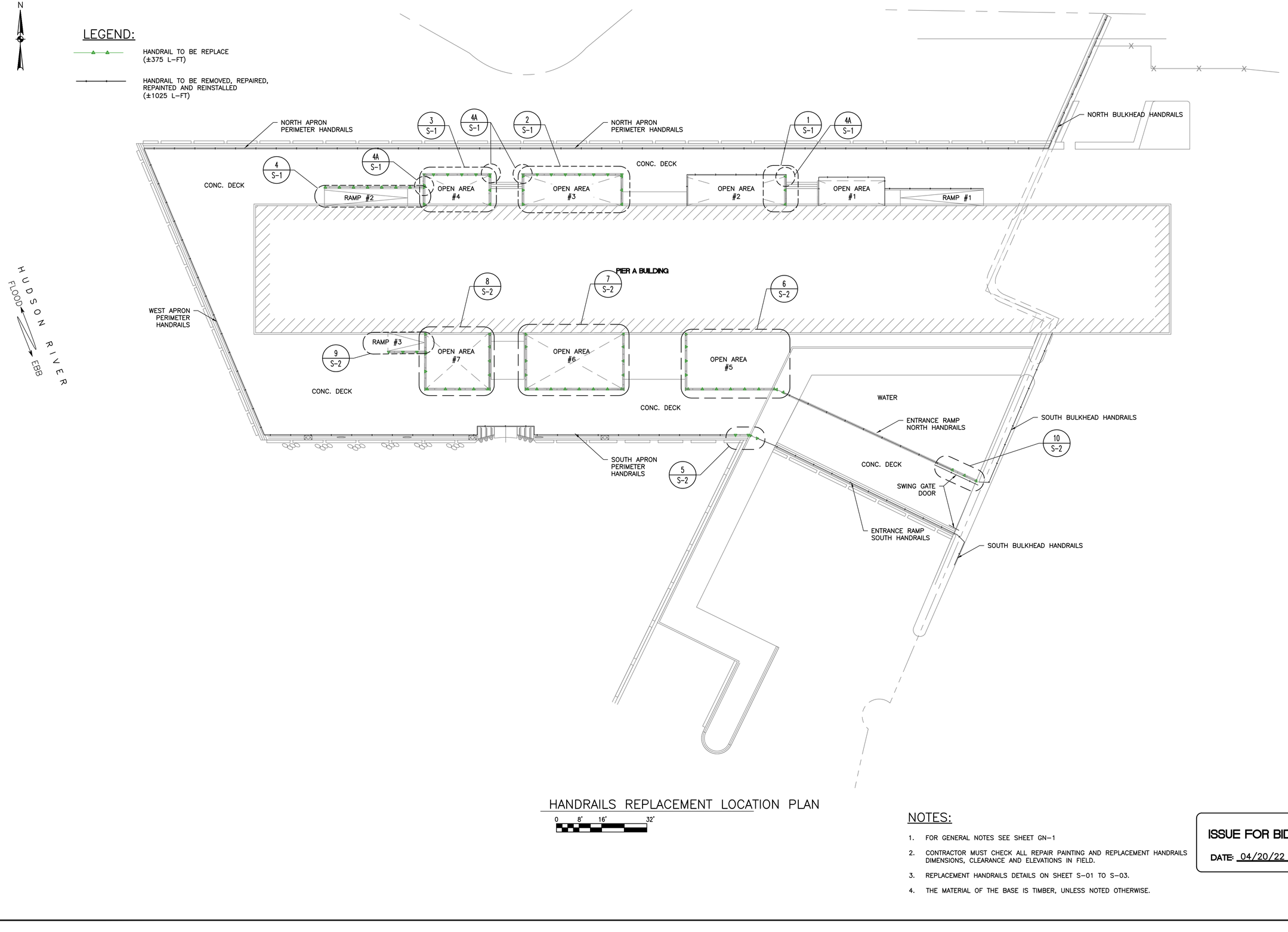
LEGEND:

HANDRAIL TO BE REPLACE (±375 L–FT)

HANDRAIL TO BE REMOVED, REPAIRED, REPAINTED AND REINSTALLED (±1025 L–FT)



HANDRAILS REPLACEMENT LOCATION PLAN

0 8' 16' 32'

NOTES:

1. FOR GENERAL NOTES SEE SHEET GN–1
2. CONTRACTOR MUST CHECK ALL REPAIR PAINTING AND REPLACEMENT HANDRAILS DIMENSIONS, CLEARANCE AND ELEVATIONS IN FIELD.
3. REPLACEMENT HANDRAILS DETAILS ON SHEET S–01 TO S–03.
4. THE MATERIAL OF THE BASE IS TIMBER, UNLESS NOTED OTHERWISE.

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PIER A RAILINGS REHABILITATION

HANDRAILS REPLACEMENT LOCATION PLAN

SCALE: AS NOTED	DESIGN BY: AK
DATE: 04/20/22	APPROVED BY: REM
PROJECT NO: 2020200179.007	DRAWN BY: FYC
SHEET NUMBER: GA-4	CHECKED BY: CFK
SHT. NO.: 6 OF 15	
DRAWING FILE NO.: GA-1 EXI... .DWG	REV. NO.: 0

S:\2020200179.007 PIER A RAILINGS\DWG\CURRENT\GA-1 EXISTING PIER & REPAIR PLAN.DWG

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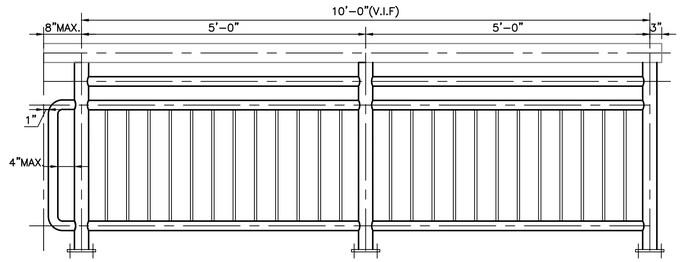
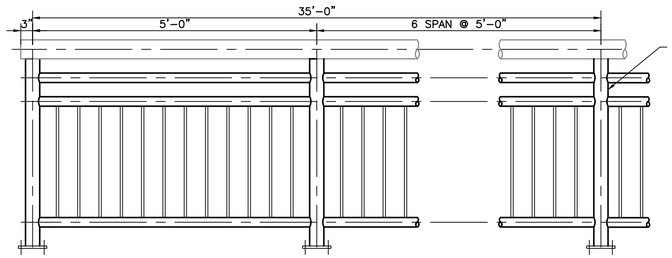
WEST



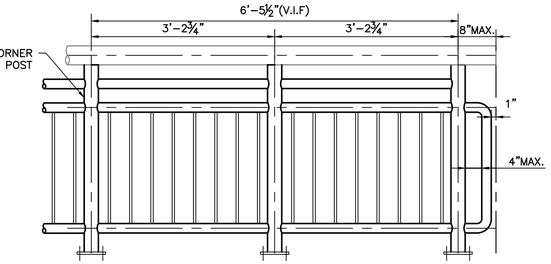
1 S-1 GA-4 OPENING #2 HANDRAILS ELEVATION

0 1' 2'

NORTH



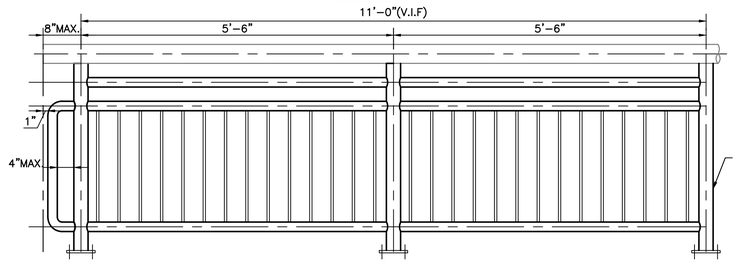
WEST



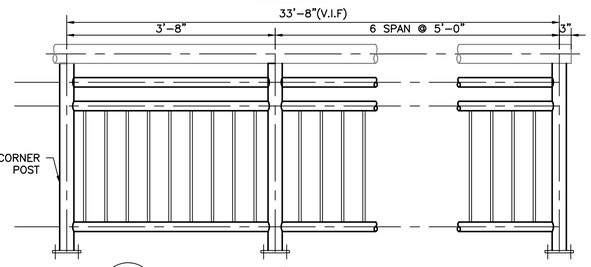
4 S-1 GA-4 RAMP #2 HANDRAILS ELEVATION

0 1' 2'

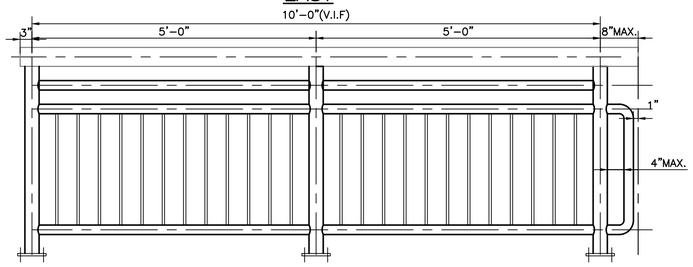
WEST



NORTH



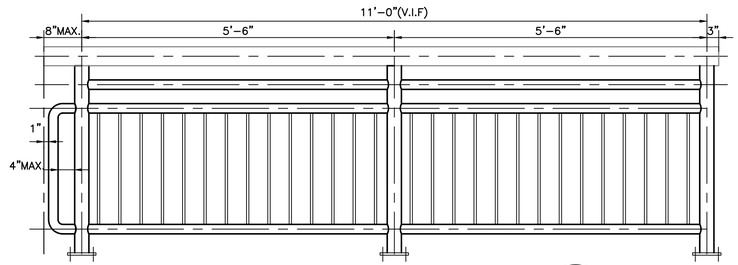
EAST



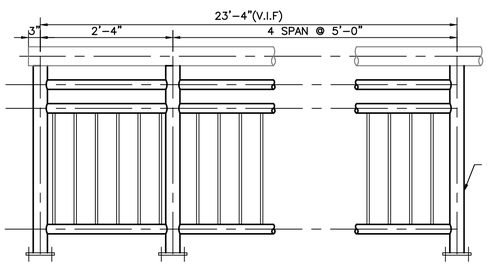
2 S-1 GA-4 OPENING #3 HANDRAILS ELEVATION

0 1' 2'

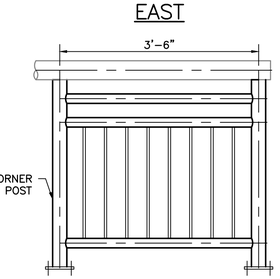
WEST



NORTH

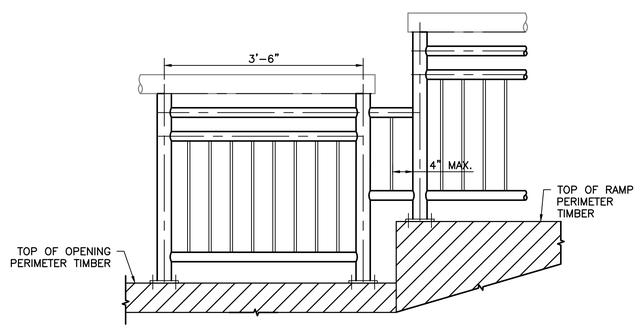


EAST



3 S-1 GA-4 OPENING #4 HANDRAILS ELEVATION

0 1' 2'



4A S-1 GA-4 HANDRAIL BETWEEN DIFFERENT ELEVATIONS

0 1' 2'

NOTES:

1. FOR GENERAL NOTES SEE SHEET GN-1
2. CONTRACTOR MUST CHECK ALL REPLACEMENT HANDRAILS DIMENSIONS, CLEARANCE AND ELEVATIONS IN FIELD.
3. HANDRAILS REPLACEMENT LOCATIONS ARE INDICATED IN SHEET GA-4.
4. TYPICAL RAILING ELEVATION, DIMENSIONS, MATERIALS, AND CONNECTION DETAILS ARE INDICATED IN SHEET S-03 AND TECHNICAL SPECIFICATIONS.
5. THE MATERIAL OF THE BASE IS EXISTING TIMBER, UNLESS NOTED OTHERWISE.

ISSUE FOR BID

DATE: 04/20/22

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200 LIBERTY STREET, 24TH FLOOR,
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BATTERY PARK CITY AUTHORITY
PIER A RAILINGS REHABILITATION

NORTH APRON HANDRAILS REPLACEMENT DETAILS

SCALE: AS NOTED	DESIGN BY: AK
DATE: 04/20/22	APPROVED BY: REM
PROJECT NO.: 2020200179.007	DRAWN BY: FYC
SHEET NUMBER: S-1	CHECKED BY: CFK
SHT. NO.: 7 OF 15	
DRAWING FILE NO.: S-1 REPA... .DWG	REV. NO.: 0

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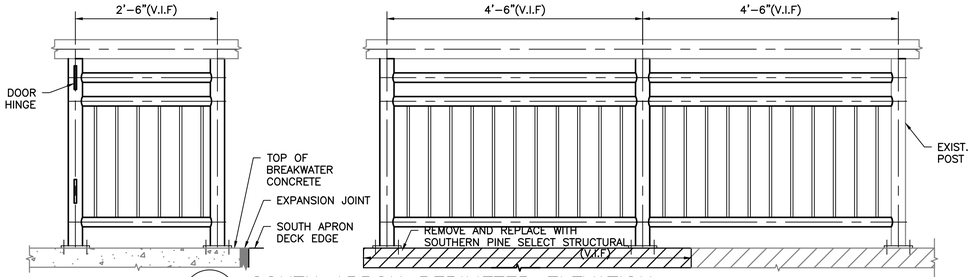
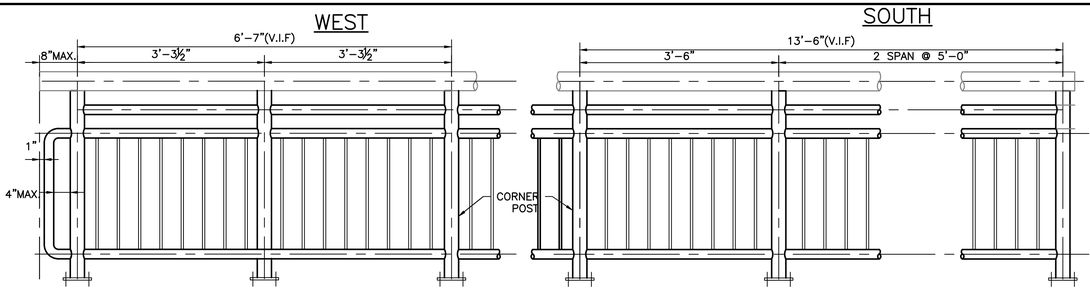


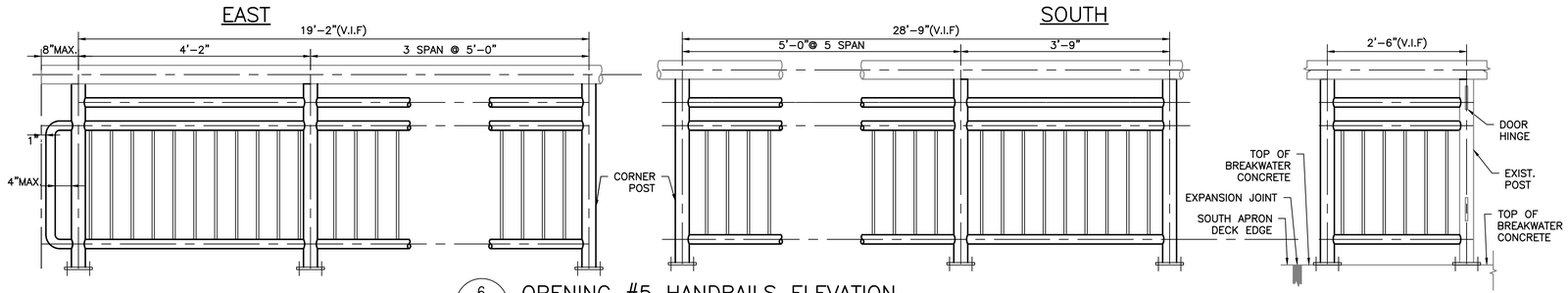
5 S-2 GA-4 SOUTH APRON PERIMETER ELEVATION

0 1' 2'



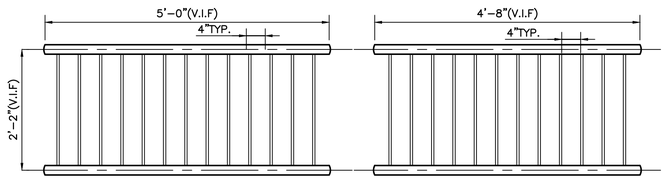
9 S-2 GA-4 RAMP #3 HANDRAILS ELEVATION

0 1' 2'



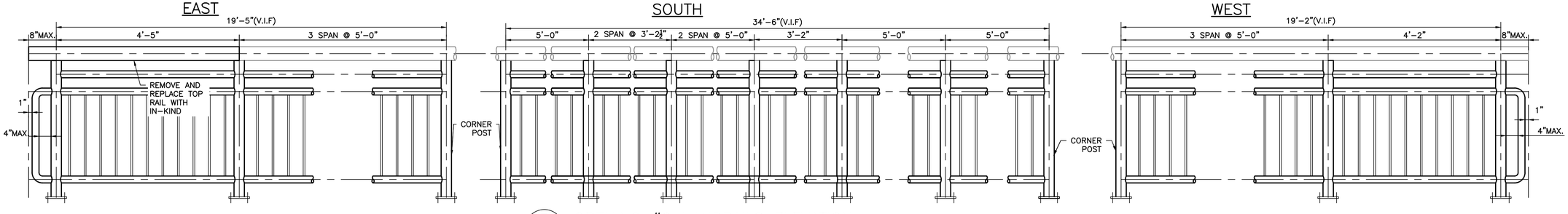
6 S-2 GA-4 OPENING #5 HANDRAILS ELEVATION

0 1' 2'



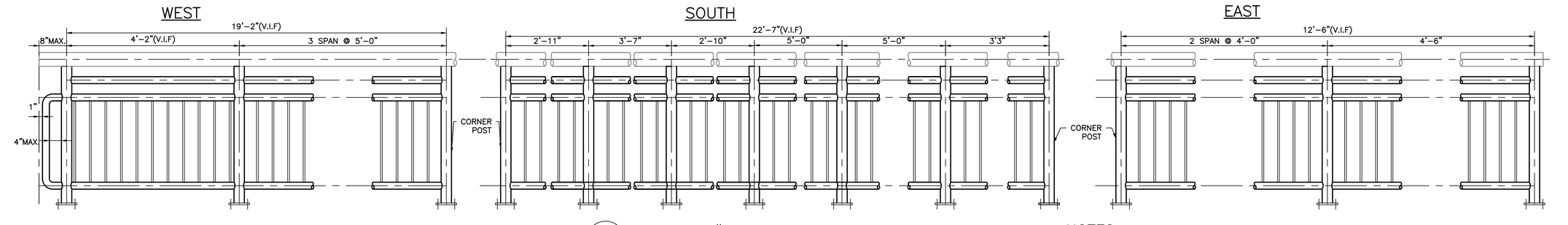
10 S-2 GA-4 ENTRANCE RAMP (NORTH)

0 1' 2'



7 S-2 GA-4 OPENING #6 HANDRAILS ELEVATION

0 1' 2'



8 S-2 GA-4 OPENING #7 HANDRAILS ELEVATION

0 1' 2'

NOTES:

1. FOR GENERAL NOTES SEE SHEET GN-1
2. CONTRACTOR MUST CHECK ALL REPLACEMENT HANDRAILS DIMENSIONS, CLEARANCE AND ELEVATIONS IN FIELD.
3. HANDRAILS REPLACEMENT LOCATIONS ARE INDICATED IN SHEET GA-4.
4. TYPICAL RAILING ELEVATION, DIMENSIONS, MATERIALS, AND CONNECTION DETAILS ARE INDICATED IN SHEET S-03 AND TECHNICAL SPECIFICATIONS.
5. THE MATERIAL OF THE BASE IS TIMBER, UNLESS NOTED OTHERWISE.

ISSUE FOR BID

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BATTERY PARK CITY AUTHORITY
PIER A RAILINGS REHABILITATION

SOUTH APRON HANDRAILS REPLACEMENT DETAILS

SCALE: AS NOTED	DESIGN BY: AK
DATE: 04/20/22	APPROVED BY: REM
PROJECT NO.: 2020200179.007	DRAWN BY: FYC
SHEET NUMBER: S-2	CHECKED BY: CFK
SHT. NO.: 8 OF 15	
DRAWING FILE NO.: S-1 REPA... .DWG	REV. NO.: 0

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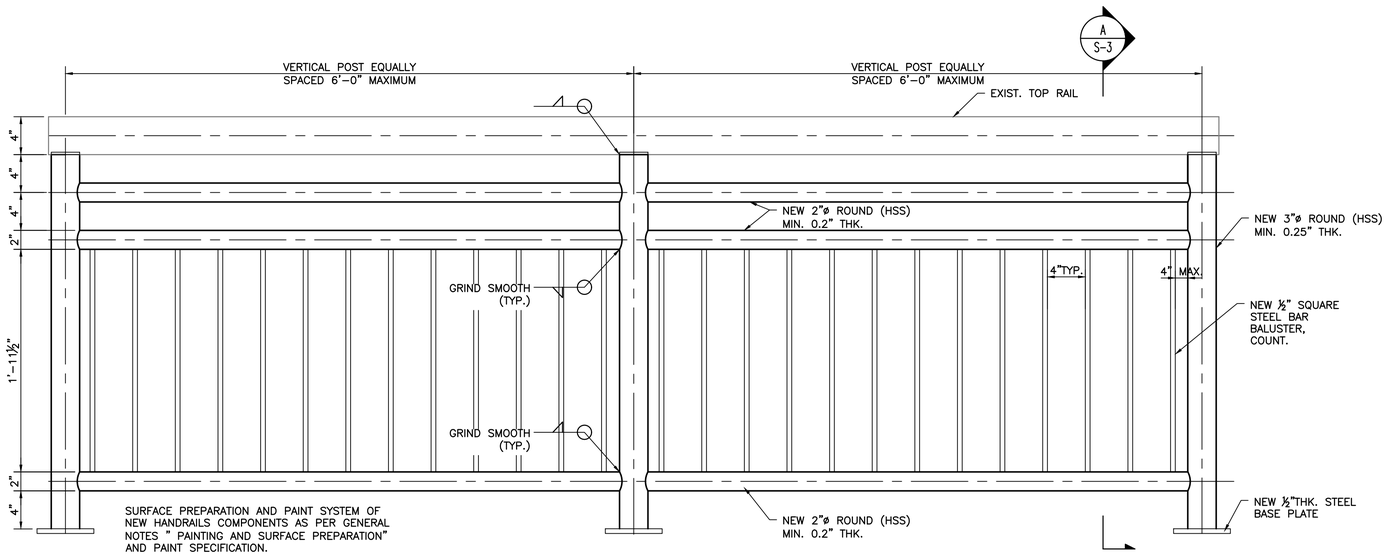
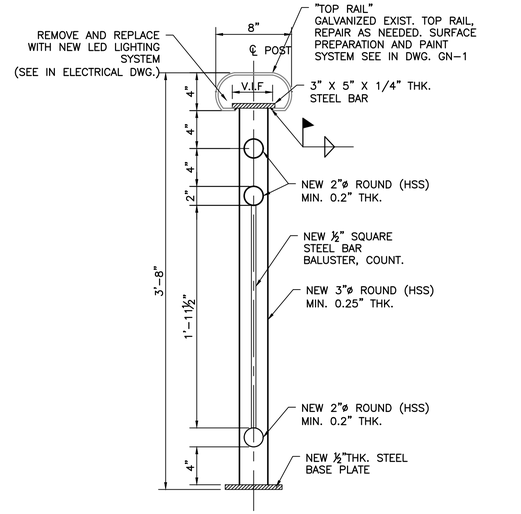


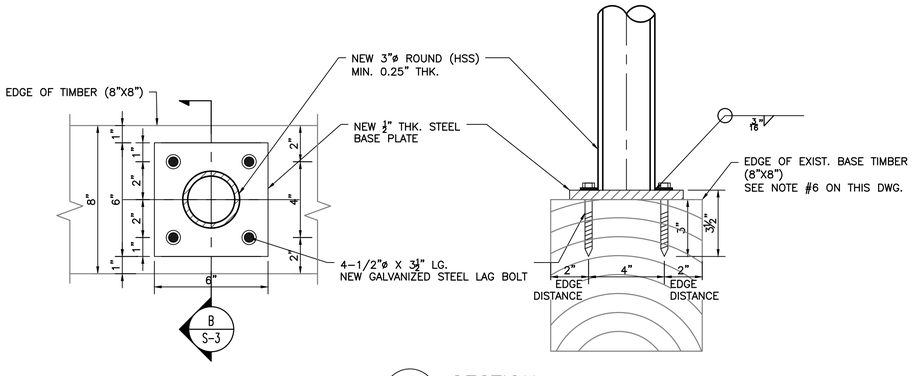
TYPICAL NEW RAILING ELEVATION

0 1/2' 1' 1 1/2'



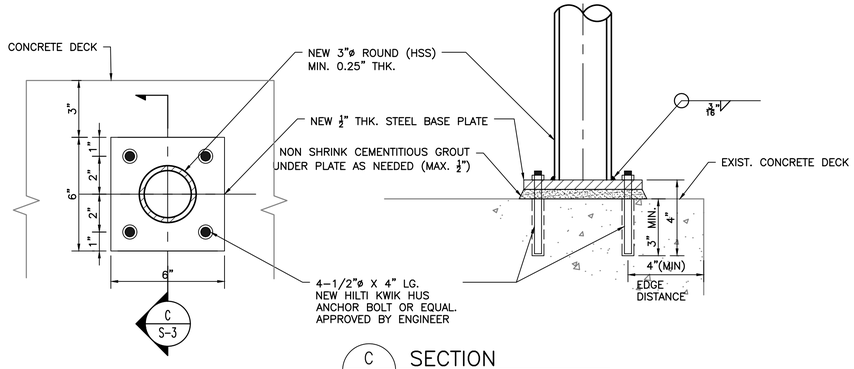
A S-3 / S-3 SECTION

0 1/2' 1' 1 1/2'



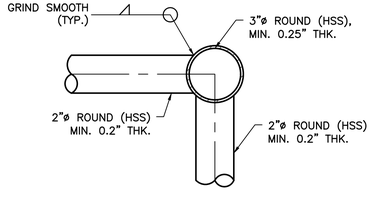
B S-3 / S-3 SECTION

0 3" 6" 1'



C S-3 / S-3 SECTION

0 3" 6" 1'



CORNER POST CONNECTION DETAILS

0 3" 6" 1'

BASE PLATE CONNECTION DETAILS

0 3" 6" 1'

NOTES:

1. FOR GENERAL NOTES SEE SHEET GN-1
2. CONTRACTOR MUST CHECK ALL REPLACEMENT HANDRAILS DIMENSIONS, CLEARANCE AND ELEVATIONS IN FIELD.
3. HANDRAILS REPLACEMENT LOCATIONS ARE INDICATED IN SHEET GA-4.
4. REPLACEMENT HANDRAILS DETAIL DIMENSION ON SHEET S-01 & S-02.
5. ALL WELDS SIZE ARE 3/16" FILLET WELD UNLESS OTHERWISE NOTED. WELDER QUALIFICATIONS AND INSTALLATION MUST FOLLOW AWS STANDARD AND TECHNICAL SPECIFICATIONS.
6. DAMAGED TIMBER BASE SHALL BE REPLACED WITH SOUTHERN PINE SELECT STRUCTURAL AT DIRECTION OF THE ENGINEER.

ISSUE FOR BID

DATE: 04/20/22

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PIER A RAILINGS REHABILITATION

TYPICAL HANDRAILS DETAILS 1 OF 2

SCALE: AS NOTED
DATE: 04/20/22
PROJECT NO: 2020200179.007
SHEET NUMBER: S-3
SHT. NO.: 9 OF 15
DRAWING FILE NO.: S-1 REPA... .DWG
DESIGN BY: AK
APPROVED BY: REM
DRAWN BY: FYC
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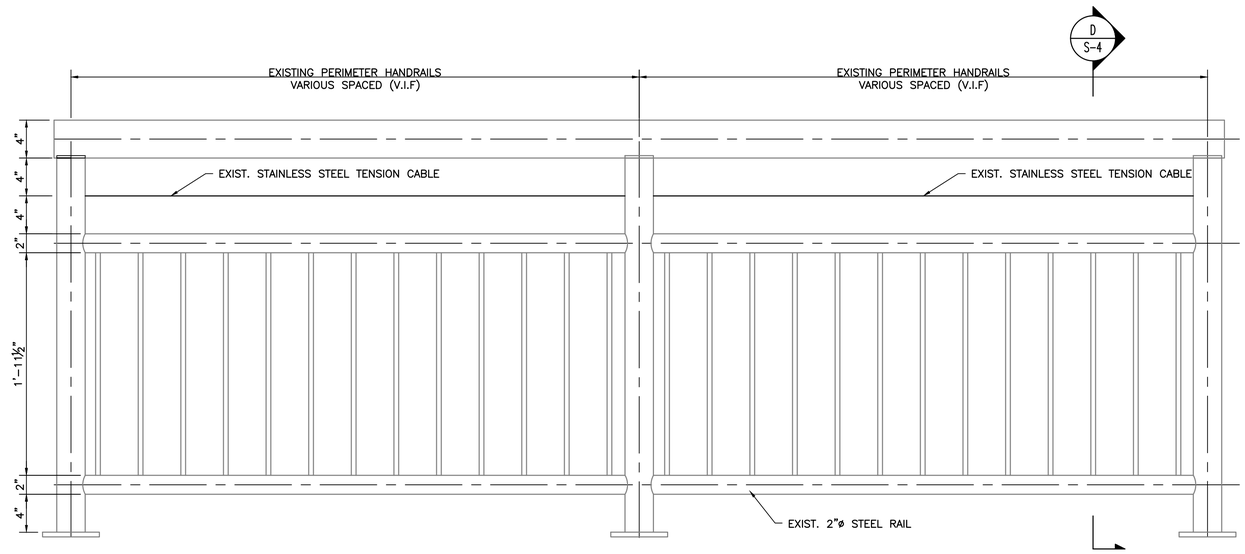
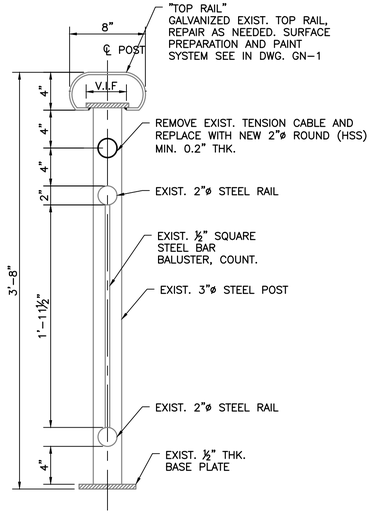


EXIST. PERIMETER HANDRAILS ELEVATION

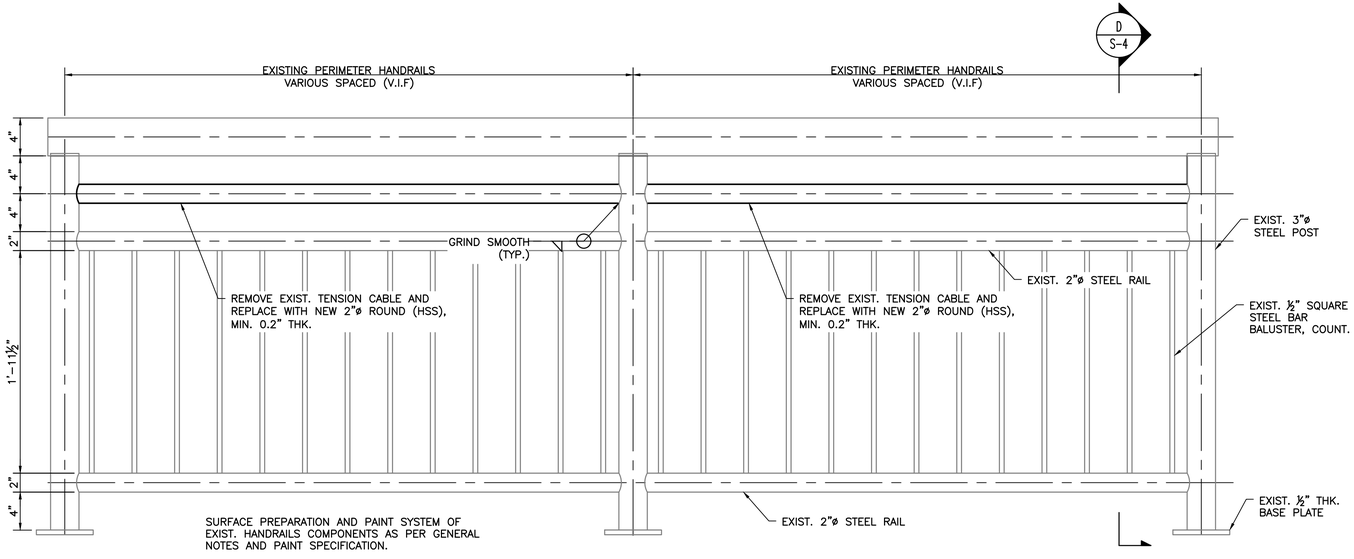
0 1/2' 1' 1 1/2'



D S-4 SECTION

S-4

0 1/2' 1' 1 1/2'



REPLACEMENT OF TENSION CABLE ELEVATION

0 1/2' 1' 1 1/2'

NOTES:

1. FOR GENERAL NOTES SEE SHEET GN-1
2. CONTRACTOR MUST CHECK ALL PERIMETER HANDRAILS SPAN DIMENSIONS BEFORE FABRICATE REPLACEMENT RAILS AT TENSION CABLE.
3. HANDRAILS REPLACEMENT LOCATIONS ARE INDICATED IN SHEET GA-4.
4. ALL WELDS SIZE ARE 3/16" FILLET WELD UNLESS OTHERWISE NOTED. WELDER QUALIFICATIONS AND INSTALLATION MUST FOLLOW AWS STANDARD AND TECHNICAL SPECIFICATIONS.

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PIER A RAILINGS REHABILITATION

TYPICAL HANDRAILS DETAILS 2 OF 2

SCALE: AS NOTED
DESIGN BY: AK
APPROVED BY: REM
DATE: 04/20/22
DRAWN BY: FYC
CHECKED BY: CFK
PROJECT NO.: 2020200179.007
SHEET NUMBER: S-4
SHT. NO.: 10 OF 15
DRAWING FILE NO.: S-4 TYPI... .DWG
REV. NO.: 0

S:\2020200179.007 PIER A RAILINGS\DWG\CURRENT\S-4 TYPICAL HANDRAILS DETAILS 2 OF 2.DWG

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POWER DEVICE SYMBOLS

- SINGLE RECEPTACLE, NEMA 5–20R
- DUPLEX RECEPTACLE, NEMA 5–20R
  - IG ISOLATED GROUND
  - SP TVSS SURGE SUPPRESSOR
- FLOOR BOX WITH DUPLEX RECEPTACLE, NEMA 5–20R
- CEILING MOUNTED DUPLEX RECEPTACLE, NEMA 5–20R
- QUADRUPLEX RECEPTACLE, NEMA 5–20R
- FLOOR BOX WITH QUADRUPLEX RECEPTACLE, NEMA 5–20R
- CEILING MOUNTED QUADRUPLEX RECEPTACLE, NEMA 5–20R
- DUPLEX RECEPTACLE, GROUND FAULT CIRCUIT INTERRUPTER
- DUPLEX RECEPTACLE ON EMERGENCY POWER, NEMA 5–20R
- QUADRUPLEX RECEPTACLE ON EMERGENCY POWER, NEMA 5–20R
- NON–LOCKING SPECIAL PURPOSE RECEPTACLE 5–20R — NEMA CONFIGURATION AS INDICATED
- LOCKING SPECIAL PURPOSE RECEPTACLE L5–20R — NEMA CONFIGURATION AS INDICATED
- WALL MOUNTED JUNCTION BOX
- JUNCTION BOX
- PB — PULL BOX
- GS — PUSHBUTTON
  - GS GENERATOR SHUTDOWN
  - ES EMERGENCY STOP
  - PB GENERAL PUSHBUTTON
  - AD ADA ACCESS

POWER EQUIPMENT SYMBOLS

- (5) — MOTOR — SIZE AS INDICATED IN HORSEPOWER
- 30A — UNFUSED SAFETY DISCONNECT SWITCH — SIZE AS INDICATED IN AMPS
- 30A — FUSED SAFETY DISCONNECT SWITCH — SIZE AS INDICATED IN AMPS
- 30A — CIRCUIT BREAKER — SIZE AS INDICATED IN AMPS
- 1 — MOTOR STARTER — NEMA SIZE AS INDICATED
- 3 30A — COMBINATION MOTOR STARTER AND CIRCUIT BREAKER — SIZE AS INDICATED IN AMPS
- 3 30A — COMBINATION MOTOR STARTER AND FUSED DISCONNECT SWITCH — SIZE AS INDICATED IN AMPS
- ELECTRICAL PANEL – SURFACE MOUNTED
- ELECTRICAL PANEL – FLUSH MOUNTED
- DISTRIBUTION PANEL
- T — TRANSFORMER
- (M) — ELECTRICITY METER BY UTILITY COMPANY
- M — ELECTRICITY METER BY OWNER

GROUNDING SYMBOLS

- G — GROUNDING CABLE (EXPOSED)
- GROUNDING CABLE (BURIED OR CONCEALED)
- GB — GROUNDING BUS BAR
- GROUND CONNECTION POINT

CONDUIT AND WIRING SYMBOLS

- LP–7 — BRANCH CIRCUIT CONDUIT & WIRE, HOMERUN TO PANELBOARD PANELBOARD AND CIRCUIT NUMBER INDICATED
- CONCEALED CONDUIT & WIRE OR ITEM RUN AT OR ABOVE ELEVATION SHOWN
- EXPOSED CONDUIT & WIRE OR ITEM RUN AT OR ABOVE ELEVATION SHOWN
- OR — EQUIPMENT ON SAME CIRCUIT BUT SEPARATELY CONTROLLED
- LIQUID–TIGHT FLEXIBLE METAL (LMFC) CONDUIT
- E — UNDERGROUND CONDUIT & WIRE
- CONDUIT BENDS TOWARD OBSERVER (UP)
- CONDUIT BENDS AWAY FROM OBSERVER (DOWN)
- CONDUIT STUBBED OUT AND CAPPED FOR FUTURE USE

LIGHTING SYMBOLS

- F1 / LP–7 / q — LIGHT FIXTURE — CIRCUIT — SWITCH — FIXTURE TYPE
- RECESSED OR SURFACE MOUNTED FIXTURE
- RECESSED OR SURFACE MOUNTED FIXTURE WITH EMERGENCY BALLAST
- INDUSTRIAL, UNDERCOUNTER, STRIP, OR CASEWORK FIXTURE
- INDUSTRIAL OR STRIP FIXTURE WITH EMERGENCY BALLAST
- DOWNLIGHT FIXTURE
- DOWNLIGHT FIXTURE WITH EMERGENCY BALLAST
- DIRECTIONAL DOWNLIGHT FIXTURE
- WALL OR SURFACE MOUNTED FIXTURE
- WALL OR SURFACE MOUNTED FIXTURE WITH EMERGENCY BALLAST
- EXIT FIXTURE – CEILING MOUNTED – ARROWS AS INDICATED
- EXIT FIXTURE – WALL OR SURFACE MOUNTED – ARROWS AS INDICATED
- EMERGENCY BATTERY UNIT WITH ADJUSTABLE HEAD(S)
- EMERGENCY BATTERY UNIT FOR REMOTE EMERGENCY FIXTURES
- REMOTE EMERGENCY FIXTURE SINGLE HEAD
- REMOTE EMERGENCY FIXTURES DUAL HEAD
- TRACK LIGHTING SYSTEM
- PC — PHOTOCELL
- S — SINGLE POLE SWITCH
- S_2 — DOUBLE POLE SWITCH
- S_3 — THREE WAY SWITCH
- S_4 — FOUR WAY SWITCH
- S_M — MANUAL STARTER SWITCH
- S_{MS} — OCCUPANCY SENSOR SWITCH
- CORNER MOUNTED MOTION SENSOR
- CEILING MOUNTED MOTION SENSOR
- TC — TIME CLOCK

SINGLE LINE DIAGRAM SYMBOLS

- 100AF / 30AT — CIRCUIT BREAKER — AF, FRAME RATING IN AMPS — AT, TRIP RATING IN AMPS
- DISTRIBUTION TRANSFORMER — SIZE AS INDICATED
- DELTA
- WYE
- WIREWAY
- 25 — ELECTRIC MOTOR — HORSEPOWER AS INDICATED
- 20A — FUSE — SIZE AS INDICATED IN AMPS
- (M) — ELECTRIC METER
- N O E L — AUTOMATIC TRANSFER SWITCH
- N O E L — AUTOMATIC TRANSFER SWITCH – SERVICE ENTRANCE RATED
- ABCNG — PORTABLE GENERATOR CONNECTION
- G — STANDBY GENERATOR — SIZE AS INDICATED
- PANELBOARD — SIZE AS INDICATED
- PANELBOARD WITH INTEGRAL TRANSFORMER — SIZE AS INDICATED

ABBREVIATIONS

AF	AMP FRAME
AFF	ABOVE FINISHED FLOOR
AMP/A	AMPERE
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
BKR	BREAKER
C/COND	CONDUIT
CAT	CATEGORY
CB, C/B	CIRCUIT BREAKER
CKT	CIRCUIT
CLG	CEILING
CT	CURRENT TRANSFORMER
CU	COPPER
DEMO	DEMOLITION
DISC	DISCONNECT
DWG	DRAWING
(E)	EXISTING
EC	ELECTRICAL CONTRACTOR
ELEC	ELECTRICAL
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
(ER)	EXISTING RELOCATED
EUH	ELECTRIC UNIT HEATER
EX	EXISTING
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FAAP	FIRE ALARM ANNUNCIATOR PANEL
GFCI, GFI	GROUND FAULT CIRCUIT INTERRUPTER
GFSC	GROUND FAULT SENSING RELAY
G/GND	GROUND
INCAND	INCANDESCENT
IMC	INTERMEDIATED METAL CONDUIT
ISC	SHORT CIRCUIT CURRENT
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
LTG	LIGHTING
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
MFR	MANUFACTURER
MH	MANHOLE
MCC	MOTOR CONTROL CENTER
MTD	MOUNTED
(N)	NEW
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NIC	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
P	POLE
PF	POWER FACTOR
PH	PHASE
PL	PILOT LIGHT
PNL	PANEL
PRI	PRIMARY
(R)	REMOVE
RECEPT	RECEPTACLE(S)
RGS	RIGID GALVANIZED STEEL
RTD	RESISTANCE TEMPERATURE DETECTOR
SEC	SECONDARY
SIG	SIGNAL
SPEC	SPECIFICATION
ST	SHUNT TRIP
STD	STANDARD
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UL	UNDERWRITERS LABORATORY
V	VOLT
W	WATT
WP	WATERPROOF
XFR	TRANSFER
ø	PHASE

GENERAL NOTES

1. THIS IS A STANDARD SYMBOL LIST. ALL DEVICE SYMBOLS AND ABBREVIATIONS MAY NOT NECESSARILY APPEAR ON THE FLOOR PLANS OR DETAIL SHEET. ONLY THOSE SYMBOLS INDICATED ON THE FLOOR PLANS ARE USED FOR THIS PROJECT. ALL OTHERS ARE TO BE CONSIDERED NOT USED AND SHOULD BE DISREGARDED.
2. REFER TO ELECTRICAL SPECIFICATIONS SECTION 260000.
3. ABBREVIATIONS NOT SHOWN ARE DERIVED FROM ASME Y1.1 1989 ABBREVIATIONS FOR USE ON DRAWINGS AND IN TEXT.
4. DIMENSIONS MARKED ± ARE TO BE VERIFIED IN THE FIELD. THOSE MARKED N.T.S. ARE SHOWN NOT TO SCALE, ALL OTHERS ASSUMED TO BE CORRECT AND SHOULD BE CHECKED WITH OTHER TRADE DRAWINGS AND VERIFIED BY THE CONTRACTOR.
5. ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND WITH THE LATEST REVISIONS OF THE NATIONAL ELECTRICAL CODE, WITH THE LOCAL CODES WHICH HAVE PRECEDENCE.
6. CONDUIT AND WIRE ARE SHOWN DIAGRAMMATICALLY ON THE DRAWINGS. EXACT LOCATIONS AND ROUTING IS TO BE DETERMINED IN THE FIELD. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL ELECTRICAL WORK WITH ALL OTHER TRADES.
7. MINIMUM CONDUIT SIZE SHALL BE 3/4" ABOVE GRADE AND 1" BELOW GRADE UNLESS OTHERWISE NOTED.
8. ALL CONDUIT SHALL BE GALVANIZED STEEL ABOVE GRADE AND PVC BELOW GRADE.
9. ALL MOUNTING HARDWARE (PIPE STRAPS, V–BOLTS, ETC.) MUST BE HOT DIPPED GALVANIZED.
10. CONDUIT SHALL BE RUN NEAT AND IN A WORKMAN LIKE MANNER, AT 90 DEGREE ANGLES WERE POSSIBLE.
11. CONDUIT RUNS SHALL BE KEPT AT LEAST 12" FROM STEAM OR OTHER HOT LINES. WHERE CROSSINGS ARE UNAVOIDABLE, CONDUIT SHALL BE KEPT AT LEAST 6" FROM COVERING OF SUCH LINES.
12. ALL LIGHTING FIXTURE ELEVATIONS ARE TAKEN FROM FINISHED FLOOR ELEVATION, PLATFORM ELEVATION OR GRADE TO BOTTOM OF GLOBE.
13. FINAL CONNECTIONS TO EQUIPMENT SHALL BE MADE BY FLEXIBLE CONDUIT.
14. INSTRUMENT SIGNAL AND CONTROL WIRES SHALL NOT BE SPLICED.
15. ALL ELECTRICAL WIRES AND CABLES FOR POWER, CONTROL AND INSTRUMENTATION SHALL BE TAGGED AT BOTH ENDS.
16. MULTIPLE "HOME RUN" CIRCUITS MAY BE COMBINED BY THE CONTRACTOR INTO A SINGLE CONDUIT/CABLE USING THE FOLLOWING GUIDELINES:
    - A. NO MORE THAN (8) SINGLE PHASE OR (3) THREE PHASE CIRCUITS MAY BE COMBINED.
    - B. WIRE SIZES MUST BE INCREASED PER N.E.C. ARTICLE 310 NOTE #8 TO AMPACITY TABLES (AS REQUIRED).
    - C. CONDUITS SIZES MUST BE ADJUSTED TO MAINTAIN A MAXIMUM OF 40% FILL.
    - D. ONLY CIRCUITS ORIGINATING AT A COMMON PANEL, MCC, ETC. MAY BE COMBINED.
    - E. LOW LEVEL SIGNAL CIRCUITS SHALL NOT BE COMBINED WITH ALTERNATING CURRENT CIRCUITS.
17. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY RACEWAY SUPPORTS. SUPPORTS SHALL BE FABRICATED FROM GALVANIZED STEEL STRUCTURAL SHAPES OR UNISTRUT.
18. NEUTRAL AND GROUND CONDUCTORS SHALL BE OF THE SAME AWG AS CURRENT CARRYING CONDUCTORS. (UNLESS OTHERWISE NOTED).
19. GROUNDING AND BONDING OF ELECTRICAL EQUIPMENT AND PIPING SHALL BE IN ACCORDANCE WITH NEC SECTION 250 AND 501, NFPA 54–1988, AND ANSI 2223.1–1988.
21. WIRE AND CABLE
    - A. FEEDER CABLES AND BRANCH CIRCUIT WIRING AT INTERIOR, DRY LOCATIONS, UP TO 500MCM SHALL BE TYPE THWN/THHN THERMOPLASTIC 600 VOLT INSULATED COPPER CONDUCTOR. MINIMUM SIZE IS #12 AWG (#14 MAY BE USED FOR CONTROL CIRCUITS ONLY). ALL UNDERGROUND SERVICE CABLES SHALL HAVE THW – THERMOPLASTIC, 600 VOLT INSULATION COPPER CONDUCTOR.
    - B. VFD LOAD SIDE WIRING SHALL BE TYPE XHHW–2 THERMOSET 600 VOLT INSULATED COPPER CONDUCTOR. MINIMUM SIZE IS #12 AWG.
22. RACEWAYS
    - A. CONDUCTORS SHALL BE INSTALLED IN RGS WHERE SUBJECT TO PHYSICAL DAMAGE, EMT MAY BE USED IN OTHER LOCATIONS AS ALLOWED BY CODE.
23. BRANCH WIRING
    - A. PROVIDE ALL CIRCUITING OF GENERAL, HVAC AND LIGHTING CIRCUITS TO THE PANELS
    - B. ACTUAL CIRCUIT NUMBERS MAY BE ALTERED DURING CONSTRUCTION. HOWEVER, THE DESIGN INTENT MUST BE MAINTAINED. THE EC WILL ACCURATELY REFLECT ALL CIRCUIT NUMBERS ON THE AS–BUILT DRAWINGS.
    - C. BASE BUILDING LIGHTING AND GENERAL CONVENIENCE RECEPTACLE CIRCUITS SHALL BE NETWORKED WITH (3) SINGLE PHASE CONDUCTORS SHARING (1) NEUTRAL CONDUCTOR (4#12 AWG.). ONLY AT 3–PHASE PANELS.
    - D. ALL 120 VOLT, 20 AMP BRANCH WIRING EXCEEDING 120 FEET SHALL BE INCREASED TO #10 AWG.
    - E. NO MORE THAN 1,920 WATTS SHALL BE CONNECTED TO ANY (1) 20AMP, 120 VOLT
    - F. ALL FLUORESCENT LIGHTING CIRCUITS SHALL BE PROVIDED WITH 20AMP CIRCUIT BREAKER WITH A MAXIMUM OF 1,250 WATTS.
    - G. TANDEM WIRING OF GFI RECEPTACLES SHALL BE PERMITTED IF INSTALLED PER CODE.

STANDARD MOUNTING HEIGHTS

9" BELOW FINISHED CEILING	WALL–MOUNTED CLOCKS, PROGRAM BELLS, (OR AS SHOWN ON ARCHITECTURAL DETAILS).
6" ABOVE FIRE HOUSE CABINET	BLUE SIGNAL LIGHT
10'–0"	BATTERY LIGHTING UNITS AND REMOTE WALL MOUNTED LIGHTHEADS (OR 1'–0" BELOW FINISHED CEILING OF TOP OF UNIT)
8'–6"	PENDANT–HUNG INDUSTRIAL AND STRIP LIGHTING FIXTURES
CENTERED ABOVE DOOR OR WINDOW	WARNING AND SIGNALING FIXTURES/SIGNS
6'–8" – TO BOTTOM OF DEVICE	OR 6" BELOW FINISHED CEILING WHICHEVER IS LOWER. FIRE ALARM SIGNAL DEVICES AND ILLUMINATED FIRE SIGNALS.
6'–6"	TOP OF FLUSH AND SURFACE MOUNTED ELECTRICAL LIGHTING OR POWER PANELBOARDS AND TELEPHONE CABINETS.
6'–3"	TOP OF BACK–MOUNTED WALL EXIT FIXTURES (NOT MOUNTED ABOVE DOORS).
6'–0"	TOP OF HIGHEST ELECTRICAL SAFETY DISCONNECT SWITCHES, MAGNETIC STARTERS, CONTACTORS.
4'–6"	WALL MOUNTED INTERCOM, TELEPHONE AND PAY STATIONS. (MAXIMUM SIDE REACH HEIGHT ADA).
4'–0"	WALL MOUNTED ELECTRICAL DEVICE LIGHTING SWITCHES, MANUAL MOTOR STARTERS, THERMOSTATS, WALL–MOUNTED WIREMOLD AND G.F.I. RECEPTACLES IN TOILET ROOMS OR FOR SEPERATE SINKS NOT IN CASEWORK (MAXIMUM SIDE REACH HEIGHT ADA).
3'–6"	FIRE ALARM PULL STATIONS, ADA COMPLIANT DEVICE ROUGH IN.
2'–0"	ELECTRICAL RECEPTACLES WITHIN MECHANICAL SPACES, ELECTRICAL AND ELEVATOR ROOMS.
18"	ELECTRICAL RECEPTACLES, TELEPHONE JACKS, COAXIAL JACKS, AND DATA JACKS FOR DESKS.
00"	FINISHED FLOOR

MOUNTING HEIGHT NOTES

1. STANDARD MOUNTING HEIGHTS: (COORDINATE WITH ARCHITECTURAL DRAWINGS) ALL MOUNTING HEIGHTS SHALL BE AS INDICATED BY ARCHITECT. IF NOT INDICATED BY ARCHITECT THEN PROVIDE AS NOTED ABOVE.
2. MOUNTING HEIGHTS TO CENTER OF OUTLETS UNLESS OTHERWISE NOTED. IN MASONRY CONSTRUCTION THE ABOVE MOUNTING HEIGHTS SHALL BE USED FOR REFERENCE TO NEAREST BLOCK OR BRICK COURSING.
3. THE ABOVE MOUNTING HEIGHTS SHALL BE ADHERED TO UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE ON THE DRAWING OR SPECIFICATIONS.
4. INDICATION (+) NEXT TO A DEVICE INDICATES THAT DEVICE IS MOUNTED ABOVE A COUNTER OR CASEWORK. COORDINATE WITH ARCHITECTURAL DETAILS AND CASEWORK CONTRACTOR.
5. 3'–6" FOR ADA COMPLIANT DEVICES VERIFY EXACT HEIGHT WITH ARCHITECT PRIOR TO ROUGH IN.

DRAWING LIST

E–00	ELECTRICAL COVER SHEET
E–01	ELECTRICAL DEMO PLAN
E–02	ELECTRICAL PROPOSED PLAN – LIGHTING
E–03	ELECTRICAL SCHEDULES
E–04	ELECTRICAL DETAILS

NOTE:

NOT ALL SYMBOLS AND ABBREVIATIONS INDICATED APPEAR ON THESE DOCUMENTS.

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DATE: 04/20/22

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PIER A RAILINGS REHABILITATION

ELECTRICAL GENERAL NOTES & LEGENDS

SCALE: AS NOTED	DESIGN BY: SJI
DATE: 04/22/22	APPROVED BY: REM
	DRAWN BY: SJI
	CHECKED BY: GTH
PROJECT NO.: 2020200179.007	
SHEET NUMBER: E-0	
SHT. NO.: 11 OF 15	
DRAWING FILE NO.: GN-2 GEN... .DWG	REV. NO.: 0

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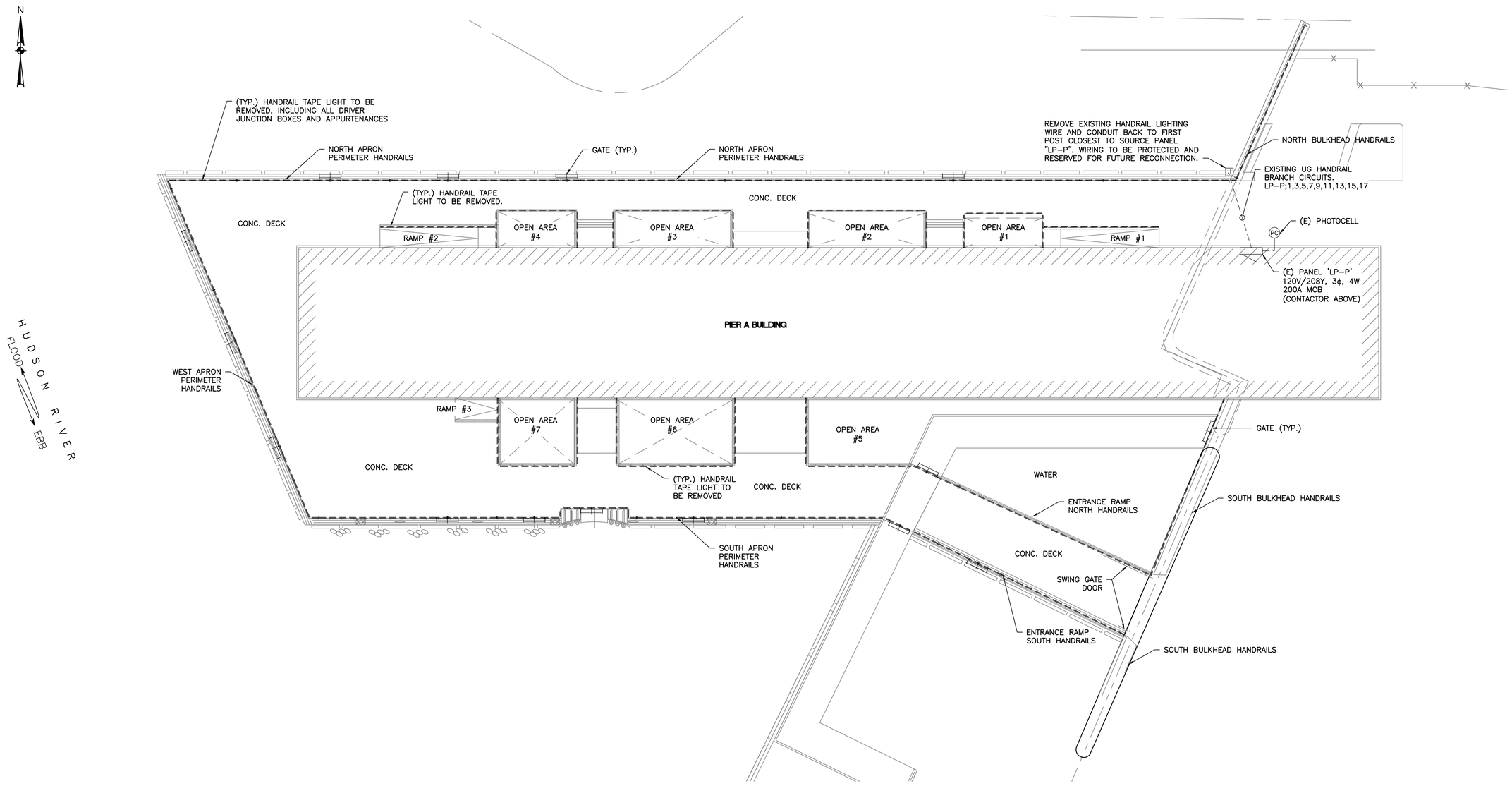

LIGHTING PLAN

0 8' 16' 32'

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BPCA CONTRACT #19-2855

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URBAN ENGINEERS

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PIER A RAILINGS REHABILITATION

ELECTRICAL WORK DEMOLITION PLAN

SCALE: AS NOTED	DESIGN BY: SJI
DATE: 04/20/22	APPROVED BY: REM
	DRAWN BY: SJI
	CHECKED BY: GTH
PROJECT NO.: 2020200179.007	
SHEET NUMBER: E-1	
SHT. NO.: 12 OF 15	
DRAWING FILE NO.: E-1 LIGH... .DWG	REV. NO.: 0

S:\2020200179.007 PIER A RAILINGS\DWG\CURRENT\ELECTRICAL DWG\SIE-1 LIGHTING PLAN - DEMO.DWG

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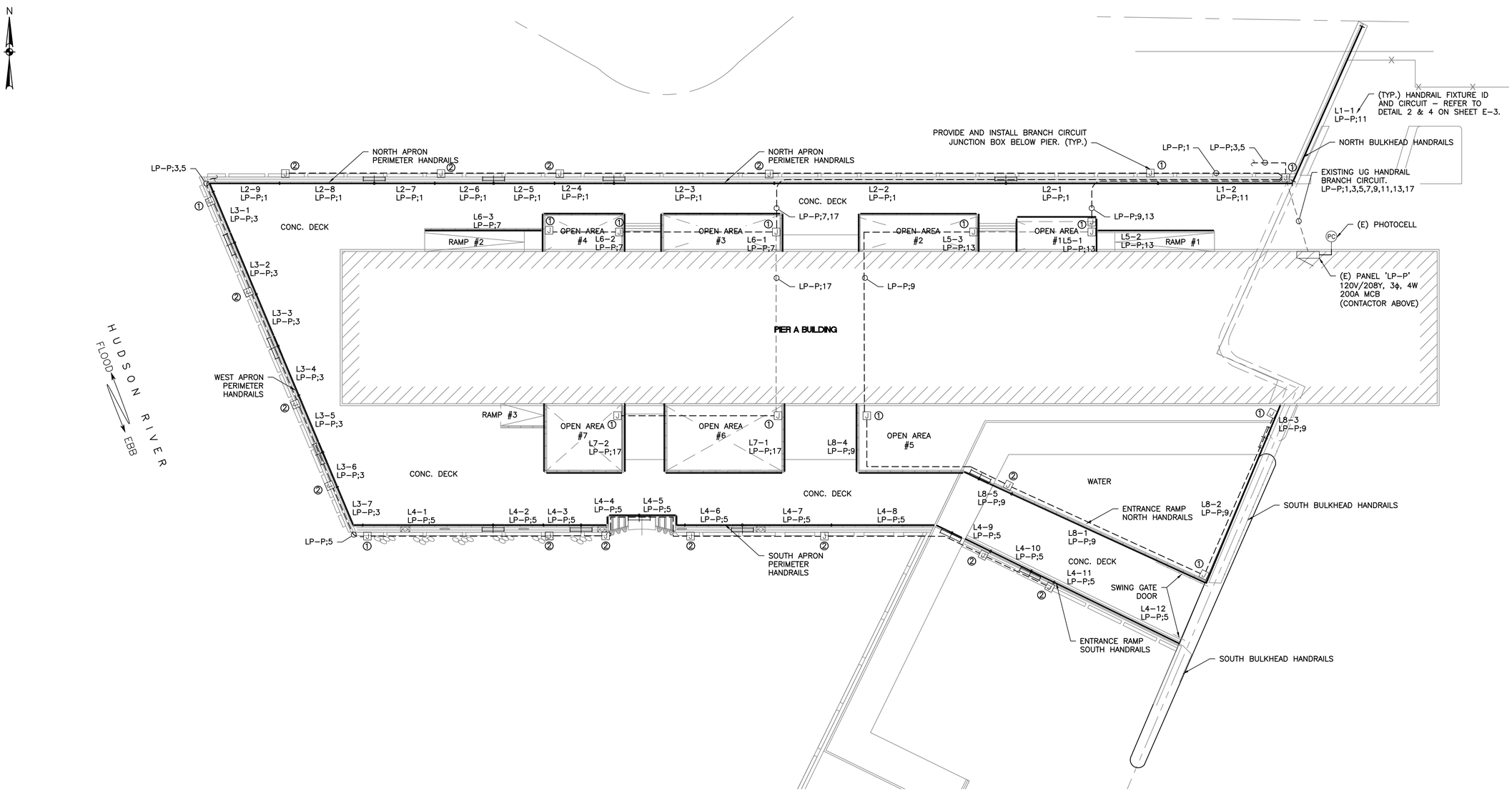

GENERAL NOTES:

1. HANDRAIL LIGHTING FIXTURE CONNECTION JUNCTION BOXES NOT SHOWN FOR CLARITY.
2. ALL CONDUITS SHALL BE ROUTED BELOW PIER. ROUTING TO MATCH EXISTING INSTALLATION, WHERE FEASIBLE.
3. ALL LIGHTING BRANCH CIRCUIT SHALL BE FED FROM PANEL 'LP–P'
4. ALL EXTERIOR JUNCTION BOXES SHALL BE GASKETED WATERPROOF TYPE. ALL CONDUITS RUN SHALL BE PVC COATED RGS.
5. ALL HANDRAIL FIXTURES ARE CONTROLLED VIA EXISTING CONTACTOR AND PHOTOCELL.
6. REFER TO E–3 FOR ELECTRICAL SCHEDULES
7. REFER TO E–4 FOR ELECTRICAL DETAILS.

LIGHTING PLAN

0 8' 16' 32'

KEY NOTES:

1. CONNECTION TO ONE HANDRAIL FIXTURE (I.E.;L2–1). CONTRACTOR TO PROVIDE AND INSTALL ONE LIGHT FIXTURE CONNECTION JUNCTION BOX WITH LMFC CONNECTIONS ADJACENT TO BRANCH CIRCUIT JUNCTION BOX. ROUTE FIXTURE'S FACTORY ATTACHED SINGLE LEAD CABLE THROUGH VERTICAL HANDRAIL POST DOWN TO FIXTURE CONNECTION JUNCTION BOX AND SPLICE WITH ASSOCIATED BRANCH CIRCUIT WIRING. INSTALL FIXTURE MANUFACTURER PROVIDED JUNCTION BOX COVER.

2. CONNECTION TO TWO HANDRAIL FIXTURES (I.E.;L2–2,3). CONTRACTOR TO PROVIDE AND INSTALL TWO LIGHT FIXTURE CONNECTION JUNCTION BOXES WITH LMFC CONNECTIONS ADJACENT TO BRANCH CIRCUIT JUNCTION BOX. ROUTE BOTH FIXTURES' FACTORY ATTACHED SINGLE LEAD CABLES THROUGH VERTICAL HANDRAIL POST DOWN TO EACH FIXTURE CONNECTION JUNCTION BOX AND SPLICE WITH ASSOCIATED BRANCH CIRCUIT WIRING. INSTALL FIXTURE MANUFACTURER PROVIDED JUNCTION BOX COVERS.

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BPCA CONTRACT #19-2855

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PIER A RAILINGS REHABILITATION
NEW LIGHITNG PLAN

SCALE: AS NOTED
DATE: 04/20/22
PROJECT NO.: 2020200179.007
SHEET NUMBER: E-2
SHT. NO.: 13 OF 15
DRAWING FILE NO.: E-2 LIGH... .DWG
REV. NO.: 0

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TABLE–1 EXISTING PANEL 'LP–P' SCHEDULE

JOB NAME: BPCA-PIER A HANDRAIL LIGHTING PANEL NAME: (E) LP-P	NOTES: SQUARE D POWERLINK PANEL * - INDICATED CONTROLLABLE CIRCUIT BREAKER	VOLTAGE: 208Y/120V PHASE: 3 WIRE: 4 BUS: 225A MAINS: 200A MCB AIC RATING: 22KAIC ENCLOSURE: NEMA 1 MOUNTING: SURFACE

CONN. AMPS	DESCRIPTION	BRANCH CIRCUIT	BKR	CKT	PH	CKT	BKR	BRANCH CIRCUIT	DESCRIPTION	CONN. AMPS
3.67	*RAIL LIGHTS - NORTH APRON	EXISTING WIRE AND CONDUIT	20	1	A	2	20	EXISTING WIRE AND CONDUIT	(4) GFCI RECPT. (NORTHERNMOST PLANTERS)	0.00
1.46	*RAIL LIGHTS - WEST APRON	EXISTING WIRE AND CONDUIT	20	3	B	4	20	EXISTING WIRE AND CONDUIT	(3) GFCI RECPT. (SOUTHERNMOST PLNTRS)	0.00
3.40	*RAIL LIGHTS - SOUTH APRON	EXISTING WIRE AND CONDUIT	20	5	C	6	20	EXISTING WIRE AND CONDUIT	(3) GFCI RECPT. (POLE LIGHTS, NOT AT PLNTRS)	0.00
2.26	*RAIL LIGHTS - NORTHWEST INTERIOR	EXISTING WIRE AND CONDUIT	20	7	A	8	20	EXISTING WIRE AND CONDUIT	SPARE	0.00
1.53	*RAIL LIGHTS - EAST SIDE	EXISTING WIRE AND CONDUIT	20	9	B	10	20	EXISTING WIRE AND CONDUIT	SPARE	0.00
1.33	*RAIL LIGHTS - NORTHEAST PERIMETER	EXISTING WIRE AND CONDUIT	20	11	C	12	50/2	EXISTING WIRE AND CONDUIT	RECPT. (AT THE SOUTHERNMOST PLANTERS)	0.00
2.26	*RAIL LIGHTS - NORTHEAST INTERIOR	EXISTING WIRE AND CONDUIT	20	13	A	14				0.00
SEE NOTE 1 → 0.16	*RAIL LIGHTS - SMALL SECTION NEAR EAST SIDE	EXISTING WIRE AND CONDUIT	20	15	B	16	50/2	EXISTING WIRE AND CONDUIT	RECPT. (AT BUILDING WALL)	0.00
2.99	*RAIL LIGHTS - SOUTHWEST INTERIOR	EXISTING WIRE AND CONDUIT	20	17	C	18				0.00
0.00	*(3) POLE LIGHTS (2 FIXTURES EACH)	EXISTING WIRE AND CONDUIT	20	19	A	20	50/2	EXISTING WIRE AND CONDUIT	RECPT. (AT THE NORTHERNMOST PLANTERS)	0.00
0.00	*(4) PLANTER LIGHTS (NORTHERNMOST)	EXISTING WIRE AND CONDUIT	20	21	B	22				0.00
0.00	*(2) PLANTER LIGHTS (SOUTHERNMOST)	EXISTING WIRE AND CONDUIT	20	23	C	24			SPACE	0.00
0.00	*PHOTO-ELECTRIC EYE FOR OUTDOOR LIGHTING	EXISTING WIRE AND CONDUIT	20	25	A	26			SPACE	0.00
0.00	*SPARE	--	20	27	B	28			SPACE	0.00
0.00	*SPARE	--	20	29	C	30			SPACE	0.00
0.00	*SPARE	--	20	31	A	32			SPACE	0.00
0.00	*SPARE	--	20	33	B	34			SPACE	0.00
0.00	*SPARE	--	20	35	C	36			SPACE	0.00
0.00	SPACE			37	A	38			SPACE	0.00
0.00	SPACE			39	B	40			SPACE	0.00
0.00	SPACE			41	C	42			SPACE	0.00
		PHASE A CONNECTED AMPS	8.19			8.19		PHASE A DEMAND AMPS		
		PHASE B CONNECTED AMPS	3.15			3.15		PHASE B DEMAND AMPS		
		PHASE C CONNECTED AMPS	7.72			7.72		PHASE C DEMAND AMPS		
		TOTAL CONNECTED AMPS	6.35			6.35		TOTAL DEMAND AMPS		
		TOTAL CONNECTED KVA	2.29			2.29		TOTAL DEMAND KVA		

NOTES:

1. REMOVE WIRE BACK TO SOURCE AND RENAME BREAKER AS SPARE.

TABLE–2 PROPOSED PANEL 'LP–P' SCHEDULE

JOB NAME: BPCA-PIER A HANDRAIL LIGHTING PANEL NAME: (E) LP-P	NOTES: SQUARE D POWERLINK PANEL * - INDICATED CONTROLLABLE CIRCUIT BREAKER	VOLTAGE: 208Y/120V PHASE: 3 WIRE: 4 BUS: 225A MAINS: 200A MCB AIC RATING: 22KAIC ENCLOSURE: NEMA 1 MOUNTING: SURFACE

CONN. AMPS	DESCRIPTION	BRANCH CIRCUIT	BKR	CKT	PH	CKT	BKR	BRANCH CIRCUIT	DESCRIPTION	CONN. AMPS
8.43	*HANDRAIL LIGHTS (ZONE 2)	2#12 + 1#12GND, 3/4"C	20	1	A	2	20	EXISTING WIRE AND CONDUIT	(4) GFCI RECPT. (NORTHERNMOST PLANTERS)	0.00
3.47	*HANDRAIL LIGHTS (ZONE 3)	2#10 + 1#10GND, 3/4"C	20	3	B	4	20	EXISTING WIRE AND CONDUIT	(3) GFCI RECPT. (SOUTHERNMOST PLNTRS)	0.00
7.31	*HANDRAIL LIGHTS (ZONE 4)	2#12 + 1#12GND, 3/4"C	20	5	C	6	20	EXISTING WIRE AND CONDUIT	(3) GFCI RECPT. (POLE LIGHTS, NOT AT PLNTRS)	0.00
4.75	*HANDRAIL LIGHTS (ZONE 6)	2#12 + 1#12GND, 3/4"C	20	7	A	8	20	EXISTING WIRE AND CONDUIT	SPARE	0.00
5.64	*HANDRAIL LIGHTS (ZONE 8)	2#12 + 1#12GND, 3/4"C	20	9	B	10	20	EXISTING WIRE AND CONDUIT	SPARE	0.00
2.70	*HANDRAIL LIGHTS (ZONE 1)	2#12 + 1#12GND, 3/4"C	20	11	C	12	50/2	EXISTING WIRE AND CONDUIT	RECPT. (AT THE SOUTHERNMOST PLANTERS)	0.00
4.81	*HANDRAIL LIGHTS (ZONE 5)	2#8 + 1#8GND, 3/4"C	20	13	A	14				0.00
0.00	*SPARE	--	20	15	B	16	50/2	EXISTING WIRE AND CONDUIT	RECPT. (AT BUILDING WALL)	0.00
4.32	*HANDRAIL LIGHTS (ZONE 7)	2#12 + 1#12GND, 3/4"C	20	17	C	18				0.00
0.00	*(3) POLE LIGHTS (2 FIXTURES EACH)	EXISTING WIRE AND CONDUIT	20	19	A	20	50/2	EXISTING WIRE AND CONDUIT	RECPT. (AT THE NORTHERNMOST PLANTERS)	0.00
0.00	*(4) PLANTER LIGHTS (NORTHERNMOST)	EXISTING WIRE AND CONDUIT	20	21	B	22				0.00
0.00	*(2) PLANTER LIGHTS (SOUTHERNMOST)	EXISTING WIRE AND CONDUIT	20	23	C	24			SPACE	0.00
0.00	*PHOTO-ELECTRIC EYE FOR OUTDOOR LIGHTING	EXISTING WIRE AND CONDUIT	20	25	A	26			SPACE	0.00
0.00	*SPARE	--	20	27	B	28			SPACE	0.00
0.00	*SPARE	--	20	29	C	30			SPACE	0.00
0.00	*SPARE	--	20	31	A	32			SPACE	0.00
0.00	*SPARE	--	20	33	B	34			SPACE	0.00
0.00	*SPARE	--	20	35	C	36			SPACE	0.00
0.00	SPACE			37	A	38			SPACE	0.00
0.00	SPACE			39	B	40			SPACE	0.00
0.00	SPACE			41	C	42			SPACE	0.00
		PHASE A CONNECTED AMPS	17.99			17.99		PHASE A DEMAND AMPS		
		PHASE B CONNECTED AMPS	9.11			9.11		PHASE B DEMAND AMPS		
		PHASE C CONNECTED AMPS	14.33			14.33		PHASE C DEMAND AMPS		
		TOTAL CONNECTED AMPS	13.80			13.80		TOTAL DEMAND AMPS		
		TOTAL CONNECTED KVA	4.97			4.97		TOTAL DEMAND KVA		

TABLE–3 LIGHTING FIXTURE SCHEDULE

LIGHTING FIXTURE SCHEDULE								
TYPE	MANUFACTURER	MODEL NO.	COLOR TEMP	LENGTH	VOLTAGE	WATTAGE	LUMENS	MOUNTING
LED TAPE	DURALAMP – TARGETTI	DLHV37–0–30–"JCVR65"–"PRAP–U"–"OR–DEV"–"KTORDEV–U"	3000K	VARIES – REFER TO TABLE 4/E–3	120V	3.7W/FT	320 LM/FT	ADJUSTABLE MOUNTING BRACKET

NOTES:

1. **PROVIDE AND INSTALL ASSOCIATED MOUNTING HARDWARE. REFER TO E–4 FOR MOUNTING HARDWARE DETAILS.**
2. **FACTORY ATTACHED 60" SINGLE LEAD CABLE AND IP65 RATED OUTDOOR JUNCTION BOX COVER. CONTRACTOR TO CONFIRM LEAD LENGTHS REQUIRED PER FIELD INSTALLED JUNCTION BOXES PRIOR TO FIXTURE ORDERING.**
3. **ELECTRICAL CONTRACTOR TO PROVIDE FIXTURE CONNECTION JUNCTION BOX(S).**
4. **FACTORY INSTALLED 6" FLEXIBLE CABLE JUMPERS BETWEEN CONTINUOUS SECTIONS OF TAPE LIGHTING, AS REQUIRED, TO ROUTE BETWEEN HANDRAIL AND GATE SECTIONS.**

TABLE–4 FIXTURE LENGTH SCHEDULE

Fixture ID	Zone ID	Length (approx.) - ft	# of 6" Jumper	Wattage (W)
L1-1	1	47	1	172
L1-2	1	41	0	152
L2-1	2	45	1	165
L2-2	2	60	1	220
L2-3	2	60	1	220
L2-4	2	17	1	61
L2-5	2	17	1	61
L2-6	2	17	1	61
L2-7	2	17	1	61
L2-8	2	23	1	83
L2-9	2	22	1	80
L3-1	3	21	1	76
L3-2	3	17	1	61
L3-3	3	17	1	61
L3-4	3	17	1	61
L3-5	3	17	1	61
L3-6	3	12	1	43
L3-7	3	15	1	54
L4-1	4	38	1	139
L4-2	4	11	1	39
L4-3	4	13	1	46
L4-4	4	14	4	44
L4-5	4	15	3	50
L4-6	4	16	1	57
L4-7	4	26	1	94
L4-8	4	37	2	133
L4-9	4	12	1	43
L4-10	4	14	1	50
L4-11	4	8	1	28
L4-12	4	41	0	152
L5-1	5	49	2	178
L5-2	5	47	0	174
L5-3	5	62	2	226
L6-1	6	62	2	226
L6-2	6	49	2	178
L6-3	6	45	0	167
L7-1	7	77	2	281
L7-2	7	65	2	237
L8-1	8	65	0	241
L8-2	8	45	1	165
L8-3	8	11	1	39
L8-4	8	55	3	198
L8-5	8	10	1	35

ISSUE FOR BID

DATE: 04/20/22

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

BATTERY PARK CITY AUTHORITY
200 LIBERTY STREET, 24TH FLOOR, NEW YORK, NY 10281
T: 212.417.2000

BPCA CONTRACT #19-2855

Urban Engineers of New York, D.P.C.
One Penn Plaza, Suite 4125
New York, NY 10119
o. 212.736.9100

URBAN ENGINEERS

SEAL

BY:

DATE:

REV	DATE	DESCRIPTION	BY	CKD	APP'D
0	04/22/22	ISSUE FOR BID	SJI	GTH	REM

NEW YORK, NY
BATTERY PARK CITY AUTHORITY

PIER A RAILINGS REHABILITATION

ELECTRICAL WORK SCHEDULES

SCALE: AS NOTED	DESIGN BY: SJI
DATE: 04/22/22	APPROVED BY: REM
	DRAWN BY: SJI
PROJECT NO.: 2020200179.007	CHECKED BY: GTH
SHEET NUMBER: E-3	
SHT. NO.: 14 OF 15	
DRAWING FILE NO.: E-3 SCHE....DWG	REV. NO.: 0

DATE PRINTED: 4/20/2022 4:07:29 PM

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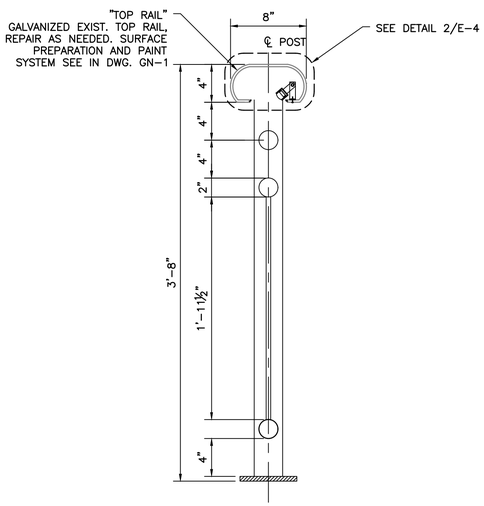
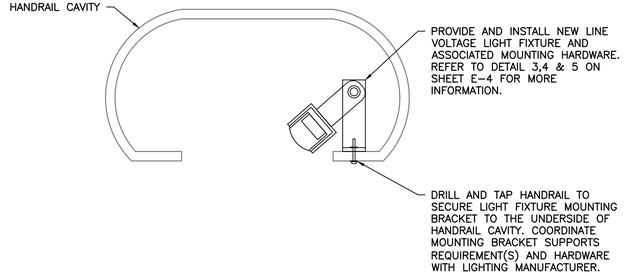


1 E-4 E-2 HANDRAIL ELEVATION – LIGHTING

0 1/2' 1' 1 1/2'



2 E-4 ENLARGED HANDRAIL ELEVATION

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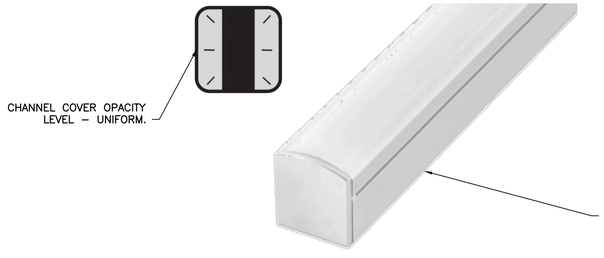

3 E-4 LIGHTING FIXTURE CHANNEL DETAIL

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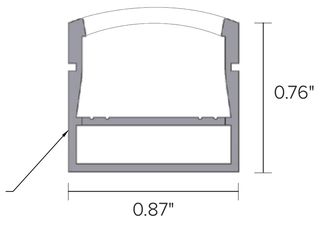
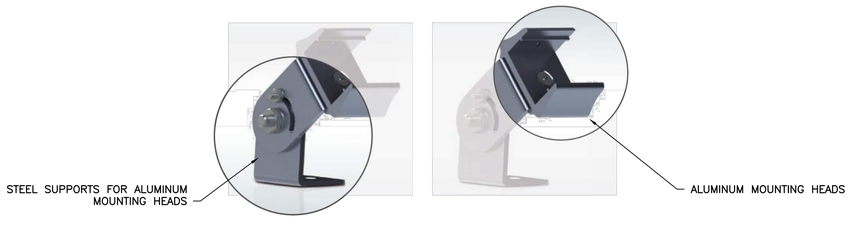


4 E-4 LIGHTING FIXTURE CHANNEL SECTION

N.T.S.



5 E-4 MOUNTING BRACKET DETAIL

N.T.S.

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DATE: 04/20/22

NEW YORK STATE OF OPPORTUNITY. | Battery Park City Authority

BATTERY PARK CITY AUTHORITY

200 LIBERTY STREET, 24TH FLOOR, NEW YORK, NY 10281
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BPCA CONTRACT #19-2855

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URBAN ENGINEERS

SEAL

BY:

DATE:

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0	04/20/22	ISSUE FOR BID	SJI	GTH	REM

NEW YORK, NY

BATTERY PARK CITY AUTHORITY

PIER A RAILINGS REHABILITATION

LIGHTING DETAILS

SCALE: AS NOTED
DATE: 04/20/22
DESIGN BY: SJI
APPROVED BY: REM
DRAWN BY: SJI
CHECKED BY: GTH
PROJECT NO.: 2020200179.007
SHEET NUMBER: **E-4**
SHT. NO.: 15 OF 15
DRAWING FILE NO.: E-4 DETA... .DWG
REV. NO.: 0

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DATE PRINTED: 4/20/2022 4:33:58 PM

ISSUE FOR BID

Battery Park City Authority

Pier A Railings Rehabilitation

TECHNICAL SPECIFICATIONS

Issue for Bid

April 2022

Prepared for:

Battery Park City Authority
200 Liberty St, 24th FL
New York, NY 10281

Prepared By:

Urban Engineers of New York, D.P.C
7 Penn Plaza, Suite 1800
New York, NY 10001

Battery Park City Authority

Pier A Handrails Maintenance and Restoration

22 Battery Pl., New York, NY

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260553 Identification for Electrical Systems

265619 LED Exterior Lighting

SECTION 011100 - SUMMARY OF WORK

PART 1 - GENERAL

1.1 GENERAL PROJECT AND SITE DESCRIPTION

A. The project is located on the Battery Park Terminal on the eastern shore of the Hudson River in New York, NY.

B. The objective of the project is to replace, repair, and refinish the existing metal fencing and metal railings surrounding the Pier A Building as directed.

C. Recent surveys indicate that a portion of the railings and their components, connectors, and welds, are exhibiting signs of moderate to serious deterioration.

1.2 WORK INCLUDED IN THE CONTRACT

A. GENERAL

i. Provide all labor, equipment, materials, and all other services and expenses as may be necessary for, and incidental to, the proper execution and completion of the tasks as described herein.

B. MOBILIZATION & STARTUP

i. Perform a survey of the all railings to verify conditions, quantities and dimensions.

ii. Mobilize all personnel, equipment and materials to the site as needed. A laydown area for equipment and materials will be provided for by the Owner in the vicinity of the work site.

iii. All equipment and materials shall be located in the laydown area(s) provided by the Owner, or as otherwise directed by the Owner. Bids shall include any specific laydown requirements required to perform the work.

iv. Install all construction fencing, signage, and materials to comply with all permits and site maintenance plans.

C. REPLACEMENT OF RAILING AND REPAIR EXISTING RAILING WORK

i. Follow the procedures outlined on the drawings to clean and prepare the surfaces for repair painting and install the new railing components according to drawing sheet GA-4.

a. Perimeter of existing railing cleaning and painting.

b. Installation new anchor bolts and lag bolts.

c. Removing deteriorated railings and replacing with new railings.

D. DEMOBILIZATION & CLOSE-OUT

i. Demobilize from the site and leave the facility in a clean and satisfactory condition.

ii. Submit as-built drawings to the Owner.

1.3 INCIDENTAL ITEMS

A. Review the information available relating to the project, including, but not limited to, the construction drawings, drawings indicating previous repairs, investigation survey report(s), geotechnical investigation/report, tides and currents.

B. Adhere to and abide by all the Owner's safety and security policies at all times.

C. Provide and maintain all safety measures and devices to ensure public safety and prevent public access to the structure throughout construction.

D. Include all required insurance documents with Bid.

1.4 EXCLUSIONS

A. All exclusions shall be specifically stated in the Bid and shall become the basis for the Contract.

B. No additional exclusions or modifications will be accepted after the award of work.

1.5 PERMITS

A. Obtain all permits required for performing the work under the Contract.

1.6 SCHEDULE

A. Bids shall include an approximate schedule of duration for the completion of the construction and associated activities.

END OF SECTION 011100

SECTION 013300 – SUBMITTAL PROCEDURES

PART 1: GENERAL

1.01 SCOPE

A. The provisions of this section apply to the submittal of all information by the Contractor to the Engineer / Owner.

PART 2: PRODUCTS

Not used.

PART 3: SUBMITTALS

As specified in related sections.

PART 4: QUALITY ASSURANCE

Not used.

PART 5: EXECUTION

5.01 SUBMITTAL PROCEDURES

A. Make Submissions in a timely manner. Do not initiate a construction activity prior to receiving ALL the submittals, reviewed by the Engineer, related to the construction activity, indicating an authorization to proceed with the construction activity. Any construction activity performed without this authorization shall be at Contractor's risk and cost. Delays arising due to the failure in making timely submittals shall be at Contractor's cost. No compensation will be paid for construction activities performed without the authorization of the Engineer.

B. Submit a Submittal Log, documenting the list of submittals to be made during the project, prior to mobilization.

C. Transmit each submittal with a letter of transmittal indicating the content of the submittal, quantity of submitted items and any special instructions.

D. Submittals are to be sequentially numbered. Mark revised submittals with original number and sequential alphabetic suffix.

E. Identify Project, Contractor, Subcontractor and Supplier; pertinent drawing and detail number, and specification section number, appropriate to submittal.

F. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with requirements of the Work and Contract Documents.

G. Schedule submittals to expedite Project. All materials shall be submitted electronically either through email or other media. The Contractor shall coordinate with the Engineer and Owner as to the preferred submission procedures for the project.

I. For each submittal, allow for a 10-working-day review period excluding delivery time to and from Contractor.

J. Identify with highlighter and/or red ink variations from Contract Documents and product or system limitations, which may alter or be detrimental to successful performance of completed Work. Contractor shall provide an estimated cost for any proposed alternates.

K. Allow space on submittals for Contractor and Engineer review stamps.

L. When revised for resubmission, identify changes made since previous submission.

M. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.

N. Submittals not requested will not be recognized or processed.

O. No materials, supplies, equipment or labor shall be ordered for an item until the Engineer has reviewed the submittal.

P. Update the submittal log and submit to the Engineer every month at a minimum.

5.02. SUBMITTAL DATA

A. Product Data: Submit to the Engineer, for the purpose of review and checking the conformance with information given and design concept expressed in Contract Documents.

B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project. Record this information in the submittal matrix.

END OF SECTION 013300

SECTION 055213 – PIPE AND TUBE RAILINGS

PART 1: GENERAL

1.1 SCOPE

A. Provisions of this section apply to furnishing stainless steel pipe and tube railings indicated on the Drawings, described in these Specifications, or otherwise required for proper completion of the Work

1.2 PERFORMANCE REQUIREMENTS

A. Delegated Design: Where the drawings call for delegated design, or where member sizes, wall thicknesses, and connection details are not provided, design railings, including comprehensive engineering analysis by a qualified professional engineer, using the performance requirements and design criteria indicated on the Drawings and in this Section.

B. General: In engineering railings to withstand structural loads indicated, determine allowable design working stresses of railing materials based on the following:

1. Steel: 72 percent of minimum yield strength.
2. Stainless Steel: 60 percent of minimum yield strength.

C. Structural Performance: Railings shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

1. Handrails and Top Rails of Guards:

a. Uniform load of 50 lbf/ ft. (0.73 kN/m) applied in any direction.
b. Concentrated load of 200 lbf (0.89 kN) applied in any direction.
c. Uniform and concentrated loads need not be assumed to act concurrently.

2. Infill Panels:

a. Concentrated load of 50 lbf (0.22 kN) applied horizontally on an area of 1 sq. ft. (0.093 sq. m).
b. Infill load and other loads need not be assumed to act concurrently.

D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on exterior metal fabrications by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects.

1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

PART 2: PRODUCTS

2.2 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. HSS round Railings:

a. Atlas Tube Inc.
b. Independence Tube Corp. or
c. Approved Equal.

2.3 METALS, GENERAL

A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.

B. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.

2.4 PLAIN STEEL AND IRON

A. Recycled Content of Steel Products: Provide products with average recycled content of steel products so postconsumer recycled content plus one-half of preconsumer recycled content is not less than 25 percent.

B. Tubing: ASTM A 500 (cold formed) or ASTM A 513.

C. Plates, Shapes, and Bars: ASTM A 36/A 36M.

2.5 FASTENERS

A. General: Provide the following:
1. Ungalvanized-Steel Railings: Plated steel fasteners complying with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 5 for zinc coating.

B. Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction indicate and capable of withstanding design loads.

C. Fasteners for Interconnecting Railing Components:
1. Provide concealed fasteners for interconnecting railing components and for attaching them to other work, unless exposed fasteners are unavoidable or are the

standard fastening method for railings indicated.

2. Provide tamper-resistant machine screws for exposed fasteners unless otherwise indicated.

2.6 MISCELLANEOUS MATERIALS

A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

1. For stainless-steel railings, provide type and alloy as recommended by producer of metal to be welded and as required for color match, strength, and compatibility in fabricated items.

B. Etching Cleaner for Galvanized Metal: Complying with MPI#25.

C. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

D. Shop Primers: Provide primers that comply with Division 09 painting Sections.

E. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible material.

F. Intermediate Coats and Topcoats: Provide products that comply with Division 09 painting Sections.

G. Non-shrink, Nonmetallic Grout: Factory-packaged, non-staining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.

H. Anchoring Cement: Factory-packaged, non-shrink, non-staining, hydraulic-controlled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound.

1. Water-Resistant Product: At exterior locations and where indicated provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended by manufacturer for exterior use.

PART 3: SUBMITTALS

3.1 MANUFACTURERS

A. Product Data: For the following:

1. Manufacturer's product lines of mechanically connected railings.
2. Railing brackets.
3. Grout, anchoring cement, and paint products.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

C. Delegated-Design Submittal: Submit certification that the delegated design products have been designed in accordance with the specified design criteria and meet the performance requirements. Include calculations signed and sealed by the qualified professional engineer responsible for their preparation.

D. Qualification Data: For qualified professional engineer or testing agency.

E. Mill Certificates: Signed by manufacturers of stainless-steel products certifying that products furnished comply with requirements.

F. Welding certificates.

G. Paint Compatibility Certificates: From manufacturers of topcoats applied over shop primers certifying that shop primers are compatible with topcoats.

H. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, according to ASTM E 894 and ASTM E 935.

PART 4: QUALITY ASSURANCE

4.1 MANUFACTURERS

A. Source Limitations: Obtain each type of railing from single source from single manufacturer.

B. Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."

4.2 SPECIAL INSPECTIONS

A. Where fabrication of steel assemblies shall be performed offsite, the manufacturer shall:

1. Be accredited by International Accreditation Services under its Fabricator Inspection Accreditation Program and hold a current certificate of accreditation indicating the scope of fabrication accreditation.

OR

2. Obtain approval from the Department of Licenses and Inspections as a fabricator that is exempt from special inspections at its fabrication facility, in accordance with Chapter 17 of the IBC.

PART 5: EXECUTION

5.1 PROJECT CONDITIONS

E. Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication.

5.2 FABRICATION

A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.

B. Assemble railings in the shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.

C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch (1 mm) unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

D. Form work true to line and level with accurate angles and surfaces.

E. Fabricate connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.

G. Connections: Fabricate railings with either welded or non-welded connections unless otherwise indicated.

H. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove flux immediately.
4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.

I. Non-welded Connections: Connect members with concealed mechanical fasteners and fittings. Fabricate members and fittings to produce flush, smooth, rigid, hairline joints.

J. Form changes in direction as follows:

1. As detailed.
2. By flush bends or by inserting prefabricated flush-elbow fittings.

K. Bend members in jigs to produce uniform curvature for each configuration required; maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.

L. Close exposed ends of railing members with prefabricated end fittings.

M. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise indicated.

N. Provide inserts and other anchorage devices for connecting railings to concrete or masonry work. Fabricate anchorage devices capable of withstanding loads imposed by railings. Coordinate anchorage devices with supporting structure.

1. Orient wire mesh with wires horizontal and vertical.

5.3 FINISHES, GENERAL

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Provide exposed fasteners with finish matching appearance, including color and texture, of railings.

5.4 INSTALLATION, GENERAL

A. Fit exposed connections together to form tight, hairline joints.

B. Perform cutting, drilling, and fitting required for installing railings. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.

1. Do not weld, cut, or abrade surfaces of railing components that have been coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
2. Set posts plumb within a tolerance of 1/16 inch in 3 feet (2 mm in 1 m).
3. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet (5 mm in 3 m).

C. Corrosion Protection: Coat concealed surfaces of aluminum that will be in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.

D. Adjust railings before anchoring to ensure matching alignment at abutting joints.

E. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.

5.5 RAILING CONNECTIONS

A. Non-welded Connections: Use mechanical or adhesive joints for permanently connecting railing components. Seal recessed holes of exposed locking screws using plastic cement filler colored to match finish of railings.

B. Welded Connections: Use fully welded joints for permanently connecting railing components. Comply with requirements for welded connections in "Fabrication" Article whether welding is performed in the shop or in the field.

C. Expansion Joints: Install expansion joints at locations indicated but not farther apart than required to accommodate thermal movement. Provide slip-joint internal sleeve extending 2 inches (50 mm) beyond joint on either side, fasten internal sleeve securely to one side, and locate joint within 6 inches (150 mm) of post.

5.6 ANCHORING POSTS

A. Cover anchorage joint with flange of same metal as post, welded to post after placing

anchoring material.

B. Anchor posts to metal surfaces with plates as required by conditions, connected to posts and to metal supporting members as follows:
   1. For stainless-steel pipe railings, weld plate to post and bolt to supporting surfaces.

5.7 ADJUSTING AND CLEANING

A. Clean stainless steel by washing thoroughly with clean water and soap and rinsing with clean water.

B. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

   1. Apply by brush or spray to provide a minimum 2.0-mil (0.05-mm) dry film thickness.

C. Touchup Painting: Cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint are specified in Division 09 painting Sections.

5.8 PROTECTION

A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.

END OF SECTION 055213

SECTION 099000 - PAINTING & COATING

PART 1: GENERAL

1.01 SCOPE

A. Work Included

Paint and finish all surfaces listed in the Painting Schedule, Part Five of this Section. Provide all touch up and remedial painting as required until the work is accepted by the Engineer.

B. Work Not Included

1. Painting specified under other sections.

2. Unless otherwise indicated, painting is not required on surfaces in concealed areas and inaccessible areas.

3. Metal surfaces of anodized aluminum, stainless steel, chromium plate, copper, bronze, and similar finished materials will not require painting under this Section except as may be specified herein.

4. Do not paint over any required labels or equipment identification, performance rating, name, or nomenclature plates.

C. Definitions

The term "paint", as used herein, means all coating systems materials including primers, emulsions, epoxy, enamels, sealers, fillers, and other applied materials whether used as prime, intermediate, or finish coats.

PART 2: PRODUCTS

2.01 MATERIAL

A. Design

Design is based on use of paint products manufactured by Glidden or Rust-oleum, and the materials of those manufacturers are named in the Painting Schedule. Equal products of Sherwin-Williams or other manufacturers may be used if approved by Engineer.

B. General

Provide the best quality grade of the various types of coatings as regularly manufactured by paint materials manufacturers approved by Engineer. Materials not displaying the manufacturer's identification as a standard best-grade product will not be acceptable.

C. Durability

Provide paints of durable and washable quality. Do not use paint materials which will not withstand normal washing as required to remove pencil marks, ink, ordinary soil, and similar material without showing discoloration, loss of gloss, staining, or other damage.

D. Colors and Glosses

Paint colors shall be as specified below, or Owner approved equal, unless noted otherwise on the Contract Drawings:

- Handrail - Same as existing color

The Construction Manager will be the sole judge of acceptability of the various glosses obtained from the materials supposed to be used in the Work.

E. Undercoats and Thinners

Provide undercoat paint produced by the same manufacturer as the finish coat. Use only the thinners recommended by the paint manufacturer, and use only to the recommended limits. Insofar as practicable, use undercoat, finish coat, and thinner material as parts of a unified system of paint finish.

F. Standards

Provide paint materials, which meet or exceed the standards listed for each application in the Painting Schedule in Part Five of this Section.

2.02 APPLICATION EQUIPMENT

A. General

For application of the approved paint, use only such equipment as is recommended for application of the particular paint by the manufacturer of the particular paint, and as approved by Engineer.

B. Compatibility

Prior to actual use of application equipment, use all means necessary to verify that the proposed equipment is actually compatible with the material to be applied and that the integrity of the finish will not be jeopardized by use of the proposed application equipment.

2.03 OTHER MATERIALS

A. All other materials, not specifically described but required for a complete and proper installation of the work of this Section, shall be new, first-quality of their respective kinds, and as selected by the Contractor subject to the approval of the Engineer.

PART 3: SUBMITTALS

3.01 Contractor shall submit the following in accordance with Section 013300, Submittal Procedures:

A. Submit recommended color, paint specifications, proposed application procedure, and manufacturer contact number three weeks prior to painting.

PART 4: QUALITY ASSURANCE

4.01 QUALIFICATIONS

A. Qualification of Manufacturer
Products used in the work of this Section shall be produced by manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Engineer.

B. Qualifications of Workmen

1. Provide and identify by name, at least one person who shall be present at all times during execution of the work of this Section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this Section.

2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used.

3. In acceptance or rejection of the work of this Section, the Engineer will make no allowance for lack of skill on the part of workmen.

C. Paint Coordination

1. Provide finish coats, which are compatible with the prime coats used.

2. Review other Sections of these Specifications as required, verifying the prime coats to be used and assuring compatibility of the total coating system for the various substrata.

3. Upon request, furnish information on the characteristics of the specific finish materials to ensure that compatible prime coats are used.

4. Provide barrier coats over non-compatible primers, or remove the primer and reprime as required.

5. Notify the Engineer in writing of anticipated problems in using the specified coating systems over prime coating supplied under other Sections.

D. In addition to complying with all pertinent codes and regulations, comply with all pertinent recommendations contained in the latest revision of the following publications of the Steel Structures Painting Council:

1. SSPC-SP-l Solvent Cleaning

2. SSPC-SP-2 Hand Tool Cleaning

3. SSPC-SP-3 Power Tool Cleaning

4. SSPC-SP-4 Flame Cleaning

5. SSPC-SP-5 White Metal Blast Cleaning

6. SSPC-SP-6 Commercial Blast Cleaning

7. SSPC-SP-7 Brush Off Blast Cleaning

8. SSPC-SP-8 Pickling

9. SSPC-SP-9 Weathering Blast Cleaning

10. SSPC-SP-10 Near White Metal Cleaning

PART 5: EXECUTION

5.01 PRODUCT HANDLING

A. Delivery of Materials

Deliver all materials to the painting site in original, new, and unopened containers bearing the manufacturer's name and label showing at least the following information:

1. Name or title of the material
2. Fed. Spec. number, if applicable
3. Manufacturer's stock number
4. Manufacturer's name
5. Contents by volume for major constituents
6. Thinning instructions
7. Application instructions

B. Do not bring to the job site any paint or solvent containers bearing the name of a material that has not been specified.

C. Storage of Materials

Provide proper storage to prevent damage to and deterioration of, paint materials in accordance with manufacturer recommendations.

D. Protection

Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the work and materials of all other trades.

E. Replacements

In the event of damage, immediately make all repairs and replacements necessary to the approval of the Engineer and at no additional cost to the Owner.

5.02 JOB CONDITIONS

A. Surface Temperatures

Do not apply any paints when the temperature of surfaces to be painted or the surrounding air temperature are below 45 degrees F, unless otherwise permitted by the manufacturer's printed instructions as approved by the Engineer. Do not apply any paints when the temperature of the surfaces to be painted or the surrounding air temperature is above 99 degrees F.

B. Weather Conditions

Do not apply paint in snow, rain, fog, or mist; or when the relative humidity exceeds 85%; or to damp or wet surfaces; unless otherwise permitted by the manufacturer's printed instructions as approved by the Engineer. Applications may be continued during inclement weather within the temperature limits specified by the paint manufacturer during application and drying periods.

5.03 SURFACE CONDITIONS

A. Inspection

Prior to installation of the work of this Section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence. Verify that painting may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the Engineer.

B. Discrepancies

Do not proceed in areas of discrepancy until all such discrepancies have been fully resolved.

5.04 MATERIALS PREPARATION

A. General

1. Mix and prepare painting materials in strict accordance with the manufacturer's recommendations as approved by the Engineer.

2. Store materials not in actual use in tightly covered containers.

3. Maintain containers used in storage, mixing, and application of paint in a clean condition, free from foreign materials and residue.

B. Stirring

Stir all materials before application to produce a mixture of uniform density, and as required during the application of materials. Do not stir into the material any

film, which may form on the surface. Remove the film and, if necessary, strain the material before using.

5.05 SURFACE PREPARATION

A. General

1. Perform all preparation and cleaning procedures in strict accordance with the paint manufacturer's recommendations, federal, state, local environmental regulations and as approved by the Engineer.

2. Remove all removable items, which are in place and not scheduled to receive paint finish, or provide surface-applied protection prior to surface preparation and painting operations.

3. Following completion of painting in each space or area, reinstall the removed items by using workmen skilled in the necessary trades.

4. Clean each surface to be painted prior to applying paint or surface treatment.

5. Remove oil and grease with clean cloths and cleaning solvents. Change rags as they become dirty. Unless otherwise specified, the general purpose solvent to be used for cleaning under normal conditions shall be aliphatic or aromatic solvents, alcohol esters, chlorinated hydrocarbons, or mixtures of these substances, with a minimum flash point of 100 F. In hot weather (temperatures between 80 and 95 F) a solvent that has a minimum flash point of 120 F shall be used. In very hot weather (temperatures over 95 F) solvent with a flash point over 140 F shall be used.

6. Schedule the cleaning and painting so that dust and other contaminants from the cleaning process will not fall onto wet newly painted surfaces.

B. Preparation of Wood Surfaces

Not applicable

C. Preparation of Metal Surfaces

1. Thoroughly clean all surfaces until they are completely free from dirt, oil, and grease.

2. On galvanized surfaces, use solvent for the initial cleaning and then treat the surface thoroughly with phosphoric acid etch. Remove all etching solution before proceeding.

3. Allow to dry thoroughly before the application of paint.

4. Before sandblasting, remove all deposits of oil and grease by the methods described in SSPC-SP-l.

5. Clean in compliance with the provisions of SSPC-SP-10.

5.06 PAINT APPLICATION

A. General

1. Slightly vary the color of succeeding coats. Do not apply additional coats until the completed coat has been inspected and approved. Only the inspected and approved coats of paint will be considered in determining the number of coats applied.

2. Sand and dust between enamel coats to remove all defects visible to the unaided eye from a distance of five feet.

3. On all removable panels and all hinged panels, paint the back sides to match the exposed sides.

4. Prime all blasted surfaces as soon as possible within the same working day and before any visual rusting, blushing, or blooming occurs. Should any of these conditions develop before the paint is applied, these areas must be reblasted.

B. Drying

1. Allow sufficient drying time between coats. Modify the period as recommended by the material manufacturer to suit adverse weather conditions.

2. Oil-base and oleo-resinous solvent-type paints shall be considered dry for recoating when the paint feels firm, does not deform or feel sticky under moderate pressure of the thumb, and the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

C. Brush Application

Brush out and work all brush coats onto the surfaces in an even film. Cloudiness, spotting, laps, brush marks, runs, sags, and other surface imperfections will not be acceptable.

D. Spray Application

1. Confine spray application to metal framework and similar surfaces where hand brush work would be inferior.

2. Wherever spray application is used, apply each coat to provide the equivalent hiding of brush applied coats. Do not double back with spray equipment for the purpose of building up film thickness of two coats in one pass.

E. Completed Work

Shall match the approved Samples for color, texture, and coverage. Remove, refinish, or repaint all work not in compliance with specified requirements.

F. Finish Paint

Finish paint on all structural steel shall be accomplished in the shop prior to shipment to the job site. Touch up all abrasions, welds, connections and other bare metals with primer and finish coats after erection.

G. Overspray

Overspray will not be permitted. Should overspray occur, remove the overspray with a stiff wire brush or by sanding. Air-blow the affected area to remove all traces of overspray and repaint as necessary.

5.07 PAINTING SCHEDULE

A. Provide a three coat system, prime coat of compatible Zinc Primer, 3 to 5 mils total dry thickness.

B. Provide an Intermediate epoxy coat of 3 to 5 mils total dry thickness.

C. Provide a finish coat of acrylic urethane with a minimum total dry film thickness of 2 to 4 mils.

D. Color Chart

The color of the coatings shall be per Owner's requirements. The contractor shall obtain Owner's approval of the color two weeks prior to the purchase of the coatings. The handrail and guardrail shall be painted safety yellow.

5.08 PAINTED PRODUCT HANDLING

A. After a product is painted, the Contractor and painting Subcontractor shall protect the coating from chipping, abrasion, or other damage during storage, transport, placement, and subsequent construction. Any damage to the coating system shall be repaired at the Contractor's expense.

END OF SECTION 099000

SECTION 260500 - COMMON WORK RESULTS FOR ELECTRICAL

PART 1: GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes:

1. Electrical equipment coordination and installation.
2. Grout.
3. Common electrical installation requirements.

1.03 DEFINITIONS

A. EPDM: Ethylene-propylene-diene terpolymer rubber.

B. NBR: Acrylonitrile-butadiene rubber.

1.04 COORDINATION

A. Coordinate arrangement, mounting, and support of electrical equipment:

1. To allow maximum possible headroom unless specific mounting heights that reduce headroom are indicated.
2. To provide for ease of disconnecting the equipment with minimum interference to other installations.
3. To allow right of way for piping and conduit installed at required slope.
4. So connecting raceways, cables, wireways, cable trays, and busways will be clear of obstructions and of the working and access space of other equipment.

B. Coordinate installation of required supporting devices.

C. Coordinate location of access panels and doors for electrical items that are behind finished surfaces or otherwise concealed. Access doors and panels are specified in Division 08 Section "Access Doors and Frames."

PART 2: PRODUCTS

2.01 GROUT

A. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

PART 3: SUBMITTALS

3.01 SHOP DRAWING SUBMITTALS AND PRODUCT SUBSTITUTION

A. The following shall be considered an amendment to Specification section 012500 – SUBSTITUTION PROCEDURES.

B. If the Contract Documents state "basis of design product shall be used" the Contractor shall provide the specified or scheduled material or equipment.

C. If the Contract Documents list two or more acceptable products for an item of work, the choice shall be up to the contractor. However, should any product other than the specified or scheduled "Basis of Design" be submitted, the contractor shall be responsible for making any and all changes to the project required to accommodate that product. He shall also be responsible for paying all associated costs necessitated by the change including the costs incurred by other trades on the project, the fees for the Design Professionals for reviewing the product and performing any design work necessitated by the change, and for costs caused by schedule delays caused by the change.

D. If a Contractor intends to substitute an "or equal" that is not listed by name on the documents, he must do so at the time of bid. If the required notice is not provided and an "or equal" substitution is requested, the Design Professional and Owner, at their sole discretion, may refuse to consider the substitution unless the product specified is no longer commercially available. If the Design Professional and Owner allow the substitution to be proposed despite the lack of proper notice, the Contractor will be back-charged the professional fees incurred by the Design Professional and Owner in reviewing the proposed substitution.

E. Whenever in the Contract Documents any specific article, device, equipment, product, material, fixture, patented process, form, method, or type of construction is indicated or specified by name, make, trade name, or catalogue number, with or without the words "or equal", such specifications shall be used for the purpose of facilitating description of material, process, or article desired, and shall be deemed to be followed by the words "or equal". Contractor may, unless it is specifically stated that the basis of design shall be used, offer any

material, process, or article which shall be substantially equal or better in every respect to that so indicated or specified, which will completely accomplish the purpose of the Contract Documents.

F. The Owner shall not incur additional responsibilities, including but not limited to, additional compensation to the Design Professional for redesign and evaluation services, increased cost of other construction to the Owner, or similar considerations as all such costs shall be borne by the Contractor proposing the change.

G. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.
3. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number. Resubmittals shall include an alphabetic suffix after another decimal point.
4. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Design Professional.
5. Metadata: Include the following information as keywords in the electronic submittal file metadata:
    a. Project name.
    b. Number and title of appropriate Specification Section.
    c. Manufacturer name.
    d. Product name.

PART 4: QUALITY ASSURANCE

PART 5: EXECUTION

5.01 COMMON REQUIREMENTS FOR ELECTRICAL INSTALLATION

A. Comply with NECA 1.

B. Measure indicated mounting heights to bottom of unit for suspended items and to center of unit for wall-mounting items.

C. Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide maximum possible headroom consistent with these requirements.

D. Equipment: Install to facilitate service, maintenance, and repair or replacement of components of both electrical equipment and other nearby installations. Connect in such a way as to facilitate future disconnecting with minimum interference with other items in the vicinity.

E. Right of Way: Give to piping systems installed at a required slope.

- END OF SECTION -

SECTION 260519 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1: GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes:

1. Copper building wire rated 600 V or less.
2. Connectors, splices, and terminations rated 600 V and less.

PART 2: MATERIALS

2.01 COPPER BUILDING WIRE

A. Description: Flexible, insulated and uninsulated, drawn copper current-carrying conductor with an overall insulation layer or jacket, or both, rated 600 V or less.

B. Manufacturers:
1. General Cable.
2. Southwire.
3. Okonite.

C. Standards:

1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
2. RoHS compliant.
3. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."

D. Conductors: Copper, complying with ASTM B3 for bare annealed copper and with ASTM B8 and/or ASTM B496 for stranded conductors.

E. Conductor Insulation:
1. Type THHN and Type THWN-2: Comply with UL 83.
2. Type XHHW-2: Comply with UL 44.

2.02 CONNECTORS AND SPLICES

A. Description: Factory-fabricated connectors, splices, and lugs of size, ampacity rating, material, type, and class for application and service indicated; listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.

B. Manufacturers
   1. Hubbell/Burndy.
   2. 3M
   3. Thomas & Betts/Blackburn.
   4. Tyco Electronic.
   5. Ideal.

C. Inline Resin Power Cable Splice Kit
   1. Material: Epoxy.
   2. Rated for single or multiple conductor, non-shielded cables
   3. Listed for submerged locations.

D. Connectors
   1. Pressure type
   2. Material: Rigid thermoplastic
   3. Solid or stranded wire
   4. Waterproof and corrosion proof (UL 486D listed) where applicable

E. Lugs: One piece, seamless, designed to terminate conductors specified in this Section.

   1. Material: Copper.
   2. Type: One or Two hole with standard barrels.
   3. Termination: Compression.

PART 3: SUBMITTALS

3.01 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Product Schedule: Indicate type, use, location, and termination locations.

3.02 INFORMATIONAL SUBMITTALS

A. Field quality-control reports.

PART 4: QUALITY ASSURANCE

4.01 QUALITY ASSURANCE

A. Testing Agency Qualifications: Member company of NETA.

1. Testing Agency's Field Supervisor: Certified by NETA to supervise on-site testing.

PART 5: EXECUTION

5.01 CONDUCTOR MATERIAL APPLICATIONS

A. Feeders: Copper; solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

B. Branch Circuits: Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

5.02 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

A. Exposed Feeders: THWN-2, single conductors in raceway.

B. Feeders Concealed in Concrete, below Slabs-on-Grade, and Underground: Type XHHW-2, single conductors in raceway.

C. Branch Circuits Concealed in Concrete, below Slabs-on-Grade, and Underground: Type XHHW-2, single conductors in raceway.

5.03 INSTALLATION OF CONDUCTORS AND CABLES

A. Conceal cables in finished walls, ceilings, and floors unless otherwise indicated.

B. Complete raceway installation between conductor and cable termination points according to Section 260533 "Raceways and Boxes for Electrical Systems" prior to pulling conductors and cables.

C. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

D. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.

E. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.

F. Support cables according to Section 260529 "Hangers and Supports for Electrical Systems."

5.04 CONNECTIONS

A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.

B. Make splices, terminations, and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors].

1. Use oxide inhibitor in each splice, termination, and tap for aluminum conductors.

C. Splices at or below the dock and gangway shall be listed for submersible applications.

1. Use an inline resin power cable splice kit

D. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches of slack.

5.05 IDENTIFICATION

A. Identify and color-code conductors and cables according to Section 260553 "Identification for Electrical Systems."

B. Identify each spare conductor at each end with identity number and location of other end of conductor, and identify as spare conductor.

5.06 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

B. Testing Agency: Engage a qualified testing agency to perform tests and inspections.

C. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.

D. Perform tests and inspections.

1. After installing conductors and cables and before electrical circuitry has been energized, test service entrance and feeder conductors for compliance with requirements.

2. Perform each of the following visual and electrical tests:

   a. Inspect exposed sections of conductor and cable for physical damage and correct connection according to the single-line diagram.
   b. Test bolted connections for high resistance using one of the following:

      1) A low-resistance ohmmeter.
      2) Calibrated torque wrench.
      3) Thermographic survey.

   c. Inspect compression-applied connectors for correct cable match and indentation.
   d. Inspect for correct identification.
   e. Inspect cable jacket and condition.
   f. Insulation-resistance test on each conductor for ground and adjacent conductors. Apply a potential of 500-V dc for 300-V rated cable and 1000-V dc for 600-V rated cable for a one-minute duration.
   g. Continuity test on each conductor and cable.
   h. Uniform resistance of parallel conductors.

3. Initial Infrared Scanning: After Substantial Completion, but before Final Acceptance, perform an infrared scan of each splice in conductors No. 3 AWG and larger. Remove box and equipment covers so splices are accessible to portable scanner. Correct deficiencies determined during the scan.

   a. Instrument: Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.
   b. Record of Infrared Scanning: Prepare a certified report that identifies switches checked and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

4. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each switch 11 months after date of Substantial Completion.

E. Cables will be considered defective if they do not pass tests and inspections.

F. Prepare test and inspection reports to record the following:

1. Procedures used.
2. Results that comply with requirements.
3. Results that do not comply with requirements, and corrective action taken to achieve compliance with requirements.

- END OF SECTION -

SECTION 260526 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1: GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section includes grounding and bonding systems and equipment.

B. Section includes grounding and bonding systems and equipment, plus the following special applications:

1. Foundation steel electrodes.

PART 2: MATERIALS

2.01 SYSTEM DESCRIPTION

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with UL 467 for grounding and bonding materials and equipment.

2.02 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Burndy; Part of Hubbell Electrical Systems.
2. ERICO International Corporation.
3. Harger Lightning & Grounding.
4. Thomas & Betts Corporation; A Member of the ABB Group.

2.03 CONDUCTORS

A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.

B. Bare Copper Conductors:

1. Solid Conductors: ASTM B 3.
2. Stranded Conductors: ASTM B 8.

2.04 CONNECTORS

A. Listed and labeled by an NRTL acceptable to authorities having jurisdiction for applications in which used and for specific types, sizes, and combinations of conductors and other items connected.

B. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.

C. Beam Clamps: Mechanical type, terminal, ground wire access from four directions, with dual, tin-plated or silicon bronze bolts.

D. Cable-to-Cable Connectors: Compression type, copper or copper alloy.

E. Conduit Hubs: Mechanical type, terminal with threaded hub.

PART 3: SUBMITTALS

3.01 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

3.02 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Plans showing dimensioned locations of grounding features specified in "Field Quality Control" Article, including the following:

1. Grounding Arrangements and Connections

B. Qualification Data: For testing agency and testing agency's field supervisor.

C. Field quality-control reports.

3.03 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For grounding to include in emergency, operation, and maintenance manuals.

1. In addition to items specified in Section 017823 "Operation and Maintenance Data," include the following:

a. Plans showing as-built, dimensioned locations of grounding features specified in "Field Quality Control" Article, including the following:
   1) Grounding Arrangements and Connections

b. Instructions for periodic testing and inspection of grounding features at test wells and ground rings based on NETA MTS and NFPA 70B.

   1) Tests shall determine if ground-resistance or impedance values remain within specified maximums, and instructions shall recommend corrective action if values do not.
   2) Include recommended testing intervals.

PART 4: QUALITY ASSURANCE

4.01 QUALITY ASSURANCE

A. Testing Agency Qualifications: Certified by NETA.

PART 5: EXECUTION

5.01 APPLICATIONS

A. Conductors: Install solid conductor for No. 10 AWG and smaller, and stranded conductors for No. 8 AWG and larger unless otherwise indicated.

B. Conductor Terminations and Connections:

   1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
   2. Connections to Structural Steel: Welded connectors.

5.02 EQUIPMENT GROUNDING

A. Install insulated equipment grounding conductors with all feeders and branch circuits.

B. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:

   1. Feeders and branch circuits.

5.03 INSTALLATION

A. Grounding Conductors: Route along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.

B. Ground Bonding Common with Lightning Protection System: Comply with NFPA 780 and UL 96 when interconnecting with lightning protection system. Bond electrical power system ground directly to lightning protection system grounding conductor at closest point to electrical service grounding electrode. Use bonding conductor sized same as system grounding electrode conductor, and install in conduit.

5.04 FIELD QUALITY CONTROL

A. Testing Agency: Contractor shall perform tests and inspections.

B. Perform tests and inspections

C. Tests and Inspections:

1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.
2. Inspect physical and mechanical condition. Verify tightness of accessible, bolted, electrical connections with a calibrated torque wrench according to manufacturer's written instructions.

D. Grounding system will be considered defective if it does not pass tests and inspections.

E. Prepare test and inspection reports.

F. Report measured ground resistances that exceed the following values:

1. Power Equipment: 0.25 ohms.

G. Excessive Resistance: If resistance to ground exceeds specified values, notify Engineer promptly and include recommendations to reduce ground resistance.

- END OF SECTION -

SECTION 260529 - HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1: GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes:

1. Hangers and supports for electrical equipment and systems.

PART 2: MATERIALS

2.01 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design hanger and support system.

B. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame Rating: Class 1.
2. Self-extinguishing according to ASTM D 635.

2.02 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

A. Steel Slotted Support Systems: Comply with MFMA-4 factory-fabricated components for field assembly.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. ERICO International Corporation.
b. Thomas & Betts Corporation; A Member of the ABB Group.
c. Unistrut; Part of Atkore International.

2. Material: Galvanized steel.

3. Channel Width: 1-5/8 inches

4. Metallic Coatings: Hot-dip galvanized after fabrication and applied according to MFMA-4.
5. Nonmetallic Coatings: Manufacturer's standard PVC, polyurethane, or polyester coating applied according to MFMA-4.
6. Painted Coatings: Manufacturer's standard painted coating applied according to MFMA-4.
7. Protect finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
8. Channel Dimensions: Selected for applicable load criteria.

B. Conduit and Cable Support Devices: Steel hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.

C. Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for nonarmored electrical conductors or cables in riser conduits. Plugs shall have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body shall be made of malleable iron.

D. Structural Steel for Fabricated Supports and Restraints: ASTM A 36/A 36M steel plates, shapes, and bars; black and galvanized.

E. Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:

1. Powder-Actuated Fasteners: Threaded-steel stud, for use in hardened portland cement concrete, steel, or wood, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.

    a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

        1) Hilti, Inc.
        2) ITW Ramset/Red Head; Illinois Tool Works, Inc.
        3) MKT Fastening, LLC.

2. Mechanical-Expansion Anchors: Insert-wedge-type, zinc-coated steel, for use in hardened portland cement concrete, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.

    a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

        1) B-line, an Eaton business.
        2) Hilti, Inc.

3) ITW Ramset/Red Head; Illinois Tool Works, Inc.

3. Concrete Inserts: Steel or malleable-iron, slotted support system units are similar to MSS Type 18 units and comply with MFMA-4 or MSS SP-58.

4. Clamps for Attachment to Steel Structural Elements: MSS SP-58 units are suitable for attached structural element.
5. Through Bolts: Structural type, hex head, and high strength. Comply with ASTM A 325.
6. Toggle Bolts: All-steel springhead type.
7. Hanger Rods: Threaded steel.

2.03 FABRICATED METAL EQUIPMENT SUPPORT ASSEMBLIES

A. Description: Welded or bolted structural-steel shapes, shop or field fabricated to fit dimensions of supported equipment.

B. Materials: Comply with requirements in Section 055000 "Metal Fabrications" for steel shapes and plates.

PART 3: SUBMITTALS

3.01 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for the following:

a. Hangers.
b. Steel slotted support systems.
c. Nonmetallic support systems.
d. Trapeze hangers.
e. Clamps.
f. Turnbuckles.
g. Sockets.
h. Eye nuts.
i. Saddles.
j. Brackets.

2. Include rated capacities and furnished specialties and accessories.

B. Shop Drawings: For fabrication and installation details for electrical hangers and support systems.

1. Trapeze hangers. Include product data for components.

2. Steel slotted-channel systems.
3. Nonmetallic slotted-channel systems.
4. Equipment supports.
5. Vibration Isolation Base Details: Detail fabrication, including anchorages and attachments to structure and to supported equipment. Include adjustable motor bases, rails, and frames for equipment mounting.

C. Delegated-Design Submittal: For hangers and supports for electrical systems.

1. Include design calculations and details of trapeze hangers.
2. Include design calculations for seismic restraints.

PART 4: QUALITY ASSURANCE

4.01 QUALITY ASSURANCE

A. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M and AWS D1.2/D1.2M.

B. Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D1.1/D1.1M.
2. AWS D1.2/D1.2M.

PART 5: EXECUTION

5.01 APPLICATION

A. Comply with NECA 1 and NECA 101 for application of hangers and supports for electrical equipment and systems unless requirements in this Section are stricter.

B. Comply with requirements for raceways and boxes specified in Section 260533 "Raceways and Boxes for Electrical Systems."

C. Maximum Support Spacing and Minimum Hanger Rod Size for Raceway: Space supports for EMTs, IMCs, and RMCs as required by NFPA 70. Minimum rod size shall be 1/4 inch in diameter.

D. Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted or other support system, sized so capacity can be increased by at least 25 percent in future without exceeding specified design load limits.

1. Secure raceways and cables to these supports with two-bolt conduit clamps

5.02 SUPPORT INSTALLATION

A. Comply with NECA 1 and NECA 101 for installation requirements except as specified in this article.

B. Raceway Support Methods: In addition to methods described in NECA 1, EMTs, IMCs, and RMCs may be supported by openings through structure members, according to NFPA 70.

C. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb.

D. Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code:

1. To Wood: Fasten with lag screws or through bolts.
2. To New Concrete: Bolt to concrete inserts.
3. To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.
4. To Existing Concrete: Expansion anchor fasteners.
5. Instead of expansion anchors, powder-actuated driven threaded studs provided with lock washers and nuts may be used in existing standard-weight concrete 4 inches (100 mm) thick or greater. Do not use for anchorage to lightweight-aggregate concrete or for slabs less than 4 inches thick.
6. To Steel: Beam clamps (MSS SP-58, Type 19, 21, 23, 25, or 27), complying with MSS SP-69.
7. To Light Steel: Sheet metal screws.
8. Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate.

E. Drill holes for expansion anchors in concrete at locations and to depths that avoid the need for reinforcing bars.

5.03 INSTALLATION OF FABRICATED METAL SUPPORTS

A. Comply with installation requirements in Section 055000 "Metal Fabrications" for site-fabricated metal supports.

B. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.

C. Field Welding: Comply with AWS D1.1/D1.1M.

D. Anchor equipment to concrete base as follows:

1. Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
2. Install anchor bolts to elevations required for proper attachment to supported equipment.
3. Install anchor bolts according to anchor-bolt manufacturer's written instructions.

- END OF SECTION -

SECTION 260533 - RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

PART 1: GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes:

1. Metal conduits, tubing, and fittings.
2. Nonmetal conduits, tubing, and fittings.
3. Surface raceways.
4. Boxes, enclosures, and cabinets.
5. Handholes and boxes for exterior underground cabling.

1.03 DEFINITIONS

A. ARC: Aluminum rigid conduit.

B. GRC: Galvanized rigid steel conduit.

C. IMC: Intermediate metal conduit.

PART 2: MATERIALS

2.01 METAL CONDUITS, TUBING, AND FITTINGS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Allied Tube & Conduit; a part of Atkore International.
2. Calconduit.
3. Thomas & Betts Corporation; A Member of the ABB Group.
4. Wheatland Tube Company.

B. Listing and Labeling: Metal conduits, tubing, and fittings shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

C. GRC: Comply with ANSI C80.1 and UL 6.

D. ARC: Comply with ANSI C80.5 and UL 6A.

E. PVC-Coated Steel Conduit: PVC-coated rigid steel conduit.

1. Comply with NEMA RN 1.
2. Coating Thickness: 0.040 inch, minimum.

F. LFMC: Flexible steel conduit with PVC jacket and complying with UL 360.

G. Fittings for Metal Conduit: Comply with NEMA FB 1 and UL 514B.

1. Conduit Fittings for Hazardous (Classified) Locations: Comply with UL 886 and NFPA 70.

2. Expansion Fittings: PVC or steel to match conduit type, complying with UL 651, rated for environmental conditions where installed, and including flexible external bonding jumper.
3. Coating for Fittings for PVC-Coated Conduit: Minimum thickness of 0.040 inch, with overlapping sleeves protecting threaded joints.

H. Joint Compound for IMC, GRC, or ARC: Approved, as defined in NFPA 70, by authorities having jurisdiction for use in conduit assemblies, and compounded for use to lubricate and protect threaded conduit joints from corrosion and to enhance their conductivity.

2.02 BOXES, ENCLOSURES, AND CABINETS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Hoffman
2. Crouse-Hinds, an Eaton business.
3. Hubbell Incorporated.
4. RACO; Hubbell.
5. Thomas & Betts Corporation; A Member of the ABB Group.
6. Wiremold / Legrand.

B. Exterior boxes shall be NEMA type 4X, 304 stainless steel. Coordinate finish with owner.

C. Interior small Sheet Metal Pull and Junction Boxes: NEMA OS 1.

D. Device Box Dimensions: 4 inches square by 2-1/8 inches deep (100 mm square by 60 mm deep).

E. Gangable boxes are not allowed.

F. Wireways shall be painted & galvanized, lay-in type with removable front quick connect hinge cover and include barriers for normal/emergency wiring separation.

G. Cabinets

1. NEMA 250, Type 4X stainless steel box with two-door front and removable interior panel.
2. 12 gauge Type 304 stainless steel.
3. Removable centerpost for easy panel installation.
4. Type 316L stainless steel lifting eyes.
5. Collar studs provided for mounting interior panels.
6. Provide accessories per enclosure detail in bid drawings.

2.03 SOURCE QUALITY CONTROL FOR UNDERGROUND ENCLOSURES

A. Handhole and Pull-Box Prototype Test: Test prototypes of handholes and boxes for compliance with SCTE 77. Strength tests shall be for specified tier ratings of products supplied.

1. Tests of materials shall be performed by an independent testing agency.
2. Strength tests of complete boxes and covers shall be by either an independent testing agency or manufacturer. A qualified registered professional engineer shall certify tests by manufacturer.
3. Testing machine pressure gages shall have current calibration certification complying with ISO 9000 and ISO 10012 and traceable to NIST standards.

PART 3: SUBMITTALS

3.01 ACTION SUBMITTALS

A. Product Data: For surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.

B. Shop Drawings: For custom enclosures and cabinets. Include plans, elevations, sections, and attachment details. Detailed elevations shall include dimensions of equipment and devices.

PART 4: QUALITY ASSURANCE

PART 5: EXECUTION

5.01 RACEWAY APPLICATION

A. Outdoors: Apply raceway products as specified below unless otherwise indicated:

1. Exposed Conduit: PVC Coated Steel.
2. Concealed Conduit, Aboveground: PVC Coated Steel.
3. Underground Conduit: Type EPC-40-PVC, except that elbows, bends and stub-ups shall be GRC.
4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.
5. Boxes and Enclosures, Aboveground: NEMA 250, Type 4X.

B. Minimum Raceway Size: 3/4-inch trade size.

C. Raceway Fittings: Compatible with raceways and suitable for use and location.

1. Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings unless otherwise indicated. Comply with NEMA FB 2.10.
2. PVC Externally Coated, Rigid Steel Conduits: Use only fittings listed for use with this type of conduit. Patch and seal all joints, nicks, and scrapes in PVC coating after installing conduits and fittings. Use sealant recommended by fitting manufacturer and apply in thickness and number of coats recommended by manufacturer.
3. Flexible Conduit: Use only fittings listed for use with flexible conduit. Comply with NEMA FB 2.20.

D. Do not install aluminum conduits, boxes, or fittings in contact with concrete or earth.

E. Install surface raceways only where indicated on Drawings.

F. Do not install nonmetallic conduit where ambient temperature exceeds 120 deg F.

5.02 INSTALLATION

A. Comply with NECA 1 and NECA 101 for installation requirements except where requirements on Drawings or in this article are stricter. Comply with NECA 102 for aluminum conduits. Comply with NFPA 70 limitations for types of raceways allowed in specific occupancies and number of floors.

B. Keep raceways at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.

C. Complete raceway installation before starting conductor installation.

D. Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for hangers and supports.

E. Arrange stub-ups so curved portions of bends are not visible above finished slab.

F. Install no more than the equivalent of three 90-degree bends in any conduit run except for control wiring conduits, for which fewer bends are allowed. Support within 12 inch of changes in direction.

G. Install conduits parallel or perpendicular to building lines.

H. Support conduit within 12 inches of enclosures to which attached.

I. Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of raceway and fittings before making up joints. Follow compound manufacturer's written instructions.

J. Coat field-cut threads on PVC-coated raceway with a corrosion-preventing conductive compound prior to assembly.

K. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors including conductors smaller than No. 4 AWG.

L. Terminate threaded conduits into threaded hubs or with locknuts on inside and outside of boxes or cabinets. Install bushings on conduits up to 1-1/4-inch trade size and insulated throat metal bushings on 1-1/2-inch trade size and larger conduits terminated with locknuts. Install insulated throat metal grounding bushings on service conduits.

M. Install raceways square to the enclosure and terminate at enclosures with locknuts. Install locknuts hand tight plus 1/4 turn more.

N. Do not rely on locknuts to penetrate nonconductive coatings on enclosures. Remove coatings in the locknut area prior to assembling conduit to enclosure to assure a continuous ground path.

O. Cut conduit perpendicular to the length. For conduits 2-inch trade size and larger, use roll cutter or a guide to make cut straight and perpendicular to the length.

P. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of pull wire. Cap underground raceways designated as spare above grade alongside raceways in use.

Q. Surface Raceways:

1. Install surface raceway with a minimum 2-inch radius control at bend points.
2. Secure surface raceway with screws or other anchor-type devices at intervals not exceeding 48 inches and with no less than two supports per straight raceway section. Support surface raceway according to manufacturer's written instructions. Tape and glue are not acceptable support methods.

R. Install raceway sealing fittings at accessible locations according to NFPA 70 and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings according to NFPA 70.

S. Install devices to seal raceway interiors at accessible locations. Locate seals so no fittings or boxes are between the seal and the following changes of environments. Seal the interior of all raceways at the following points:

1. Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces.
2. Where an underground service raceway enters a building or structure.
3. Where otherwise required by NFPA 70.

T. Comply with manufacturer's written instructions for solvent welding RNC and fittings.

U. Expansion-Joint Fittings:

1. Install in each run of aboveground RNC that is located where environmental temperature change may exceed 30 deg F and that has straight-run length that exceeds 25 feet. Install in each run of aboveground RMC conduit that is located where environmental temperature change may exceed 100 deg F and that has straight-run length that exceeds 100 feet.
2. Install type and quantity of fittings that accommodate temperature change listed for each of the following locations:

    a. Outdoor Locations Not Exposed to Direct Sunlight: 125 deg F temperature change.
    b. Outdoor Locations Exposed to Direct Sunlight: 155 deg F temperature change.

c. Indoor Spaces Connected with Outdoors without Physical Separation: 125 deg F temperature change.

3. Install fitting(s) that provide expansion and contraction for at least 0.00041 inch per foot of length of straight run per deg F of temperature change for PVC conduits. Install fitting(s) that provide expansion and contraction for at least 0.000078 inch per foot of length of straight run per deg F of temperature change for metal conduits.
4. Install expansion fittings at all locations where conduits cross building or structure expansion joints.
5. Install each expansion-joint fitting with position, mounting, and piston setting selected according to manufacturer's written instructions for conditions at specific location at time of installation. Install conduit supports to allow for expansion movement.
6. Use LFMC in damp or wet locations subject to severe physical damage.
7. Use LFMC or LFNC in damp or wet locations not subject to severe physical damage.

V. Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block, and install box flush with surface of wall. Prepare block surfaces to provide a flat surface for a raintight connection between box and cover plate or supported equipment and box.

W. Horizontally separate boxes mounted on opposite sides of walls so they are not in the same vertical channel.

X. Locate boxes so that cover or plate will not span different building finishes.

Y. Support boxes of three gangs or more from more than one side by spanning two framing members or mounting on brackets specifically designed for the purpose.

Z. Fasten junction and pull boxes to or support from building structure. Do not support boxes by conduits.

AA. Set metal floor boxes level and flush with finished floor surface.

BB. Set nonmetallic floor boxes level. Trim after installation to fit flush with finished floor surface.

5.03 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR ELECTRICAL PENETRATIONS

A. Install sleeves and sleeve seals at penetrations of exterior floor and wall assemblies. Comply with requirements in Section 260544 "Sleeves and Sleeve Seals for Electrical Raceways and Cabling."

5.04 PROTECTION

A. Protect coatings, finishes, and cabinets from damage and deterioration.

1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
2. Repair damage to PVC coatings or paint finishes with matching touchup coating recommended by manufacturer.

- END OF SECTION -

SECTION 260553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1: GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Identification for raceways.
2. Identification of power and control cables.
3. Identification for conductors.
4. Underground-line warning tape.
5. Warning labels and signs.
6. Instruction signs.
7. Equipment identification labels.
8. Miscellaneous identification products.

1.3 COORDINATION

A. Coordinate identification names, abbreviations, colors, and other features with requirements in other Sections requiring identification applications, Drawings, Shop Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual; and with those required by codes, standards, and 29 CFR 1910.145. Use consistent designations throughout Project.

B. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be applied.

C. Coordinate installation of identifying devices with location of access panels and doors.

D. Install identifying devices before installing acoustical ceilings and similar concealment.

PART 2: MATERIALS

2.1 POWER AND CONTROL RACEWAY IDENTIFICATION MATERIALS

A. Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each raceway size.

B. Colors for Raceways Carrying Circuits at 600 V or Less:

1. Black letters on an orange field.
2. Legend: Indicate voltage and system or service type.

C. Vinyl Labels for Raceways Carrying Circuits at 600 V or Less: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound clear adhesive tape for securing ends of legend label.

D. Metal Tags: Brass or aluminum, 2 by 2 by 0.05 inch (50 by 50 by 1.3 mm), with stamped legend, punched for use with self-locking cable tie fastener.

2.2 ARMORED AND METAL-CLAD CABLE IDENTIFICATION MATERIALS

A. Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each cable size.

B. Colors for Cables Carrying Circuits at 600 V and Less:

1. Black letters on an orange field.
2. Legend: Indicate voltage and system or service type.

C. Vinyl Labels: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound clear adhesive tape for securing ends of legend label.

D. Heat-Shrink Preprinted Tubes: Flame-retardant polyolefin tube with machine-printed identification label. Sized to suit diameter of and shrinks to fit firmly around cable it identifies. Full shrink recovery at a maximum of 200 deg F (93 deg C). Comply with UL 224.

2.3 POWER AND CONTROL CABLE IDENTIFICATION MATERIALS

A. Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each cable size.

B. Self-Adhesive, Self-Laminating Polyester Labels: Preprinted, 3-mil- (0.08-mm-) thick flexible label with acrylic pressure-sensitive adhesive that provides a clear, weather- and chemical-resistant, self-laminating, protective shield over the legend. Labels sized to fit the cable diameter such that the clear shield overlaps the entire printed legend.

C. Heat-Shrink Preprinted Tubes: Flame-retardant polyolefin tube with machine-printed identification label. Sized to suit diameter of and shrinks to fit firmly

around cable it identifies. Full shrink recovery at a maximum of 200 deg F (93 deg C). Comply with UL 224.

2.4 CONDUCTOR IDENTIFICATION MATERIALS

A. Color-Coding Conductor Tape: Colored, self-adhesive vinyl tape not less than 3 mils (0.08 mm) thick by 1 to 2 inches (25 to 50 mm) wide.

B. Self-Adhesive, Self-Laminating Polyester Labels: [Preprinted] [Write-on], 3-mil-(0.08-mm-) thick flexible label with acrylic pressure-sensitive adhesive that provides a clear, weather- and chemical-resistant, self-laminating, protective shield over the legend. Labels sized to fit the conductor diameter such that the clear shield overlaps the entire printed legend.

C. Heat-Shrink Preprinted Tubes: Flame-retardant polyolefin tube with machine-printed identification label. Sized to suit diameter of and shrinks to fit firmly around conductor it identifies. Full shrink recovery at a maximum of 200 deg F (93 deg C). Comply with UL 224.

D. Marker Tapes: Vinyl or vinyl-cloth, self-adhesive wraparound type, with circuit identification legend machine printed by thermal transfer or equivalent process.

2.5 FLOOR MARKING TAPE

A. 2-inch- (50-mm-) wide, 5-mil (0.125-mm) pressure-sensitive vinyl tape, with yellow and black stripes and clear vinyl overlay.

2.6 WARNING LABELS AND SIGNS

A. Comply with NFPA 70 and 29 CFR 1910.145.

B. Baked-Enamel Warning Signs:

1. Preprinted aluminum signs, punched or drilled for fasteners, with colors, legend, and size required for application.
2. 1/4-inch (6.4-mm) grommets in corners for mounting.
3. Nominal size, 7 by 10 inches (180 by 250 mm).

C. Warning label and sign shall include, but are not limited to, the following legends:

1. Multiple Power Source Warning: "DANGER - ELECTRICAL SHOCK HAZARD - EQUIPMENT HAS MULTIPLE POWER SOURCES."
2. Workspace Clearance Warning: "WARNING - OSHA REGULATION - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 36 INCHES (915 MM)."

2.7 INSTRUCTION SIGNS

A. Engraved, laminated acrylic or melamine plastic, minimum 1/16 inch (1.6 mm) thick for signs up to 20 sq. inches (129 sq. cm) and 1/8 inch (3.2 mm) thick for larger sizes.

1. Engraved legend with black letters on white face.
2. Punched or drilled for mechanical fasteners.
3. Framed with mitered acrylic molding and arranged for attachment at applicable equipment.

2.8 EQUIPMENT IDENTIFICATION LABELS

A. Engraved, Laminated Acrylic or Melamine Label: Punched or drilled for screw mounting. White letters on a dark-gray background. Minimum letter height shall be 3/8 inch (10 mm).

2.9 CABLE TIES

A. UV-Stabilized Cable Ties: Fungus inert, designed for continuous exposure to exterior sunlight, self extinguishing, one piece, self locking, Type 6/6 nylon.

1. Minimum Width: 3/16 inch (5 mm).
2. Tensile Strength at 73 deg F (23 deg C), According to ASTM D 638: 12,000 psi (82.7 MPa).
3. Temperature Range: Minus 40 to plus 185 deg F (Minus 40 to plus 85 deg C).
4. Color: Black.

2.10 MISCELLANEOUS IDENTIFICATION PRODUCTS

A. Paint: Comply with requirements in painting Sections for paint materials and application requirements. Select paint system applicable for surface material and location (exterior or interior).

B. Fasteners for Labels and Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

PART 3: SUBMITTALS

3.1 ACTION SUBMITTALS

A. Product Data: For each electrical identification product indicated.

PART 4: QUALITY ASSURANCE

4.1 QUALITY ASSURANCE

A. Comply with ANSI A13.1.

B. Comply with NFPA 70.

C. Comply with 29 CFR 1910.144 and 29 CFR 1910.145.

D. Comply with ANSI Z535.4 for safety signs and labels.

E. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

PART 5: EXECUTION

5.1 INSTALLATION

A. Verify identity of each item before installing identification products.

B. Location: Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.

C. Apply identification devices to surfaces that require finish after completing finish work.

D. Self-Adhesive Identification Products: Clean surfaces before application, using materials and methods recommended by manufacturer of identification device.

E. Attach signs and plastic labels that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.

F. Attach plastic raceway and cable labels that are not self-adhesive type with clear vinyl tape with adhesive appropriate to the location and substrate.

G. Cable Ties: For attaching tags. Use general-purpose type, except as listed below:

1. Outdoors: UV-stabilized nylon.

5.2 IDENTIFICATION SCHEDULE

A. Accessible Raceways and Metal-Clad Cables, 600 V or Less, for Service, Feeder, and Branch Circuits More Than 30 A, and 120 V to ground: Identify with self-adhesive vinyl label. Install labels at 10-foot (3-m) maximum intervals.

B. Accessible Raceways and Cables within Buildings: Identify the covers of each junction and pull box of the following systems with self-adhesive vinyl labels with the wiring system legend and system voltage. System legends shall be as follows:

1. Emergency Power.
2. Normal Power.

C. Power-Circuit Conductor Identification, 600 V or Less: For conductors in vaults, pull and junction boxes, manholes, and handholes, use color-coding conductor tape to identify the phase.

1. Color-Coding for Phase and Voltage Level Identification, 600 V or Less: Use colors listed below for ungrounded service, feeder and branch-circuit conductors.

a. Color shall be factory applied or field applied for sizes larger than No. 8 AWG, if authorities having jurisdiction permit.
b. Colors for 208/120-V Circuits:

1) Phase A: Black.
2) Phase B: Red.
3) Phase C: Blue.
4) Neutral: White.

c. Colors for 480/277-V Circuits:

1) Phase A: Brown.
2) Phase B: Orange.
3) Phase C: Yellow.
4) Neutral: Gray

d. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for a minimum distance of 6 inches (150 mm) from terminal points and in boxes where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding. Locate bands to avoid obscuring factory cable markings.

D. Control-Circuit Conductor Identification: For conductors and cables in pull and junction boxes, manholes, and handholes, use self-adhesive, self-laminating polyester labels with the conductor or cable designation, origin, and destination.

E. Control-Circuit Conductor Termination Identification: For identification at terminations provide self-adhesive, self-laminating polyester labels with the conductor designation.

F. Conductors to Be Extended in the Future: Attach write-on tags to conductors and list source.

G. Auxiliary Electrical Systems Conductor Identification: Identify field-installed alarm, control, and signal connections.

1. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, and pull points. Identify by system and circuit designation.
2. Use system of marker tape designations that is uniform and consistent with system used by manufacturer for factory-installed connections.
3. Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual.

H. Workspace Indication: Install floor marking tape to show working clearances in the direction of access to live parts. Workspace shall be as required by NFPA 70 and 29 CFR 1926.403 unless otherwise indicated. Do not install at flush-mounted panelboards and similar equipment in finished spaces.

I. Warning Labels for Indoor Cabinets, Boxes, and Enclosures for Power and Lighting: Baked-enamel warning signs.

1. Comply with 29 CFR 1910.145.
2. Identify system voltage with black letters on an orange background.
3. Apply to exterior of door, cover, or other access.
4. For equipment with multiple power or control sources, apply to door or cover of equipment including, but not limited to, the following:

    a. Power transfer switches.
    b. Controls with external control power connections.

J. Operating Instruction Signs: Install instruction signs to facilitate proper operation and maintenance of electrical systems and items to which they connect. Install instruction signs with approved legend where instructions are needed for system or equipment operation.

K. Emergency Operating Instruction Signs: Install instruction signs with white legend on a red background with minimum 3/8-inch- (10-mm-) high letters for emergency instructions at equipment used for power transfer.

L. Equipment Identification Labels: On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and the Operation and Maintenance Manual. Apply labels to disconnect switches and protection equipment, central or master units, control panels, control stations, terminal cabinets, and racks of each system. Systems include power, lighting,

control, communication, signal, monitoring, and alarm systems unless equipment is provided with its own identification.

1. Labeling Instructions:

    a. Indoor Equipment: Engraved, laminated acrylic or melamine label. Unless otherwise indicated, provide a single line of text with 1/2-inch- (13-mm-) high letters on 1-1/2-inch- (38-mm-) high label; where two lines of text are required, use labels 2 inches (50 mm) high.
    b. Outdoor Equipment: Engraved, laminated acrylic or melamine label.
    c. Elevated Components: Increase sizes of labels and letters to those appropriate for viewing from the floor.
    d. Unless provided with self-adhesive means of attachment, fasten labels with appropriate mechanical fasteners that do not change the NEMA or NRTL rating of the enclosure.

2. Equipment to Be Labeled:

    a. Enclosures and electrical cabinets.
    b. Switchgear.
    c. Switchboards.
    d. Emergency system boxes and enclosures.
    e. Power transfer equipment.
    f. Power-generating units.
    g. Monitoring and control equipment.

- END OF SECTION -

SECTION 265619 - LED EXTERIOR LIGHTING

PART 1: GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes:
   1. Luminaire types.

1.03 DEFINITIONS

A. CCT: Correlated color temperature.

B. CRI: Color rendering index.

C. Fixture: See "Luminaire."

D. IP: International Protection or Ingress Protection Rating.

E. Lumen: Measured output of lamp and luminaire, or both.

F. Luminaire: Complete lighting unit, including lamp, reflector, and housing.

PART 2: MATERIALS

2.01 LUMINAIRE REQUIREMENTS

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. NRTL Compliance: Luminaires shall be listed and labeled for indicated class and division of hazard by an NRTL.

C. FM Global Compliance: Luminaires for hazardous locations shall be listed and labeled for indicated class and division of hazard by FM Global.

D. UL Compliance: Comply with UL 1598 and listed for wet location.

E. CRI of minimum 80. CCT of 3000 K.

F. L90 lamp life of 35,000 hours.

G. Lamps dimmable from 100 percent to 15 percent of maximum light output.

H. In-line Fusing: Separate in-line fuse for each luminaire.

I. Source Limitations:

1. Obtain luminaires from single source from a single manufacturer.
2. For luminaires, obtain each color, grade, finish, type, and variety of luminaire from single source with resources to provide products of consistent quality in appearance and physical properties.

2.02 LUMINAIRE TYPES

A. HIVOLT ARCH IP65 Tape Light (Handrail Lighting Application)

1. Manufacturers:
   a. Refer to fixture schedule
2. Luminaire Shape: Linear/Tape.
3. Max continuous lengths: 160 ft minimum.
4. Pre-assembled to specific lengths with factory attached flexible jumpers between sections – min lengths at 3.92 inch increments.
5. Mounting: Bracket with adjustable clip system under handrail.
6. Diffusers: Opaque.
7. Housings:

   a. Anodized aluminum.
8. Power Requirement: 120VAC.
9. Temperature Range: -40 degree F through 120 degree F
10. Product Rating: IP65.
11. CRI: Ra+90 min.
12. Efficacy Lm/Wt: 86 min.
13. Viewing angle: 110 degrees
14. Dimming: 10% with ELV 120V dimming standard.
15. Warranty: 5 years.
16. Listings: cULus Listed / UL1598 / UL2388

2.03 MATERIALS

A. Metal Parts: Free of burrs and sharp corners and edges.

B. Lens and Refractor Gaskets: Use heat- and aging-resistant resilient gaskets to seal and cushion lenses and refractors in luminaire doors.

C. Reflecting surfaces shall have minimum reflectance as follows unless otherwise indicated:

1. White Surfaces: 85 percent.
2. Specular Surfaces: 83 percent.
3. Diffusing Specular Surfaces: 75 percent.

D. Housings:

1. Luminaire housing shall be fabricated and integrated into the dock and gangway handrail to form a weather-tight and light-tight enclosure that will not warp, sag, or deform in use.

2.04 FINISHES

A. Variations in Finishes: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

B. Luminaire Finish: Match finish process and color of handrail materials.

2.05 LUMINAIRE SUPPORT COMPONENTS

A. Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for channel and angle iron supports and nonmetallic channel and angle supports.

PART 3: SUBMITTALS

3.01 ACTION SUBMITTALS

A. Product Data: For each type of luminaire, including associated drivers and inverters.

1. Arrange in order of luminaire designation.
2. Contractor to field measure and submit continuous to fixture manufacturer to coordinate continuous lengths with flexible jumpers per field conditions and accommodate handrail gates and offsets.
3. Include data on features, accessories, and finishes.
4. Include physical description and dimensions of luminaire.
5. Lamps, include life, output (lumens, CCT, and CRI), and energy-efficiency data.

6. Photometric data and adjustment factors based on laboratory tests, complying with IES Lighting Measurements Testing and Calculation Guides, of each luminaire type.

    a. Manufacturer's Certified Data: Photometric data certified by manufacturer's laboratory with a current accreditation under the NVLAP for Energy Efficient Lighting Products.
    b. Testing Agency Certified Data: For indicated luminaires, photometric data certified by a qualified independent testing agency. Photometric data for remaining luminaires shall be certified by manufacturer.

7. Wiring diagrams for power, control, and signal wiring.
8. Means of attaching luminaires to supports and indication that the attachment is suitable for components involved.

B. Shop Drawings:

1. Include plans, elevations, sections, and mounting and attachment details.
2. Include details of luminaire assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
3. Include diagrams for power, signal, and control wiring.

C. Product Schedule: For luminaires. Use same designations indicated on Drawings.

3.02 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Plans, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:

1. Luminaires.
2. Structural members to which equipment and luminaires will be attached.
3. Vertical and horizontal information.

B. Qualification Data: For testing laboratory providing photometric data for luminaires.

C. Product Certificates: For each type of the following:

1. Luminaire.

D. Product Test Reports: For each luminaire, for tests performed by a qualified testing agency.

E. Source quality-control reports.

F. Sample warranty.

3.03 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For luminaires to include in operation and maintenance manuals.

PART 4: QUALITY ASSURANCE

4.01 QUALITY ASSURANCE

A. Luminaire Photometric Data Testing Laboratory Qualifications:

1. Luminaire manufacturers' laboratory that is accredited under the NVLAP for Energy Efficient Lighting Products.
2. Provided by an independent agency, with the experience and capability to conduct the testing indicated, that is an NRTL as defined by OSHA in 29 CFR 1910.7, accredited under the NVLAP for Energy Efficient Lighting Products and complying with applicable IES testing standards.

B. Provide luminaires from a single manufacturer for each luminaire type.

C. Each luminaire type shall be binned within a three-step MacAdam Ellipse to ensure color consistency among luminaires.

D. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

4.02 DELIVERY, STORAGE, AND HANDLING

A. Protect finishes of exposed surfaces by applying a strippable, temporary protective covering prior to shipping.

4.03 FIELD CONDITIONS

A. Verify existing and proposed utility structures prior to the start of work associated with luminaire installation.

4.04 WARRANTY

A. Warranty: Manufacturer and Installer agree to repair or replace components of luminaires that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

    a. Structural failures, including luminaire support components.
    b. Faulty operation of luminaires and accessories.
    c. Deterioration of metals, metal finishes, and other materials beyond normal weathering.

2. Warranty Period: 5 year(s) from date of Substantial Completion.

PART 5: EXECUTION

5.01 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Examine roughing-in for luminaire electrical conduit to verify actual locations of conduit connections before luminaire installation.

C. Examine handrail for suitable conditions where luminaires will be installed.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

5.02 GENERAL INSTALLATION REQUIREMENTS

A. Comply with NECA 1.

B. Use fastening methods and materials selected to resist seismic forces defined for the application and approved by manufacturer.

C. Fasten luminaire to structural support.

D. Supports:

1. Sized and rated for luminaire weight.
2. Able to maintain luminaire position after cleaning and relamping.
3. Support luminaires without causing deflection of finished surface.
4. Luminaire-mounting devices shall be capable of supporting a horizontal force of 100 percent of luminaire weight and a vertical force of 400 percent of luminaire weight.

E. Wiring Method: Install cables in raceways and handrails. Conceal raceways and cables.

F. Coordinate layout and installation of luminaires with other construction.

G. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables" and Section 260533 "Raceways and Boxes for Electrical Systems" for wiring connections and wiring methods.

5.03 IDENTIFICATION

A. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

5.04 FIELD QUALITY CONTROL

A. Inspect each installed luminaire for damage. Replace damaged luminaires and components.

B. Perform the following tests and inspections:

1. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.
2. Verify operation of photoelectric and time clock controls.

C. Illumination Tests:

1. Measure light intensities at night. Use photometers with calibration referenced to NIST standards. Comply with the following IES testing guide(s):

    a. IES LM-5.
    b. IES LM-50.
    c. IES LM-52.
    d. IES LM-64.
    e. IES LM-72.

2. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.

D. Luminaire will be considered defective if it does not pass tests and inspections.

E. Prepare a written report of tests, inspections, observations, and verifications indicating and interpreting results. If adjustments are made to lighting system, retest to demonstrate compliance with standards.

SECTION 265619 - LED EXTERIOR LIGHTING

- END OF SECTION -



Pier A Handrails Maintenance and Restoration Inspection Report for Rehabilitation Design

For

Battery Park City Authority
January 28th, 2022

Prepared For:
Battery Park City Authority
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1 INTRODUCTION

1.1 Purpose and Scope

Battery Park City Authority (BPCA) engaged Urban Engineers of New York, D.P.C. (Urban) to provide professional engineering services associated with the maintenance and restoration of the railings surrounding the Pier A building. BPCA provided a Railing Assessment Survey performed by Cashin Associates, P.C. in May 2021 that included their Railings Assessment Chart and Site Plan map. Based on the RFP provided by BPCA, the survey performed by Cashin Associates, and our assessment of the current site conditions, Urban provided design recommendations for the (1) refinishing, (2) repair and refinishing, and (3) replacement of Pier A handrails as required.

1.2 General Description of Structure

Pier A was originally built in the late nineteenth century and served as the headquarters of the New York City Board of Dock Commissioners and Harbor Police. Existing handrails extend along the perimeter of the pier and enclose six architectural openings within the pier that are adjacent to the house. The handrails have been rehabilitated and replaced at different times since Pier A was constructed, most recently as part of a 2014 renovation. However, due to the expose to the extreme weather conditions in the area, the handrails are in various stages of deterioration.

2 SUMMARY OF EXISTING CONDITIONS

2.1 Method of Investigation

On January 25th, 2022, Aye Sandar Khaing from Urban Engineers visited the Pier A site to visually inspect the current conditions of the railings. Pictures and measurements were taken of the railings and the timber & reinforced concrete platforms that the railings were anchored into. This investigation was used to corroborate and update the information provided as part of the May 2021 Cashin report.

2.2 North Apron Handrails

The handrails along the north apron have been broken down into eight different locations below. A visual map is provided in Appendix A and corresponding measurements are provided in Appendix B. All support timber beams, reinforce concrete beams, and concrete deck planks referenced below are good condition and do not require replacement or repair.

1) **North Bulkhead** – Located between the landside and water edge, the handrails located on the bulkhead reinforced concrete beam are good condition with new painting. There are gaps between the column base plates and the concrete beam due to missing grouting. [*See in photo-1, Sheet GA-2 in appendix-A*]
2) **North Apron Perimeter** – The handrails that are installed along the northern edge of the apron appear to be in good condition with only painting beginning to chip. All the handrail columns in this location are installed on 8" x 8" perimeter timber lodge. [*See in photo-2, Sheet GA-2 in appendix-A*]
3) **Ramp # 1** - L-shaped perimeter handrails are provided along the northeast ramp for ADA compliance. The handrails between the deck walkway and the ramp are installed on sloped timber planks. [*See in photo-3, Sheet GA-2 in appendix-A*] The sloped timber planks are cracked at the edge of the column baseplate, which was sandwiched between the base plate and the concrete ramp. [*See in photo-4, Sheet GA-2 in appendix-A*]
4) **Ramp # 2** – A second ADA access ramp located on the north west corner are installed in a similar fashion to Ramp # 1. All the column baseplates are installed on the timber beams. The handrails near the open water space and angle corner span are corroded. [*See in photo-10, Sheet GA-2 in appendix-A*]
5) **Open Area #1** - Handrails are installed along three sides of the most east open water space along the north apron. The house adjacent to the southern portion of the opening helps enclose the space. The handrail along the eastern portion of the opening connects directly to the ramp #1 railing and all the handrail column base plates are installed on the timber beam. The handrails are in fair condition with only peeling painting. [*See photo-5, Sheet GA-2 in appendix-A*]
6) **Open Area # 2** – The opening just to the west of Open Area # 1 as handrails along three sides as well. Two spans of handrail in this location are in poor condition due to corrosion. [*See in photo-6, Sheet GA-2 in appendix-A*]
7) **Open Area # 3** - The third open water area, which is just west of Open Area # 2, have handrails with columns installed on the timber beams. The handrails are in poor condition with all the rail components, excluding the green color galvanized top rail, with corroded areas. [*See in photo-7 & 8, Sheet GA-2 in appendix-A*]
8) **Open Area # 4** – The most western open water opening has the rail column base plates installed onto timber beams with the west handrails connecting with the handrail for ramp # 2. The handrails at this open area are in poor condition with all the rail components , excluding the green color galvanized top rail, beginning to corrode. [*See in photo-9, Sheet GA-2 in appendix-A*]

2.3 West Apron Handrails

The handrails along the West apron have been broken down into only one locations below.

1) **West Apron Perimeter** - West handrails are provided at seaside of pier and the shorten perimeter edge of the pier A. All handrails in the location are in good condition with only peeling of the paint. Tension cables between columns are lose and lost in five span. All the handrail column baseplates are installed on the perimeter timber beam. [*See in photo-25, Sheet GA-3 in appendix-A*]

2.4 South Apron Handrails

The handrails along the south apron have been broken down into nine different locations below. A visual map is provided in Appendix A and corresponding measurements are provided in Appendix B. All support timber beams, reinforce concrete beams, and concrete deck planks referenced below are good condition and do not require replacement.

1) **South Bulkhead** – The handrails between the relieving platform and the water's edge appear to be in re good condition. However, piled up debris that was leaning on the handrails prevented the full access needed to inspect the bottom part of the rail components. All the handrail column base plates are installed on bulkhead reinforce concrete beam. [*See in photo-11, Sheet GA-3 in appendix-A*]
2) **South Apron Perimeter** - South apron handrails are good condition with mostly only peeling paint. A few lengths of green color galvanized top rail were deformed and open at connecting joints. [See in photo-23&24, Sheet GA-3 in appendix-A]. Total five anchor bolts are missing near fender panel handrail column base plates. These handrail column baseplates are installed on the concrete deck.
3) **Entrance Ramp Gate** – Entrance gate doors are provided on the concrete ramp that **connects** the bulkhead with the south apron. Both of column base plates for this gate have missing anchor bolts.
4) **Entrance Ramp North** – The handrails along the north side of the ramp had corroded sections adjacent to the entrance gate and adjacent to the connection with the break water crossing. [*See in photo-12, Sheet GA-3 in appendix-A*] All baseplates are installed on the timber beam with ten rail column base plates missing anchor bolts. [*See in photo-13, Sheet GA-3 in appendix-A*]
5) **Entrance Ramp South –** The handrails along the south side of the ramp has a corroded section near the breakwater crossing. [*See in photo-14, Sheet GA-3 in appendix-A*] All baseplates are installed on the timber beam with two column base plates missing all their anchor bolts. [*See in photo-15, Sheet GA-3 appendix-A*]
6) **Open Area # 5** – The south west opening, which is enclosed on two sides by handrails, has corrosion along western edge. The southern handrail is not steady as it sways when pressure is applied. [*See in photo-16 & 17, Sheet GA-3 in appendix-A*]
7) **Open Area # 6** – The middle opening along the south side have all the handrail column base plates installed into timber beams. The handrails on all three sides were found to be in very poor condition. [*See in photo-18 & 19, Sheet GA-3 in appendix-A*]
8) **Open Area # 7** – The south-west opening, which has handrails on three sides, has all the handrail column baseplates installed into the timber beam. The handrails at this location are in very poor condition. [See in photo-20 & 21, Sheet GA-3 in appendix-A]
9) **Ramp # 3** – The southern ADA access ramp is adjacent to the western edge of Open Area #7. All the column baseplates are installed on the timber beams with the area between the deck walkway and the ramp installed on a ramp slope timber beam. The handrails along the eastern edge were found to be corroded. [*See in photo-21, Sheet GA-2 in appendix-A*]

3 DESIGN RECOMMENDATIONS

3.1 Observed Conditions and Ratings

Our findings, which are found in Appendix B, list all 18 locations, the current condition of the their respective railings, and our design recommendations for each section identified.

Please note that all the existing handrails are connected with onsite welding. Therefore, demolishing individual spans will have an expensive labor cost and less benefit for owner. Therefore, in most cases where replacements were required, we have recommended the replacement of larger, connected sections, to improve cost efficiency and future maintenance scheduling.

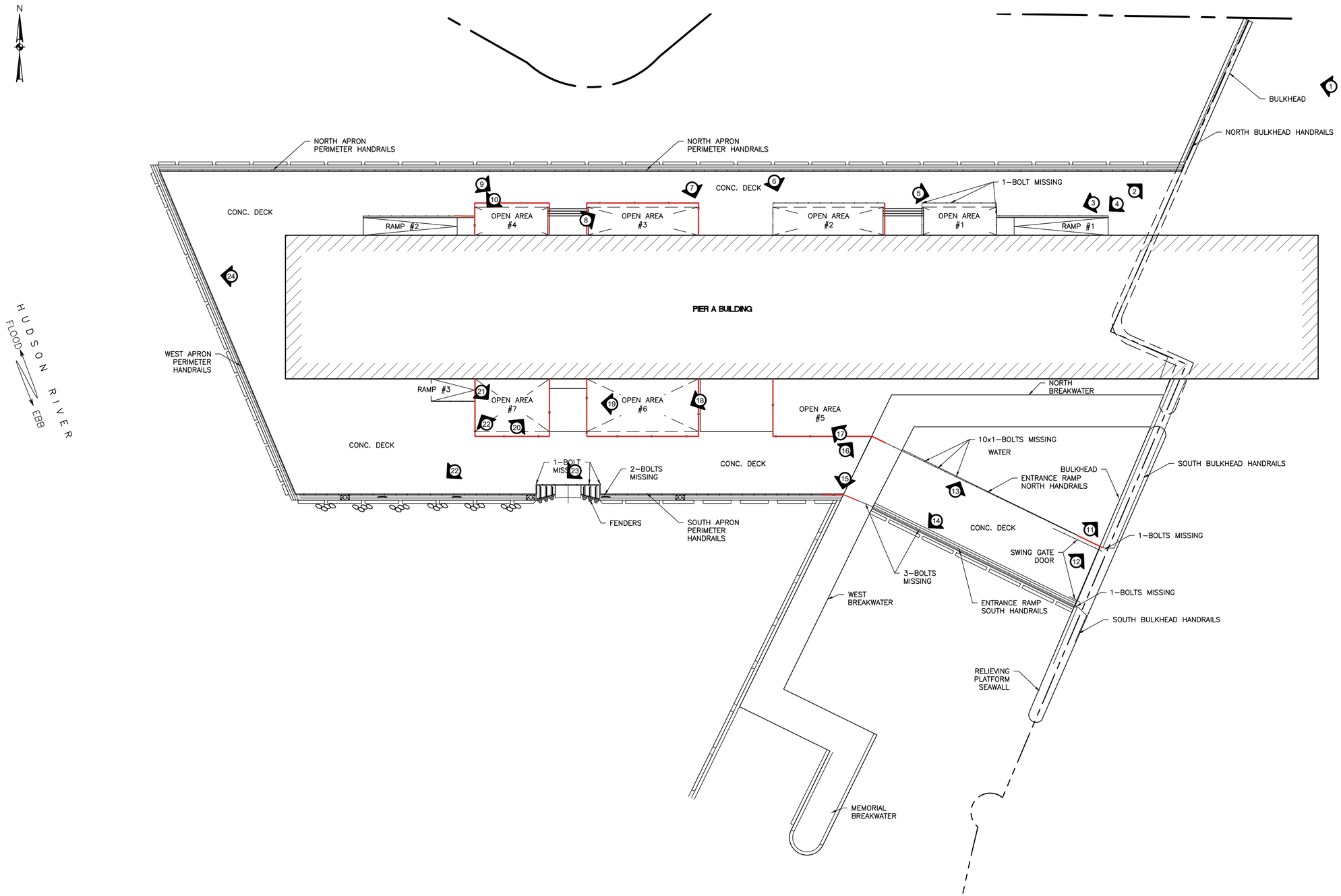
4 Schedule

4.1 Preliminary Schedule

Attached in Appendix C, please find our preliminary schedule for both design and construction. We anticipate a 90% design submission by Friday, March 11th, and a construction NTP to be sent out no later than Friday, June 17th.

Appendix – A

Pier A Layout Plan and Photographs



LEGEND:

DETERIORATED HANDRAIL

PHOTO LOCATION

EXISTING PIER A HANDRAILS LAYOUT PLAN

0 8' 16' 32'

ISSUED FOR REVIEW
DATE: 01/28/22

NEW YORK STATE OF OPPORTUNITY | Battery Park City Authority

BATTERY PARK CITY AUTHORITY
200 LIBERTY STREET, 24TH FLOOR,
NEW YORK, NY, 10281
T: 212.417.2000

Urban Engineers of New York, D.P.C.
One Penn Plaza, Suite 4125
New York, NY 10119
o. 212.736.9100

SEAL

BY:

DATE:

REV	DATE	DESCRIPTION	BY	CKD	APD
0	01/28/22	ISSUED FOR REVIEW	AK	SMM	MGW

NEW YORK, NY
BATTERY PARK CITY AUTHORITY
PIER A RAILINGS REHABILITATION
EXISTING PIER A HANDRAILS LAYOUT PLAN

SCALE: AS NOTED
DATE: 01/28/22
DESIGN BY: AK
APPROVED BY: MGW
DRAWN BY: FTC
CHECKED BY: SMM
PROJECT NO.: 2020200179.007
SHEET NUMBER: GA-1
SHT. NO.: 4 OF 5
DRAWING FILE NO.: GA-1 EXI... .DWG
REV. NO.: 0

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DATE PRINTED: 1/28/2022 4:18:55 PM

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NORTH APRON HANDRAILS



PHOTO NO.1 NORTH BULKHEAD HANDRAILS



PHOTO NO.2 NORTH APRON PERIMETER HANDRAILS



PHOTO NO.3 RAMP#1 HANDRAILS



PHOTO NO.4 RAMP#1 HANDRAIL SUPPORT CRACKED TIMBER BOARD

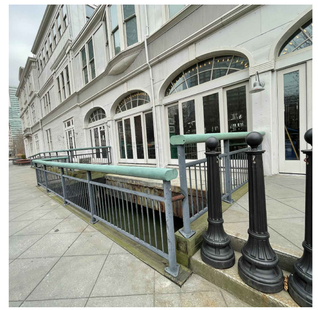

PHOTO NO.5 OPEN AREA #1 HANDRAILS



PHOTO NO.6 OPEN AREA #2 CORRODED HANDRAILS

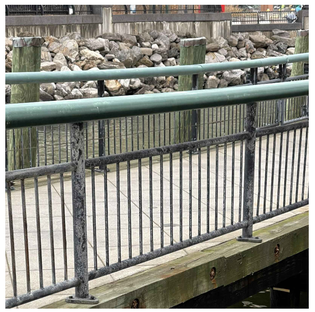

PHOTO NO.7 OPEN AREA #3 CORRODED HANDRAILS

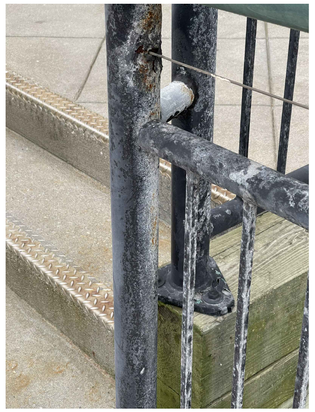

PHOTO NO.8 OPEN AREA #3 DETERIORATED HANDRAILS



PHOTO NO.9 OPEN AREA #4 CORRODED HANDRAILS



PHOTO NO.10 RAMP #2 CORRODED HANDRAILS

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NEW YORK, NY 10281
T: 212.417.2000

Urban Engineers of New York, D.P.C.
One Penn Plaza, Suite 4125
New York, NY 10119
o. 212.736.7100

SEAL

BY:

DATE:

REV	DATE	DESCRIPTION	BY	CKD	APD
0	01/28/22	ISSUED FOR REVIEW	AK	SMM	MGW

NEW YORK, NY

BATTERY PARK CITY AUTHORITY

PIER A RAILINGS REHABILITATION

EXISTING HANDRAIL CONDITION PHTOGRAPHS 1/2

SCALE: AS NOTED
DESIGN BY: AK
APPROVED BY: MGW
DATE: 01/28/22
DRAWN BY: FYC
CHECKED BY: SMM
PROJECT NO.: 2020200179.007
SHEET NUMBER: **GA-2**
SHT. NO.: 4 OF 5
DRAWING FILE NO.: GA-1 EXI... .DWG
REV. NO.: 0

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DATE PRINTED:1/28/2022 4:18:55 PM

ISSUED FOR REVIEW

SOUTH APRON HANDRAILS



PHOTO NO.11 SOUTH BULKHEAD HANDRAILS



PHOTO NO.12 ENTRANCE RAMP NORTH CORRODED HANDRAIL



PHOTO NO.13 ENTRANCE RAMP NORTH ONE BOLT MISSED IN TEN COLUMN BASE PLATES



PHOTO NO.14 ENTRANCE TAMP SOUTH
THREE BOLT MISSED IN TWO COLUMN BASE PLATES



PHOTO NO.15 ENTRANCE RAMP SOUTH DAMAGED AND DETERIORATED HANDRAIL



PHOTO NO.16 OPEN AREA #5 DETERIORATED HANDRAILS

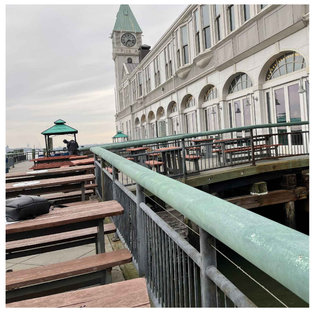

PHOTO NO.17 OPEN AREA #5 CORRODED HANDRAIL



PHOTO NO.18 OPEN AREA #6 DETERIORATED HANDRAIL



PHOTO NO.19 OPEN AREA #6 CORRODED HANDRAIL



PHOTO NO.20 OPEN AREA #7 CORRODED HANDRAIL



PHOTO NO.21 OPEN AREA #7 DETERIORATED HANDRAIL

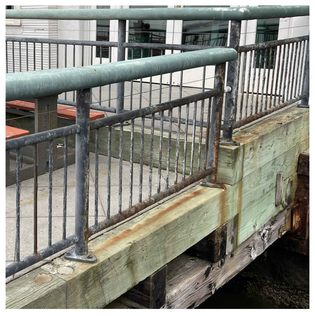

PHOTO NO.22 OPEN AREA #7 CORRODED HANDRAIL



PHOTO NO.23 SOUTH PERIMETER HANDRAILS
DEFORMED PIPE TOP RAIL



PHOTO NO.23 SOUTH PERIMETER HANDRAILS
DEFORMED PIPE TOP RAIL NEAR FENDERS



PHOTO NO.25 WEST PERIMETER HANDRAILS
LOSE AND LOST TENSION CABLE

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NEW YORK, NY 10281
T: 212.417.2000

Urban Engineers of New York, D.P.C.
One Penn Plaza, Suite 4125
New York, NY 10119
o. 212.736.7100

URBAN ENGINEERS

SEAL

BY:

DATE:

REV	DATE	DESCRIPTION	BY	CKD	APD
0	01/28/22	ISSUED FOR REVIEW	AK	SMM	MGW

NEW YORK, NY
BATTERY PARK CITY AUTHORITY

PIER A RAILINGS REHABILITATION

EXISTING HANDRAIL CONDITION PHTOGRAPHS 1 / 2

SCALE: AS NOTED	DESIGN BY: AK
DATE: 01/28/22	APPROVED BY: MGW
	DRAWN BY: FYC
	CHECKED BY: SMM

PROJECT NO.: 2020200179.007

SHEET NUMBER
GA-3

SHT. NO.: 4 OF 5

DRAWING FILE NO.: GA-1 EXI... .DWG

REV. NO.: 0

ISSUED FOR REVIEW

DATE PRINTED:1/28/2022 4:18:55 PM

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Appendix – B

Design Recommendations

Handrail Location #	Maintenance parts	Defected area / length	Condition	Action	Photo No.	Rehabilitation handrails Design linear foot			
						Total	**Paint**	**Repair**	**Replace**
North Apron						L-Ft.	L-Ft.	L-Ft.	L-Ft.
1) **North Bulkhead**	Handrail	51.5 L-Ft.	Good	Touch up to the Existing handrails	#1	51.50	51.50		
	Base plate grouting missed	2 No.s	Fair	Provide the grouting under the base plate					
2) **North Apron Perimeter**	Handrail	320 L-ft	Good	Clean and provide corrosion resistance paint	#2	320.00	320.00		
3) **Ramp #1**	Handrail	43.7 L.Ft.	Good	Clean and provide corrosion resistance paint	#3	43.60	43.60		
	Missed Bolt	1	Very poor	Provide new galvanized bolt					
	Timber plank under the base plate		Poor	Remove and replace with grouting	#4				
4) **Ramp #2**	Handrails	13 L-Ft.	Poor	Remove and replace with new handrail.	#10	40.75			40.75
	Handrails	27.75 L-Ft.	Fair	Remove and replace with new handrail.					
5) **Open Area #1**	Handrails	42 L-Ft.	Fair	Clean and provide corrosion resistance paint	#5	42.00	42.00		
	Missed Bolt	2	Very poor	Provide new galvanized bolts					

Handrail Location #	Maintenance parts	Defected area / length	Condition	Action	Photo No.	Rehabilitation handrails Design Approximate linear foot			
						Total	Paint	Repair	Replace
South Apron						L-Ft.	L-Ft.	L-Ft.	L-Ft.
6) **Open Area #2**	Handrails	12 L-Ft.	Poor	Remove and replace with new handrail.	#6	59.75	47.75		12.00
	Handrails	47.75 L-Ft.	Fair	Clean and provide corrosion resistance paint					
7) **Open Area #3**	Handrail	59 L-Ft.	Poor	Remove and replace with new handrail.	#7 & #8	59.75			59.75
8) **Open Area #4**	Handrail	42 L-Ft	Poor	Remove and replace with new handrail	#9	42.00			42.00
West Apron									
1) **West Apron Perimeter**	Handrail	108.75 L-Ft.	Fair	Clean and provide corrosion resistance paint		108.75	108.75		
	Tension cable, Span no. 5, 6, 7, 8 and 9	31 L-Ft	Fair	Tighten the Cable	#25				

Handrail Location #	Maintenance parts	Defected area / length	Condition	Action	Photo No.	Rehabilitation handrails Design Approximate linear foot			
						Total	**Paint**	**Repair**	**Replace**
South Apron						L-Ft.	L-Ft.	L-Ft.	L-Ft.
1) **South Bulkhead**	Handrails	60 L-Ft.	Fair	Clean and provide corrosion resistance paint	#11	72.60	72.60		
	Handrails	12.6 L-Ft.	Fair	Clean and provide corrosion resistance paint					
	Missed Bolt	1 No.s	Very poor	Provide new galvanized bolts					
2) **South Apron Perimeter**	Handrail	171.5 L-Ft.	Good	Clean and provide corrosion resistance paint		177.50	171.50		6.00
	Handrail	6 L-Ft.	Poor	Remove and replace with new handrail.	#15				
	Missed Bolts On concrete deck near Fenders	5 No.s	Very Poor	Provide new galvanized bolts and grouting as necessary.					
	Deformed pipe top rail	2 span	poor	Repair to original shape and provide weld joint as necessary	#23 & #24				
3) **Entrance Ramp Gate**	Door frame	21 L-Ft.	Fair	Clean and provide corrosion resistance paint		21.00	21.00		
	Missed Bolts	4 No.s	Very poor	Provide new galvanized bolts					

Handrail Location #	Maintenance parts	Defected area / length	Condition	Action	Photo No.	Rehabilitation handrails Design Approximate linear foot			
						Total	**Paint**	**Repair**	**Replace**
						L-Ft.	L-Ft.	L-Ft.	L-Ft.
South Apron									
4) **Entrance Ramp North**	Handrails	67.67 L-Ft.	Fair	Clean and provide corrosion resistance paint	#12 & #16	79.67	67.67		12.00
	Handrails	12 L-Ft.	Poor	Remove and replace with new handrail					
	Missed Bolts	10 No.s	Very poor	Provide new galvanized bolts					
5) **Entrance Ramp South**	Handrails	73.67 L-Ft.	Fair	Clean and provide corrosion resistance paint	#15	79.67	73.67		6.00
	Handrails	6 L-Ft.	Poor	Remove and replace with new handrail					
	Missed Bolts	6 No.s	Very poor	Provide new galvanized bolts					
6) **Open Area #5**	Handrail	51.5 L-ft	Poor	Remove and replace with new handrail.	#16 & #17	51.50			51.50
7) **Open Area #6**	Handrail	79.5 L-ft	Poor	Remove and replace with new handrail.	#18 & #19	79.50			79.50
8) **Open Area #7**	Handrail	59.5 L-ft	Poor	Remove and replace with new handrail.	#20 & #21	59.50			59.00
9) **Ramp #3**	Handrails	7.25 L-Ft.	Poor	Remove and replace with new handrail.	#22	21.00			21.00
	Handrails	13.75 L-Ft.	Fair	Remove and replace with new handrail.					
Total length of handrails maintenance and replacement						**1410.0**	**1020.0**		**390.0**

Appendix – C

Schedule

ID	Task Name	Duration	Start	Finish
1	**Pier A Railings**	**175 days**	**Mon 1/24/22**	**Fri 9/23/22**
2	**Task 1 - Existing Plans & Visual Assessment Report Review**	**5 days**	**Mon 1/24/22**	**Fri 1/28/22**
3	Design NTP	0 days	Mon 1/24/22	Mon 1/24/22
4	Inspection & Testing	3 days	Mon 1/24/22	Wed 1/26/22
5	Inspection Report Preparation	5 days	Mon 1/24/22	Fri 1/28/22
6	Inspection Report Submission	0 days	Fri 1/28/22	Fri 1/28/22
7	**Task 2 - Design and Prepare Construction Documents**	**55 days**	**Mon 1/31/22**	**Fri 4/15/22**
8	BPCA Review & Approval of Inspection Report	10 days	Mon 1/31/22	Fri 2/11/22
9	90% Design	20 days	Mon 2/14/22	Fri 3/11/22
10	Preliminary Cost Estimate	20 days	Mon 3/14/22	Fri 4/8/22
11	90% Design Submission	0 days	Fri 3/11/22	Fri 3/11/22
12	BPCA Review & Comment on Design Submission	10 days	Mon 3/14/22	Fri 3/25/22
13	Issued for Bid Design	15 days	Mon 3/28/22	Fri 4/15/22
14	Final Cost Estimate	15 days	Mon 3/28/22	Fri 4/15/22
15	Issued for Bid Submission	0 days	Fri 4/15/22	Fri 4/15/22
16	**Task 3 - Bid Services**	**30 days**	**Mon 4/18/22**	**Fri 5/27/22**
17	Contractor RFP Issued	1 day	Mon 4/18/22	Mon 4/18/22
18	Pre-Bid Meeting	0 days	Mon 5/9/22	Mon 5/9/22
19	Review & Respond to RFIs	20 days	Tue 4/19/22	Mon 5/16/22
20	Contractor Bid Submissions	0 days	Mon 5/16/22	Mon 5/16/22
21	Contractor Bid Review	9 days	Tue 5/17/22	Fri 5/27/22
22	Contractor Selection	0 days	Fri 5/27/22	Fri 5/27/22
23	**Task 4 - Construction Administration & Close Out Services**	**70 days**	**Fri 6/17/22**	**Fri 9/23/22**
24	Construction NTP	0 days	Fri 6/17/22	Fri 6/17/22
25	Submittal & RFI Submission	35 days	Mon 6/20/22	Fri 8/5/22
26	Mobilization	0 days	Mon 7/18/22	Mon 7/18/22
27	Construction	40 days	Mon 7/18/22	Fri 9/9/22
28	Substantial Completion	0 days	Fri 9/9/22	Fri 9/9/22
29	Punchlist	10 days	Mon 9/12/22	Fri 9/23/22
30	Demobilization	0 days	Fri 9/23/22	Fri 9/23/22

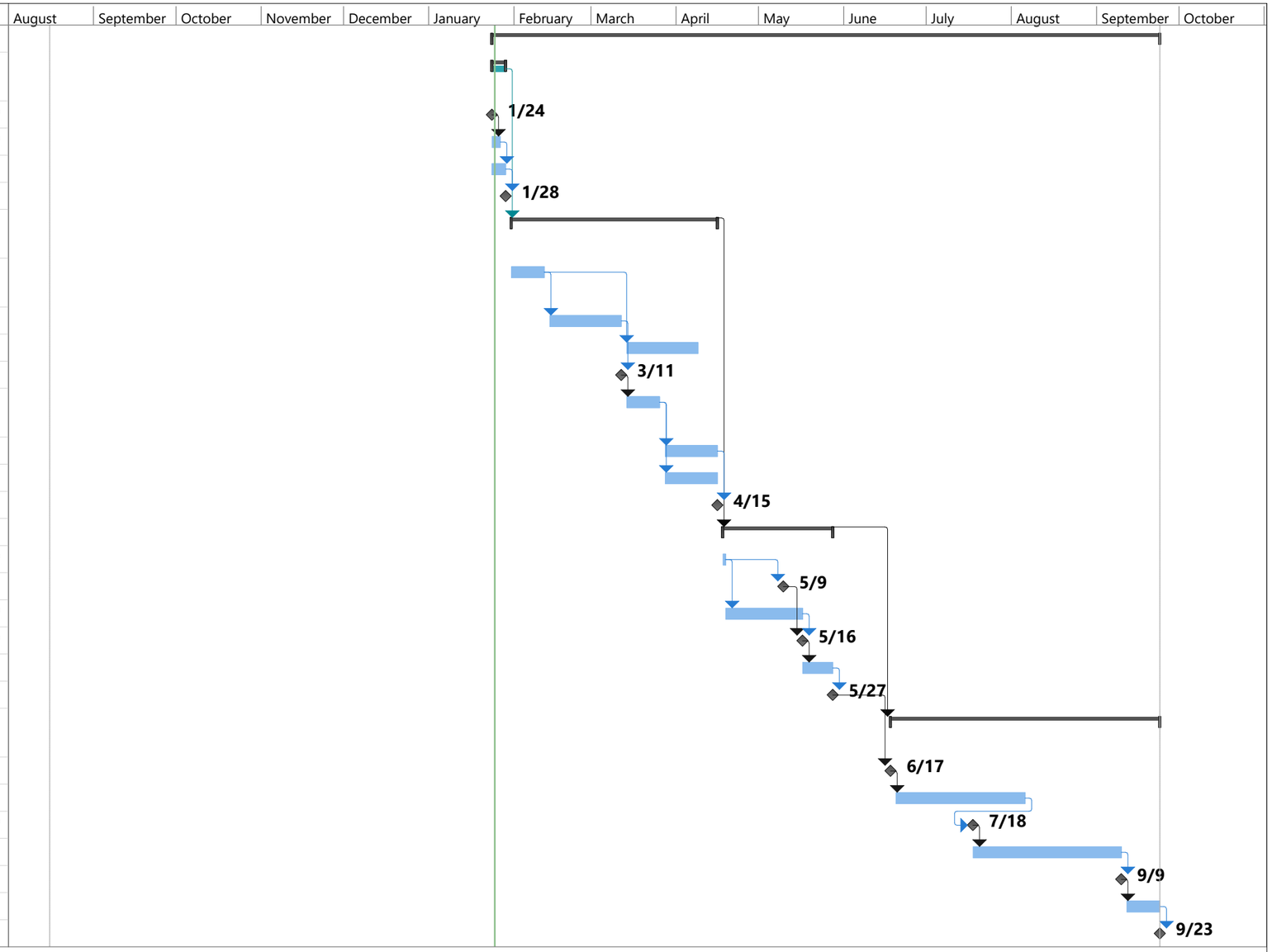

EXHIBIT C

CONTRACTOR REQUIREMENTS AND PROCEDURES FOR PARTICIPATION BY NEW YORK STATE-CERTIFIED MBEs/WBEs/SDVOBs AND EQUAL EMPLOYMENT OPPORTUNITIES FOR MINORITY GROUP MEMBERS AND WOMEN

NEW YORK STATE LAW

Pursuant to New York State Executive Law Article 15-A and Parts 140-145 of Title 5 of the New York Codes, Rules and Regulations BPCA is required to promote opportunities for the maximum feasible participation of New York State-certified MBEs/WBEs (collectively, "MWBE(s)") and the employment of minority group members and women in the performance of BPCA contracts. Pursuant to New York State Executive Law Article 17-B and 9 NYCRR §252, BPCA recognizes its obligation under the law to promote opportunities for maximum feasible participation of certified Service-Disabled Veteran-Owned Businesses ("SDVOB(s)").

Business Participation Opportunities for MWBEs

For purposes of this solicitation, BPCA hereby establishes the following MWBE participation goals, based on the current availability of MWBEs:

Overall goal for total MWBE participation:	**30%**
NYS-Certified Minority-Owned Business ("MBE") Participation:	**15%**
NYS-Certified Women-Owned Business ("WBE") Participation:	**15%**

A contractor ("Contractor") on any contract resulting from this procurement ("Contract") must document its good faith efforts to provide meaningful participation by MWBEs as subcontractors and suppliers in the performance of the Contract. To that end, by submitting a response to this RFP, the Proposer agrees that BPCA may withhold payment pursuant to any Contract awarded as a result of this RFP pending receipt of the required MWBE documentation. The directory of MWBEs can be viewed at: https://ny.newnycontracts.com. For guidance on how BPCA will evaluate a Contractor's "good faith efforts," refer to 5 NYCRR § 142.8.

The Proposer understands that only sums paid to MWBEs for the performance of a commercially useful function, as that term is defined in 5 NYCRR § 140.1, may be applied towards the achievement of the applicable MWBE participation goal. The portion of a contract with an MWBE serving as a supplier that shall be deemed to represent the commercially useful function providing supplies shall be sixty percent (60%) of the total value of the contract. The portion of a contract with an MWBE serving as a broker that shall be deemed to represent the commercially useful function performed by the MWBE shall be the monetary value for fees, or the markup percentage, charged by the MWBE.

In accordance with 5 NYCRR § 142.13, the Proposer further acknowledges that if it is found to have willfully and intentionally failed to comply with the MWBE participation goals set forth in a Contract resulting from this RFP, such finding constitutes a breach of contract and BPCA may withhold payment or collect liquidated damages.

Such liquidated damages shall be calculated as an amount equaling the difference between: (1) all sums identified for payment to MWBEs had the Contractor achieved the contractual MWBE goals; and (2) all sums actually paid to MWBEs for work performed or materials supplied under the Contract.

By submitting a bid or proposal, a Proposer agrees to demonstrate its good faith efforts to achieve the applicable MWBE participation goals by submitting evidence thereof through the New York State Contract System ("NYSCS"), which can be viewed at https://ny.newnycontracts.com, provided, however, that a Proposer may arrange to provide such evidence via a non-electronic method by contacting Justin Mclaughlin-Williams at justin.mclaughlin-williams@bpca.ny.gov or 212-417-2337. Please note that the NYSCS is a one-stop solution for all of your

MBE/WBE and Article 15-A contract requirements. For additional information on the use of the NYSCS to meet the Proposer's MBE/WBE requirements, please see the attached MBE/WBE guidance from the New York State Division of Minority and Women's Business Development, "Your MWBE Utilization and Reporting Responsibilities Under Article 15-A.".

Additionally, a Proposer will be required to submit the following documents and information as evidence of compliance with the foregoing:

A. An MWBE Utilization Plan with their bid or proposal. Any modifications or changes to an accepted MWBE Utilization Plan after the Contract award and during the term of the Contract must be reported on a revised MWBE Utilization Plan and submitted to BPCA for review and approval.

B. BPCA will review the submitted MWBE Utilization Plan and advise the Proposer of BPCA acceptance or issue a notice of deficiency within thirty (30) days of receipt.

C. If a notice of deficiency is issued, the Proposer will be required to respond to the notice of deficiency within seven (7) business days of receipt by submitting to BPCA's Justin Mclaughlin-Williams, by email at justin.mclaughlin-williams@bpca.ny.gov, a written remedy in response to the notice of deficiency. If the written remedy that is submitted is not timely or is found by BPCA to be inadequate, BPCA shall notify the Proposer and direct the Proposer to submit, within five (5) business days, a request for a partial or total waiver of MWBE participation goals. Failure to file the waiver form in a timely manner may be grounds for disqualification of the bid or proposal.

D. BPCA may disqualify a Proposer as being non-responsive under the following circumstances:

1) If a Proposer fails to submit an MWBE Utilization Plan;

2) If a Proposer fails to submit a written remedy to a notice of deficiency;

3) If a Proposer fails to submit a request for waiver; or

4) If BPCA determines that the Proposer has failed to document good faith efforts.

The successful Proposer will be required to attempt to utilize, in good faith, any MBE or WBE identified within its MWBE Utilization Plan, during the performance of the Contract. Requests for a partial or total waiver of established goal requirements made subsequent to Contract Award may be made at any time during the term of the Contract to BPCA, but must be made no later than prior to the submission of a request for final payment on the Contract.

The successful Proposer will be required to submit a \M/WBE Contractor Compliance & Payment Report to BPCA via the New York State Contracting System https://ny.newnycontracts.com. by the tenth (10th) day of each month over the term of the Contract documenting the progress made toward achievement of the MWBE goals of the Contract.

Business Participation Opportunities for SDVOBs

For purposes of this solicitation, BPCA hereby establishes an overall goal of 6% for SDVOB participation. A Proposer must document good faith efforts to provide meaningful participation by SDVOBs as subcontractors or suppliers in the performance of the Contract and Proposer agrees that BPCA may withhold payment pending receipt of the required SDVOB documentation. The directory of New York State Certified SDVOBs can be viewed at: https://sdves.ogs.ny.gov/ For guidance on how BPCA will determine a Contractor's "good faith efforts," refer to 9 NYCRR §252.2(f)(2).

In accordance with 9 NYCRR §252.2(s), the Proposer acknowledges that if it is found to have willfully and intentionally failed to comply with the SDVOB participation goals set forth in the Contract, such finding constitutes

a breach of Contract and Contractor shall be liable for damagest.to be calculated based on the actual cost incurred by BPCA related to BPCA's expenses for personnel, supplies and overhead related to establishing, monitoring and reviewing certified SDVOB programmatic goals.

A. Additionally, a Proposer agrees to submit a Utilization Plan with their bid or Proposal as evidence of compliance with the foregoing. Any modifications or changes to the Utilization Plan after the Contract award and during the term of the Contract must be reported on a revised Utilization Plan and submitted to BPCA.

B. BPCA will review the submitted Utilization Plan and advise the Proposer of BPCA's acceptance or issue a notice of deficiency within thirty (30) days of receipt.

C. If a notice of deficiency is issued, Proposer agrees that it shall respond to the notice of deficiency within seven (7) business days of receipt by submitting to BPCA's Justin Mclaughlin-Williams, by email at justin.mclaughlin-williams@bpca.ny.gov, a written remedy in response to the notice of deficiency. If the written remedy that is submitted is not timely or is found by BPCA to be inadequate, BPCA shall notify the Proposer and direct the Proposer to submit, within five (5) business days, a request for a partial or total waiver of SDVOB participation goals. Failure to file the waiver form in a timely manner may be grounds for disqualification of the bid or Proposal.

D. BPCA may disqualify a Proposer as being non-responsive under the following circumstances:

1) If a Proposer fails to submit a Utilization Plan;

2) If a Proposer fails to submit a written remedy to a notice of deficiency;

3) If a Proposer fails to submit a request for waiver; or

4) If BPCA determines that the Proposer has failed to document good faith efforts.

The successful Proposer shall attempt to utilize, in good faith, any SDVOB identified within its Utilization Plan, during the performance of the Contract. Requests for a partial or total waiver of established goal requirements made subsequent to the Contract award may be made at any time during the term of the Contract to BPCA, but must be made no later than prior to the submission of a request for final payment on the Contract.

The successful Proposer is required to submit a Contractor's SDVOB Contractor Compliance & Payment Report to BPCA on a monthly basis over the term of the Contract documenting the progress made toward achievement of the SDVOB goals of the Contract.

Equal Employment Opportunity (EEO) Requirements

By submission of a bid or proposal in response to this solicitation, the Proposer agrees with all of the terms and conditions of the attached MWBE Equal Employment Opportunity Policy Statement. The Proposer is required to ensure that it and any subcontractors awarded a subcontract for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work"), except where the Work is for the beneficial use of the Proposer, undertake or continue programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status. For these purposes, equal opportunity shall apply in the areas of recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, termination, and rates of pay or other forms of compensation. This requirement does not apply to: (i) work, goods, or services unrelated to the Contract; or (ii) employment outside New York State.

The Proposer will be required to submit a Minority and Women-owned Business Enterprise and Equal Employment Opportunity Policy Statement, Form #4, to BPCA with its bid or proposal.

If awarded a Contract, Proposer shall submit a Workforce Utilization Report and shall require each of its Subcontractors to submit a Workforce Utilization Report, in such format as shall be required by BPCA on a monthly basis during the term of the Contract using the New York State Contract System or by other electronic means accepted by BPCA.Pursuant to Executive Order #162, contractors and subcontractors may also be required to report the gross wages paid to each of their employees for the work performed by such employees on the contract utilizing the Workforce Utilization Report on a quarterly basis.

Further, pursuant to Article 15 of the Executive Law (the "Human Rights Law"), all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor and sub-contractors will not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

Please Note: Failure to comply with the foregoing requirements may result in a finding of non-responsiveness, non-responsibility and/or a breach of the Contract, leading to the withholding of funds, suspension or termination of the Contract or such other actions or enforcement proceedings as allowed by the Contract.

NEW YORK STATE OF OPPORTUNITY | Division of Minority and Women's Business Development

Your MBE/WBE Utilization and Reporting Responsibilities Under Article 15-A

The New York State Contract System ("NYSCS") is your one stop tool compliance with New York State's MBE/WBE Program. It is also the platform New York State uses to monitor state contracts and MBE/WBE participation.

GETTING STARTED

To access the system, please login or create a user name and password at https://ny.newnycontracts.com. If you are uncertain whether you already have an account set up or still need to register, please send an email to the customer service contact listed on the Contact Us & Support page, or reach out to Justin Mclaughlin-Williams at justin.mclaughlin-williams@bpca.ny.gov or 212-417-2337. For verification, in the email, include your business name and contact information.

VENDOR RESPONSIBILITIES

As a vendor conducting business with New York State, you have a responsibility to utilize minority- and/or women-owned businesses in the execution of your contracts, per the MBE/WBE percentage goals stated in your solicitation, incentive proposal or contract documents. NYSCS is the tool that New York State uses to monitor MBE/WBE participation in state contracting. Through the NYSCS you will submit utilization plans, request subcontractors, record payments to subcontractors, and communicate with your project manager throughout the life of your awarded contracts.

There are several reference materials available to assist you in this process, but to access them, you need to first be registered within the NYSCS. Once you log onto the website, click on the **Help & Support >>** link on the lower left hand corner of the Menu Bar to find recorded trainings and manuals on all features of the NYSCS. You may also click on the **Help & Tools** icon at the top right of your screen to find videos tailored to primes and subcontractors. There are also opportunities available to join live trainings, read up on the "Knowledge Base" through the Forum link, and submit feedback to help improve future enhancements to the system. Technical assistance is always available through the **Contact Us & Support** link on the NYSCS website (https://ny.newnycontracts.com).

For more information, contact Justin Mclaughlin-Williams at justin.mclaughlin-williams@bpca.ny.gov or by phone, at 212-417-2337.

MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISES
EQUAL EMPLOYMENT OPPORTUNITY (EEO) POLICY STATEMENT

I, _____ (the "Contractor"), agree to adopt the following policies with respect to the project being developed at, or services rendered to, the Battery Park City Authority ("BPCA").

MBE/WBE

This organization will and will cause its contractors and subcontractors to take good faith actions to achieve the MBE/WBE contract participations goals set by the State for that area in which the State-funded project is located, by taking the following steps:

(1) Actively and affirmatively soliciting bids for contracts and subcontracts from qualified State certified MBEs or WBEs, including solicitations to MBE/WBE contractor associations.

(2) Requesting a list of State-certified MBEs/WBEs from BPCA and soliciting bids from these MBEs/WBEs directly.

(3) Ensuring that plans, specifications, request for proposals and other documents used to secure bids will be made available in sufficient time for review by prospective MBEs/WBEs.

(4) Where feasible, dividing the work into smaller portions to enhance participations by MBEs/WBEs and encourage the formation of joint venture and other partnerships among MBE/WBE contractors to enhance their participation.

(5) Documenting and maintaining records of bid solicitation, including those to MBEs/WBEs and the results thereof. The Contractor will also maintain records of actions that its subcontractors have taken toward meeting MBE/WBE contract participation goals.

(6) Ensuring that progress payments to MBEs/WBEs are made on a timely basis so that undue financial hardship is avoided, and that bonding and other credit requirements are waived or appropriate alternatives are developed to encourage MBE/WBE participation.

EEO

(a) This organization will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability or marital status, will undertake or continue existing diversity programs to ensure that minority group members are afforded equal employment opportunities without discrimination, and shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on State contracts.

(b) This organization shall state in all solicitation or advertisements for employees that in the performance of the State contract all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex disability or marital status.

(c) At the request of BPCA, this organization shall request that each employment agency, labor union, or authorized representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of this organization's obligations herein.

(d) The Contractor shall comply with the provisions of the Human Rights Law, all other State and Federal statutory and constitutional non-discrimination provisions. The Contractor and subcontractors shall not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

(e) This organization will include the provisions of sections (a) through (d) of this agreement in every subcontract in such a manner that the requirements of the subdivisions will be binding upon each subcontractor as to work in connection with the State contract.

Agreed to this _____ day of _____ *(month)*, 20____ *(year)*

By _____

Print: _____ Title: _____

_____ is designated as the Contractor's Minority Business Enterprise Liaison responsible for administering the Minority and Women-Owned Business Enterprises - Equal Employment Opportunity (MBE/WBE - EEO) program.

MBE/WBE Contract Goals

30% Minority and Women's Business Enterprise Participation

___% Minority Business Enterprise Participation

___% Women's Business Enterprise Participation

EEO Contract Goals (if applicable)

___% Minority Labor Force Participation

___% Female Labor Force Participation

_____
(Authorized Representative)

Title: _____

Date: _____

Diversity Practices Questionnaire

I, _____, as _____ (title) of _____ company (the "Company"), swear and/or affirm under penalty of perjury that the answers submitted to the following questions are complete and accurate to the best of my knowledge:

1. Does your Company have a Chief Diversity Officer or other individual who is tasked with supplier diversity initiatives? Yes or No

If Yes, provide the name, title, description of duties, and evidence of initiatives performed by this individual or individuals.

2. What percentage of your Company's gross revenues (from your prior fiscal year) was paid to New York State certified MBEs/WBEs as subcontractors, suppliers, joint-ventures, partners or other similar arrangement for the provision of goods or services to your Company's clients or customers?

3. What percentage of your Company's overhead (i.e. those expenditures that are not directly related to the provision of goods or services to your Company's clients or customers) or non-contract-related expenses (from your prior fiscal year) was paid to New York State certified MBEs/WBEs as suppliers/contractors?[1]

4. Does your Company provide technical training[2] to MBEs/WBEs? Yes or No

If Yes, provide a description of such training which should include, but not be limited to, the date the program was initiated, the names and the number of MBEs/WBEs participating in such training, the number of years such training has been offered and the number of hours per year for which such training occurs.

5. Is your Company participating in a government approved M/WBE mentor-protégé program?

If Yes, identify the governmental mentoring program in which your Company participates and provide evidence demonstrating the extent of your Company's commitment to the governmental mentoring program.

6. Does your Company include specific quantitative goals for the utilization of MBEs/WBEs in its non-government procurements? Yes or No

If Yes, provide a description of such non-government procurements (including time period, goal, scope and dollar amount) and indicate the percentage of the goals that were attained.

7. Does your Company have a formal M/WBE supplier diversity program? Yes or No

If Yes, provide documentation of program activities and a copy of policy or program materials.

8. Does your Company plan to enter into partnering or subcontracting agreements with New York State certified MBEs/WBEs if selected as the successful Proposer? Yes or No

If Yes, complete the attached Utilization Plan

[1] Do not include onsite project overhead.

[2] Technical training is the process of teaching employees how to more accurately and thoroughly perform the technical components of their jobs. Training can include technology applications, products, sales and service tactics, and more. Technical skills are job-specific as opposed to soft skills, which are transferable.

All information provided in connection with the Diversity Practices Questionnaire is subject to audit and any fraudulent statements are subject to criminal prosecution and debarment.

Signature of Owner/Official _____

Printed Name of Signatory _____

Title _____

Name of Business _____

Address _____

City, State, Zip _____

STATE OF _____

COUNTY OF) ss:

On the _____ day of _____, 20__, before me, the undersigned, a Notary Public in and for the State of _____, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to this certification and said person executed this instrument.

_____
Notary Public

EXHIBIT D
BPCA STANDARD FORM OF CONTRACT

[ATTACHED]

CONSTRUCTION AGREEMENT

between

HUGH L. CAREY BATTERY PARK CITY AUTHORITY

and

[NAME OF COMPANY, INC. CORP, CO.]

Dated as of **[DATE]**

Contract No. **[ENTER CONTRACT NUMBER]**

(PROJECT NAME)

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CONSTRUCTION AGREEMENT

AGREEMENT made as of _____ by and between BATTERY PARK CITY AUTHORITY, d/b/a HUGH L. CAREY BATTERY PARK CITY AUTHORITY, ("**BPCA"**), a body corporate and politic, constituting a public benefit corporation and having a place of business at 200 Liberty Street, 24th Floor, New York, New York 10281, and [NAME OF COMPANY], formed under the laws of the State of [STATE], having an office at [Street Address, City, Zip Code] ("**Contractor**").

W I T N E S S E T H:

WHEREAS, BPCA has fee title to certain real property located in the City, County and State of New York, generally consisting of approximately 92 acres of land located on the west side of lower Manhattan, bounded by Pier A to the South, the westerly extension of Reade Street to the North, the United States Bulkhead Line to the East and the United States Pierhead Line to the West (collectively, "**Battery Park City**"); and

WHEREAS, BPCA has caused the staged development of Battery Park City, in individual parcels, creating a richly diversified mixed use community providing residential and commercial space, with related amenities such as parks, plazas, recreational areas and a waterfront esplanade; and

WHEREAS, BPCA intends to hire a contractor to perform [type of services], consisting of the Work, as hereinafter defined, for the [structure] upon which work will be performed (the "**Project**"), located in and adjacent to [location], in Battery Park City, in the Borough of Manhattan, County, City and State of New York (the "**Site**"); and

WHEREAS, Contractor has been selected to perform the Work, upon the terms and conditions hereinafter provided; and

NOW, THEREFORE, in consideration of the mutual covenants hereinafter set forth, Contractor and BPCA hereby agree as follows:

ARTICLE 1 - DEFINITIONS

The following terms, wherever used in the Contract Documents, as defined herein, shall have the meanings set forth below or in the Section enumerated below next to each term:

(a) Agreement - as defined in Section 2.2(a).

(b) Agreement Termination Date - as defined in Section 3.1(a).

(c) Architect - [include Name, Address, etc., as applicable].

(d) Artist - [include Name, Address, etc., as applicable].

(e) BPCA - as defined in the introductory clause of this Agreement. BPCA hereby designates [BPCA Person and Title], as the representative of BPCA for the purpose of acting on behalf

of BPCA whenever action is required to be taken hereunder by BPCA. Such designation may be revoked in writing at any time after notice given by BPCA to Contractor. In addition, such representative of BPCA shall have full power and authority to delegate in writing any or all of her responsibilities hereunder to any one or more persons after notice to Contractor.

(f) Certificate of Substantial Completion - as defined in Section 8.6.

(g) Change Order - as defined in Section 9.1(b).

(h) Construction Manager - [include Name, Address, etc., as applicable].

(i) Contract Documents - as defined in Section 2.2.

(j) Contract Price - as defined in Article 4.

(k) Contract Time - the duration of time during which Construction Manager schedules and coordinates the Work of Contractor pursuant to Section 7.2 hereof.

(l) Contractor - as defined in the first Recital of this Agreement.

(m) Drawings - Project drawings comprising part of Exhibit [x].

(n) Engineer [include Name, Address, etc., as applicable].

(o) Extra Work - any work in addition to the Work to be performed by Contractor pursuant to the Contract Documents.

(p) Field Order - as defined in Section 9.3.

(q) Final Acceptance - as defined in Section 8.7.

(r) Final Requisition - as defined in Section 5.2.

(s) Guarantor - as defined in Section 27.3.

(t) Joint Venture - an entity created pursuant to a written agreement among two or more contractors pursuant to which each shares in the direction and performance of the Work and shares in a stated percentage of profits or losses.

(u) Key Person/Personnel - as defined in Section 27.25.

(v) Materialman - supplier of Materials.

(w) Materials - all products, materials, fixtures, tools, equipment, apparatus, and furnishings intended to form a part of the Work.

(x) Minority Business Enterprise or Minority Owned Business Enterprise or MBE - as defined in Article 26.

(y) Minority or Minority Group Member - as defined in Article 26.

(z) Notice to Proceed - a written directive from BPCA to Contractor signed by a duly authorized BPCA representative directing Contractor to begin performance of the Work set forth in this Agreement on a particular date.

(aa) Payment Bond - as defined in Section 13.3.

(bb) Performance Bond - as defined in Section 13.3.

(cc) Preceding Covered Date - as defined in Section 5.5.

(dd) Product Data - illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by Contractor to illustrate a Material, product or system for some portion of the Work.

(ee) Progress Schedule for the Work - as defined in Section 3.1(a).

(ff) Project - as defined in the third Recital of this Agreement.

(gg) Purchase Order - as defined in Section 10.1(e).

(hh) Requisitions - as defined in Section 5.2.

(ii) Samples - physical examples which illustrate Materials or workmanship and establish standards by which the Work will be judged.

(jj) Site - as defined in the third Recital of this Agreement.

(kk) Specifications - the specifications comprising part of Exhibit [x].

(ll) Subcontract - an agreement between the Contractor and a Subcontractor (as defined in subsection (mm) below) for work on the Site.

(mm) Subcontractor - a person, firm, partnership or corporation under contract with Contractor.

(nn) Term - as defined in Section 3.1(a).

(oo) Trade Payment Breakdown - as defined in Section 5.3.

(pp) Women’s Business Enterprise or Women Owned Business Enterprise or WBE - as defined in Article 26.

(qq) Work - as defined in Section 2.1.

(rr) Work Completion Date - as defined in Section 3.1(a).

ARTICLE 2 - SCOPE OF WORK, MATERIALS AND LABOR

2.1 Definition of Work

Contractor shall perform and complete (and shall cause all Subcontractors to perform and complete) for BPCA the work more particularly described in Exhibit A (the "**Work**") annexed hereto and made a part hereof, required by and in conformity with the Contract Documents in connection with the construction of the Project on the Site. All materials to be furnished and labor and work to be performed and completed by Contractor and/or Subcontractors as required in the Contract Documents and in conformity with all requirements applicable with respect thereto are herein collectively referred to as the "Work."

2.2 Contract Documents

The "**Contract Documents**" shall consist of the following:

(a) This instrument (the "**Agreement**"), which includes, in addition to the text comprising Articles 1 through 27, the following:

(1) EXHIBIT A - SCOPE OF WORK (as applicable)
(2) EXHIBIT B – DRAWINGS (as applicable)
(3) EXHIBIT C – SPECIFICATIONS (as applicable)
(4) EXHIBIT D - MONTHLY UTILIZATION COMPLIANCE REPORTS (as applicable)
(5) EXHIBIT E - PROMPT PAYMENT POLICY (as applicable)
(6) EXHIBIT F - INCIDENT REPORT FORM (as applicable)

(b) The Payment and Performance Bonds (as defined in Section 13.3).

(c) Change Orders adopted pursuant to Article 9.

The Contract Documents form the contract between BPCA and Contractor. References in the Contract Documents to "the Contract", "this Contract" or "the Construction Contract" shall be deemed to include all of the Contract Documents. References to "this Agreement" or "the Agreement" shall refer to this instrument (including the Exhibits attached hereto), which is one of the Contract Documents.

2.3 Intent of Contract Documents

(a) The intent of the Contract Documents is to include in the Work all labor and materials, insurance, tools, equipment, permits, licenses, taxes, approvals, transportation, surveys, testing, field engineering and other professional services (other than the services of BPCA's Architect, Construction Manager, Engineers, and attorneys, and the inspection, survey and testing services of BPCA) and any other items required to execute and complete the Work satisfactorily and in accordance with the Contract Documents. Contractor shall perform and complete the Work in accordance with the true intent and meaning of the Contract Documents and shall perform all Work incident thereto or as is usually performed in connection therewith or as is reasonably inferable therefrom, it being the intention that all work usually performed by the trade covered by

this Agreement and necessary to produce the intended result be performed by Contractor whether or not specifically covered by the Contract Documents.

(b) The Contract Documents are complementary and what is called for by one shall be as binding as if called for by all.

(c) If any conflicts or ambiguities are found in or between the Drawings and Specifications, or among any of the Contract Documents, they shall be brought to the attention of Construction Manager immediately for resolution. Architect and Construction Manager will interpret the Contract Documents so as to secure in all cases the most substantial and complete performance of the Work as is most consistent with the needs and requirements of the Work. In the event that Architect and Construction Manager disagree as to the interpretation of the Contract Documents, such dispute shall be presented to BPCA, which shall have sole authority to resolve the dispute.

(d) Addenda to parts of the Contract Documents are for the purpose of varying, modifying, rescinding or adding to the affected portion of the Contract Documents. All addenda should be read together with the portions of the Contract Documents to which they pertain. Where an addendum modifies a portion of a paragraph or a Section, the remainder of the paragraph or Section shall remain in force unless otherwise stated in the addendum.

(e) Captions, headings, cover pages, tables of contents and footnote instructions contained in the Contract Documents are inserted only to facilitate reference and for convenience and in no way define, limit or describe the scope, intent or meaning of any provision of the Agreement.

(f) Words and abbreviations which have well-known technical or trade meanings are used in the Contract Documents in accordance with such recognized meanings.

(g) Drawings and Specifications are complementary. Anything shown in the Drawings and not mentioned in the Specifications, or mentioned in the Specifications and not shown in the Drawings, shall have the same effect as if shown or mentioned in both.

(h) A typical or representative detail indicated on the Drawings shall constitute the standard for workmanship and Materials throughout corresponding parts of the Work. Where necessary, and where reasonably inferable from the Drawings or Specifications, Contractor shall adapt such representative detail for application to such corresponding parts of the Work. The details of such adaptation shall be subject to prior approval by Architect. Repetitive features shown in outline on the Drawings shall be in exact accordance with corresponding features completely shown.

(i) The layout of mechanical and electrical systems, equipment, fixtures, piping, ductwork, conduit, specialty items, and accessories indicated on the Drawings is diagrammatic, and all variations in alignment, elevation, and detail required to avoid interferences and satisfy Architectural and structural limitations are not necessarily shown. Actual layout of the Work shall be carried out without affecting the architectural and structural integrity and limitations of the Work and shall be performed in such sequence and manner as to avoid conflicts, provide clear access to all control points, including valves, strainers, control devices, and specialty items of

every nature related to such systems and equipment, obtain maximum headroom, and provide adequate clearances as required for operation and maintenance.

2.4 Completion of Drawings and Specifications

Contractor acknowledges that there are items of work which are not drawn or specified with complete detail in the Drawings and Specifications but which are required for the completion of the Work. Any such item, when identified as part of the reasonable development of the Work, shall be drawn or specified by Architect in consultation with Contractor, in a manner consistent with contemplated kind and quality and customary standards. When such drawing or specification is approved by BPCA, the drawing or specification so approved shall thereupon be part of the Contract Documents and the item of work shall be performed by Contractor as part of the Work without further action or order of Construction Manager or BPCA and without any increase in the Contract Price (as hereinafter defined) as if such drawing and/or specification were originally included in the Contract Documents.

2.5 Title to Materials

Title to all Materials shall immediately vest in BPCA upon payment in respect of such Materials, whether or not then incorporated or installed into the Project. The Materials shall then become the sole property of BPCA subject to the right of BPCA, Construction Manager or Architect to reject same for failure to conform to the standards of any or all of the Contract Documents. Title to all Work and Materials shall be in BPCA, free and clear of all liens, claims, security interests or encumbrances. Contractor warrants that no Work or Materials shall be fabricated or delivered to the Site by Contractor or any Subcontractor or Materialman subject to any security interest, lien or similar encumbrance.

2.6 Contractor's Obligations

(a) Contractor shall in a good and workmanlike manner perform all the Work required by this Agreement in accordance with the best practice of Contractor's trade within the time specified herein. Contractor shall supervise and direct the Work using its best skill and attention. Contractor shall be solely responsible for all construction means, methods, techniques, sequences and procedures within the scope of Contractor's Work.

(b) Contractor shall furnish, erect, maintain, and remove such construction plant and such temporary Work as may be required for the performance of the Work. Contractor shall be responsible for the safety, efficiency and adequacy of Contractor's plant, appliances and methods, and for damage that may result from failure or improper construction, maintenance or operation of such plant, appliances and methods. Contractor shall comply with all terms of the Contract Documents, and shall do, carry on and complete the entire Work under the direction of and to the satisfaction of BPCA.

(c) Contractor shall provide all equipment, tools and materials and whatever else may be required for proper performance of the Work unless stated otherwise in the Contract Documents.

(d) Contractor shall deliver all Materials at such times and in such quantities as will insure the speedy and uninterrupted progress of the Work. All Materials shall be delivered to the Site in proper order and quantity and shall be stored at the Site, if storage space is available in Construction Manager's opinion, in such places as Construction Manager shall direct; provided, that no delivery of Materials shall be made to the Site without prior approval by Construction Manager. Contractor has been advised and is aware that the Project is located in a congested metropolitan area, and there may not be sufficient space to store Materials on Site. If storage space is unavailable on Site, Contractor shall make arrangements to store Materials off Site at Contractor's own cost. Contractor shall not be entitled to additional compensation for moving Materials from one storage area to another, whether such storage areas are on or off Site. No Materials shall be removed from the Site without the consent of Construction Manager. Contractor shall handle and take care of all Materials used in performance of the Work whether furnished by Contractor or BPCA, as the same are delivered to the Site or to any applicable offsite storage location and shall be solely responsible for the security and condition of the same. After final completion and acceptance of the Work, or sooner if requested by Construction Manager, Contractor shall remove all surplus Materials and scaffolding furnished by it which have not been incorporated in the Work.

(e) Contractor shall follow and perform the Work in accordance with the Contract Documents as interpreted by Architect, Construction Manager, and BPCA.

(f) Unless otherwise provided in the Contract Documents, Contractor shall secure and pay for all permits and governmental fees, licenses and inspections necessary for the proper execution and completion of the Work. Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the Work. If Contractor observes that any of the Contract Documents are at variance with any applicable laws in any respect, Contractor shall promptly notify Architect and Construction Manager in writing, and any necessary changes shall be accomplished by appropriate modification. If Contractor performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to Architect and Construction Manager, Contractor shall assume full responsibility therefor and shall bear all costs attributable thereto.

(g) Contractor shall be responsible for collecting all paper, cartons and other debris caused by its Work or personnel, placing the same in a location designated by Construction Manager and keeping the portion of the Site upon which Contractor is performing the Work free from all debris.

(h) Contractor shall attend meetings as directed by BPCA or Construction Manager.

2.7 "Or Equal" Clause

(a) The Materials of manufacturers referred to in the Specifications and on the Drawings are intended to establish the standard of quality and design required by Architect; however, Materials of manufacturers, other than those specified, may be used if equivalent and approved by Architect, Construction Manager and BPCA.

(b) It is deemed that the term "or approved equal" is included after all Materials

referred to in the Specifications or on the Drawings.

(c) Architect will initially judge the equivalency of proposed substitute Materials. Architect will make written recommendation of acceptance or rejection to Construction Manager and/or BPCA. Construction Manager and/or BPCA will then authorize Architect to issue to Contractor written approval or rejection of the substitution.

(d) If Contractor desires to use a substitute item, Contractor shall make application to Architect in writing in sufficient time (with regard to the progress of the Work, the period of delivery of the goods concerned and adequate time for Architect's review) stating and fully identifying the proposed substitute, cost changes (if any), and submitting substantiating data, samples, brochures of the item proposed. It is Contractor's responsibility to provide at its sole expense sufficient evidence by tests or other means to support any request for approval of substitutions.

(e) Prior to proposing any substitute item, Contractor shall satisfy itself that the item Contractor proposes is, in fact, equal to that specified and had been used satisfactorily in similar applications to the application proposed for the Work, for at least three years, that it will fit into the space allocated and within the load allocated for the same, that it affords comparable ease of operations, maintenance and service, that its appearance, longevity and suitability for the climate and use are comparable to that specified, and that the substitution requires no change in dimension or design of any other Work of Contractor, of any other contractor or in the time required for the performance thereof.

(f) The burden of proof that a proposed substitution is equal to a specified item shall be upon Contractor, who shall support its request with sufficient test data and other means to permit Architect to make a fair and equitable decision on the merits of the proposal. Any item by the manufacturer other than those cited in the Contract Documents, or of brand name or model number or of generic species other than those cited in the Contract Documents, will be considered a substitution.

(g) Acceptance of substitutions shall not relieve Contractor from responsibility for compliance with all the requirements of the Contract Documents. If, notwithstanding the provisions of subsection (e) above, changes in other parts of the Work or the work of other contractors are required by its substitutions, Contractor shall be responsible for the costs of any such changes including the cost of all design and redesign services related thereto incurred by the Architect and its Contractors.

(h) The Contract Time shall not be extended by any circumstances resulting from a proposed substitution, nor shall Contractor be entitled to any compensation for any delay caused thereby or related thereto.

2.8 Quality and Labeling

All Materials furnished shall be new and the quality thereof shall be in accordance with the Contract Documents. When Materials are specified to conform to a given standard, the Materials delivered to the Site shall bear manufacturer's labels stating that the Materials meet such standard. The above requirements shall not restrict or affect BPCA's right to test Materials as provided in

this Agreement.

ARTICLE 3 - COMMENCEMENT AND COMPLETION OF THE WORK

3.1 Commencement, Completion and Progress Schedule

(a) Contractor shall prepare and submit a progress schedule for the Work ("**Progress Schedule for the Work**") and agrees to be bound by and comply with the Work Completion Date and the Progress Schedule for the Project (as the Progress Schedule for the Project shall be updated pursuant to subsection (b)) and waives any right to charge or claim damages or any increased cost, charges or expenses against BPCA, Construction Manager, or Architect, for delays or disruptions from any cause whatsoever. Contractor's sole remedy as against BPCA, Construction Manager, or Architect for any delays or disruptions shall be as provided in Section 3.4 hereof. Notwithstanding the foregoing, the Work shall be completed by no later than [date] (the "**Work Completion Date**") with time being of the essence in respect of said Work Completion Date, as more fully set forth in subsection (h) below; this Agreement shall terminate by [date] (the "**Agreement Termination Date**") (the period between the date of commencement of the Work and the Agreement Termination Date, the "**Term**").

(b) The Progress Schedule for the Work shall be formatted in a detailed precedence-style critical path method, or such other format satisfactory to BPCA and Construction Manager and shall also (a) provide a graphic representation of all activities and events including float values that will affect the critical path of the Work, (b) incorporate and coordinate all pertinent information involving each phase of Work, and (c) identify dates that are critical to ensuring the timely and orderly completion of the work in accordance with the requirements of the Contract Documents, including the dates for Substantial Completion of each respective phase of the Work. The Progress Schedule for the Work shall be updated weekly, or at any other time at the request of Construction Manager or BPCA, and submitted to Construction Manager and BPCA for review and approval. Failure to submit any requested update shall constitute a material breach of this Agreement. The Contractor shall promptly give written notice of any actual or potential delays to BPCA and Construction Manager. After submission of the Progress Schedule for the Work, Construction Manager shall coordinate the Progress Schedule for the Work with the Progress Schedule for the Project. The Progress Schedule for the Work may be revised by Construction Manager from time to time.

(c) Contractor shall commence the Work upon receipt of a written notice to proceed signed by BPCA (the "**Notice to Proceed**"), and shall prosecute the Work diligently and in accordance with the time and place requirements of the Project as determined and directed by Construction Manager, by using such means and methods of construction as will assure that the Work will be performed hereunder in accordance with the Contract Documents and Progress Schedule for the Work, and to the satisfaction of BPCA, Architect, and Construction Manager.

(d) If, in the opinion of Construction Manager, Contractor falls behind the Progress Schedule for the Project then in effect, Contractor shall take whatever steps may be necessary to improve its progress and shall, if requested by Construction Manager, submit operational plans to demonstrate the manner in which the lost time may be regained. It is the responsibility of Contractor to maintain its schedule so as not to delay the progress of the Project or the schedules

of other contractors. If Contractor delays the progress of its Work or the work of other contractors, it shall be the responsibility of Contractor to increase the number of workers, the number of shifts, the days of Work and/or, to the extent permitted by law, to institute or increase overtime operations, all without additional cost to BPCA, in order to regain any time lost and maintain the Progress Schedule for the Project then in effect as established by Construction Manager.

(e) If Contractor shall fail to complete the Work by the Work Completion Date, or within the time to which such completion may have been extended, BPCA may, at its option, withhold from any sums otherwise due and owing to Contractor hereunder, so much of the balance thereof as BPCA shall deem necessary to secure it against any costs, expenses, or damages which may be incurred by BPCA as a result of said failure, but any such withholding shall not be deemed to be a waiver of any rights hereunder, and Contractor shall be liable to and shall indemnify and hold BPCA harmless from any and all cost, expense or damage incurred by BPCA by reason of such failure.

[(f) If Contractor shall neglect, fail or refuse to complete the Work on or before the Work Completion Date or any changes thereto in accordance with, or upon the expiration of, any proper extension granted by BPCA, Contractor agrees to pay to BPCA **($$$$$)**, not as a penalty, **but as liquidated** damages for loss of beneficial use of the Project, for each and every calendar day that the Contractor is in default. Default shall include abandonment of the Work by Contractor.] **[delete if no liquidated damages]**

(g) [Said amount of liquidated damages is agreed upon by and between Contractor and BPCA because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages which BPCA would sustain for loss of beneficial use of the Project in the event of delay in completion, and said amount is agreed to be the amount of damages sustained by BPCA and said amount may be retained from time to time by BPCA. The foregoing liquidated damages are intended to compensate BPCA only for the loss of beneficial use of the Project. In addition,] **[delete if no liquidated damages]** Contractor shall be liable to BPCA, to the fullest extent permitted by law, for whatever actual damages (other than actual loss of beneficial use) BPCA may incur as a result of any actions or inactions of Contractor or its Subcontractors including, without limitation, interest expense and carrying costs, liabilities to other Contractors working on the Project or other third parties, job extension costs, and other losses incurred by BPCA. The provisions of this paragraph are exclusive to BPCA, and shall not accrue to other contractors or third parties.

(h) It is further agreed that time is of the essence for each and every portion of the Work. In any instance in which additional time is allowed for the completion of any Work, the new time of completion established by said extension shall be of the essence. Contractor shall not be charged with [liquidated damages or] **[delete if no liquidated damages]** any excess cost if BPCA determines that Contractor is without fault and that the delay in completion of the Work is due to:

(1) any preference, priority or allocation order duly issued by the Government of the United States or the State of New York;

(2) causes beyond the control and without the fault of, or negligence of

Contractor, and approved by BPCA, including, but not limited to, acts of God or of public enemy, fires, epidemics, quarantine, strikes, freight embargoes and unusually severe weather; and

(3) any delays of Subcontractors or Materialmen occasioned by any of the causes specified in subsections 1 and 2 of this paragraph.

(i) Notwithstanding the foregoing, and whether or not, at any given time, a Progress Schedule, or update thereto (as appropriate) has been submitted, the Work shall be completed by the Work Completion Date.

(j) Notwithstanding anything to the contrary, a schedule submitted by Contractor showing a time of completion earlier than that specified in the Contract shall not entitle Contractor to any additional compensation in the event the earlier time of completion is not realized.

3.2 Coordination with Other Contractors

Contractor shall coordinate the Work to be performed hereunder with the work of other contractors performing work for the Project in such manner as Construction Manager shall direct. Contractor shall indemnify and hold BPCA, Construction Manager, and Architect harmless from any and all claims or judgments for damages, costs and expenses to which BPCA, Construction Manager or Architect may be subjected or which they may suffer or incur by reason of Contractor's failure to promptly comply with Construction Manager's directions. If Contractor notifies Construction Manager in writing that another contractor is failing to coordinate its work with the Work to be performed hereunder, Construction Manager shall promptly investigate the charge. If Construction Manager finds that charge to be true, it shall promptly issue such direction to the other contractor with respect thereto as the situation may require. BPCA, Construction Manager and Architect shall not, however, be liable for any damages suffered by Contractor by reason of the other contractor's failure to promptly comply with the directions so issued by Construction Manager or by reason of another contractor's default in performance. Should Contractor sustain any damage through any act or omission of any other contractor, Contractor shall have no claim against BPCA, Construction Manager or Architect for such damage but shall have a right to recover such damage from the other contractor, under a provision similar to a provision contained in the following sentence which is part of this Agreement and which has been or will be inserted in the contracts with the other contractors engaged in the Project.

Should any other contractor having or who shall hereafter have a contract with BPCA for the performance of work upon the Project sustain any damage through any act or omission of Contractor hereunder, Contractor shall reimburse such other contractor for all such damages and to indemnify and hold BPCA, Construction Manager and Architect harmless from all such claims. Any claim against a performance bond surety made by any contractor shall be subordinated to any claim of BPCA then existing or that may arise in the future against such other contractor or its performance bond surety.

3.3 Notice of Delay

Should Contractor be or anticipate being delayed or disrupted in performing the Work hereunder for any reason, including, without limitation, its financial condition or Contractor's general nonpayment of its debts as such debts become due, it shall promptly and in no event more

than three (3) days after the commencement of any condition that is causing or is threatening to cause such delay or disruption notify Construction Manager in writing of the effect of such condition upon the Progress Schedule for the Project, stating why and in what respects the condition is causing or is threatening to cause delay, provided, however, that notwithstanding the above, if such delay or disruption, or anticipated delay or disruption, should be the result of any change or anticipated change in Contractor's financial condition, Contractor shall notify Construction Manager forthwith of such cause or anticipated cause. Failure to strictly comply with this notice requirement shall be sufficient cause to deny Contractor a change in schedule and to require it to conform to the Progress Schedule for the Project then in effect established by Construction Manager.

3.4 Extension of Time

(a) An extension of time under the Progress Schedule for the Project then in effect may be granted by BPCA subject to the provisions hereof upon written application therefor by Contractor. An application for an extension of time under the Progress Schedule for the Project then in effect must set forth in detail the nature of each cause of delay in the performance of the Work, the date or dates upon which each cause of delay began and ended and the number of days delay attributable to each such cause. After the application is submitted, Contractor shall supply any other data that Construction Manager may request.

(b) Contractor shall be entitled to an extension of time under the Progress Schedule for the Project then in effect for delays in the performance of the Work, if caused:

(1) solely by acts or omissions of BPCA, Construction Manager or Architect; or

(2) by the acts or omissions of other contractors or causes beyond the control and without the fault or negligence of Contractor including, but not limited to, acts of God, acts of public enemy, acts of any Government body, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, or delays of Subcontractors or Materialmen arising from unforeseeable causes beyond the control and without the fault or negligence of both Contractor and such Subcontractors or Materialmen; provided, that Contractor shall have used its best efforts and diligently sought to have minimized any such period of delay, by taking whatever measures are necessary, including without limitation, if applicable, seeking alternate sources of Materials, other Subcontractors or other facilities in which to perform the required construction operations; and provided, further, that an application is made pursuant to the requirements of the immediately preceding paragraph.

ARTICLE 4 - CONTRACT PRICE

For the performance and completion of the Work, BPCA shall pay Contractor a lump sum amount of **($$$$$)**, (such sum is herein sometimes referred to as the "**Contract Price**"), which amount shall include any monies earned by or paid to Contractor prior to the execution of this Agreement, provided, that if the Contract Price shall be expressly revised by a Change Order in accordance with Article 9 hereof, the Contract Price shall thereafter mean the Contract Price as so revised. Contractor will submit appropriate Time Sheets in the form of Exhibit [x].

ARTICLE 5 - METHOD, SCHEDULE AND TERMS OF PAYMENTS

5.1 Partial Payment

(a) In accordance with Requisitions (as defined in Section 5.2) submitted and approved as provided below for Work performed in accordance with this Agreement, Contractor shall be entitled to partial payment on account of the Contract Price in an amount equal to the value, as determined in accordance with the Trade Payment Breakdown (as defined in Section 5.3), of the portions of the Work completed and acceptable to BPCA and Construction Manager for purposes of such payment, less a retainage equal to ten percent (10%) of the total amount of all prior partial payments. Partial payments shall constitute advances against the Contract Price until final payment is made and accepted. No partial payment made, nor approval of a portion of the Work given for purposes of making a partial payment, shall constitute an acceptance of any Work not in accordance with the Contract Documents.

(b) Upon completion of fifty percent of the Work, Contractor may make written application to BPCA requesting reduction of the retainage set forth in Section 5.1(a) hereof. Approval of such reduction of retainage and the percentage to which the retainage shall be reduced is in the sole discretion of BPCA. If BPCA approves a reduction of retainage as herein described, BPCA shall so notify Contractor in writing. Any reduction of retainage pursuant to this paragraph (b) shall not be deemed to be a waiver of retainage requirements for future partial payments.

5.2 Requisitions

Applications for partial payments ("**Requisitions**") and application for final payment ("**Final Requisition**") shall be in the form previously supplied by BPCA and shall be submitted by Contractor to Construction Manager or its designee in five original copies in the manner hereinafter provided for the approval of BPCA and Construction Manager. Each Requisition shall be supported by such data substantiating Contractor's right to payment as BPCA and Construction Manager may require.

5.3 Trade Payment Breakdown

Prior to the submission of the first Requisition, Contractor shall present to Construction Manager for approval a trade payment breakdown (the "**Trade Payment Breakdown**") of the various portions of the Work, aggregating the Contract Price, prepared in such form as specified by BPCA and supported by such data to substantiate its correctness as Construction Manager may require. After approval by BPCA and Construction Manager, the Trade Payment Breakdown shall not be changed or revised in any way without the written consent of Construction Manager. The Trade Payment Breakdown, when approved by Construction Manager, shall be used only as a basis for Requisitions and shall not be considered as a basis for reducing or increasing the Contract Price.

5.4 Payment for Stored Materials

If approved in advance of delivery by BPCA and Construction Manager, payments will be made on account of 80% of the value of Materials that have not been incorporated in the Work to date, but delivered and suitably stored at the Site or at some other offsite location agreed upon in

writing by BPCA and Construction Manager. Such payments shall be conditioned upon submission by Contractor of bills of sale or other supporting documentation satisfactory to BPCA and Construction Manager to establish BPCA's title to such Materials including applicable insurance and transportation to the Site for those Materials stored offsite. In the event that Contractor, with approval of BPCA, stores any Materials offsite, the conditions for payment of Material stored off-site shall include but not be limited to the following: (a) the Material shall be properly stored in a secured location approved by the BPCA and/or Construction Manager; (b) the Material will be covered under the BPCA's builder's risk policy subject to policy limits and restrictions; and (c) the Material may be inspected by the BPCA and /or Construction Manager to assure compliance with Contract Documents.

5.5 Receipts and Releases of Liens

With each Requisition, Contractor shall furnish its affidavit of payment and waiver of lien for Work done and Materials furnished through the date covered by the last preceding partial payment (the **"Preceding Covered Date**") and shall furnish its affidavit certifying that all Subcontractors and Materialmen have been paid for Work performed and Materials furnished through the Preceding Covered Date except for any permitted retainage. BPCA may also require Contractor to attach to each Requisition (i) affidavits of payment and waivers of lien from all Subcontractors and Materialmen dealing directly or indirectly with Contractor for Work performed and Materials furnished through the Preceding Covered Date and/or (ii) the consent of the surety issuing the Payment Bond to such payment. BPCA may require Contractor to execute a waiver of lien at the time payment is made for a Requisition for all Work performed through the date of the Requisition in respect of which payment is being made.

In addition to the documents required to be furnished by the preceding paragraph, with the Final Requisition, Contractor shall furnish (y) its affidavit that there are no liens, claims or demands by, and that there is no indebtedness to, Subcontractors, Materialmen, laborers, other employees or third persons for which BPCA, Construction Manager, or Architect might in any way be responsible and (z) releases from all Subcontractors and Materialmen dealing directly or indirectly with Contractor. Should any such Subcontractor or Materialman fail or refuse to furnish such release, Contractor may be required to furnish a bond satisfactory to BPCA to indemnify it against any such lien, claim or demand. If any such lien, claim or demand remains unsatisfied after all payments are made to Contractor, Contractor shall refund to BPCA all monies that BPCA may be compelled to pay in discharging such lien, claim or demand including all costs, expenses and attorneys' fees which BPCA may incur in connection therewith.

5.6 Time of Payment

(a) Submittal and Approval of Requisitions: Requisitions (together with the documents required pursuant to Sections 5.2 and 5.5 hereof) shall be submitted by Contractor to BPCA and Construction Manager by the seventh day of each calendar month for Work completed up to the last calendar day of the previous month or other day approved by BPCA. Contractor shall be entitled to payment only in the amount approved by BPCA and Construction Manager with respect to such Requisitions, each of which must be signed by BPCA and Construction Manager before payment is made. The value of any Work included in a Requisition for partial payment which is found unacceptable by BPCA or Construction Manager may be deducted from that or any

subsequent Requisition.

(b) Submittal of Proper Invoice: Upon approval of the Requisition, the Contractor shall submit a Proper Invoice, together with the approved Requisition, via email to:

BPCA Finance Ops bpcafinanceops@bpca.ny.gov
Office of the Treasurer
Battery Park City Authority
d/b/a Hugh L. Carey Battery Park City Authority
200 Liberty Street, 24th Floor
New York, NY 10281-1097
Attn.: Accounts Payable

A duplicate copy is to be sent via email to the Construction Manager and to the BPCA Representative identified in Article 1(e).

(c) Time for Payment: Following BPCA's receipt of a Proper Invoice, Owner shall pay Contractor in accordance with the Prompt Payment Policy, a copy of which can be found at http://bpca.ny.gov/wpcontent/ uploads/2018/01/BPCA-Prompt-Payment-Policy-Fiscal-Year-2017.pdf. Owner may withhold from any payment amounts pursuant to Section 5.11 herein.

5.7 Reduction of Retainage

Upon the issuance of a Certificate of Substantial Completion, as defined in Section 8.6, Contractor shall submit a Requisition in an amount equal to the Contract Price less five percent (5%) of the total contract amount (including all approved Change Orders and pending Change Order proposals), and less the total amount of all prior payments. Upon approval of the same by BPCA, BPCA shall pay to Contractor the amount approved less any amount which BPCA is entitled to withhold hereunder.

5.8 Final Payment

(a) The final balance due Contractor under this Agreement shall be payable to Contractor by BPCA, as final payment hereunder, within thirty days after all of the following have taken place:

(1) Contractor's Final Requisition has been submitted by Contractor and approved by BPCA and Construction Manager;

(2) the affidavit provided for in Section 5.5 hereof has been submitted by Contractor, and any other documents or actions expressly specified in the Contract Documents as preconditions to final payment have been submitted or completed; and

(3) any inspections or approvals with respect to any of the Work that BPCA deems legally required or appropriate by governmental authorities or by the applicable Board of Fire Underwriters have been performed or obtained.

(b) The acceptance of final payment shall constitute a waiver of all claims by Contractor.

5.9 Release and Consent of Surety

Notwithstanding any other provision of this Agreement, before final payment pursuant to Section 5.8 shall become due pursuant hereto or before reduction of retainage, Contractor shall submit to BPCA a consent of surety to final payment or reduction of retainage in form and substance acceptable to BPCA.

5.10 BPCA's Right to Audit and Inspect Records

Contractor shall maintain and shall keep for a period of at least six years after the date of Final Acceptance of the Work, pursuant to Section 8.7, all records and other data relating to the Work. BPCA or its designee shall have the right to inspect and audit all records and other data of Contractor relating to the Work at any time and from time to time until the end of such six year period. Contractor shall promptly respond to any inquiries of BPCA or any representative of BPCA arising out of any such inspection or audit.

5.11 Withholding of Payments

(a) BPCA may withhold payment or, because of subsequently discovered evidence, may nullify the whole or any part of any previously approved Requisition to such extent as may, in the judgment of BPCA, be necessary:

(1) to assure payment of just claims or liens of any persons supplying labor or Materials for the Work;

(2) to protect BPCA from loss due to defective Work or to reimburse BPCA, Construction Manager and Architect for fines on account of non-compliance with applicable laws, rules and regulations, including rules promulgated by the Office of Safety & Health Administration;

(3) to protect BPCA from loss due to death or injury to persons or damage to the Work or property of BPCA, other contractors or others caused by the act or neglect of the Contractor;

(4) in the event that there is reasonable evidence that the Work will not be completed for the unpaid balance of the Contract Price;

(5) in the event that there is reasonable evidence that the Work will not be completed within the time provided; or

(6) in the event that Contractor persistently fails to perform the Work in accordance with the Contract Documents.

In any of such events, BPCA shall have the right to apply any such amounts so withheld in such manner as BPCA may deem proper to satisfy such claims, to secure such protection, to

complete the Work or to compensate BPCA for any loss suffered by reason of Contractor's delay. Such application shall be deemed payment for the account of Contractor. In the event that BPCA gives Contractor notice that it intends to make such application, Contractor shall be estopped from disputing liability or the amount of liability unless, within three days after receipt of such notice, it indicates to BPCA in writing that it is not liable or that the amount of its liability is different from that set forth in the notice.

(b) The provisions of this Section 5.11 are solely for the benefit of BPCA, and any action or non-action by BPCA shall not give rise to any liability on the part of BPCA. Failure to so act shall not be deemed a waiver of any present or future claims of BPCA.

ARTICLE 6 – CONTRACTOR

6.1 Superintendence by Contractor, Discipline and Employee Skills

Contractor shall provide a competent construction superintendent to be in charge of the Work. The construction superintendent shall devote full time to the Work, shall be present at the Site during the time the Work is required to be performed and shall have full authority to accept instructions, make decisions and act for Contractor at all times. If at any time the construction superintendent is not satisfactory to BPCA or Construction Manager, Contractor shall, if requested by BPCA, replace such superintendent with another satisfactory to BPCA. Contractor shall enforce strict discipline and good order at all times among Contractor's employees and all Subcontractors. Contractor shall not engage any employee not skilled in the task assigned.

6.2 Representations and Warranties

Contractor represents and warrants that:

(a) Contractor is financially solvent and is experienced in, and competent to perform the Work and has the staff, manpower, equipment, Subcontractor, and suppliers available to complete the Work within the time specified in this Agreement for the Contract Price;

(b) Contractor is familiar with all Federal, State or other laws, ordinances, orders, rules and regulations, which may in any way affect the Work;

(c) any temporary and permanent Work required by this Agreement can be satisfactorily constructed, and such construction will not injure any person or damage any property; and

(d) Contractor has carefully examined the Contract Documents and the Site and, from Contractor's own investigations, is satisfied 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 conditions or items that may affect the Work. Prior to submitting its bid for performance of the Work, Contractor notified BPCA or Construction Manager in writing of any discrepancies or errors in the Contract Documents.

6.3 Verifying Dimensions and Site Conditions

Before proceeding with the Work, Contractor will check all previous and surrounding work and determine the correctness of the same; failure on its part to detect or report discrepancies will relieve BPCA of liability from any and all claims to recover cost, expense, loss or damage resulting therefrom. Contractor shall take, determine, investigate and verify all field measurements, dimensions, field construction criteria and Site conditions for the performance of the Work and shall check and coordinate the information contained in the Contract Documents and the boring logs which shall be available for inspection with the requirements of the Work. Contractor shall be responsible for determining the exact location of and to verify the spatial relationships of all Work. If any conflicts or discrepancies are found in the Contract Documents or if Contractor has any questions concerning the foregoing, it shall immediately notify Construction Manager and shall thereafter perform the Work in accordance with the directions of Construction Manager.

6.4 Copies of Contract Documents for Contractor

BPCA shall furnish to Contractor, without charge, two sets of the Contract Documents. Any sets in excess of the number mentioned above may be furnished to Contractor at the cost of reproduction and mailing.

6.5 Meetings

Contractor shall attend all meetings as directed by BPCA or Construction Manager, including meetings set forth in Section 26.3, and shall be represented at such meetings by a person having knowledge of the Work and authorized to act for Contractor at all times. If at any time such person is not satisfactory to BPCA or Construction Manager, Contractor shall, if requested by BPCA, be represented by another person satisfactory to BPCA, having knowledge of the Work and authorized to act for Contractor at all times.

6.6 Related Work

Contractor shall examine the Contract Documents for related work to ascertain the relationship of such work to the Work under the Contract Documents.

6.7 Surveys and Layout

Unless otherwise expressly provided in this Agreement, BPCA shall furnish Contractor survey points necessary for the Work, but Contractor shall lay out the Work.

6.8 Reports and Access

Contractor shall furnish BPCA and Construction Manager with daily and monthly manpower reports on forms provided by BPCA or Construction Manager and such other reports as may be required by BPCA or Construction Manager. BPCA, Construction Manager and Architect shall have full and free access to the shops, plants and factories of Contractor, any Materialmen and Subcontractors to inform themselves as to the progress of the Work.

6.9 Financial Information

During the Term, Contractor agrees to notify BPCA forthwith in writing of any event which

has caused or is reasonably anticipated to cause a material adverse change in Contractor's business or financial condition from that shown in the then most recent financial statements furnished by Contractor to BPCA. Contractor has furnished to BPCA financial statements regarding the period from **[date]** to **[date]**. Contractor agrees to furnish to BPCA, at BPCA's request from time to time hereafter, quarterly, or annual financial statements (which shall be audited, if such is the practice of Contractor for financial statements covering the applicable period) and such additional information as BPCA shall deem necessary or desirable to satisfy itself of Contractor's continuing ability to complete the Work.

ARTICLE 7 - CONTRACT ADMINISTRATION

7.1 Architect's Responsibilities and Functions

Contractor acknowledges that the role of Architect with respect to the Work shall be as specified in this Agreement. Contractor will comply with the instructions of Architect pursuant hereto.

Architect's duties and services shall in no way supersede or dilute Contractor's obligation to perform and complete the Work in conformity with the Contract Documents.

7.2 Construction Manager's Responsibilities and Functions

(a) Construction Manager shall coordinate and schedule construction to insure that the completion of the Project is on schedule and that the Project is well constructed in accordance with the Contract Documents. Contractor acknowledges that the role of Construction Manager with respect to the Work shall be as specified in this Agreement. Contractor hereby agrees to comply with the directions and instructions of Construction Manager.

(b) Construction Manager shall call for meetings of Contractor, other contractors, Subcontractors and Materialmen as necessary for the proper coordination of the Work. Such meetings shall be held at the Site on regular working days, during regular working hours, unless otherwise directed by BPCA. Attendance shall be mandatory for all parties notified to attend.

7.3 Scope of Responsibility of Architect and Construction Manager

In no event shall any act or omission on the part of the Construction Manager or Architect relieve Contractor of its obligation to perform the Work in full compliance with the Contract Documents. Neither Architect nor Construction Manager will be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and neither will be responsible for Contractor's failure to carry out the Work in accordance with the Contract Documents or the failure to fulfill any of the requirements of this Agreement.

ARTICLE 8 - INSPECTION AND ACCEPTANCE

8.1 Access to the Work

BPCA, Construction Manager, Architect or their authorized representatives shall at all

times have access to and the right to observe the Work and all facilities where the Work or any part thereof is being fabricated or stored, and Contractor shall provide proper facilities for such access and observation.

8.2 Notice of Required Inspections and Tests

If the Contract Documents, or any laws, rules, ordinances or regulations, require that any Work be inspected or tested, Contractor shall give BPCA, Construction Manager and Architect at least five days prior written notice of readiness of the Work for inspection or testing and the date fixed for such inspection or testing.

8.3 Additional Inspections and Tests

(a) Whenever, in the opinion of BPCA, Construction Manager or Architect, it is desirable to require inspection or testing of the Work or its individual components in addition to any such testing that may be originally included in the Work, they shall have authority to do so whether or not such Work be then fabricated, installed, covered or completed. If such inspection or testing reveals a failure of the Work to comply (1) with the requirements of the Contract Documents, or (2) with respect to the performance of the Work, with laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, Contractor shall bear all costs thereof, including Architect's and Construction Manager's additional services made necessary by such failure; otherwise BPCA shall bear such costs, and an appropriate Change Order shall be issued.

(b) In the event that any item of the Work fails inspection or testing, BPCA, Architect or Construction Manager may require inspection or testing of any or all of the other items of the Work at Contractor's cost and expense.

8.4 Uncovering of Work

(a) If any Work shall be covered or concealed contrary to the request of BPCA, Architect or Construction Manager, such Work shall, if required by BPCA, Architect or Construction Manager, be uncovered by examination, inspection or testing. Any examination, testing or inspection shall not relieve Contractor of the responsibility to maintain quality control over the Work. If any test results are below specified minimums, BPCA may order additional testing. The cost of such additional examination, inspection or testing, any additional professional services required, and any other expenses incurred by BPCA as a result of such examination, inspection or testing shall be borne by Contractor.

(b) In the event that a typical detail fails inspection or testing, BPCA, Architect or Construction Manager may require inspection or testing of any or all of other such typical details at Contractor's cost and expense.

8.5 Correction of Work

Any Work not approved by BPCA, Architect and Construction Manager shall immediately be reconstructed, made good, replaced or corrected by Contractor including all Work of other contractors destroyed or damaged by such removal or replacement. Rejected material shall be

removed immediately from the Site. Acceptance of Materials and workmanship by BPCA shall not relieve Contractor from Contractor's obligation to replace all Work which is not in full compliance with the Contract Documents.

8.6 Certificate of Substantial Completion

Upon their receipt of written notice from Contractor stating that in Contractor's estimation the Work has been substantially performed in conformity with the Contract Documents, Architect and/or Construction Manager shall perform an inspection for the purposes of determining whether the Work has been so performed, commencing such inspection within ten (10) days of receipt of such notice and completing it with all due diligence. When Architect and/or Construction Manager find upon inspection that, to the best of their knowledge and belief, the Work is so performed, they shall prepare and deliver to BPCA for delivery to Contractor a certificate specifying the date of substantial completion of the Work for purposes of this Agreement ("**Certificate of Substantial Completion**") and a punch list of items of Work remaining to be completed.

The delivery of a Certificate of Substantial Completion shall not terminate or alter Contractor's obligation under this Agreement to complete the Work as expeditiously as practicable in conformity with the Contract Documents and to fulfill all terms and conditions of this Agreement.

8.7 Completion of Work and Acceptance

Upon their receipt of written notice from Contractor stating its belief that the Work has been fully performed in conformity with the Contract Documents, and confirming that Contractor has completed any items of Work previously noted to it by Architect and Construction Manager as not having been acceptably completed in any punch list or otherwise, Architect and Construction Manager shall perform an inspection for purposes of determining whether the Work has been so performed. Architect and Construction Manager shall commence such inspection within ten (10) days of receipt of such notice and shall pursue and complete it with all due diligence. When BPCA and Construction Manager find upon inspection that, to the best of their knowledge and belief, the Work has been so performed, they shall prepare a certificate of final completion, and, upon delivery by BPCA to Contractor of said certificate, the Work shall be deemed to be finally accepted by BPCA (such delivery of the certificate of final completion to Contractor is hereinafter referred to as "**Final Acceptance**").

Final Acceptance shall not terminate or alter Contractor's obligation under this Agreement to complete the Work in conformity with the Contract Documents and to fulfill all terms and conditions of this Agreement.

ARTICLE 9 - CHANGES IN THE WORK

9.1 Change Orders

(a) BPCA may, at any time, in any quantity or amount, without notice to the sureties and without invalidating or abandoning this Agreement, order Extra Work. Notwithstanding the terms of subsection 3.1(a) hereof, BPCA may, but shall be under no obligation to, change the manner, sequence or method of performance of the Work or direct acceleration of the Work and

Contractor shall, therefor, be entitled to a Change Order (as defined in Section 9.1(b)) provided that such change or acceleration was not ordered to maintain the Progress Schedule for the Project, the Progress Schedule for the Work or to coordinate the Work with the work of other contractors. Contractor shall be obligated to perform changed Work promptly in conformity with any Change Order or Field Order issued in accordance herewith and may not suspend or otherwise refuse to perform the Work contained therein or any other aspect of the Work required under this Agreement because a Change Order has yet to be fully executed.

(b) "**Change Order**" shall mean a written order issued by BPCA to Contractor after execution of this Agreement, authorizing or requiring:

(1) Extra Work,

(2) items that were erroneously deleted or omitted from the Work,

(3) items that were included in the Work but were subsequently deleted,

(4) an extension or decrease of time to complete Work,

(5) an increase or reduction in the payment to Contractor, or

(6) any other change in the Contract Documents or in the sequence of performing or phasing of the Work.

(c) All Change Orders shall be prepared, signed and issued by Construction Manager at the instruction of BPCA, and to be valid, must be countersigned by BPCA and Contractor.

9.2 Change in Contract Price and Time

(a) The Contract Price will not be revised due to any change of the Work except as and to the extent expressly provided in the Change Orders. The amount by which the Contract Price is to be increased or decreased by any Change Order shall be determined by BPCA and Construction Manager by one or more of the following methods:

(1) accepting an amount agreed upon by BPCA and Contractor;

(2) applying the applicable unit prices and alternates where the Work involved is covered by unit prices in this Agreement;

(3) receiving from Contractor a detailed breakdown satisfactory to BPCA and Construction Manager, including actual time slips and invoices, itemizing the direct cost of labor and Materials to perform the changed Work and adding thereto fifteen percent (15%) to cover profit and all indirect and overhead costs, except that where the changed Work is performed by a Subcontractor or Materialman, the direct cost of labor and Materials to perform the changed Work plus fifteen percent (15%) for profit and all indirect and overhead costs to Subcontractor or Materialman and an additional sum for profit and all indirect and overhead costs of Contractor equal to ten percent (10%) of the first $100,000, five percent (5%) of the second $100,000 and three percent (3%) of any cost in excess of $200,000 to Contractor. No allowance shall be paid on

the premium portion of overtime pay. Where the changed Work involves both an increase and a reduction in any contract Work, the above percentage override shall be applied only on the amount, if any, by which the cost of the increase exceeds the cost of the reduction.

(4) receiving from Contractor a true copy of its bid work sheets to determine the contract price for the elimination of any contract Work. The amount of reduction shall not include the overhead or profit of Contractor for the eliminated Work. Should Contractor fail to furnish BPCA with such bid work sheets, then Construction Manager shall determine the amount of the reduction. The determination of Construction Manager shall be final and binding unless erroneously or fraudulently arrived at, or arbitrary and capricious;

(5) adding to the Contract Price only the amount of the premium portion of overtime pay resulting from an acceleration of the Work; or

(6) adding to the Contract Price, the actual incremental labor and equipment costs incurred by the Contractor resulting from a change in the manner, sequence or method of performing the Work.

(b) The compensation specified in a Change Order shall constitute a release and full payment for the Extra Work covered thereby and for any delay and disruption cost or expense occasioned by reason of said change in the Work.

(c) No time extension shall be granted Contractor by reason of the issuance of any Change Order unless it is expressly stated therein.

9.3 Field Orders

Construction Manager shall have the authority to order minor changes in the Work by the issuance of written field orders ("**Field Orders**"), which may be issued without prior approval by BPCA. Field Orders must be countersigned by Contractor. Minor changes in the Work for purposes of this Section shall mean only changes that do not necessitate or warrant any revision in the Contract Price in excess of $5,000 or affect the time of performance of Contractor's Work, any change in the basic character or design of the Project, or deviation from design standards established for the Project. Except as otherwise provided in the preceding sentence relating to an increase in the Contract Price, no claim for an increase in the Contract Price may be based upon any Field Order. If Contractor, on receipt of a Field Order, claims that the change of Work involved necessitates a Change Order, it shall proceed in accordance with the Field Order under protest and notify BPCA immediately of its claim for additional compensation for Extra Work pursuant to Article 14.

9.4 Changed Conditions

(a) BPCA assumes no responsibility for the correctness of any boring or other subsurface information and makes no representation of any kind regarding subsurface conditions and test borings, reports, rock cores, foundation investigation and topographical maps which may be made available to Contractor.

(b) Contractor shall promptly, and before such conditions are disturbed, notify

Construction Manager of: (1) subsurface or latent physical conditions differing materially from those indicated in the Contract Documents, or (2) unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Agreement. Construction Manager shall promptly investigate the conditions, and if it finds that such conditions do materially so differ and cause an increase or decrease in Contractor's cost of, or the time required for, performance of any part of the Work under this Agreement, Contractor shall be paid in the manner provided for payment with respect to any Change Order and receive, if warranted, a time extension.

(c) No claim of Contractor under this clause shall be allowed unless Contractor has given the notice required in subsection (b) above.

ARTICLE 10 - SUBCONTRACTS AND PURCHASE ORDERS

10.1 Selection of Subcontractors and Materialmen and Approval of Subcontracts and Purchase Orders

(a) Contractor shall submit to Construction Manager, within 21 calendar days of the issuance of the Notice to Proceed, the names of all persons with whom it has contracted or intends to contract or hereafter contracts with respect to the Work.

(b) Except as specifically provided herein, Contractor shall not enter into any Subcontracts or issue any Purchase Orders (as hereinafter defined) to any Materialmen in connection with the performance of Contractor's obligations hereunder without the prior written consent of BPCA to the use of each such Subcontractor or Materialman, and to the agreement to be entered into between Contractor and any such Subcontractor or Materialman. Contractor shall inform BPCA in writing of any interest it may have in a proposed Subcontractor or Materialman. No such consent by BPCA, or employment, contract, or use by Contractor, shall relieve Contractor of any of its obligations hereunder nor may BPCA be held responsible in any way for the performance of a Subcontractor or Materialman to whom BPCA gave its consent.

(c) Contractor shall be responsible for the performance of the Work of any Subcontractors or Materialmen engaged, including the maintenance of schedules, coordination of their Work and resolutions of all differences between or among Contractor and any Subcontractors. It is expressly understood and agreed that any and all Subcontractors or Materialmen engaged by Contractor hereunder shall at all times be deemed engaged by Contractor and not by BPCA.

(d) Upon the request of BPCA, Contractor shall cause any Subcontractor or Materialman employed by the Contractor in connection with this Agreement to execute a copy of the Agreement wherein such Subcontractor or Materialman shall acknowledge that it has read and is fully familiar with the terms and provisions hereof and agrees to be bound thereby as such terms and provisions are or may be applicable to such Subcontractors or Materialmen.

(e) Contractor shall submit to BPCA promptly following execution, three copies of every revision, amendment, modification or cancellation executed or issued by Contractor with respect to any Subcontractor or Materialman. BPCA is not obligated to make payment on account of Work performed or Materials furnished by a Subcontractor or a Materialman under a Subcontract or contract for construction supplies or Materials (hereinafter "**Purchase Order(s)**")

unless there shall have been filed with BPCA prior to the submission of a Requisition for each payment, three copies of such Subcontract or Purchase Order containing the provisions required by this Agreement to be contained therein, except as may otherwise be specified by BPCA with respect to Purchase Orders for minor purchases.

10.2 Access by BPCA and Others

Contractor shall include a provision in all Subcontracts and Purchase Orders stating that, to permit verification of Contractor's costs, BPCA shall have the right to have its representatives inspect and audit the books of account and records of the Subcontractor and Materialmen, including the right to make excerpts from such books and records. All payments by Contractor to a Subcontractor or Materialman shall be by check specifically indicating that payment is attributable to this Agreement and identifying the invoice(s) for which payment is being made. Contractor shall include a provision in all Subcontracts and Purchase Orders that will enable representatives of the State of New York, Construction Manager and BPCA, as the case may be, to obtain access during working hours to the appropriate books of account and records of the Subcontractors or Materialmen relating to the Work to determine if there is compliance with the requirements of law or this Agreement.

10.3 Retainage

Contractor may provide for a retainage under any of its Subcontracts or Purchase Orders provided that where a Subcontract or Purchase Order provides for a retainage, the retainage shall be no greater in percentage than that provided for under Sections 5.1 or 5.7 hereof with respect to Contractor itself, unless otherwise approved in writing by BPCA. Contractor shall submit with each Requisition a statement setting forth the amounts of all retainage, if any, under its Subcontracts and Purchase Orders.

10.4 Miscellaneous

(a) Contractor shall be fully responsible for the work, acts and omissions of Subcontractors and Materialmen, and of persons either directly or indirectly employed by Subcontractors and Materialmen.

(b) Contractor's use of Subcontractors and Materialmen shall not diminish Contractor's obligation to complete the Work in accordance with the Contract Documents. Contractor shall control and coordinate the work of Subcontractors and Materialmen.

(c) Nothing contained in this Agreement shall create any contractual relationship between Subcontractors or Materialmen and BPCA, Construction Manager or Architect. Nothing in this Section shall obligate BPCA to pay or to see to the payment of any sums to any Subcontractor or Materialmen.

(d) Contractor shall include a provision in all Subcontracts and Purchase Orders exceeding $50,000, requiring the Subcontractor or Materialman, if requested by BPCA, until the Subcontractor or Materialman finishes its portion of the Work, to deliver to Contractor unaudited and, if available, audited financial statements of the Subcontractor or Materialman similar to the

obligation of Contractor under Section 6.8 and promptly upon receipt thereof Contractor shall deliver copies thereof to BPCA.

ARTICLE 11 - ASSIGNMENT

11.1 No Assignment of Duties

Contractor shall not assign this Agreement or the performance of any obligations of Contractor under this Agreement, nor enter into any Subcontract in respect of the Work or any part thereof except in compliance with Article 10 hereof and with the prior written consent of BPCA, and each and every such assignment, Purchase Order and Subcontract without such compliance and consent shall be void and shall revoke and annul this Agreement.

11.2 No Assignment of Monies

Contractor shall not assign any monies payable hereunder nor execute and deliver any order for payment unless Contractor and the assignee shall have complied with the following terms and conditions:

(a) the assignee shall be a commercial bank or finance company regularly engaged in the business of provided financing to construction contractors and shall be providing such financing to Contractor;

(b) the assignee shall, simultaneously with the assignment, execute and deliver to BPCA an undertaking, in favor of BPCA, in form and substance satisfactory to BPCA, providing that:

(1) assignee will cause Contractor to apply for trust purposes, as defined in New York Lien Law Article 3-A (the "**Lien Law**"), all funds advanced by assignee to Contractor;

(2) assignee will file a copy of the assignment, containing the covenant required by the Lien Law, with the County Clerk of New York County and the head of the agency having charge of the underlying project;

(c) the assignee shall agree with BPCA in writing that BPCA and Contractor may modify any of the terms of this Agreement, including any of the terms of payment, without the consent of assignee;

(d) the assignee shall agree with BPCA in writing that after the effective date of the assignment, BPCA may make payment directly to any Subcontractor or Materialman without any liability to the assignee;

(e) the assignee shall agree with BPCA in writing that the assignee shall require and cause Contractor to keep his books and records in the form and manner described in New York Consolidated Laws Service Lien Law Article 3-A Section 75; and

(f) the assignee shall agree with BPCA in writing that the assignee will indemnify and hold BPCA harmless from and against any loss, claim or expense incurred as a result of any failure

of performance in accordance with the terms of such undertaking.

11.3 Assignment by BPCA

This Agreement or any rights of BPCA under this Agreement, including any guaranties or warranties of workmanship or material, may at any time be assigned by BPCA to the State of New York or any political subdivision, public corporation or agency of the State.

ARTICLE 12 - MECHANICS' LIENS AND CLAIMS

If any mechanic's lien or other claim shall be filed for or on account of the Work, Contractor shall discharge such lien or claim within thirty days of receiving written notice of such lien or other claim.

ARTICLE 13 – INSURANCE AND CONTRACT SECURITY

13.1 Insurance

(a) Contractor shall procure and maintain all of the insurance required under this Article 13 until Final Acceptance of the Work, except with respect to Completed Operations Coverage, as described in 13.1(f)(3) below.

(b) Contractor shall not commence physical performance of the Work at the Site until Contractor has obtained, and required each Subcontractor to obtain, all the insurance required under this Article and until it has furnished to BPCA the certificate or certificates of insurance required by Section 13.1(c) hereof.

(c) Contractor shall furnish to BPCA, before or upon execution of this Agreement, attention: [name], a certificate or certificates of the insurance required under this Article and, upon BPCA's request, certified copies of the original policies of insurance, within the time period required by BPCA and before commencing physical performance of the Work at the Site. Such certificate or certificates shall be in form satisfactory to BPCA, shall list the various coverages and shall contain, in addition to any other provisions required hereby, a provision that the policy shall not be changed, canceled or reduced and that it shall be automatically renewed upon expiration and continued in force until two years after Final Acceptance unless BPCA is given 90 days' written notice to the contrary. Such certificates shall also include riders providing that violation of any of the terms of any policy shall not by itself invalidate such policy. Such policies and certificates should name as additional insureds BPCA, Battery Park City Parks Conservancy Corporation ("**BPCPC**"), the State of New York, Construction Manager, and Architect.

(d) All insurance required to be procured and maintained must be procured from insurance companies that have a financial rating by A.M. Best Company as published in the most current key rating guide of "A-X" or better and which are authorized to do business in the State of New York.

(e) If at any time any of the required insurance policies should be canceled, terminated or modified so that insurance is not in effect as required, then, if BPCA shall so direct, Contractor shall suspend performance of the Work. If the Work is not suspended then BPCA may, at BPCA's

option, obtain insurance affording coverage equal to that required, the cost of such insurance to be payable by Contractor to BPCA.

(f) Contractor and each Subcontractor shall secure in a form satisfactory to BPCA:

(1) Worker's Compensation and Employer's Liability Insurance (including United States Longshoreman & Harbor Workers and Jones Act Coverages) during the Term for the benefit of such employees as are required to be insured by the applicable provisions of law and voluntary compensation for employees excluded from statutory benefits. Employer's Liability Insurance and benefits resulting from disease shall not be less than an annual aggregate amount of **($$$$$)** for each consecutive 12-month period.

(2) Disability Benefit Insurance during the life of this Agreement for the benefit of such employees as are required to be insured by the applicable provisions of law.

(3) Commercial General Liability Insurance as follows:

Standard commercial general liability insurance policy with contractual, products and completed operations and explosion, blasting, collapse, excavation and underground damage liability coverages, under the occurrence policy format, issued to and covering the liability of Contractor for all the Work and operations relating thereto and all obligations assumed by Contractor under this Agreement including, but not limited to indemnity obligations in an amount which shall not be less than the following limits:

Combined Single Limits, Bodily Injury and Property Damage Liability

($$$$$) per each occurrence and **($$$$$)** in the aggregate.

Product and Completed Operations

($$$$$)

The completed operations coverage shall continue in force until three years after Final Acceptance of the Work and shall contain, in addition to any other provisions required hereby, a provision that the policy shall not be changed, canceled or reduced. As a condition precedent to the making of Final Payment, Contractor shall furnish BPCA with a certified copy of the completed operations policy.

(4) Automobile Liability Insurance as follows:

A policy covering the use in connection with the Work of all owned, non-owned and hired vehicles bearing license plates, or under the circumstances that such vehicles are being used they are required by the Motor Vehicle Laws of the State of New York to bear license plates. The coverage under such policy shall not be less than the following limits:

Combined Single Limits,

Bodily Injury and Property Damage Liability

($$$$$) per each occurrence.

(5) Marine Protection and Indemnity insurance of not less than [amount] per occurrence, if Contractor or any of its Subcontractors utilizes floating equipment, barges or floats, or performs marine-related construction, covering any and all claims for personal injury, death and property damage arising out of or in connection with this Agreement.

(6) Pollution Liability Insurance, on an occurrence basis, providing coverage for bodily injury liability, property damage or environmental damage caused by pollution conditions with a limit of liability of not less than [amount] per occurrence and in the aggregate. The policy shall include coverage for environmental clean-up on land, in air and on water. The policy shall include coverage for completed operations for two (2) years after the completion of the performance of the Work, gradual and sudden and accidental pollution coverage, with a time element of no less than seven (7) days' notice and thirty (30) days' reporting. The policy shall not contain a sunset provision, or any other provision, which would prohibit the reporting of a claim and the subsequent defense and indemnity that would normally be provided by the policy. The policy shall provide transportation coverage for the hauling of hazardous materials from the Project Site to the final disposition location.

(7) Vessel Pollution Liability Insurance, on an occurrence basis, providing coverage for bodily injury liability, property damage or environmental damage caused by pollution conditions, emanating from any floating equipment, barges or floats, utilized by Contractor or Subcontractors in the performance of Marine related construction, with a limit of liability of not less than [amount] per occurrence and in the aggregate. The policy shall include coverage for environmental clean-up on land, in air and on water.

(8) Contractor shall secure, pay for, and maintain Property Insurance necessary for protection against the loss of owned, borrowed or rented equipment, tools and materials used in Contractor's performance of the Work. The requirement to secure and maintain such insurance is solely for the benefit of Contractor. Contractor's failure to secure such insurance or to maintain adequate levels of coverage shall not render BPCA or any other Additional Insureds, or their agents and employees, responsible for any such losses, and Owner, the other Additional Insureds, and their agents and employees shall have no such liability.

(9) Valuable Papers Insurance insuring, for the benefit of Contractor and BPCA all plans, designs, drawings, specifications, and documents used under this Agreement by Contractor in a total amount of not less than [$$$$$$] Contractor may furnish full coverage under one policy, or may submit separate policies from any Subcontractor(s) for their proportionate shares of such coverage.

(10) Comprehensive Crime/Employee Dishonesty Insurance in a reasonable amount or an amount which is customary in the applicable industry, trade or profession.

(11) If the Work involves the removal, repair, installation or testing of underground petroleum storage tanks, or petroleum remediation operations, or the performance of work or services related to excavation, loading, transporting or unloading of hazardous or contaminated materials, Contractor shall provide Contractors Professional Liability Insurance with

a limit of **[$$$$$]**. Coverage shall provide and encompass the following:

(i) Contractor's negligent acts, errors or omissions in rendering or failing to render services of an engineering or consulting nature arising out of their environmental engineering or consulting.

(ii) Maximum self-insured retention of **[$$$$$]**, or an amount acceptable to BPCA.

(12) Umbrella Liability Insurance [excess of general liability, automobile liability, Marine protection and indemnity, pollution liability, vessel pollution liability and Employer's Liability] in an amount of not less than [amount].

(g) The insurance required under subsections 13.1(f) 3, 4 [and 5] shall be of a type which shall protect Contractor and Subcontractors, respectively, against damage claims which may arise from operations under this Agreement, whether such operations be by the insured or by anyone directly or indirectly employed by the insured. Each of the aforesaid policies shall provide that the insurance company or an attorney approved and retained by the insurance company shall defend any suit or proceeding against BPCA or any officers, agents or employees of BPCA whether or not such suit is groundless, false or fraudulent. Notwithstanding the foregoing, BPCA shall have the right to engage its own attorneys for the purpose of defending any suit or proceeding against it or its respective officers, agents or employees, and, in such event, Contractor shall, indemnify BPCA for all attorneys' fees and disbursements and other costs incurred by it arising out of, or incurred in connection with, any such defense. The said insurance shall name BPCA, BPCPC, the State of New York, Construction Manager and Architect as additional insureds as respects this location and shall, where applicable, be written on an occurrence basis and shall contain a provision that it is primary and that any similar insurance which BPCA, BPCPC, the State of New York, Construction Manager, Architect, Contractor or Subcontractor elect to carry for their own benefit is secondary or excess and not contributing insurance.

(h) BPCA, at BPCA's cost and expense, may, at its sole option, procure and maintain such insurance as shall in the opinion of BPCA, protect BPCA from contingent liability of BPCA to others for damages arising from bodily injury, including death and property damages which may arise from operations under this Agreement. The procurement and maintenance of such insurance by BPCA shall not in any way be construed or be deemed to relieve Contractor from, or to be a limitation on the nature or extent of, such obligations and risk.

(i) BPCA shall, at all times during the period of construction and until completion and Final Acceptance of the Work procure and maintain at the cost and expense of BPCA "**Builders Risk**" insurance, or its functional equivalent, against direct physical loss or damage to the Work and on all Materials to be made a part of the Work in the names of BPCA, Construction Manager, Contractor and Subcontractors, said amount of insurance to be procured and maintained on a one hundred percentage (100%) completed value basis on the insurable portion of the Work, which insurance shall contain a deductible provision for all losses except flood and earthquake in the amount of TEN THOUSAND DOLLARS ($10,000) and a deductible provision for flood and earthquake in the amount of TEN THOUSAND DOLLARS ($10,000). BPCA recognizes that the deductible applicable to flood and earthquake may be greater than TEN THOUSAND DOLLARS

($10,000) due to insurance market conditions and shall notify Contractor if such deductible is greater than TEN THOUSAND DOLLARS ($10,000). Losses up to and including the amounts of such deductible provisions shall be borne by Contractor. The insurance specified above may, in certain instances, include other parties as named insureds, as the interests of such parties may appear. Loss, if any, is to be made adjustable with and payable to BPCA on behalf and for the named insureds as the interests of such insureds may appear. BPCA shall, in BPCA's sole discretion, have power to adjust and to settle with the insureds any loss or claim under such insurance. The above is not intended to be a complete, full or accurate description of the coverage provided by the policies of insurance, copies of which are on file with BPCA. This subsection (i) is not intended to create or give any rights to Contractor or Subcontractors other than those which may be made available to such Contractors or Subcontractors under the terms of such policies. BPCA assumes no obligation to obtain insurance other than that evidenced by said polices. Contractor and Subcontractors shall not violate or permit to be violated any term or condition of such policies and shall at all times satisfy the safety requirements of BPCA and of the insurance companies issuing the aforementioned policies. The Contractor shall, upon notification by BPCA, obtain such insurance at BPCA's expense on a date determined by BPCA, which date shall not be less than thirty (30) days after notice to Contractor of such determination by the BPCA.

13.2 Effect of Procurement of Insurance

Neither the procurement nor the maintenance of any type of insurance by BPCA or Contractor shall in any way be construed or be deemed to limit, discharge, waive or release Contractor from any of the obligations and risks impressed upon Contractor by this Agreement or to be a limitation on the nature or extent of such obligations and risks.

13.3 Contract Security

Contractor shall, if it has not already done so, furnish to BPCA, with the execution of this Agreement, to BPCA, a bond in the form acceptable to BPCA in an amount at least equal to one hundred percent (100%) of the Contract Price for performance of the Work (the "**Performance Bond**"), and a labor and material payment bond in the form acceptable to BPCA in an amount at least equal to one hundred percent (100%) of the Contract Price for the payment of all persons performing labor or providing Materials in connection with the Work (the "Payment Bond"). The surety on said bond shall be a surety company authorized to do business in the State of New York and shall be rated at last B+ by A.M. Best and Company, or meet such other requirements as are acceptable to BPCA.

13.4 Additional or Substitute Bond

If at any time BPCA shall be or shall become dissatisfied with any surety or sureties then obligated upon the Performance Bond or the Payment Bond, or if for any other reason such bonds shall cease to be adequate security to BPCA, Contractor shall within five (5) days after notice from BPCA to do so, substitute an acceptable bond or bonds in such form and sum and signed by such other surety or sureties as may be satisfactory to BPCA, except that the penal sum of said bond shall not exceed the Contract Price as adjusted by Change Orders. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished such an acceptable bond or bonds to BPCA.

ARTICLE 14 - CLAIMS FOR EXTRA WORK

(a) If Contractor is of the opinion that (i) any work that it has been ordered to perform is Extra Work and not Work as set forth in the Contract Documents, (ii) any action or omission of BPCA, Construction Manager or Architect is contrary to the terms and provisions of the Contract Documents and will require the performance of Extra Work or will cause additional expense to Contractor or (iii) any determination, order or directive of BPCA, Construction Manager or Architect is contrary to the terms of the Contract Documents and will require the performance of Extra Work or will cause additional expense to Contractor, Contractor shall:

(1) promptly comply with each determination, order or directive and proceed diligently with the performance of the Work in accordance with BPCA's instructions,

(2) notify BPCA, Construction Manager and Architect in writing within 72 hours of such determination, order, act or omission that Contractor believes such will require it to perform Extra Work or incur additional expense and the basis for Contractor's conclusion and request a final determination thereon by BPCA; and

(3) present to the Construction Manager for signature daily time and Material tickets to confirm quantities of Material and hours of labor in cases where Contractor is performing the Work which it considers to be Extra Work.

If BPCA determines that (x) such work is Work required to be performed hereunder and not Extra Work, (y) such action or omission is proper, or (z) such determination, order or directive is proper, Contractor, in order to reserve its right to claim compensation for or damages resulting from the performance of such work or the compliance with such determination, order or directive, must notify BPCA in writing within three (3) working days after receiving notice of BPCA's determination that it is performing such work or complying with such determination, order or directive under protest.

In addition to the foregoing, Contractor must submit to BPCA, Construction Manager and Architect within thirty (30) days after it has performed such work or complied with such determination, order or directive, a detailed statement of the extra expense claimed to have been incurred and of any claimed damages resulting from the performance of such work or the compliance with such determination, order or directive.

(b) No claim for Extra Work shall be allowed unless the same was done pursuant to written order approved in writing by BPCA. Contractor's failure to comply with any provision of this Article:

(1) shall constitute a conclusive and binding determination on the part of Contractor that such action, omission, determination, order or directive does not involve Extra Work, has not caused extra expense or damages to Contractor, and is not contrary to the terms and provisions of the Contract Documents; and

(2) shall constitute an irrevocable waiver by Contractor of any claim for compensation for or damages resulting from the performance of such work or the compliance with

such determination, order or directive.

(c) The value of claims for Extra Work, if allowed, shall be determined by the methods described in Section 9.2(a).

ARTICLE 15 - TERMINATION

15.1 Termination for Cause

(a) If any of the following events shall occur (an "**Event of Default**") then BPCA or Construction Manager may serve written notice upon Contractor and upon Contractor's surety, if any, terminating this Agreement at a specified date. The notice shall contain the reasons for termination but shall not be effective to terminate this Agreement if Contractor cures all Events of Default stated in the notice prior to the date specified in the notice of termination.

(1) Contractor shall violate any substantial provision of this Agreement, including, without limitation, by failing to maintain the Progress Schedule for the Project or Progress Schedule for the Work then in effect in accordance with, or failing to discharge any of its responsibilities under, Section 3.1(d) hereof, including abandonment of the Work by Contractor, or by failing to indemnify and hold harmless BPCA (as required by Sections 3.1(e), 3.2, 17.5, 21.1, 21.2, 22(c) or any other provision of this Agreement) from and against any and all claims, liabilities, losses, costs or damages arising out of Contractor's performance of, or failure to perform, its obligations under this Agreement in accordance with its terms, or if the Contractor fails to maintain the insurance required by the provisions of Section 13; or

(2) any material adverse change shall take place in the financial condition of the Contractor;

(3) Contractor takes any action which would result in it becoming the subject of any insolvency proceeding. The term "insolvency proceeding" as used herein shall include the filing of a petition for relief under Title 11 of the United States Code by Contractor or the consent, acquiescence or taking of any action by Contractor, or the filing by or against Contractor of petition or action, looking to or seeking any reorganization, arrangement, composition, readjustment, liquidation, dissolution, or similar relief under any other regulation; or the appointment, with or without the consent of Contractor, of any trustee, custodian, receiver or liquidator of Contractor or of any property or assets of Contractor; or Contractor's making of an assignment for the benefit of creditors or its inability to pay its debts as they become due;

(4) Contractor misrepresented or omitted information in its submission of the Statement of Qualifications of Contractor submitted by Contractor to BPCA in connection with this Agreement; or

(5) any partner, principal, director, officer or shareholder owning in excess of five percent (5%) of the stock of Contractor shall have been convicted of a felony.

(b) Upon the occurrence of an Event of Default, at BPCA's option exercised by written notice to Contractor, title to any or all of Contractor's Materials, equipment, work product, work in process and dies and tools, whether on the Site or off site, which are necessary or useful in

completing the Work shall vest in BPCA and BPCA may take possession of and utilize the same for completion of the Work; provided that title to such items shall revert to Contractor upon effectuation of a cure of the Event of Default prior to the termination of this Agreement. If no cure has been effected, this Agreement has been terminated and BPCA has taken possession of the same, then after BPCA has taken possession and the Work shall have been completed by or on behalf of BPCA, BPCA shall pay to Contractor, in respect to the items for which title has vested in BPCA, an amount equal to the sum of:

(1) the direct costs of Contractor for such Materials and Work in progress, and

(2) the depreciated book value of such tools and dies less, if BPCA elects to return the tools and dies to Contractor, the salvage value thereof. BPCA shall have the right to set off against such payment due to Contractor any amounts then due and payable by Contractor to BPCA which may accrue as damages owing by Contractor to BPCA under the terms of this Agreement. Contractor shall execute any further documents (including Form UCC-1 Financing Statements to give public notice of the potential ownership interest of BPCA as set forth herein) required by BPCA to confirm the terms of this subsection 15.1(b).

(c) Upon termination of this Agreement, BPCA shall have the right, in addition to all other rights and remedies, to complete or have the Work completed by such means and in such manner, by contract or otherwise, with or without public letting as permitted by law, as BPCA deems advisable. BPCA may deduct any loss it incurs thereby from any payment then or thereafter due to Contractor without prejudice to any other remedy BPCA may have.

(d) Immediately upon termination in accordance with the provisions of this Section, each and every Subcontract and Purchase Order entered into by Contractor shall, at BPCA's option, be automatically assigned to BPCA, and Contractor shall insert a provision to this effect in all Subcontracts and Purchase Orders.

(e) Contractor shall, upon the date when such termination shall take effect, promptly notify the union or unions, if any, having jurisdiction over the work by its employees that it releases the Project and consents that the Work be performed by others and Contractor expressly authorizes BPCA to notify the union or unions of such release in the name of Contractor. The failure, neglect or refusal of Contractor to issue such release or the disclaimer by it of the effectiveness of the release issued by BPCA shall subject Contractor to all damages sustained by BPCA.

(f) If this Agreement shall have been terminated by BPCA pursuant to this Section 15.1 and it shall be finally determined by BPCA or a court of competent jurisdiction that adequate grounds for such termination did not exist, then such termination shall be deemed a termination for convenience of BPCA under Section 15.2 hereof and the sole right, remedy and recourse of Contractor against BPCA shall be governed and determined by Section 15.2 hereof.

15.2 Termination for Convenience of BPCA

(a) BPCA, at any time, may terminate this Agreement for its own convenience. Any such termination shall be effected by delivering to Contractor a notice of termination specifying the extent to which performance of Contractor's Work under the Contract is terminated and the date upon which such termination becomes effective. Upon receipt of the notice of termination,

Contractor shall:

(1) stop work under this Agreement on the date specified in the notice of termination;

(2) place no further Purchase Orders or Subcontracts for Materials, services or facilities;

(3) unless directed otherwise by BPCA, terminate all Purchase Orders and Subcontracts;

(4) assign to BPCA, in the manner, at the times, and to the extent directed by Construction Manager, all of the right, title and interest of Contractor under the Purchase Orders and Subcontractors so terminated, in which case BPCA shall have the right, in its sole discretion, to settle or pay any or all claims arising out of the termination of such Purchase Orders and Subcontracts;

(5) to the extent required by Construction Manager, settle all outstanding liabilities and all claims arising out of such termination of Purchase Orders and Subcontracts, with the approval or ratification of Construction Manager, which approval or ratification shall be final for all the purposes of this Section 15.2;

(6) transfer title to BPCA and deliver in the manner, at the time, and to the extent, if any, directed by the Construction Manager (i) the fabricated or unfabricated parts, Work in process, completed Work, supplies, and other Material produced as a part of, or acquired in connection with the performance of, the Work terminated by the notice of termination, and (ii) the completed or partially completed plans, drawings, work product, information and other property, which if this Agreement had been completed, would have been required to be furnished to BPCA; and

(7) take such action as may be necessary, or as the Construction Manager may direct, for the protection and preservation of the property related to this Agreement which is in the possession of Contractor and in which BPCA has or may acquire an interest.

(b) In the event of a termination of this Agreement pursuant to this Section 15.2, Contractor shall be paid by BPCA only the apportioned Contract Price for Work installed, the fair and reasonable value of Materials stored on the Site and under order for which Contractor is responsible for payment, less any sums properly deductible by BPCA, except that in no event shall Contractor be entitled to compensation in excess of the total Contract Price.

15.3 Suspension of Work

(a) BPCA may at any time and for any reason direct Contractor to suspend, stop, or interrupt the Work or any part thereof for a period of time. Such direction shall be in writing and shall specify the period during which the Work is to be stopped. Upon receipt of a direction of suspension, Contractor shall, as soon as practicable, cease performance of the Work as ordered and take immediate affirmative measures to protect the Work from loss or damage. Contractor shall resume the Work upon the date specified in such direction or upon such other date as BPCA

may thereafter specify in writing.

(b) The period during which the Work shall have been suspended, stopped or interrupted may, if warranted, be added to the time fixed for performance. A suspension, stoppage or interruption of the Work pursuant to this provision shall not give rise to any claim against BPCA for additional compensation.

ARTICLE 16 - COMPOSITE DRAWINGS AND COOPERATION

Where Contractor shall perform Work in close proximity to work of other contractors or subcontractors, or where there is evidence that Contractor's Work may interfere with work of other contractors, or subcontractors, Contractor shall assist in arranging space conditions to make satisfactory adjustment for the performance of such work and the Work. Contractor shall prepare composite scale working drawings and specifications as directed by Construction Manager, clearly showing how Contractor's Work is to be performed in relation to work of other contractors or Subcontractors. Such direction may include the following: the scale of the drawings, where the drawings are to be drafted, the number of prints or reproducibles, and the requirement of attendance at meetings. The determination as to who shall provide the composite drawings and the contents of the same shall rest exclusively with Construction Manager. Upon request by Construction Manager, Contractor shall sign and be bound by such composite drawings. Such signature shall indicate Contractor's acknowledgment that such drawing is acceptable as related to its Work covered or included in such drawing. If Contractor performs the Work in a manner that causes interference with the work of other contractors, or Subcontractors, Contractor shall make the changes necessary to correct the condition as directed by Construction Manager.

ARTICLE 17 - PROTECTION OF RIGHTS, PERSONS AND PROPERTY

17.1 Accident Prevention

Contractor shall at all times take every precaution against injuries to persons or damage to property and for the safety of persons engaged in the performance of the Work.

17.2 Safety Programs

Contractor shall be responsible for the initiation, maintenance and supervision of safety precautions and programs as prescribed by Construction Manager in connection with the Work.

17.3 Protection of Work and Property

(a) Contractor shall at all times guard BPCA's property from injury or loss in connection with the Work. Contractor shall at all times guard and protect the Site, the Work and adjacent property. Contractor shall replace or make good any such loss or injury unless such loss or injury is caused directly by BPCA.

(b) Contractor shall have full responsibility to install, protect and maintain all Materials in proper condition and forthwith repair, replace and make good any damage thereto until Final Acceptance of the Work.

(c) No provision is included for stresses or loads imposed by construction operations. If Contractor desires to place such loads in excess of the design load (as shown on the Drawings or Specifications), Contractor shall submit to Architect drawings and calculations prepared by, and bearing the seal of a professional engineer, showing the proposed method for supporting such loads, for Architect's review and approval. No loading of any kind in excess of design loads shall be placed on any part of the Project prior to Architect's approval of such submitted drawings and calculations. The costs of the Architect's review shall be reimbursed to BPCA by Contractor.

(d) Contractor shall be responsible for all cutting, fitting or patching that may be required to complete the Work, to make its several parts fit together properly and to make the Work fit together properly with previous and surrounding work. The requirement to cut, fit or patch shall be determined by Construction Manager; provided, that structural elements of the Project shall not be cut, patched, or otherwise altered or repaired without prior authorization by BPCA. Authorization to proceed with remedial operation on any damaged or defective element or portion of the Project shall not constitute a limitation or a waiver of BPCA's, Construction Manager's or Architect's right to require the removal and replacement of any Work which fails to fulfill the requirements of the Contract Documents.

17.4 Adjoining Property

Contractor shall protect all adjoining property and shall repair or replace any such property damaged or destroyed during the progress of the Work.

17.5 Risks Assumed by Contractor

(a) Contractor solely assumes the following risk whether such risk arises from acts or omissions (whether negligent or not and whether supervisory or otherwise) of BPCA, Construction Manager, of Architect or Contractor, of any Subcontractor, of any Materialman, of third persons or from any other cause, including unforeseen obstacles and difficulties which may be encountered in the prosecution of the Work, whether such risk is within or beyond the control of Contractor and whether such risk involves any legal duty, primary or otherwise, imposed upon BPCA:

The risk of loss or damage, direct or indirect, of whatever nature, to the Work or to any Materials furnished, used, installed or received by BPCA, Contractor or any Subcontractor, Materialmen or workmen performing services or furnishing Materials for the Work, whether such Work or Materials are stored at the Site or at an offsite location in accordance with Section 5.4 hereof. Contractor shall bear such risk of loss or damage until Final Acceptance of the Work by BPCA or until completion of such Materials or removal of such Materials from the Site following a determination that they will no longer be needed for the Project and delivery to the location at which they are to be subsequently stored or disposed of, whichever event occurs last. A portion of the risk of such loss or damage may be insured against under the terms of a "builder's risk" insurance policy maintained in the name of Contractor, among others, as described in Section 13.1(i). Notwithstanding the status of any actual or potential recovery or claim under the said "builder's risk" insurance policy, in the event of any loss or damage, Contractor immediately shall repair, replace or make good any such loss or damage.

(b) Contractor shall not, without obtaining express advance permission of BPCA, raise

any defense involving in any way the: (i) jurisdiction of any court in which BPCA brings an action arising under this Agreement, (ii) the governmental nature of BPCA, or (iii) the provisions of any statutes respecting suits against BPCA.

(c) Contractor's obligations under this Article 17 shall not be deemed waived, limited or discharged by the enumeration or procurement of any insurance for liability for damages.

(d) Neither Final Acceptance of the Work nor any payment made hereunder shall release Contractor from Contractor's obligations under this Article 17. The enumeration elsewhere in this Agreement of particular risks assumed by Contractor or of particular claims for which Contractor is responsible shall not be deemed to limit the effect of the provisions of this Article 17 or to imply that Contractor assumes or is responsible for only risks or claims of the type enumerated; and neither the enumeration in this Article 17 nor the enumeration elsewhere in this Agreement of particular risks assumed by Contractor of particular claims for which Contractor is responsible shall be deemed to limit the risks which Contractor would assume or the claims for which Contractor would be responsible in the absence of such enumerations.

(e) The Contractor is advised that the Work under this Agreement may impose certain obligations and requirements mandated by the U.S. Department of Labor Occupational Safety and Health Administration regulations, Title 29 CFR Part 1926.62 Lead Exposure in Construction, relative to the potential exposure to lead by its employees. The Contractor assumes entire responsibility and liability for complying fully in all respects with these regulations.

(f) Contractor agrees that any unsatisfied claims of the BPCA arising from Contractor's obligations under this Article 17 or Article 13 (Insurance) may be offset or deducted by BPCA from any payments due to Contractor hereunder.

ARTICLE 18 - USE PRIOR TO ACCEPTANCE BY BPCA

(a) If before Final Acceptance of Work, BPCA desires to use the Site or any part thereof that is completed or partly completed, or to place or install therein or thereon equipment, BPCA shall have the right to do so, and Contractor shall in no way interfere with or object to such use by BPCA.

(b) Such use shall not (1) constitute acceptance of space, systems, Materials or elements of the Work, (2) affect the start of any guaranty period, nor (3) affect the obligations of Contractor to complete the Work in accordance with the requirements of this Agreement or other obligations of Contractor under the Contract Documents.

(c) Contractor shall continue the performance of the Work in a manner that shall not unreasonably interfere with such use by BPCA.

ARTICLE 19 - EXEMPTION FROM SALES AND COMPENSATING USE TAXES

19.1 BPCA Exempt

BPCA is exempt from payment of sales and compensating use taxes of the State of New York and of cities and counties thereof on all Materials that will become an integral component of

the completed Project pursuant to this Agreement.

19.2 Certificates

Contractor shall obtain and cause Subcontractors and Materialmen to obtain any and all necessary certificates or other documentation from the appropriate governmental agency or agencies, and use such certificates or other documentation as required by law, rule or regulations to obtain said tax exemption.

ARTICLE 20 - WARRANTIES AND GUARANTIES

20.1 In General

(a) Contractor guarantees that all Work performed and all Materials furnished will conform to the Contract Documents as to kind, quality, functions, design and characteristics of material and workmanship. Contractor shall remove, replace and repair, at its sole cost and expense, all defects in workmanship, Materials, ratings, capacities, or design characteristics occurring in or to the Work including, without limitation, any portion of the Work furnished or performed by any Subcontractor or Materialman, within one year from the date of Final Acceptance. Contractor guarantees that all Work performed and all Materials furnished will conform to the Contract Documents as to kind, quality, functions, design and characteristics of material and workmanship. Contractor hereby acknowledges that BPCA may be required to incur substantial expense if correction of the Work is required particularly if such correction involves the uncovering, removal or replacement of concrete, wiring and piping installed at the Site. If Contractor shall fail to reimburse BPCA for any such expense which may become payable as provided in this paragraph, BPCA shall be entitled to deduct such expense from any payments required to be made by BPCA to Contractor pursuant to this Agreement. Contractor, upon demand, shall pay for any and all damage to any Work affected by or from such defects and all expenses necessary to remove, replace and repair such Work that may be damaged in removing, replacing or repairing such defects.

(b) The benefits of this Article 20 shall inure to the benefit of BPCA and its respective successors and assigns. In addition, any bond or guaranty that may be required of Contractor or any Subcontractor or Materialman under the Contract Documents shall inure to the benefit of BPCA and its respective successors and assigns.

(c) The rights and remedies afforded BPCA under this Section are in addition to and not in lieu of and do not in any way affect, change, alter, modify, vary or prejudice any right, remedy or recourse that BPCA may have under other provisions of this Agreement or pursuant to law.

20.2 Additional Guaranties

In addition to the general guaranty set forth in Section 20.1, any other guaranties set forth in the Contract Documents shall be applicable.

20.3 Repair by Another

If BPCA has requested Contractor to correct any Work and Contractor shall not have completed any correction of the Work as shall be required pursuant to this Article 20 within ten (10) working days after receipt of written notice from BPCA specifying the defect or damage required to be removed, replaced or repaired, or if such defect or damage is of such a nature that it cannot be completely removed, repaired and replaced within such ten (10) day period and Contractor shall not have diligently commenced removing, repairing and replacing such defect and damage within such ten (10) day period or shall not thereafter with reasonable diligence and in good faith proceed to do such work, BPCA may employ such other person, firm or corporation as it may choose, to perform such removal, replacement and repair, and Contractor shall, upon demand, pay to BPCA all amounts that BPCA expends for such removal, replacement and repair.

ARTICLE 21 - INDEMNITY

21.1 Delay or Failure

Contractor and its sureties shall be responsible for and pay to BPCA, all loss, damage and additional cost incurred by reasons or on account of (i) the unexcused delays of Contractor (determined as set forth in Section 3.1 hereof) or (ii) Contractor's failure to fully and completely carry out the terms of this Agreement.

21.2 Inventions

In addition to the indemnity set forth in Section 17.5(a), Contractor shall indemnify and hold BPCA harmless from all claims, demands or liabilities of any kind or nature, including costs and expenses, for or on account of any patented or unpatented plan, design, invention, article, arrangement, appliance, Material, or preparation, manufactured, used or followed in the performance of or incident to the Work hereunder, and shall defend any and all actions arising out of the same. In the event of any injunction or legal action by reason thereof, which shall operate to stop or retard the Work, BPCA shall have the right to substitute such other articles of like kind as will enable it to complete the Project, and all costs and expenses occasioned thereby shall be borne by Contractor.

21.3 Liability

To the fullest extent allowed by law, Contractor shall hold BPCA, BPCPC, the State of New York, Construction Manager and Architect and their servants, agents and employees harmless from and shall indemnify them against any and all liability, loss, cost, damage or expense, including attorneys' fees, by reason of claims of Contractors employees or employees of its Subcontractors or Materialmen for injuries or death or by reason of claims of any other person or persons, including BPCA, BPCPC, the State of New York, Construction Manager, and Architect and their servants, agents or employees, for injuries to person or property or for death occasioned in whole or in part by any act or omission of Contractor, its Subcontractors and Materialmen and their servants, agents and employees whether or not it is contended that BPCA contributed thereto or was responsible therefor by reason of nondelegable duty. If, however, this indemnification is limited by applicable law, then the said indemnification hereby shall be similarly limited to conform with such law, it being the intention that this indemnification shall be as permitted by applicable law. BPCA may retain any monies due or to become due hereunder sufficient to

indemnify BPCA, BPCPC, the State of New York, Construction Manager, and Architect and their servants, agents and employees against such injuries, claims, suits, actions, costs or damages should any such claim arise. Contractor shall, at the sole option of BPCA and upon written demand of BPCA, assume the defense in behalf of BPCA, BPCPC, the State of New York, Construction Manager, and Architect or their servants, agents or employees of any action or proceeding commenced against them whether or not Contractor is named as a party therein as part of Contractor's aforementioned obligation to indemnify and hold them harmless.

ARTICLE 22 - PATENTS AND ROYALTIES

(a) In the prosecution of the Work, Contractor will not use or furnish any patented appliance, article, device or method of construction unless it has authorization for such use. Contractor shall pay all royalty and license fees.

(b) Any approval of Materials by Architect shall be construed merely as an approval of their adequacy for the Work.

(c) Contractor will be responsible for all claims against BPCA for the infringement of any patents. Contractor shall defend all suits and claims for infringement of any patent rights and shall indemnify and hold BPCA harmless from loss on account thereof. Any expenses incurred by Contractor in connection with suits and claims will not offset the Contract Price.

(d) Contractor hereby and presently grants to BPCA an irrevocable and non-exclusive license to utilize all of the Contractor's rights in and to all:

(1) United States patents and patents registered in any other foreign country;

(2) proprietary knowledge, data and trade secrets; and

(3) Engineering data and information necessary in connection with and solely in connection with, all work performed by BPCA or other contractors hired by BPCA to complete the work after termination of this Agreement pursuant to Section 15.1.

Each Purchase Order and Subcontract shall contain a similar clause with respect to the rights of Subcontractor and Materialman in and to the foregoing, in form and substance acceptable to BPCA, granting BPCA the aforesaid license. BPCA shall not be obligated to pay any royalties, license fees or any other consideration to Contractor or any Subcontractor or Materialman for this license. Contractor and each Subcontractor and Materialman shall execute a separate license agreement, in form and substance satisfactory to BPCA, concurrently with the execution of this Agreement, or any Subcontract or Purchase Order, or within ten (10) days thereafter, embodying the terms of this Section. On request, Contractor and each Subcontractor and Materialman shall furnish BPCA with copies of all related Engineering and technical data required to complete the work.

ARTICLE 23 - AS-BUILT DRAWINGS

(a) Contractor shall be furnished by BPCA, at BPCA's expense, with one physical set

and two electronic copies (on disk) of 48" x 36" Drawings, on which Contractor, where applicable, shall record the installation of underground utilities, concealed piping, concealed valves and control equipment and record changes in the Work. Such recording shall be kept current and include final and actual sizes as well as the location and elevation of the above figures and offset distances in feet and inches to permanent surface improvements such as buildings, retaining walls or curbs. During the progress of the Work, at the request of Construction Manager and prior to the approval of any Requisition of Contractor, Contractor shall provide a 48" x 36" PDF to BPCA of the up to-date Drawings showing the Work as installed. At completion of the Work, Contractor shall complete, sign and date the 48" x 36" physical set of Drawings and deliver it to Architect.

(b) After review by Architect and return to Contractor for any required changes, Contractor shall furnish to BPCA, at Contractor's expense, at least one physical set and two electronic copies (on disk) of 48" x 36" final Drawings.

ARTICLE 24 - SHOP DRAWINGS AND SAMPLES

24.1 Contractor Submittal

Contractor shall submit to Construction Manager the shop drawings, Product Data and Samples required by the Contract Documents and shall adhere to all submittal and scheduling requirements with respect thereto. After review of such shop drawings, Product Data and Samples by Construction Manager and their approval by Architect, each of such items shall be returned in accordance with the procedures established therefor.

24.2 Contractor's Responsibility

Architect's approval of shop drawings, Product Data and Samples shall not relieve Contractor of responsibility for and deviation from the requirements of the Contract Documents. Contractor shall be responsible for the accuracy of the shop drawings, Product Data and Samples and for the conformity of Documents unless Contractor has notified Architect of the deviation in writing at the time of submission and has received from Architect written approval by separate letter of the specified deviations. Architect's approval shall not relieve Contractor of responsibility for errors or omissions in the shop drawings, Product Data or Samples.

ARTICLE 25 – NOTICES

Whenever it is provided herein that notice, demand, request, consent, approval or other communication shall or may be given to, or served upon, either of the parties by the other, or whenever either of the parties desires to give or serve upon the other any notice, demand, request, consent, approval or other communication with respect hereto, each such notice, demand, request, consent, approval or other communication shall be in writing and shall be effective for any purpose only if given or served by hand with proof of delivery, by delivery by an overnight courier service which obtains receipts, or by mailing the same by express or certified mail, postage prepaid, return receipt requested, addressed to:

(a) if to BPCA:

Battery Park City Authority

Attn: [Name], [Title]
200 Liberty Street, 24th Fl
New York, NY 10281

with a copy to: General Counsel, at the same address

or to such other address as BPCA may from time to time designate in the manner set forth above.

(b) if to Contractor:

[Company]
Attn: [Name], [Title]
[Street Address]
[City, State, Zip]

or to such other addresses as Contractor may from time to time designate in the manner set forth above.

(c) if to Construction Manager

[Company]
Attn: [Name], [Title]
[Street Address]
[City, State, Zip]

or to such other addresses as the Construction Manager may from time to time designate in the manner set forth above.

(d) if to Architect/Engineer/etc.

[Company]
Attn: [Name], [Title]
[Street Address]
[City, State, Zip]

or to such other addresses as Architect or Engineer may from time to time designate in the manner set forth above.

Every notice, demand, request, consent, approval or other communication hereunder shall be deemed to have been given or served (i) in the case of express or certified mail, on the date the receipt is dated by the Post Office or express mail carrier, as the case may be, and (ii) in the case of notice by hand or by overnight courier service, upon delivery, as evidenced by a signed receipt.

ARTICLE 26 – EMPLOYMENT AND DIVERSITY

26.1 Participation by Minority and Women-Owned Business Enterprises

(a) General Provisions

(1) Owner is required to implement the provisions of New York State Executive Law Article 15-A and Parts 140-145 of Title 5 of the New York Codes, Rules and Regulations ("NYCRR") for all contracts, as defined therein, with a value (1) in excess of $25,000 for labor, services, equipment, materials, or any combination of the foregoing or (2) in excess of $100,000 for real property renovations and construction.

(2) Contractor agrees, in addition to any other nondiscrimination provision herein and at no additional cost to Owner, to fully comply and cooperate with Owner in the implementation of New York State Executive Law Article 15-A and the regulations promulgated thereunder. These requirements include equal employment opportunities for minority group members and women ("EEO") and contracting opportunities for New York State-certified minority and women-owned business enterprises ("MWBEs"). Contractor's demonstration of "good faith efforts" pursuant to 5 NYCRR § 142.8 shall be a part of these requirements. These provisions shall be deemed supplementary to, and not in lieu of, the nondiscrimination provisions required by New York State Executive Law Article 15 (the "Human Rights Law") and other applicable federal, state, and local laws.

(3) Failure to comply with all of the requirements herein may result in a finding of non-responsiveness, non-responsibility and/or a breach of contract, leading to the assessment of liquidated damages pursuant to Section 26.1(g) and such other remedies as are available to Owner.

(b) Contract Goals

(1) For purposes of this Contract, Owner hereby establishes an overall goal of XX% for MWBE participation, XX% for New York State-certified minority-owned business enterprise ("MBE") participation and XX% for New York State-certified women-owned business enterprise ("WBE") participation (collectively, "MWBE Contract Goals") based on the current availability of MBEs and WBEs.

(2) For purposes of providing meaningful participation by MWBEs on the Agreement and achieving the MWBE Contract Goals established in Section 26.1(b)(1) hereof, Contractor should reference the directory of MWBEs at the following internet address: https://ny.newnycontracts.com.

(3) Additionally, Contractor is encouraged to contact the Division of Minority and Women's Business Development at (212) 803-2414 to discuss additional methods of maximizing participation by MWBEs on this Agreement.

(4) Contractor understands that only sums paid to MWBEs for the performance of a commercially useful function, as that term is defined in 5 NYCRR § 140.1, may be applied towards the achievement of the applicable MWBE participation goal. [FOR CONSTRUCTION CONTRACTS – The portion of a contract with an MWBE serving as a supplier that shall be deemed to represent the commercially useful function performed by the MWBE shall be 60% of the total value of the contract. The portion of a contract with an MWBE serving as a broker that shall be deemed to represent the commercially useful function performed by the MWBE shall be the monetary value for fees, or the markup percentage, charged by the MWBE]. [FOR ALL

OTHER CONTRACTS - The portion of a contract with an MWBE serving as a broker that shall be deemed to represent the commercially useful function performed by the MWBE shall be 25% of the total value of the contract.]

(5) Contractor must document "good faith efforts," pursuant to 5 NYCRR § 142.8, to provide meaningful participation by MWBEs as Subcontractors and suppliers in the performance of this Agreement. Such documentation shall include, but not necessarily be limited to:

(A) Evidence of outreach to MWBEs;
(B) Any responses by MWBEs to Contractor's outreach;
(C) Copies of advertisements for participation by MWBEs in appropriate general circulation, trade, and minority or women-oriented publications;
(D) The dates of attendance at any pre-bid, pre-award, or other meetings, if any, scheduled by Owner with MWBEs; and,
(E) Information describing specific steps undertaken by Contractor to reasonably structure the Work to maximize opportunities for MWBE participation.

(c) Equal Employment Opportunity ("EEO")

(1) The provisions of Article 15-A of the Executive Law and the rules and regulations promulgated thereunder pertaining to equal employment opportunities for minority group members and women shall apply to this Agreement.

(2) In performing the Agreement, Contractor shall:

(A) Ensure that each Contractor and Subcontractor performing work on the Agreement shall undertake or continue existing EEO programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status. For these purposes, EEO shall apply in the areas of recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation.

(B) Contractor shall submit an EEO policy statement to Owner within seventy-two (72) hours after the date of the notice by Owner to award the Agreement to Contractor.

(C) If Contractor, or any of its Subcontractors, does not have an existing EEO policy statement, Owner may require Contractor or Subcontractor to adopt a model statement (see Exhibit D – Equal Employment Opportunity Policy Statement).

(D) Contractor's EEO policy statement shall include the following language:

(i) Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability, or marital status, will undertake or continue existing EEO programs to ensure that minority group

members and women are afforded equal employment opportunities without discrimination, and shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force.

(ii) Contractor shall state in all solicitations or advertisements for employees that, in the performance of the contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.

(iii) Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union, or representative will not discriminate on the basis of race, creed, color, national origin, sex age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of Contractor's obligations herein.

(iv) Contractor will include the provisions of Sections 26.1(c)(2)(D)(i) through (iii), which provides for relevant provisions of the Human Rights Law, in every subcontract in such a manner that the requirements of the subdivisions will be binding upon each Subcontractor as to the Work.

[PLEASE NOTE THAT THIS REQUIREMENT "C" IS ONLY APPLICABLE WHERE A STATE AGENCY EXPECTS TO ENTER INTO A STATE CONTRACT WITH A TOTAL EXPENDITURE IN EXCESS OF $250,000. NOTE: THIS LANGUAGE SHOULD BE DELETED FROM THE FINAL CONTRACT]

(3) Staffing Plan. To ensure compliance with this Section, Contractor shall submit a staffing plan to document the composition of the proposed workforce to be utilized in the performance of the Agreement by the specified categories listed, including ethnic background, gender, and Federal occupational categories. Contractor shall complete the staffing plan form (https://www.ogs.ny.gov/MWBE/Docs/EEO100.docx) and submit it as part of their bid or proposal or within a reasonable time, as directed by Owner.

WORKFORCE UTILIZATION REPORTS SHALL BE COLLECTED ON A MONTHLY BASIS FOR CONSTRUCTION CONTRACTS AND A QUARTERLY BASIS FOR ALL OTHER CONTRACTS. NOTE: THIS LANGUAGE SHOULD BE DELETED FROM THE FINAL CONTRACT]

(4) Workforce Utilization Report

(A) Contractor shall submit a Workforce Utilization Report (https://its.ny.gov/sites/default/files/documents/eeo_workforce_utilization_report.xlsx) and shall require each of its Subcontractors to submit a Workforce Utilization Report, in such form as shall be required by Owner on a monthly/quarterly basis during the term of this Agreement.

(B) Separate forms shall be completed by Contractor and any Subcontractors.

(C) Pursuant to Executive Order #162, Contractors and Subcontractors are also required to report the gross wages paid to each of their employees for the work performed by such employees on the contract on a monthly/quarterly basis.

(5) Contractor shall comply with the provisions of the Human Rights Law, and all other State and Federal statutory and constitutional non-discrimination provisions. Contractor and its Subcontractors shall not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

(d) MWBE Utilization Plan

(i) Contractor represents and warrants that Contractor has submitted an MWBE Utilization Plan, or shall submit an MWBE Utilization Plan at such time as shall be required by Owner, through the New York State Contract System ("NYSCS"), which can be viewed at https://ny.newnycontracts.com, provided, however, that Contractor may arrange to provide such evidence via a non-electronic method to Owner, either prior to, or at the time of, the execution of the contract.

(ii) Contractor agrees to adhere to such MWBE Utilization Plan in the performance of the Work.

(iii) Contractor further agrees that failure to submit and/or adhere to such MWBE Utilization Plan shall constitute a material breach of the terms of the Agreement. Upon the occurrence of such a material breach, Owner shall be entitled to any remedy provided herein, including but not limited to, a finding that Contractor is non-responsive.

(e) Waiver**s**

(i) If Contractor, after making good faith efforts, is unable to achieve the MWBE Contract Goals stated herein, Contractor may submit a request for a waiver through the NYSCS, or a non-electronic method provided by Owner. Such waiver request must be supported by evidence of Contractor's good faith efforts to achieve the maximum feasible MWBE participation towards the applicable MWBE Contract Goals. If the documentation included with the waiver request is complete, Owner shall evaluate the request and issue a written notice of approval or denial within twenty (20) business days of receipt.

(ii) If Owner, upon review of the MWBE Utilization Plan, quarterly MWBE Contractor Compliance Reports described in Section 26.1(c)(iv)(C), or any other relevant information, determines that Contractor is failing or refusing to comply with the MWBE Contract Goals, and no waiver has been issued in regards to such non-compliance, Owner may issue a notice of deficiency to Contractor. Contractor must respond to the notice of deficiency within seven (7) business days of receipt. Such response may include a request for partial or total waiver of MWBE Contract Goals.

(f) Contractor is required to submit a quarterly MWBE Contractor Compliance Report through the NYSCS, provided, however, that Contractor may arrange to provide such report via a non-electronic method to Owner by the 10th day following the end of each quarter during the term of the Agreement.

(g) Liquidated Damages - MWBE Participation

(1) Where Owner determines that Contractor is not in compliance with the requirements of this Section 26.1 and Contractor refuses to comply with such requirements, or if Contractor is found to have willfully and intentionally failed to comply with the MWBE participation goals, Contractor shall be obligated to pay to Owner liquidated damages.

(2) Such liquidated damages shall be calculated as an amount equaling the difference between:

(A) All sums identified for payment to MWBEs had Contractor achieved the contractual MWBE goals; and

(B) All sums actually paid to MWBEs for work performed or materials supplied under the Agreement.

(3) In the event a determination has been made which requires the payment of liquidated damages and such identified sums have not been withheld by Owner, Contractor shall pay such liquidated damages to Owner within sixty (60) days after they are assessed. Provided, however, that if Contractor has filed a complaint with the Director of the Division of Minority and Women's Business Development pursuant to 5 NYCRR § 142.12, liquidated damages shall be payable only in the event of a determination adverse to Contractor following the complaint process.

26.2 Participation by Service-Disabled Veteran-Owned Businesses

(a) General Provisions

Article 17-B of the New York State Executive Law provides for more meaningful participation in public procurement by New York State-certified Service-Disabled Veteran-Owned Businesses ("SDVOB"), thereby further integrating such businesses into New York State's economy. Owner recognizes the need to promote the employment of service-disabled veterans and to ensure that certified service-disabled veteran-owned businesses have opportunities for maximum feasible participation in the performance of Owner contracts.

In recognition of the service and sacrifices made by service-disabled veterans and in recognition of their economic activity in doing business in New York State, Contractors are expected to consider SDVOBs in the fulfillment of the requirements of the Agreement. Such participation may be as Subcontractors or suppliers, as protégés, or in other partnering or supporting roles.

(b) Contract Goals

(i) Owner hereby establishes an overall goal of __% for SDVOB participation, based on the current availability of qualified SDVOBs. For purposes of providing meaningful participation by SDVOBs, the Contractor should reference the directory of New York State Certified SDVOBs found at: http://ogs.ny.gov/Core/docs/CertifiedNYS_SDVOB.pdf. Questions regarding compliance with SDVOB participation goals should be directed to Shinay Stewart at shinay.stewart@bpca.ny.gov or (212) 336-9353. Additionally, following execution of this Agreement, Contractor is encouraged to contact the Office of General Services' Division of Service-Disabled Veterans' Business Development at 518-474-2015 or VeteransDevelopment@ogs.ny.gov to discuss additional methods of maximizing participation by SDVOBs on the Agreement.

(ii) Contractor must document "good faith efforts" to provide meaningful participation by SDVOBs as subcontractors or suppliers in the performance of the Contract (see Section 26.2(d) below).

(c) SDVOB Utilization Plan

(i) In accordance with 9 NYCRR § 252.2(i), Contractors are required to submit a completed SDVOB Utilization Plan on Form SDVOB 100 (https://ogs.ny.gov/Veterans/Docs/2016/SDVOB_100_Utilization_Plan.docx) with their bid.

(ii) The Utilization Plan shall list the SDVOBs that Contractor intends to use to perform the Work, a description of the Work that Contractor intends the SDVOB to perform to meet the goals on the Agreement, the estimated dollar amounts to be paid to an SDVOB, or, if not known, an estimate of the percentage of Work the SDVOB will perform. By signing the Utilization Plan, Contractor acknowledges that making false representations or providing information that shows a lack of good faith as part of, or in conjunction with, the submission of a Utilization Plan is prohibited by law and may result in penalties including, but not limited to, termination of a contract for cause, loss of eligibility to submit future bids, and/or withholding of payments. Any modifications or changes to the agreed participation by SDVOBs after the contract award and during the term of the Agreement must be reported on a revised SDVOB Utilization Plan and submitted to Owner.

(iii) Owner will review the submitted SDVOB Utilization Plan and advise the Contractor of Owner acceptance or issue a notice of deficiency within 20 days of receipt.

(iv) If a notice of deficiency is issued, Contractor agrees that it shall respond to the notice of deficiency, within seven business days of receipt, by submitting to Owner a written remedy in response to the notice of deficiency. If the written remedy that is submitted is not timely or is found by Owner to be inadequate, Owner shall notify Contractor and direct the Contractor to submit, within five business days of notification by Owner, a request for a partial or total waiver of SDVOB participation goals on Form SDVOB 200 (https://ogs.ny.gov/Veterans/Docs/2016/SDVOB_200_Waiver_Form.docx). Failure to file the waiver form in a timely manner may be grounds for disqualification of the bid or proposal.

(v) Owner may disqualify a Contractor's bid or proposal as being non-responsive under the following circumstances:

(A) If Contractor fails to submit an SDVOB Utilization Plan;
(B) If Contractor fails to submit a written remedy to a notice of deficiency;
(C) If Contractor fails to submit a request for waiver; or
(D) If Owner determines that Contractor has failed to document good faith efforts.

(vi) Contractor certifies that it will follow the submitted SDVOB Utilization Plan for the performance of SDVOBs on the Agreement pursuant to the prescribed SDVOB contract goals set forth above.

(vii) Contractor further agrees that a failure to use SDVOBs as agreed in the Utilization Plan shall constitute a material breach of the terms of the Contract. Upon the occurrence of such a material breach, Owner shall be entitled to any remedy provided herein, including but not limited to, a finding of Contractor non-responsibility.

(d) Waivers

(i) Prior to submission of a request for a partial or total waiver, Contractor shall speak to Shinay Stewart at shinay.stewart@bpca.ny.gov or (212) 336-9353 for guidance.

(ii) In accordance with 9 NYCRR § 252.2(m), a Contractor that is able to document good faith efforts to meet the goal requirements, as set forth in Section 26.2(e) below, may submit a request for a partial or total waiver on Form SDVOB 200 (https://ogs.ny.gov/Veterans/Docs/2016/SDVOB_200_Waiver_Form.docx), accompanied by supporting documentation. Contractor may submit the request for waiver at the same time it submits its SDVOB Utilization Plan. If a request for waiver is submitted with the SDVOB Utilization Plan and is not accepted by Owner at that time, the provisions of Section 26.2(c)(iii), (iv) and (v) will apply. If the documentation included with the Contractor's waiver request is complete, Owner shall evaluate the request and issue a written notice of acceptance or denial within 20 days of receipt.

(iii) Contractor shall attempt to utilize, in good faith, the SDVOBs identified within its SDVOB Utilization Plan, during the performance of the Work. Requests for a partial or total waiver of established goal requirements made subsequent to award of the Agreement may be made at any time during the term of the Agreement to Owner, but must be made no later than prior to the submission of a request for final payment.

(iv) If Owner, upon review of the SDVOB Utilization Plan and Monthly SDVOB Compliance Report determines that Contractor is failing or refusing to comply with the contract goals and no waiver has been issued in regards to such non-compliance, Owner may issue a notice of deficiency to the Contractor. The Contractor must respond to the notice of deficiency within seven business days of receipt. Such response may include a request for partial or total waiver of SDVOB contract goals. Waiver requests should be sent to Owner.

(e) Required Good Faith Efforts. In accordance with 9 NYCRR § 252.2(n), Contractors must document their good faith efforts toward utilizing SDVOBs on the Agreement. Evidence of required good faith efforts shall include, but not be limited to, the following:

(i) Copies of solicitations to SDVOBs and any responses thereto.

(ii) Explanation of the specific reasons each SDVOB that responded to Contractors' solicitation was not selected.

(iii) Dates of any pre-bid, pre-award or other meetings attended by Contractor, if any, scheduled by Owner with certified SDVOBs whom Owner determined were capable of fulfilling the SDVOB goals set in the Agreement.

(iv) Information describing the specific steps undertaken to reasonably structure the Work for the purpose of subcontracting with, or obtaining supplies from, certified SDVOBs.

(v) Other information deemed relevant to the waiver request.

(f) Monthly SDVOB Contractor Compliance Report

In accordance with 9 NYCRR § 252.2(q), Contractor is required to report Monthly SDVOB Contractor Compliance to Owner during the term of the Agreement for the preceding month's activity, documenting progress made towards achieving the SDVOB goals. This information must be submitted using form SDVOB 101 available at https://ogs.ny.gov/Veterans/Docs/2016/SDVOB_101_Monthly_Compliance%20_Report.docx and should be completed by the Contractor and submitted to Owner, by the 10th day of each month during the term of the Contract, for the preceding month's activity to: Shinay Stewart at shinay.stewart@bpca.ny.gov.

(g) Breach of Contract and Damages

In accordance with 9 NYCRR § 252.2(s), any Contractor found to have willfully and intentionally failed to comply with the SDVOB participation goals set forth in this Agreement, shall be found to have breached the Agreement and Contractor shall pay damages as set forth therein.

ARTICLE 27 - STANDARD PROVISIONS

27.1 Provision Required by Law Deemed Inserted

Each and every provision of law and governmental regulation required by law to be inserted in the Contract Documents shall be deemed to be inserted therein and this Agreement shall read and shall be enforced as though so included therein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, this Agreement shall be deemed to be amended to make such insertion or correction. If this Agreement contains any unlawful provision, the same shall be deemed of no effect and shall, upon the application of either party, be deemed stricken from this Agreement without affecting the binding force of the remainder.

27.2 Compliance with Laws, Rules and Regulations

Contractor and each Subcontractor and Materialman shall comply fully with all applicable

laws, rules and regulations pertaining to the Project and the Work.

27.3 Applicable Law, Forum and Jurisdiction

This Agreement shall be governed by the laws of the State of New York. All actions or proceedings relating, directly or indirectly, to this Agreement shall be litigated only in courts located within the County of New York. Contractor, any guarantor of the performance of its obligations hereunder (including sureties for Payment and Performance Bonds) ("**Guarantor**") and their successors and assigns hereby subject themselves to the jurisdiction of any state or federal court located within such county, waive the personal service of any process upon them in any action or proceeding therein and consent that such process be served by certified or registered mail, return receipt requested, directed to the Contractor and any successor at Contractor's address hereinabove set forth, to Guarantor and any successor at the address set forth in the instrument of guaranty and to any assignee at the address set forth in the instrument of assignment. Such service shall be deemed made as of the date of the return receipt.

27.4 No Third Party Rights

Nothing in this Agreement shall create or shall give to third parties any claim or right of action against BPCA, Construction Manager, or Architect beyond such as may legally exist irrespective of this Agreement.

27.5 Exculpation; Limitation of Liability

In no event shall any claim be asserted under this Agreement by Contractor or any Subcontractor or Materialman against any member, officer, employee, lessee, Contractor or agent of BPCA, Construction Manager, or Architect. By execution of this Agreement, Contractor agrees to look solely to BPCA with respect to any claim which may arise. It is hereby understood by and between the parties hereto that BPCA shall only be liable to the extent of monies available to BPCA.

27.6 Protection of Lives and Health

(a) Contractor's, Subcontractor's and Materialman's attention is specifically called to the rules and regulations, codes and bulletins of the New York State Department of Labor. Attention is also directed to the standards imposed under the Federal Occupational Safety and Health Act of 1970, as amended.

(b) Contractor 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 Agreement, and shall immediately notify BPCA in writing of any injury which results in hospitalization or death. Contractor shall also complete and submit to BPCA the "Incident Report Form" attached hereto and made a part hereof as Exhibit F within 48 hours of the occurrence of any such injury.

(c) Contractor alone shall be responsible for the safety, efficiency and adequacy of contractor's work, plant, appliances and methods, and for any damage that may result from the failure, or the improper construction, maintenance, or operation of such work, plant, appliances

and methods.

27.7 Waiver of Immunity Clause

Contractor hereby agrees to the provisions of New York Public Authorities Law Section 2875, which require that a person, when called before a grand jury, head of a State department, temporary State commission, or other State agency, the Organized Crime Task Force in the State Department of Law, head of a department or other City agency, which is empowered to compel the attendance of witnesses and examine them under oath, to testify in an investigation concerning any transaction or contract had with the State, any political subdivision thereof, or with any public department, agency or official of the State, a public authority or with any public department, agency or official of the State or of any political subdivision thereof or of a public authority, that person must sign a waiver of immunity against subsequent criminal prosecution or to answer any relevant questions concerning such transaction or contract. Upon the refusal of any person to comply with such provisions:

(a) such person, and any firm, partnership or corporation of which such person is a member, partner, director or officer shall be disqualified from thereafter selling to or submitting bids to or receiving awards from or entering into any contracts with any public authority or official thereof, for goods, work or services, for a period of five (5) years after such refusal; and

(b) any and all contracts made with any public authority or official thereof, by such person, and by any firm, partnership or corporation of which such person is a member, partner, director or officer may be canceled or terminated by the public authority without incurring any penalty or damages on account of such cancellation or termination, but any monies owing by the public authority for goods delivered or work done prior to the cancellation or termination shall be paid.

27.8 Prohibited Interests

No official of BPCA who is authorized in such capacity and on behalf of BPCA to negotiate, make, accept, or approve, or take part in negotiating, making, accepting, or approving any Architectural, Engineering, inspection, Purchase Order or any Subcontract in connection with the Work, shall become directly or indirectly interested personally in the Agreement. Contractor is advised that no official or employee of BPCA is permitted to indirectly solicit, accept, or receive gifts whether in the form of money, service, loan, travel, entertainment, hospitality, thing or promise, or in any other form. No officer, employee, architect, attorney, engineer, inspector or Contractor of or for BPCA who is authorized in such capacity and on behalf of BPCA to exercise any legislative, executive, supervisory or other similar functions in connection with the Work, shall become directly or indirectly interested personally in the Agreement, any Purchase Order, Subcontract, insurance contract, or any other contract pertaining to the Work.

27.9 Labor Provisions

(a) It is hereby agreed that all applicable provision of the Labor Law of the State of New York shall be carried out in the performance of the Work.

(b) Contractor specifically agrees, as required by New York Labor Law Sections 220

and 220-d as amended, that:

(1) no laborer, workman or mechanic, in the employ of Contractor, Subcontractor, Materialman or other person doing or contracting to do the whole or any part of the Work contemplated by the Contract Documents shall be permitted or required to work more than eight (8) hours in any one calendar day or more than five (5) days in any one week, except in the emergencies set forth in the Labor Law.

(2) the wages paid for a legal day's work shall be not less than the prevailing rate of wages as defined by law;

(3) the minimum hourly rate of wage to be paid shall be not less than that stated in the Contract Documents and as shall be designated by the Industrial Commissioner of the State of New York; and

(4) Contractor shall post at appropriate conspicuous points at the Site, a schedule showing all determined minimum wage rates for the various classes of laborers and mechanics to be engaged in the Work and all deductions, if any, required by law to be made from unpaid wages actually earned by the laborers and mechanics so engaged.

(c) The minimum wage rates, if any, herein specified for apprentices shall apply only to persons working with the tools of the trade which such persons are learning under the direct supervision of journeymen mechanics. Except as otherwise required by law, the number of apprentices in each trade or occupation employed by Contractor or any Subcontractor or Materialman shall not exceed the number permitted by the applicable standards of the New York State Department of Labor, or, in the absence of such standards, the number permitted under the usual practice prevailing between the unions and the employers' association of the respective trades or occupations.

(d) All employees of Contractor and each Subcontractor and Materialman shall be paid in accordance with the provisions of the Labor Law.

(e) Contractor agrees that, in case of underpayment of wages to any worker engaged in the Work by Contractor or any Subcontractor or Materialman, BPCA shall withhold from Contractor out of payments due an amount sufficient to pay such worker the difference between the wages actually paid such worker for the total number of hours worked, and that BPCA may disburse such amount so withheld by BPCA for and on account of Contractor to the employee to whom such amount is due. Contractor further agrees that the amount to be withheld pursuant to this paragraph may be in addition to the percentages to be retained by BPCA pursuant to other provisions of the Contract Documents.

(f) The Labor Law provides that this Agreement may be terminated for cause and no sum paid for any Work done thereunder upon a second conviction for willfully paying less than:

(1) the stipulated wage scale as set forth in New York Labor Law Section 220, subdivision 3, as amended, or

(2) less than the stipulated minimum hourly wage scale as specified in Labor

Law, Section 220-d, as amended.

(g) Contractor specifically agrees, as required by the New York Labor Law Section 220-e, as amended, that:

(1) in the hiring of employees for the performance of Work under this Agreement or any Subcontract or Purchase Order hereunder, or for the manufacture, sale or distribution of Materials, equipment or supplies hereunder, but limited to operations performed within the territorial limits of the State of New York, no Contractor, Subcontractor, Materialman or any person acting on behalf of such Contractor or Subcontractor, or Materialman, shall by reason of race, creed, color, sex or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the work to which the employment relates;

(2) no Contractor, Subcontractor, Materialman, or any person on behalf of such Contractor, Subcontractor or Materialman shall, in any manner, discriminate against or intimidate any employee hired for the performance of work under this Agreement on account of race, creed, color, sex or national origin;

(3) there may be deducted from the amount payable to Contractor, by BPCA under this Agreement, a penalty of $50.00 for each person for each calendar day during which such person was discriminated against or intimidated in violation of the terms of this Agreement; and

(4) this Agreement may be canceled or terminated for cause by BPCA and all monies due or to become due hereunder may be forfeited for a second or any subsequent violation of the terms or conditions of this Section of this Agreement.

(h) Where applicable, Contractor agrees to settle labor disputes in accordance with the provisions of The New York Plan For The Settlement of Jurisdictional Disputes Between The Building And Construction Trades Council Of Greater New York And The Building Trades Employers' Association Of The City of New York.

27.10 Disputes Resolution Procedure

(a) The provisions of this Article shall constitute Contractor's sole means for challenging any determination, order or other act or omission of BPCA or otherwise asserting against BPCA any claim of whatever nature arising under, or in any way relating to, this Agreement (any such challenge or assertion by Contractor being herein referred to as a **"Dispute(s)**"). Exhaustion of these dispute resolution procedures, including the judicial review set forth below, shall be the parties' sole remedy in connection with any Dispute.

(b) The parties to this Agreement hereby authorize and agree to the resolution of all Disputes arising out of, under or in connection with, this Agreement in accordance with the following and pursuant to the procedures set forth in paragraph (c) of this Section 27.10. With respect to any Dispute which relates in whole or primary part to technical issue(s) under this Agreement including, without limitation, determinations as to the acceptability or fitness of any Work, the meaning or interpretation of the Contract Documents, the question of whether any Work falls within the scope of the Specifications set forth in the Contract Documents, the acceptability

of any proposed substitutions, modifications or other submissions under this Agreement, the disapproval of proposed Subcontractors or Materialmen (to the extent such disapproval is related to technical issues), the extension of time to the extent related to a technical matter, the question of whether substantial completion or final completion has been achieved, the parties hereby authorize the General Counsel of BPCA, or his/her designee, (hereinafter referred to as the "**Arbiter**"), acting personally, to render a final and binding decision.

(c) All Disputes shall be initiated through a written submission by either party (such submission to be hereinafter referred to as the "**Dispute Notice**") to the Arbiter within ten (10) days of the determination, order or other act or omission which is the subject of the Dispute. Within ten (10) days after the submission of such Dispute Notice, the party initiating the Dispute shall provide the Arbiter with all evidence and other pertinent information in support of the party's position and/or claim. Within thirty (30) days from the date of the Dispute Notice, the party against whom the Dispute Notice was filed shall submit any and all materials which it deems pertinent to the Arbiter. Upon submission of a Dispute Notice to the Arbiter, the Arbiter shall render its decision in writing and deliver a copy of same to the parties within a reasonable time not to exceed sixty (60) days after the receipt of all materials. In rendering such decision, the Arbiter may seek such technical or other expertise as it shall deem necessary or appropriate (notifying both parties to the Dispute when he/she so seeks such other information or expertise) and seek any such additional oral and/or written argument or materials from either or both parties to the Dispute as he/she deems fit. The Arbiter shall have the discretion to extend the time for submittals required hereunder. The Arbiter's ability to render and the effect of a decision hereunder shall not be impaired or waived by any negotiations or settlement offers in connection with the matter presented, whether or not the Arbiter participated therein, or by any prior decision of others, or by any termination or cancellation of this Agreement. The decision of the Arbiter shall be final and binding on both parties to this Agreement.

(d) It is expressly understood and agreed that the pendency of a Dispute hereunder shall at no time and in no respect constitute a basis for any modification, limitation or suspension of Contractor's obligation to fully perform in accordance with this Agreement and that Contractor shall remain fully obligated to perform the Work notwithstanding the existence of any such Dispute.

27.11 Additional Provisions Relating to the Prosecution of Claims for Money Damages

(a) Except as otherwise provided in this Agreement, if Contractor claims or intends to claim compensation or money damages for any damage or loss sustained by reason of any determination, order or other act or omission of BPCA, Contractor shall furnish a written notice to the Arbiter setting forth the nature of the claim and the extent of the damage sustained within ten (10) days of the occurrence of such loss or damages. This written notice shall constitute Contractor's submission to the Arbiter for the purposes of requesting the Arbiter's determination in accordance with Section 27.10 above. Any such claim shall state as fully as then possible all information relating thereto and shall be supported by any then available documentation, including daily records showing all costs incurred. Such information shall be supplemented with any and all further information, including information relating to the quantum of losses or damages sustained, as soon as practicable after the information becomes or reasonably should become known to the Contractor.

(b) Any claim for compensation or monetary damages, the successful prosecution of which necessarily depends upon a technical determination favorable to Contractor, may not proceed unless and until Contractor first obtains such a favorable determination with respect to the technical issue and must be made within ten (10) days of such determination; moreover, Contractor must submit to the Arbiter any documentation or proof in support of the monetary claim within fifteen (15) days of such determination in order to proceed with such a claim. This written notice shall constitute Contractor's submission to the Arbiter for the purposes of requesting the Arbiter's determination in accordance with Section 27.10 above.

(c) Compliance with the provisions hereof shall constitute a condition precedent to the Contractor's submission of a Dispute pursuant to Section 27.10 with respect to any claim for compensation or monetary damages and the Contractor shall be deemed to have waived any claim not submitted in accordance herewith.

(d) Any final determination of the Arbiter with respect to a Dispute initiated pursuant to this Article 27 shall be subject to review solely in the form of a challenge following the decision by the Arbiter in a Court of competent jurisdiction of the State of New York, County of New York, under Article 78 of the New York Civil Practice Law and Rules or a United States Court located in New York City under the procedures and laws applicable in that court, it being understood the review of such Court shall be limited to the question of whether or not the Arbiter's determination is arbitrary, capricious or lacks a rational basis. No evidence or information shall be introduced or relied upon in such proceeding which has not been duly presented to the Arbiter in accordance with this Article 27.

27.12 Limitation on Actions

(a) Subject to the provisions of Section 27.11, no action or proceeding shall lie or shall be maintained by Contractor against BPCA, Construction Manager, or Architect unless (i) such action or proceeding shall be commenced within six (6) months of the date of the issuance of the Certificate of Substantial Completion to Contractor; or (ii) in the case of an action or proceeding for monies due pursuant to Section 5.7 hereof, or arising exclusively from or pertaining exclusively to work performed after the date of issuance of the Certificate of Substantial Completion, unless such action or proceeding is commenced no later than six (6) months after the issuance of the certificate of final completion to Contractor; or (iii) if this Agreement is terminated by BPCA prior to the issuance of the Certificate of Substantial Completion, unless such action or proceeding is commenced within six (6) months after the date of such termination.

(b) Nothing in this Section 27.12 shall be construed to modify or lengthen a shorter limitations period provided by applicable law.

(c) No action or proceeding shall be commenced by Contractor against BPCA, Construction Manager, or Architect except in the Supreme Court of the State of New York, County of New York.

(d) Nothing in this Section 27.12 shall be construed to suggest that Contractor, under any circumstances, may bring an action or proceeding against Construction Manager, or Architect.

27.13 Waiver of Remedies

Contractor acknowledges that it can be compensated adequately by money damages for any breach of this Agreement which may be committed by BPCA, Construction Manager, or Architect. Contractor agrees that no default, act or omission of BPCA, Construction Manager, or Architect shall constitute a material breach of contract entitling Contractor to cancel or rescind this Agreement or to suspend or abandon performance thereof, other than the failure of BPCA to make a payment of the Contract Price in accordance with the terms hereof solely because sufficient funds to pay the Contract Price have not been appropriated or will otherwise not be made available to BPCA. Contractor hereby waives any and all rights and remedies to which Contractor might otherwise be or become entitled to because of any wrongful act or omission of BPCA, Construction Manager, or Architect except as provided in this Section 27.13 and Contractor's right to money damages.

27.14 Modification of Agreement

No change in or modification, termination or discharge of this Agreement in any form whatsoever shall be valid or enforceable unless it is in writing and signed by the party to be charged therewith or its duly authorized representative, provided, however, that any change in or modification, termination or discharge of this Agreement expressly provided for in this Agreement shall be effective as so provided.

27.15 Signs and Parking

Contractor agrees that it shall not display on or about the Site any sign, trademark or other advertisement without the approval of BPCA and Construction Manager. Contractor shall not and shall not permit any of its Subcontractors or Materialmen to park any vehicles on the Site.

27.16 Entire Agreement

The Contract Documents constitute the entire Agreement between the parties and incorporate all prior understandings in connection with the subject matter hereof.

27.17 Rights and Remedies

The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by BPCA, Construction Manager, or Architect or Contractor including, but not limited to, the making of any payment or permitting Contractor to continue with the performance of the Work shall constitute a waiver of any right or duty afforded any of them under this Agreement, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

27.18 Participation in International Boycott Prohibited

Contractor agrees, as a material condition of this Agreement, that neither Contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated or is participating or shall participate in an international boycott in violation of the provisions of the United States Export Administration Act of 1969, as amended, or the United States Export

Administration Act of 1979, as amended, or the Regulations of the United States Department of Commerce promulgated thereunder. This Agreement shall be rendered forfeit and void by the Comptroller of the State of New York if, subsequent to execution, such person, firm, partnership or corporation has been convicted of a violation of the provisions of either of such federal acts or such Regulations or has been found upon the final determination of the United States Commerce Department or any other appropriate agency of the United States to have violated the provisions of either of such federal acts or such Regulations.

27.19 Compliance with "Buy-American" Statutes

Contractor and any substantially owned or affiliated person, firm, partnership or corporation agrees to comply with the New York Public Authorities Law, Section 2603-A as amended (affects steel or steel products).

27.20 Permitted Successors

References to parties and entities herein shall be deemed to include their permitted successors.

27.21 MacBride Fair Employment Principles

If the amount payable to Contractor under this Agreement is greater than $15,000, Contractor hereby certifies that it and/or any individual or legal entity in which it holds a 10% or greater ownership interest, and any individual or legal entity that holds a 10% or greater ownership in it, either have no business operations in Northern Ireland; or shall take lawful steps in good faith to conduct any business operations they have in Northern Ireland in accordance with the MacBride Fair Employment Principles relating to nondiscrimination in employment and freedom of workplace opportunity regarding such operations in Northern Ireland, as set forth in New York State Finance Law Article XI Section 165(5), and shall permit independent monitoring of their compliance with such Principles.

27.22 Iran Divestment Act

By signing this Agreement, each person and each person signing on behalf of any other party certifies, and in the case of a joint bid or partnership each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each person is not on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the State Finance Law.

27.23 Termination for Failure to Disclose Under State Finance Law §139k

BPCA reserves the right to terminate this Agreement in the event it is found that the certification filed by Contractor pursuant to New York State Finance Law §139-k was intentionally false or intentionally incomplete. Upon such finding, BPCA may exercise its termination right by providing written notification to the Contractor in accordance with the written notification terms of this contract. If a contract is terminated in accordance with State Finance Law §139k(5), BPCA, its subsidiaries and affiliates, will include a statement in BPCA's procurement record describing the basis for any action taken under the termination provision.

27.24 Labor Peace

The Contractor and its Subcontractors and Materialmen shall not employ on the Work any labor, materials or means whose employment, or utilization during the course of this Agreement, may tend to or in any way cause or result in strikes, Work stoppages, delays, suspension of Work or similar troubles by workers employed by the Contractor or its Subcontractors, Materialmen, or by any of the trades working in or about the buildings and premises where Work is being performed under this Agreement, or by other contractors or their subcontractors pursuant to other agreements, or on any other building or premises owned or operated by BPCA, its contractors or affiliates. Any violation by the Contractor of this requirement may be considered as proper and sufficient cause for declaring the Contractor to be in default, and for BPCA to take action against Contractor as set forth in Article 15 of this Agreement, or such other Section of this Agreement as BPCA may deem proper.

27.25 Comptroller's Approval

If this Agreement is considered an "eligible contract," as defined by New York Code, Rules and Regulations Title 2 Part 206.2, it is subject to the New York State Comptroller's approval, and therefore shall not be valid and enforceable until that approval has been obtained. A contract is considered an "eligible contract," as defined by Title 2 of NYCRR Part 206.2, if it is not a specifically exempt contract, is executed by a state authority on or after March 1, 2010, the aggregate consideration under the contract may reasonably be valued in excess of one million dollars (including all reasonably anticipated renewals and amendments), AND the contract (A) was or shall be awarded on a single-source basis, sole-source basis or pursuant to any other method of procurement that is not a competitive procurement OR (B) shall be paid in whole or in part with monies appropriated by the State, either directly to a state authority or to a state agency that pays the money to a state authority.

27.26 Key Person/Personnel

The parties understand that in entering into this Agreement, BPCA has relied upon Contractor's representation that [name(s) and title(s)] (hereinafter the "**Key Personnel**") will be directly and consistently involved in supervising the Work and actively engaged in the day-to-day management of the Work, which shall include attending mandatory Project meetings. If the Key Personnel is/are not available as described herein, or if the Key Personnel depart from the firm or severs his/her/their relationship with the Contractor, or for whatever other reason is/are not available to work on the Project, then BPCA shall have the right to terminate this Agreement. The parties also agree that at any time during the course of the Work, BPCA may designate additional or substitute key personnel to perform the Work. Contractor agrees to make the additional or substituted key personnel available under the same conditions set forth herein.

27.27 Form of Agreement Not an Offer

Notwithstanding anything herein to the contrary, the submission of this form of Agreement by BPCA to Contractor shall not constitute an offer, and execution hereof by Contractor shall not be considered acceptance of an offer. A binding contract between the parties shall exist only if and at such time as both parties have executed this Agreement.

27.28 General Responsibility

(a) The Contractor shall at all times during the Agreement term remain responsible. The Contractor agrees, if requested by BPCA or its designee, to present evidence of Contractor's continuing legal authority to do business in New York State, integrity, experience, ability, prior performance, and organizational and financial capacity.

(b) BPCA or its designee, in its sole discretion, reserves the right to suspend any or all activities under this Agreement, at any time, when BPCA discovers information that calls into question the responsibility of Contractor. In the event of such suspension, Contractor will be given written notice outlining the particulars of such suspension. Upon issuance of such notice, Contractor must comply with the terms of the suspension order. Activity under the Agreement may resume at such time as BPCA or its designee issues a written notice authorizing a resumption of performance under the Agreement.

(c) Upon written notice to the Contractor, and a reasonable opportunity to be heard with appropriate BPCA officials or staff, the Agreement may be terminated by BPCA or its designee at Contractor's expense where Contractor is determined by BPCA or its designee to be nonresponsible. In such event, BPCA or its designee may complete the contractual requirements in any manner BPCA may deem advisable and pursue available legal or equitable remedies for breach.

27.29. Counterparts

This Agreement may be executed in any number of counterparts, all of which taken together shall constitute one instrument, but the Agreement shall not be deemed effective unless signed by all parties.

27.30. Section Headings

Section headings contained in this Agreement are for convenience only and shall not be considered for any purpose in governing, limiting, modifying, construing or affecting the provisions of this Agreement and shall not otherwise be given legal effect.

27.31. Subordination of Terms in the Exhibits

In the event of a conflict of terms, the terms stated in Sections 1-27 herein, shall take precedence over and shall prevail over any printed, typed, or handwritten terms located in the Exhibits.

SIGNATURE PAGE FOLLOWS

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, as of the date first above written.

BATTERY PARK CITY AUTHORITY, d/b/a

HUGH L. CAREY BATTERY PARK CITY AUTHORITY

By: _____

Name: _____

Title: _____

[CONTRACTOR NAME]

By: _____

Name: _____

Title: _____

FEIN #

EXHIBIT E
PREVAILING WAGE RATE SCHEDULE

Wage rates shall apply as shown in the Prevailing Wage Schedule prepared by the New York State Department of Labor ("NYSDOL") for this Pier A Railing Rehabilitation/Restoration Project: General Contractor Services (the Prevailing Wage Case Number (PRC#)) assigned to this Project is 2023002528). The Prevailing Wage Rate Schedule (the "Schedule") can be viewed at, and downloaded from, the following website: NYSDOL - Prevailing Wages (View PRC).

Upon award of the Contract to the selected Proposer, a hard copy of the Schedule will be provided.

***

EXHIBIT F
COST PROPOSAL

(Proposer to submit executed Cost Proposal on its letterhead)

Date:

Battery Park City Authority
200 Liberty Street - 24th Floor
New York, New York 10281

Attention: Mr. Michael LaMancusa
Contracts Administrator

Dear Mr. LaMancusa,

The undersigned (the "Proposer") hereby proposes to provide all specified work necessary to perform the Work for the **Pier A Railings Restoration/Rehabilitation Project – General Contractor Services** in accordance with the terms stipulated below and for the sum described below. Upon award of the Contract, the selected Proposer will provide backup documentation for these Labor Rates upon request.

Base Proposal

Base Proposal: A total lump sum amount of $_____ (_____ Dollars and _____ Cents) to perform all Work as described in the Scope of Work in Exhibit A of BPCA's Request for Proposals for the Pier A Railings Rehabilitation Project – General Contracting Services.

Itemized Proposal

The Proposer has submitted with its Proposal an itemized cost for the Work, according to the attached Bid Breakdown Form (attached hereto as Exhibit G), for the Scope of Work attached as Exhibit A.

Name of Proposer: _____

By: _____

Title: _____

***

EXHIBIT G
FORM OF BID BREAKDOWN

TASKS	COSTS
Mobilization and Start Up	
Replacement and Repair of Existing Railings	
Electrical Work	
Demobilization and Close Out	
General Conditions	
TOTAL COST	

***

EXHIBIT H
ACKNOWLEDGEMENT OF ADDENDA

RFP TITLE: _____

Complete Part I or Part II, whichever is applicable, and sign your name in Part III.

Part I

Listed below are the dates of issue for each Addendum received in connection with this RFP:

Addendum # 1, Dated _____, ____

Addendum # 2, Dated_____, ____

Addendum # 3, Dated_____, ____

Addendum # 4, Dated _____, ____

Addendum # 5, Dated_____, ____

Addendum # 6, Dated_____, ____

Part II Acknowledgement of No Receipt

_____ No Addendum was received in connection with this RFP

Part III

Proposer's Name: _____

Proposer's Authorized Representative:

Name: _____

Title: _____

Signature: _____ Date: _____

***

EXHIBIT I
LIST OF BPCA & BPCPC BOARD MEMBERS AND EMPLOYEES

[ATTACHED]

LIST OF BOARD MEMBERS

Martha J. Gallo

Donald Capoccia

Lester Petracca

Louis J. Bevilacqua

Catherine McVay Hughes

Anthony Kendall

Employees:

Betzayda Afzal
Curtis Afzal
Elsa Alvarez
Dana Anders
Stephen Arciold
Sharmila Baichu
Marie Baptiste
Brett Beecham
Freddy Belliard
Marieke Bender
Yipin Benon
Zachary Bergen
Marcus Billips
Emily Birdseye
Nidia Blake
Sully Bonnelly
Jasmine Briggs
Latoya Brooks-Jones
Nancy Buivid
Anthony Buquicchio
Thierry Byron
Peter Campbell
Donna Canfield
Daniel Carmalt
Monica Centeno
Alexis Torres Cid
Sarah Curtin
Gwen Dawson
Nicole Dawson
Gilbert De Padua
Joshua DeVoto
Javier Delarosa
Paul Diaz-Larui
Daniel Dickson
Tonasia Dopson
Abigail Ehrlich
AnnMaria Ellison
Richard Faraino
Claudia Filomena
Tamara Flores
Pamela Frederick
James Gallagher
Abigail Goldenberg
Anastasia Gonzalez
Lenron Goode Jr.
Ned Greenberg
Evelyn Gregg
Jonathan Gross
Robert Hansen
Nicole Heater
Sankar Heerah
Raul Hernandez
Brendan Hoey
Keiry Holguin
Megan Hood
Craig Hudon
Michael Jablonowski
Amy Jogie
William John
Jasmine Mikayla Johnson
Benjamin Jones
Gamal Jones
Ebonique Julien
Roland Kemp
Ann Ketring
Karl Koenig
Michael Lamancusa
John Lonie
Rene Lopcy
Janira Lopez
Roman Lora
Rodolfo Machuca
Robert Maggi
Evelin Maisonet
Maria Martinez
Justin McLaughlin-Williams
Princess McNeill
Vanessa Mesine
Nazima Mohamed
Ronnie Mohammed
Franco Morizio
Irene Moulketis
Eric Munson
Lauren Murtha
Jahmeliah Nathan
Robert Nesmith
Siu May Ng
Yoshihiro Nishida
Kevin O'Toole
Stuart Ohleyer
Maril Ortiz
Willem Paillant
Jonathan Parker
Nimisha Patel-Haribaran
Gladys Pearlman
Dahlia Pena
Rynell Pimentel
Katherine Powell
Sandra Power
Robert Quon
Jason Rachnowitz
Madelin Ramirez
Aline Reynolds
Angel Rivera
Manuel Rivera
Nelson Rogers
Jose Rosado
Joel Rufino
Paul Russell
Carlos Santiago
Nicholas Sbordone
Jean Schwartz
Rekha Sewraj-Kumar
Marcella Shanley Taft
Sean Simon
Kemnarine Singh
Sarah Smedley
Shinay Stewart
Jerome Sturiano
Lance Super
Ryan Torres
Michelle Torres Davila
Douglas Van Horn
Noe Velasquez
Yves Emmanuel Veve
Evangelio Villalobos
Sharon Wade
David Wallace
John Wells
Dwight Williams
Jennifer Wisnewski
Al Wright
Erin Yokoi