REQUEST FOR PROPOSALS

FOR

NORTH GRID ELECTRIC UPGRADES

I. SUMMARY

Battery Park City Authority d/b/a Hugh L. Carey Battery Park City Authority ("BPCA" or the "Authority")) requests proposals (individually a "Proposal" and collectively the "Proposals") from Electrical Contractors (individually a "Proposer" and collectively the "Proposers") to provide BPCA with Electrical Infrastructure upgrade services as detailed in the Scope of Work attached hereto as Exhibit A (the "Work"). The Work will include but not be limited to providing upgrades to BPCA's existing grid with new electrical service and centralized control equipment.

The installation of outdoor electrical infrastructure in Battery Park City commenced in the 1980s and was completed in approximately 1990/1991. There are five separate electrical grids, each of which supplies power to both the streetlights and the park lights in Battery Park City. The Work will address required maintenance and upgrades to a portion of the system. The grid is a 208Y/120V, three-phase, four wire electrical distribution system which supplies power to the streetlights and park lighting system. The limits of this project are the area in the north neighborhood of Battery Park City bounded by River Terrace to the Empire State Trail and from Vesey to Chambers Streets.

Created in 1968, BPCA is a New York State public benefit corporation responsible for financing, developing, constructing, maintaining, and operating Battery Park City as a richly diversified mixed-use community providing residential and commercial space, with related amenities such as parks, plazas, recreational areas, and a waterfront esplanade. 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/.

New York State-certified Minority-Owned Business Enterprises ("MBE"), Women-Owned Business Enterprises ("WBE") and Service-Disabled Veteran-Owned Business Enterprises ("SDVOB") are encouraged to submit Proposals.

II. GENERAL PROVISIONS

This request for Proposals, including attachments, exhibits, and any amendments or addenda (collectively, the "RFP" or the "Solicitation") 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 the Solicitation;
- Withdraw the Solicitation at any time, at the Authority's sole discretion;
- Make an award under the Solicitation in whole or in part;
- Disqualify any Proposer whose conduct and/or Proposal fails to conform to the requirements of the Solicitation;
- Seek clarifications and/or revisions of a Proposal or any part of a Proposal;
- Use information obtained by the Authority 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 RFP process;
- Prior to the review of Proposals, direct Proposers to submit modifications to their Proposals addressing subsequent amendments to the Solicitation;
- Request that Proposers submit best and final offers after Proposals have been reviewed;
- Change any of the scheduled dates;
- Waive any non-material requirements;
- Negotiate with one, multiple or all Proposers within the scope of the Solicitation and in the best interests of the Authority;

- Utilize any and all ideas submitted in the Proposals received regardless of whether a Contract is offered; and
- Require clarification at any time during the RFP 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 Solicitation.

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.

III. TIMETABLE & DESIGNATED CONTACT

A. Key Dates

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

- RFP issued: November 13, 2025
- **Mandatory Pre-proposal meeting: Wednesday, December 3, 2025, at 10:00 AM. Firms must RSVP with the Designated Contact at least 24 hours before the day of the meeting.** The meeting will start at 200 Liberty Street, New York, NY 24th Floor, site walkthrough to follow.
- Deadline to submit questions to BPCA: Monday, December 8, 2025, by 4:00 p.m. (by email only)

  All questions regarding this RFP should be submitted in writing via email to the "Designated Contact": Ryan Murray, Chief Contracting Officer, Battery Park City Authority, at **ryan.murray@bpca.ny.gov.**
- BPCA's response to substantive questions: Friday, December 12, 2025. Responses will be provided in the form of an addendum to be posted to the Authority's website: https://bpca.ny.gov/apply/rfp-opp/
- **PROPOSAL DUE DATE: Friday, December 19, 2025, by 3:00 p.m.** (the "Due Date")
- Anticipated Interview Date (If Necessary): Week of January 12, 2026
- Anticipated Contract start date: February 15, 2026

B. Anticipated Contract Term

BPCA expects that the duration of construction work and services will be up to 18 months. BPCA reserves the right to terminate the contract awarded pursuant to this RFP (the "Contract") at any time, with or without cause, in accordance with the terms of the Contract. BPCA's sample form of contract will be provided in a forthcoming addendum.

IV. 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) The proposer must be lawfully authorized to do business in the State of New York.

2) Proposer must be an NYC Department of Buildings Licensed Electrician holding a Master or Special Electrician License; and

3) Proposer must have at least seven (7) years of experience in providing **infrastructure** electrical services and must demonstrate successful experience performing such work within New York City in compliance with applicable NYC codes, standards, and permitting requirements. The Proposer must also demonstrate **successful prior experience directly coordinating with Consolidated Edison (Con Ed) on at least three (3) projects within the past seven (7) years**.

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" Zag Kimpolo or 212-417-2339.

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 the Due Date set forth above.

- Each Proposer must e-mail their Technical Proposal to the following e-mail address: **technicalproposals@bpca.ny.gov**

  The Technical Proposal must be clearly labeled as "Proposal Enclosed - "BPCA North Grid Electric Upgrades."

- Each Proposer must also e-mail their Cost Proposal to the following e-mail address: **costproposals@bpca.ny.gov**

  The Cost Proposal must be separately attached and clearly labeled as "BPCA North Grid Electric Upgrades"

- **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 may NOT be accepted. A Proposer may, after submitting a Proposal, amend its Proposal by submitting an amended Proposal, clearly labeled "Amended Proposal – BPCA North Grid Electric Upgrades" as long as the amended Proposal is submitted by the Due Date.

V. PROPOSAL FORMAT AND CONTENTS

A. Proposal Format

The Proposal must:

- Be formatted to 8½" x 11" sized pages;
- Have numbered pages; and
- Must be in Adobe PDF, Microsoft Word or Excel format.

B. Proposal Content

In addition to the separately sealed Cost Proposal, described in Section VIII below, each Proposal must include the following in the order listed, which shall comprise the Proposer's Technical Proposal:

a. Completed Proposal Submission Packet, attached as Exhibit B.

b. Appendices for Additional Documentation:

i. Financial Statements :

Provide a copy of your firm's most recent Audited Financial Statements (within the last year) or where an audited financial statement is not available, the most recent tax return. In the event you do not have an audited financial statement you must provide a statement to that effect and summary financial information for the calendar year most recently ended certified by an authorized officer.

ii. Copies of the Proposer's Internal Revenue Service ("IRS") W9 form (https://www.irs.gov/pub/irs-pdf/fw9.pdf)

iii. Attach any additional documentation such as resumes, schedules, etc. that you wish to include in response to the questions contained in Exhibit B – Section II – Information Required.

iv. A detailed listed identifying any and all exceptions taken to BPCA's standard form of contract to be provided via addendum, 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."

BPCA reserves the right to disallow any additional exceptions to the Contract after submission of the Proposals and to reject Proposals based on non-conformance with the standard form of Contract

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).

VI. INSURANCE AND BONDING REQUIREMENTS

A. General Requirements

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 for the work; 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 BPCA's sample form of contract to be provided in a forthcoming addendum.

The total cost of the required insurance and bonds listed in paragraphs B), C), and D) 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, no policies may contain any limitations / exclusions for New York Labor Law claims, and cross liability coverage must be provided for BPCA, BPCPC, and the State of New York.

All of the carriers that provide the below required insurance must be rated "A-:VII" or better by A.M. Best and must provide direct written notice of cancellation or non-renewal to BPCA, BPCPC, and the State of New York at least 30 days before such cancellation or non-renewal is effective, except for cancellations due to non-payment of premium, in which case 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 for the Project; and (ii) continuing throughout the entire Term. The insurance policies listed below must also conform to the applicable terms of the Contract, as shown in BPCA's sample form of contract attached.

- **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 years after the construction work is completed, and continue to include Additional Insured protection for BPCA, BPCPC & 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 insured.

- **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. *As applicable if any repairs are being made from watercraft:*

- **Installation Floater** must be maintained at a limit of not less than $100,000 and shall not be less than amount equal to the materials, supplies, machinery and equipment that are being installed. Theft and vandalism should be included in the covered perils. Coverage should extend from the time the materials leave the supplier until installation is complete.

BPCA, BPCPC, and the State of New York must be protected as additional insureds on policies held by the selected Proposer and any of its subcontractors..

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 the subcontractor's Work. The insurance policies listed below must also conform to the applicable terms of the Contract, as shown in BPCA's sample form of contract attached:

- **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 & 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. 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 subcontractor's owned, hired, and non-owned vehicles and protect BPCA, BPCPC, and the State of New York as additional insured.

- **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 (2) unless otherwise approved in writing by BPCA prior to commencement of any Subcontractor's work.**

D. **BONDING - Provide a letter from your surety(ies) stating that you are able to provide a payment and performance bond as required in the standard form of contract that will be provided in a forthcoming addendum.**

VII. COST PROPOSAL; FORMAT AND REQUIRED INCLUSIONS

Each Cost Proposal must state a lump-sum for the performance of all Work.

Each proposal must include pricing as requested in the cost proposal form(s) in **Exhibit F**.

The Cost Proposal must be submitted per the requirements stated in Section VI.D.

Wage rates shall apply as shown in the **Prevailing Wage Schedule** prepared by the New York State Department of Labor ("NYSDOL") for this project. The Prevailing Wage Case Number assigned to this Project is 2025013774. A link to the Prevailing Wage Rate Schedule (the "Schedule") is included in **Exhibit G**.

VIII. 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:

A) Relevant Experience performing comparable electrical infrastructure work: 45%
B) Proposed Staffing and Approach: 30%
C) Proposed Project Schedule & Work Sequencing:..... 15%
D) 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 Cost Proposal is fair, reasonable, and provides the best value to BPCA given the requirements of the project.

IX. 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.

X. 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.

XI. EXECUTIVE ORDER 16

Pursuant to Executive Order 16 dated March 17, 2022, all State agencies and authorities are prohibited from entering into any new contract or renewing any existing contract with an entity conducting business operations in Russia. As part of this [solicitation, RFP/RFI), each firm is required to certify that the firm is not an 'entity conducting business operations in Russia.' Certification under Executive Order No. 16 can be found in Exhibit B: Proposal Submission Packet.

EXHIBIT A

(Scope of Work)

Provide upgrades to the existing electrical grid with new electrical service and centralized control equipment in accordance with the Drawings and Specifications dated November 3, 2025, that follows in **Exhibit A-1**. The Work generally includes but is not limited to the following:

- Filing of all necessary permits;
- Tracing and confirming all circuits to be disconnected prior to commencement of demolition;
- Electrical demolition that includes removal of existing feeder-cables within existing conduit;
- Repair of existing conduit sections;
- Coordination of any disconnects with BPCA;
- Provision of temporary lighting as necessary;
- Cleaning, draining, grounding of existing roadway boxes; installation of new ducts, roadway boxes and conduits as necessary;
- Grade restoration in-kind as required;
- Replacement of existing luminaires with LED type luminaires. (Existing light poles to remain in place);
- Identification tagging of light poles;
- Replacement of existing distribution feeder cables and existing in-line fuses with new cables and new in-line fuses from the control cabinets to the luminaires, including 24-hour hotline/
- Refurbishment of handholds as necessary with stainless-steel parts;
- Installation of stainless-steel bolts and gaskets;
- Provision of new grounding and bonding of the existing roadway boxes, frames and covers;
- Reconfiguration of the electrical grid distribution and phasing, as directed;
- Testing of all electrical elements;
- Coordination with Con Edison ;
- Coordination with separate EV Pilot project as required;
- Preparation and submission of as-built drawings.

EXHIBIT A – 1

SPECIFICATONS AND DRAWINGS

NORTH GRID ELECTRICAL UPGRADES
CONSTRUCTION DOCUMENTS – SPECIFICATION TABLE OF CONTENTS
STANTEC 11/03/2025

SECTION 260020-A – CON ED SUPPLIED EQUIPMENT AND SERVICE WORK

1.1. INTENT

A. This section describes the items listed below associated with materials, equipment and services to be supplied and performed by Con Edison and paid for by the Contractor as a Fixed Sum allowance as part of his Contract amount.

2.1. DESCRIPTION

A. During the course of this contract, various materials, equipment and services will be supplied and performed by Con Edison and paid for by the Contractor as a Fixed Sum allowance as part of his Contract amount. Con Ed will be responsible for the following inclusive items of work:

1. Vesey Street
   a. Removal of underground Electrical Facilities
   b. Install 4#4/0 EPR Cable in existing Four Inch (4") Conduit from Manhole M-62866 to Customer's Property Line Box

2. Warren Street
   a. Removal of underground Electrical Facilities
   b. Install 4#4/0 EPR Cable in existing Four Inch (4") Conduit from Manhole M-63037 to Customer's Property Line Box

B. Measurement and Payment for these services and materials as provided by Con Ed will be described below.

3.1. METHODS OF MEASUREMENT

A. Fixed Sum Items

1. The fixed price lump sum shown in the bid proposal for this item shall be considered the price bid, although actual payment will be based on the actual invoices for the materials and work performed and submitted to the Contractor for payment and approved by the Engineer. The fixed sum is not to be altered in any manner by the bidder.

4.1. BASIS OF PAYMENT

A. Fixed Sum Items

1. The Contract price for this item shall be a lump sum price for the work described under this item and shall be equal to the sum total of all vouchers submitted to the Contractor by Con Ed as approved by the Engineer, for payment by the Contractor to Con Ed for the cost incurred.

2. Payment under this item will be made by BPCA on a reimbursement basis only for payments made by the Contractor to Con Ed for providing the materials and services described above and shall equal the total amount of invoices submitted by Con Ed and paid by the Contractor during the period for which a requisition is submitted. The Contactor shall be required to submit to the Engineer satisfactory evidence of payment for Con Ed materials and services being requisitioned. No retainage will be withheld by the Agency on such payments made under this section.
3. The total estimated cost of this item is the "fixed sum" amount shown for this item in the Bid Schedule. No guarantee is given that the actual lump sum cost for this item will in fact be the final "fixed sum" amount. The "fixed sum" amount is included in the total bid solely to ensure that sufficient monies will be available to pay the Contractor for these services.
4. The Contractor shall maintain separate books of accounts and shall not charge any portion of the cost of CON ED SUPPLIED EQUIPMENT AND SERVICE WORK to another part of the work. Payment and partial payments under this item shall be treated separately from the rest of the contract items.
5. The voucher for payment shall be submitted to the Engineer on an as-received monthly basis and shall include the signed original invoices.
6. The "fixed sum" is for bidding purposes only and shall not be varied in the bid. The Contractor will be paid the actual amount regardless of the fixed sum, which may be more or less than the fixed amount.

END OF SECTION 260020-A

SECTION 260519 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Copper wire.
2. Connectors and splices.

1.2 ACTION SUBMITTALS

A. Product Data:

1. Copper wire.
2. Connectors and splices.

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

1.3 INFORMATIONAL SUBMITTALS

A. Field quality-control reports.

PART 2 - PRODUCTS

2.1 COPPER 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. Standards:

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

C. Conductors: Copper, complying with ASTM B3 for bare annealed copper and with ASTM B8 for stranded conductors.

D. Conductor Insulation:

1. Type USE-2. Comply with UL 854.
2. Type XHHW-2. Comply with UL 44.

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

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

C. Underground Splice Kits: Fully resin-encapsulated, submersible rated and designed to insulate and seal wire connections in weather-exposed or direct burial locations.

PART 3 - EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS

A. Feeders:

1. Copper; solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

B. Branch Circuits:

1. Copper:

a. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

A. Service Entrance: Type USE-2, single conductor in raceway.

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

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

3.3 INSTALLATION, GENERAL

A. 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.

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

3.4 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. Underground splices and splices that may be submerged shall be made by new waterproof fully resin-encapsulated splice kits. The underground splice kits shall be designed to insulate and seal wire connections in weather-exposed or direct burial locations. Splice kits shall be sized and rated according to the cables to be spliced.

3.5 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.

3.6 FIELD QUALITY CONTROL

A. 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.

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

C. 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 260519

SECTION 260526 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Grounding and bonding conductors.
2. Grounding and bonding clamps.
3. Grounding and bonding bushings.
4. Grounding and bonding hubs.
5. Grounding and bonding connectors.
6. Grounding and bonding busbars.
7. Grounding (earthing) electrodes.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Field quality-control reports.

PART 2 - PRODUCTS

2.1 GROUNDING AND BONDING CONDUCTORS

A. Equipment Grounding Conductor:

1. General Characteristics: 600 V, XHHW-2, copper wire or cable, green color, in accordance with Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

B. ASTM - Bare Copper Grounding and Bonding Conductor:

1. Referenced Standards: Complying with one or more of the following:

a. Soft or Annealed Copper Wire: ASTM B3.
b. Concentric-Lay Stranded Copper Conductor: ASTM B8.
c. Tin-Coated Soft or Annealed Copper Wire: ASTM B33.

2.2 GROUNDING AND BONDING CLAMPS

A. Description: Clamps suitable for attachment of grounding and bonding conductors to grounding electrodes, pipes, tubing, and rebar. Grounding and bonding clamps specified in this article are also suitable for use with communications applications.

B. Source Limitations: Obtain products from single manufacturer.

C. Performance Criteria:

1. Regulatory Requirements:

a. Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.

2. Listing Criteria:

a. Grounding and Bonding Equipment: UL CCN KDER; including UL 467.

D. UL KDER and KDSH - Hex-Fitting-Type Pipe and Rod Grounding and Bonding Clamp

1. General Characteristics:

a. Two pieces with zinc-plated or stainless stee bolts.
b. Clamp Material: Silicon bronze, Brass, or Tinned brass.
c. Listed for outdoor use.

E. UL KDER and KDSH - U-Bolt-Type Pipe and Rod Grounding and Bonding Clamp

1. General Characteristics:

a. Clamp Material: Brass or Tinned brass.
b. Listed for outdoor use.

F. UL KDER and KDSH - Strap-Type Pipe and Rod Grounding and Bonding Clamp

1. General Characteristics:

a. Clamp Material: Copper or Tinned copper.
b. Listed for outdoor use.

G. UL KDER - Exothermically Welded Connection

1. General Characteristics:

a. Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.

2.3 GROUNDING AND BONDING BUSHINGS

A. Description: Bonding bushings connect conduit fittings, tubing fittings, threaded metal conduit, and unthreaded metal conduit to metal boxes and equipment enclosures, and have one or more bonding screws intended to provide electrical continuity between bushing and enclosure.

Grounding bushings have provision for connection of bonding or grounding conductor and may or may not also have bonding screws.

B. Source Limitations: Obtain products from single manufacturer.

C. Performance Criteria:

1. Regulatory Requirements:

a. Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.

2. Listing Criteria:

a. Grounding and Bonding Equipment: UL CCN KDER; including UL 467.

D. UL KDER - Bonding Bushing

1. General Characteristics: Threaded bushing with insulated throat.

E. UL KDER - Grounding Bushing

1. General Characteristics: Threaded bushing with insulated throat and mechanical-type wire terminal.

2.4 GROUNDING AND BONDING HUBS

A. Description: Hubs with certified grounding or bonding locknut.

B. Source Limitations: Obtain products from single manufacturer.

C. Performance Criteria:

1. Regulatory Requirements:

a. Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.

2. Listing Criteria:

a. Grounding and Bonding Equipment: UL CCN KDER; including UL 467.

D. UL KDER - Grounding and Bonding Hub

1. General Characteristics: Insulated, gasketed, watertight hub with mechanical-type wire terminal.

2.5 GROUNDING AND BONDING CONNECTORS

A. Source Limitations: Obtain products from single manufacturer.

B. Performance Criteria:

1. Regulatory Requirements:

a. Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.

2. Listing Criteria:

a. Grounding and Bonding Equipment: UL CCN KDER; including UL 467.

C. UL KDER - Pressure-Type Grounding and Bonding Busbar Cable Connector

1. General Characteristics: Copper or copper alloy, for compression bonding of one or more conductor directly to copper busbar. Listed for direct burial.

D. UL KDER - Lay-In Lug Mechanical-Type Grounding and Bonding Busbar Terminal

1. General Characteristics: Mechanical-type, copper rated for direct burial terminal with set screw.

E. UL KDER - Crimped Lug Pressure-Type Grounding and Bonding Busbar Terminal

1. General Characteristics: Cast silicon bronze, solderless compression-type wire terminals; with long barrel and two holes spaced on 5/8 or 1 inch centers for two-bolt connection to busbar.

F. UL KDER - Split-Bolt Service-Post Pressure-Type Grounding and Bonding Busbar Terminal

1. General Characteristics: Bolts that surround cable and bond to cable under compression when nut is tightened after assembly is screwed into busbar opening.

G. UL KDER - Crimped Pressure-Type Grounding and Bonding Cable Connector

1. General Characteristics: Crimp-and-compress connectors that bond to conductor when connector is compressed around conductor.

a. Copper, Copper alloy, or Tinned copper, C and H shaped.

H. UL KDER - Split-Bolt Pressure-Type Grounding and Bonding Cable Connector

1. General Characteristics: Bolts that surround cable and bond to cable under compression when nut is tightened.

a. Copper, Copper alloy, or Tinned copper.

2.6 GROUNDING AND BONDING BUSBARS

A. Description: Miscellaneous grounding and bonding devices that serve as common connection for multiple grounding and bonding conductors.

B. Source Limitations: Obtain products from single manufacturer.

C. Performance Criteria:

1. Regulatory Requirements:

a. Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.

2. Listing Criteria:

a. Grounding and Bonding Equipment: UL CCN KDER; including UL 467.

D. UL KDER - Rack and Cabinet Bonding Busbar

1. General Characteristics:

a. Bus: Rectangular bar of hard-drawn solid copper.
b. Horizontal Mounting Dimensions: Designed for mounting in 19 inch or 23 inch wide equipment racks or cabinets.
c. Vertical Mounting Dimensions: Designed for mounting in 36 inch high equipment racks or cabinets.
d. Predrilled Hole Pattern: Accepts connectors for grounding and bonding conductor sizes 14 AWG to 2/0 AWG.
e. Mounting Hardware: Stainless steel or copper-plated, for attachment to rack.

2.7 GROUNDING (EARTHING) ELECTRODES

A. Source Limitations: Obtain products from single manufacturer.

B. Performance Criteria:

1. Regulatory Requirements:

a. Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.

2. Listing Criteria:

a. Grounding and Bonding Equipment: UL CCN KDER; including UL 467.

C. UL KDER - Rod Electrode

1. General Characteristics: Copper-clad; 3/4 inch by 10 ft

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine facility's grounding electrode system and equipment grounding for compliance with requirements for maximum ground-resistance level and other conditions affecting performance of grounding and bonding of electrical system.

B. Inspect test results of grounding system measured at point of electrical service equipment connection.

C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.

D. Proceed with connection of electrical service equipment only after unsatisfactory conditions have been corrected.

3.2 SELECTION OF GROUNDING AND BONDING PRODUCTS

A. Grounding and Bonding Conductors:

1. Provide solid conductor for 8 AWG and smaller, and stranded conductors for 6 AWG and larger unless otherwise indicated.
2. Custom-Length Insulated Equipment Bonding Jumpers: As per Contract Drawings, XHHW-2.

B. Grounding and Bonding Connectors:

1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
2. Underground Connections: Welded connectors except at test wells and as otherwise indicated.

C. Grounding and Bonding Busbars: Provide in electrical cabinets housing service equipment, and elsewhere as indicated on Drawings.

3.3 INSTALLATION OF GROUNDING AND BONDING

A. Comply with manufacturer's published instructions.

B. Special Techniques:

1. Grounding and Bonding Conductors:

a. 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.

2. Grounding and Bonding Connectors: Make connections so possibility of galvanic action or electrolysis is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact are galvanically compatible.

a. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer in order of galvanic series.
b. Make connections with clean, bare metal at points of contact.
c. Make aluminum-to-steel connections with stainless steel separators and mechanical clamps.
d. Make aluminum-to-galvanized-steel connections with tin-plated copper jumpers and mechanical clamps.
e. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.
f. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance except where routed through short lengths of conduit.

1) Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate adjacent parts.
2) Use exothermic-welded connectors for outdoor locations; if disconnect-type connection is required, use bolted clamp.

3. Grounding and Bonding Busbars:

a. Install busbar horizontally, on insulated spacers 2 inch minimum from wall, 6 inch above finished floor unless otherwise indicated.

4. Electrodes:

a. Ground Rods: Drive rods until tops are 2 inch below finished floor or final grade unless otherwise indicated.

1) Interconnect ground rods with grounding electrode conductor below grade and as otherwise indicated. Make connections without exposing steel or damaging coating if any.
2) Use exothermic welds for below-grade connections.

5. Grounding at Service:

a. Equipment grounding conductors and grounding electrode conductors must be connected to ground busbar. Install main bonding jumper between neutral and ground buses.

6. Grounding Underground Distribution System Components:

a. Comply with IEEE C2 grounding requirements.
b. Grounding Manholes and Handholes: Install driven ground rod through manhole or handhole floor, close to wall, and set rod depth so 4 inch will extend above finished

floor. If necessary, install ground rod before manhole is placed and provide 1/0 AWG bare, tinned-copper conductor from ground rod into manhole through waterproof sleeve in manhole wall. Protect ground rods passing through concrete floor with double wrapping of pressure-sensitive insulating tape or heat-shrunk insulating sleeve from 2 inch above to 6 inch below concrete. Seal floor opening with waterproof, nonshrink grout.

c. Grounding Connections to Manhole Components: Bond exposed-metal parts such as inserts, cable racks, pulling irons, ladders, and cable shields within each manhole or handhole, to ground rod or grounding conductor. Make connections with 6 AWG minimum, stranded, hard-drawn copper bonding conductor or as detailed per the Contract Drawings. Train conductors level or plumb around corners and fasten to manhole walls. Connect to cable armor and cable shields in accordance with manufacturer's published instructions with splicing and termination kits.

7. Equipment Grounding and Bonding:

a. Install insulated equipment grounding conductors with 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.
2) Lighting circuits.
3) Receptacle circuits.
4) Busway Supply Circuits: Install insulated equipment grounding conductor from grounding bus in distribution panel to equipment grounding bar terminal on busway.

c. Poles Supporting Outdoor Lighting Fixtures: Bond insulated equipment grounding conductor to equipment grounding terminal inside pole base.

3.4 FIELD QUALITY CONTROL FOR GROUNDING AND BONDING

A. 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 calibrated torque wrench in accordance with manufacturer's published instructions.
3. Test completed grounding system at each location where maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal, and at individual ground rods. Make tests at ground rods before conductors are connected.

a. Measure ground resistance no fewer than two full days after last trace of precipitation and without soil being moistened by means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.
b. Perform tests by fall-of-potential method in accordance with IEEE Std 81.
c. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Engineer promptly and include recommendations to reduce ground resistance.

B. Nonconforming Work:

1. Grounding system will be considered defective if it does not pass tests and inspections.
2. Remove and replace defective components and retest.

C. Collect, assemble, and submit test and inspection reports.

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

a. Power and Lighting Equipment or System with Capacity of 500 kVA and Less: 10 Ω.
b. Manhole Grounds: 10 Ω

3.5 PROTECTION

A. After installation, protect grounding and bonding cables and equipment from construction activities. Remove and replace items that are contaminated, defaced, damaged, or otherwise caused to be unfit for use prior to acceptance by Owner.

END OF SECTION 260526

SECTION 260543 - UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Type ERMC-S raceways, elbows, couplings, and nipples.
2. Fittings for conduit, tubing, and cable.
3. Electrically conductive corrosion-resistant compounds for threaded conduit.
4. Solvent cements.
5. Duct accessories.
6. Handholes and boxes for exterior underground wiring.
7. Duct sealing.
8. Source quality control.

B. Related Requirements:

1. Section 260519 "Low-Voltage for Electrical Power Conductors and Cables" specifies nonmetallic underground conduit with conductors (Type NUCC).
2. Section 260553 "Identification for Electrical Systems" specifies underground-line warning tape and concrete cable routing markers (warning planks).

1.2 DEFINITIONS

A. Duct: A single raceway or multiple raceways, installed singly or as components of a duct bank.

B. Duct Bank: Two or more ducts installed in parallel, direct buried or with additional casing materials such as concrete.

C. Handhole: An underground chamber containing electrical cables, sized such that personnel are not required to enter in order to access the cables.

D. Trafficways: Locations where vehicular or pedestrian traffic is a normal course of events.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. For concrete and steel used in precast concrete handholes, also include product certificates as required by ASTM C858.

B. Shop Drawings:

1. Electric Duct Banks:

a. Include plans, elevations, sections, and details, including attachments to other Work.
b. Include information required for approval by electric utility and for obtaining public space utility work permits.

2. Precast or Factory-Fabricated Concrete Structures:

a. Include plans, elevations, sections, and details, including attachments to other Work.
b. Include duct entry provisions, including locations and duct sizes, and methods and materials for waterproofing duct entry locations.
c. Include reinforcement details.
d. Include grounding details.
e. Include dimensioned locations of cable rack inserts, pulling-in and lifting irons, sumps, and other accessories.
f. Include joint details.

3. Factory-Fabricated Handholes and Boxes Other Than Precast Concrete:

a. Include dimensioned plans, sections, and elevations, and fabrication and installation details.
b. Include duct entry provisions, including locations and duct sizes, and methods and materials for waterproofing duct entry locations.
c. Include cover design.
d. Include grounding details.
e. Include dimensioned locations of cable rack inserts, pulling-in and lifting irons, and other accessories.

C. Field quality-control reports.

1.4 INFORMATIONAL SUBMITTALS

A. Manufacturer's Published Instructions: Prepare and submit installation, testing, and operating instructions for product.

B. Field Reports:

1. Factory Test Reports: For handholes and boxes.
2. Manufacturer's field reports for field quality-control support.

PART 2 - PRODUCTS

2.1 TYPE ERMC-S RACEWAYS, ELBOWS, COUPLINGS, AND NIPPLES

A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.
2. General Characteristics: UL 6 and UL CCN DYIX.

B. Galvanized-Steel Electrical Rigid Metal Conduit (ERMC-S-G), Elbows, Couplings, and Nipples:

1. Exterior Coating: Zinc.
2. Options:

a. Interior Coating: Zinc with organic top coating
b. Minimum Trade Size: trade size 3/4.

2.2 FITTINGS FOR CONDUIT, TUBING, AND CABLE

A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

B. Metallic Fittings for Type ERMC Raceways:

1. General Characteristics: UL 514B and UL CCN DWTT.
2. Options:

a. Material: Steel.
b. Coupling Method: Raintight compression coupling with distinctive color gland nut.
c. Conduit Fittings for Hazardous (Classified) Locations: UL 1203.
d. Expansion and Deflection Fittings: UL 651 with flexible external bonding jumper.

2.3 ELECTRICALLY CONDUCTIVE CORROSION-RESISTANT COMPOUNDS FOR THREADED CONDUIT

A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.
2. General Characteristics: UL Subject 2419 and UL CCN FOIZ.

2.4 SOLVENT CEMENTS

A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.
2. General Characteristics: As recommended by conduit manufacturer in accordance with UL 514B and UL CCN DWTT.

2.5 DUCT ACCESSORIES

A. Duct Spacers: Factory-fabricated, rigid, PVC interlocking spacers; sized for type and size of duct with which used, and selected to provide minimum duct spacing indicated while supporting duct during concreting or backfilling.

2.6 HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING

A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.
2. General Characteristics:

    a. ASTM C858 for design and manufacturing processes.
    b. SCTE 77.

B. Precast Concrete Handholes and Boxes

1. Description: Factory-fabricated, reinforced-concrete, monolithically poured walls and bottom unless open-bottom enclosures are indicated. Frame and cover must form top of enclosure and must have load rating consistent with that of handhole or box.
2. Configuration: Units must be designed for flush burial and have open or closed bottom unless otherwise indicated.
3. Frame and Cover:

    a. Weatherproof cast-iron frame, with cast-iron cover with recessed cover hook eyes and tamper-resistant, captive, cover-securing bolts.
    b. Cover Finish: Nonskid finish must have minimum coefficient of friction of 0.50.
    c. Cover Legend: Molded lettering, as indicated in the contract drawings.

4. Extensions and Slabs: Designed to mate with bottom of enclosure. Same material as enclosure.

    a. Extension must provide increased depth of 12 inch.
    b. Slab: Same dimensions as bottom of enclosure, and arranged to provide closure.

5. Joint Sealant: Asphaltic-butyl material with adhesion, cohesion, flexibility, and durability properties necessary to withstand maximum hydrostatic pressures at installation location with ground-water level at grade.
6. Knockout Panels: Precast openings in walls, arranged to match dimensions and elevations of approaching duct, plus additional 12 inch vertically and horizontally to accommodate alignment variations.

    a. Splayed or Center window location.
    b. Knockout panels must be located no less than 6 inch from interior surfaces of walls, floors, or frames and covers of handholes, but close enough to corners to facilitate racking of cables on walls.

c. Knockout panel opening must have cast-in-place, welded-wire fabric reinforcement for field cutting and bending to tie in to concrete envelopes of duct.
d. Knockout panels must be framed with at least two additional No. 3 steel reinforcing bars in concrete around each opening.
e. Knockout panels must be 1-1/2 to 2 inch thick.

7. Duct Entrances in Handhole Walls: Cast end-bell or duct-terminating fitting in wall for each entering duct.

a. Type and size: Match fittings to duct to be terminated.
b. Fittings must align with elevations of approaching duct and be located near interior corners of handholes to facilitate racking of cable.
c. Provide minimum of one cast end-bell or duct-terminating fitting of each size provided in each wall.

8. Handholes 12 inch wide by 24 inch long and larger must have inserts for cable racks and pulling-in irons installed before concrete is poured.

2.7 DUCT SEALING

A. Duct-Sealing Compound: Nonhardening, safe for contact with human skin, not deleterious to cable insulation, and workable at temperatures as low as 35 deg F. Compound must be capable of withstanding temperature of 300 deg F without slump and adhering to clean surfaces of plastic ducts, metallic conduit, conduit and duct coatings, concrete, masonry, lead, cable sheaths, cable jackets, insulation materials, and common metals. Duct sealing compound must be removable without damaging ducts or cables.

B. Inflatable Duct-Sealing System: Wraparound inflatable bladder that seals ducts that are empty or containing conductors against air and water infiltration. System is suitable for use in steel, plastic, or concrete ducts and penetrations.

2.8 SOURCE QUALITY CONTROL

A. Factory Tests for Handholes and Boxes:

1. Factory Tests and Inspections: Perform the following tests and inspections on handholes and boxes, by, or under supervision of, qualified electrical testing laboratory recognized by authorities having jurisdiction, before delivering to site. Affix label with name and date of manufacturer's certification of system compliance.

a. Precast Concrete Utility Structures: Test and inspect in accordance with ASTM C1037.
b. Polymer Concrete and Nonconcrete Handhole and Pull-Box Prototypes: Test prototypes of handholes and boxes for compliance with SCTE 77. Strength tests must be for specified tier ratings of products supplied. Testing machine pressure gages must have current calibration certification, complying with ISO 9000 and ISO 10012, and traceable to NIST standards.

2. Nonconforming Work:

a. Equipment that does not pass tests and inspections will be considered defective.

3. Factory Test Reports: Prepare and submit factory test and inspection reports.

PART 3 - EXECUTION

3.1 PREPARATION

A. Coordinate layout and installation of duct, duct bank, handholes, and boxes with final arrangement of other utilities, site grading, and surface features as determined in field. Notify Engineer if there is conflict between areas of excavation and existing structures or archaeological sites to remain.

B. Coordinate elevations of duct and duct-bank entrances into handholes, and boxes with final locations and profiles of duct and duct banks, as determined by coordination with other utilities, underground obstructions, and surface features. Revise locations and elevations as required to suit field conditions and to ensure that duct and duct bank will drain to handholes, and as approved by Engineer.

3.2 SELECTION OF UNDERGROUND DUCTS

A. Duct for Electrical Feeders 600 V and Less: ERMC direct buried unless otherwise indicated.

B. Duct for Electrical Branch Circuits: ERMC direct buried unless otherwise indicated.

C. Underground Ducts Crossing Paved Paths Walks and Driveways: ERMC direct buried.

3.3 EARTHWORK

A. Restoration: Restore area immediately after backfilling is completed

B. Restore surface features at areas disturbed by excavation, and re-establish original grades unless otherwise indicated. Replace removed sod immediately after backfilling is completed.

C. Restore areas disturbed by trenching, storing of dirt, cable laying, and other work. Restore vegetation and include necessary topsoiling, fertilizing, liming, seeding, sodding, sprigging, and mulching.

D. Cut and patch existing pavement in path of underground duct, duct bank, and underground structures.

3.4 INSTALLATION OF DUCTS AND DUCT BANKS

A. Reference Standards:

1. Unless more stringent requirements are specified in Contract Documents or manufacturers' published instructions, comply with NEMA TCB 2 for installation of underground ducts and duct banks.
2. Consult Engineer for resolution of conflicting requirements.

B. Special Techniques:

1. Where indicated on Drawings, install duct, spacers, and accessories into duct-bank configuration shown. Duct installation requirements in this Section also apply to duct bank.
2. Steel raceway, bends, and fittings in single duct run or duct bank on Project must be of same type.
3. Slope: Pitch duct minimum slope of 1:300 down toward handholes and away from buildings and equipment.
4. Expansion and Deflection Fittings: Install expansion and deflection fitting in each duct in area of disturbed earth adjacent to handhole.
5. Install expansion fitting near center of straight line duct with calculated expansion of more than 3/4 inch .
6. Curves and Bends:

    a. Use 5-degree angle couplings for small changes in direction. Use manufactured long sweep bends with minimum radius of 48 inch, both horizontally and vertically, at other locations unless otherwise indicated.
    b. Field bending must be in accordance with NFPA 70 minimum radii requirements. Use only equipment specifically designed for material and size involved.
    c. Duct must have maximum of 180 degrees of bends between pull points.

7. Joints: Use solvent-cemented joints in nonmetallic duct and fittings and make watertight in accordance with manufacturer's published instructions. Stagger couplings so those of adjacent duct do not lie in same plane. Couple steel conduits to ducts with adapters designed for this purpose, and encase coupling with minimum 3 inch of concrete for minimum of 12 inch on each side of coupling.

    a. Install insulated grounding bushings on steel raceway terminations that are less than 12 inch below grade or floor level and do not terminate in hubs.

8. End Bell Entrances to Concrete and Polymer Concrete Handholes: Use end bells, spaced approximately 10 inch o.c. for 5 inch duct, and vary proportionately for other duct sizes.

    a. Begin change from regular spacing to end-bell spacing 10 ft from end bell, without reducing duct slope and without forming trap in line.
    b. Grout end bells into structure walls from both sides to provide watertight entrances.

9. Duct Terminators for Entrances to Concrete Handholes: Use manufactured, cast-in-place duct terminators, with entrances into structure spaced approximately 6 inch o.c. for 4 inch duct, and vary proportionately for other duct sizes.

    a. Begin change from regular spacing to terminator spacing 10 ft from terminator, without reducing duct line slope and without forming trap in line.

10. Install manufactured steel raceway elbows for stub-ups at poles unless otherwise indicated. Encase elbows for stub-up ducts throughout length of elbow.

    a. Couple steel elbows to ducts with adapters designed for this purpose, and encase coupling with minimum 3 inch of concrete for minimum of 12 inch on each side of coupling.

11. Sealing: Provide temporary closure at terminations of duct with pulled cables. Seal spare duct at terminations. Use sealing compound and plugs to withstand at least 15 psig hydrostatic pressure.
12. Pulling Cord: Install 200 lbf test nylon cord in empty ducts.
13. Direct-Buried Duct and Duct Bank:

    a. Excavate trench bottom to provide firm and uniform support for duct.
    b. Width: Excavate trench 12 inch wider than duct on each side.
    c. Depth: Install top of duct at least 24 inch below finished grade unless otherwise indicated.
    d. Set elevation of top of duct bank below frost line.
    e. Place minimum 3 inch of sand as bed for duct. Place sand to minimum of 12 inch above top level of duct.
    f. Support ducts on duct spacers coordinated with duct size, duct spacing, and outdoor temperature.
    g. Spacer Installation: Place spacers close enough to prevent sagging and deforming of duct, with not less than four spacers per 20 ft of duct. Place spacers within 24 inch of duct ends. Stagger spacers approximately 6 inch between tiers. Secure spacers to earth and to ducts to prevent floating during concreting. Tie entire assembly together using fabric straps; do not use tie wires or reinforcing steel that may form conductive or magnetic loops around ducts or duct groups.
    h. Install duct with minimum of 3 inch between ducts for like services and 12 inch between power and communications duct.
    i. Install manufactured duct elbows for stub-ups, at building entrances, and at changes of direction in duct direction unless otherwise indicated. Encase elbows for stub-up ducts throughout length of elbow.
    j. Install manufactured steel elbows for stub-ups, at building entrances, and at changes of direction in duct.

        1) Stub-ups to Outdoor Equipment: Extend concrete-encased steel raceway horizontally minimum of 60 inch from edge of base. Install insulated grounding bushings on terminations at equipment.

            a) Stub-ups mustterminate in coupling installed flush with finished grade and minimum 3 inch from conduit side to edge of base.

    k. After installing first tier of duct, backfill and compact. Start at tie-in point and work toward end of duct run, leaving ducts at end of run free to move with expansion and contraction as temperature changes during this process. Repeat procedure after placing each tier. After placing last tier, hand place backfill to 4 inch over duct and hand tamp. Firmly tamp backfill around ducts to provide maximum supporting strength. Use hand tamper only. After placing controlled backfill over final tier,

make final duct connections at end of run and complete backfilling with normal compaction.

14. Underground-Line Warning Tape: Bury nonconducting or conducting underground line specified in Section 260553 "Identification for Electrical Systems" no less than 10 inch above duct and duct banks and approximately 12 inch below grade. Align tape parallel to and within 3 inch of centerline of duct bank. Provide additional warning tape for each 12 inch increment of duct-bank width over nominal 18 inch. Space additional tapes 12 inch apart, horizontally across width of ducts.
15. Ground ducts and duct banks in accordance with Section 260526 "Grounding and Bonding for Electrical Systems."

3.5 INSTALLATION OF CONCRETE HANDHOLES AND BOXES

A. Reference Standards:

1. Precast Concrete Handholes: Comply with ASTM C891 unless otherwise indicated.
2. Consult Engineer for resolution of conflicting requirements.

B. Special Techniques:

1. Precast Concrete Handholes:

   a. Install units level and plumb and with orientation and depth coordinated with connecting duct to minimize bends and deflections required for proper entrances.
   b. Unless otherwise indicated, support units on level bed of crushed stone or gravel graded from 1 inch sieve to No. 4 sieve and compacted to same density as adjacent undisturbed earth.
   c. Field-cut openings for conduits in accordance with enclosure manufacturer's published instructions. Cut wall of enclosure with tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

2. Elevations:

   a. Install handholes with bottom below frost line.
   b. Handhole Covers: In paved areas and trafficways, set surface flush with finished grade. Set covers of other handholes 1 inch above finished grade.
   c. Where indicated, cast handhole cover frame integrally with handhole structure.

3. Waterproofing: Apply waterproofing to exterior surfaces of handholes after concrete has cured at least three days. After duct has been connected and grouted, and before backfilling, waterproof joints and connections, and touch up abrasions and scars. Waterproof exterior of manhole chimneys after mortar has cured at least three days.
4. Hardware: Install removable hardware, including pulling eyes, cable stanchions, cable arms, and insulators as required for installation and support of cables and conductors and as indicated.
5. Field-Installed Bolting Anchors in Concrete Handholes: Do not drill deeper than 2 inch for handholes, for anchor bolts installed in field. Use minimum of two anchors for each cable stanchion.

6. Ground handholes, and boxes in accordance with Section 260526 "Grounding and Bonding for Electrical Systems."

3.6 FIELD QUALITY CONTROL

A. Tests and Inspections:

1. Demonstrate capability and compliance with requirements on completion of installation of underground duct, duct bank, and utility structures.
2. Pull solid aluminum or wood test mandrel through duct to prove joint integrity and adequate bend radii, and test for out-of-round duct. Provide minimum 12 inch long mandrel equal to duct size minus 1/4 inch . If obstructions are indicated, remove obstructions and retest.
3. Test handhole grounding to ensure electrical continuity of grounding and bonding connections. Measure and report ground resistance as specified in Section 260526 "Grounding and Bonding for Electrical Systems."

B. Nonconforming Work:

1. Underground ducts, raceways, and structures will be considered defective if they do not pass tests and inspections.
2. Correct deficiencies and retest as specified above to demonstrate compliance.

C. Field Quality-Control Reports: Collect, assemble, and submit test and inspection reports.

D. Manufacturer Services: Engage factory-authorized service representative to support field tests and inspections.

3.7 CLEANING

A. Utilize a steel mandrel with a wire brush cleaner through full length of duct until duct cleaner indicates that duct is clear of dirt and debris. Follow with rubber duct swab for final cleaning and to assist in spreading lubricant throughout ducts.

B. Clean internal surfaces of handholes, including sump, affected by Work.

1. Sweep floor, removing dirt and debris.
2. Remove foreign material.

END OF SECTION 260543

SECTION 260553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Labels.
2. Bands.
3. Tapes and stencils.
4. Tags.
5. Cable ties.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 LABELS

A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
2. Listing Criteria: UL CCN PGDQ2 for components; including UL 969.

B. UL PGDQ2 - Self-Adhesive Wraparound Labels: Preprinted, 3 mil thick, polyester flexible label with acrylic pressure-sensitive adhesive.

1. Self-Lamination: Clear; UV-, weather-, and chemical-resistant; self-laminating, with protective shield over legend. Size labels such that clear shield overlaps entire printed legend.
2. Marker for Labels:

a. Permanent, waterproof, black ink marker recommended by tag manufacturer.

C. UL PGDQ2 - Self-Adhesive Labels: Polyester or thermal, transfer-printed, 3 mil thick, multicolor, weather- and UV-resistant, pressure-sensitive adhesive labels, configured for intended use and location.

2.2 BANDS

A. Snap-Around Labels: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeves, with diameters sized to suit diameters and that stay in place by gripping action.

B. Snap-Around, Color-Coding Bands: Slit, pretensioned, flexible, solid-colored acrylic sleeves, 2 inch long, with diameters sized to suit diameters and that stay in place by gripping action.

2.3 TAPES AND STENCILS

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

B. Self-Adhesive Vinyl Tape: Colored, heavy duty, waterproof, fade resistant; not less than 3 mil thick by 1 to 2 inch wide; compounded for outdoor use.

C. Tape and Stencil: 4 inch wide black stripes on 10 inch centers placed diagonally over orange background and are 12 inch wide. Stop stripes at legends.

D. Underground-Line Warning Tape:

1. Tape:

   a. Recommended by manufacturer for method of installation and suitable to identify and locate underground electrical utility lines.
   b. Printing on tape must be permanent and may not be damaged by burial operations.
   c. Tape material and ink must be chemically inert and not be subject to degradation when exposed to acids, alkalis, and other destructive substances commonly found in soils.

2. Color and Printing:

   a. Comply with APWA Uniform Color Code using NEMA Z535.1 safety colors.
   b. Inscriptions for Red Tapes: "CAUTION BURIED ELECTRIC LINE BELOW"

3. Nonconducting Line-Warning Tape

   a. Pigmented polyolefin, bright colored, continuous-printed on one side with inscription of utility, compounded for direct-burial service.
   b. Width: 3 inch
   c. Thickness: 4 mil
   d. Weight: 18.5 lb/1000 sq. ft
   e. Tensile in accordance with ASTM D882: 30 lbf and 2500 psi.

2.4 TAGS

A. Nonmetallic Preprinted Tags: Polyethylene tags, 0.015 inch or 0.023 inch thick, color-coded for phase and voltage level; punched for use with self-locking cable tie fastener.

2.5 CABLE TIES

A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
2. Listing Criteria: UL CCN ZODZ; including UL 1565 or UL 62275.

B. UL ZODZ - General-Purpose Cable Ties: Fungus inert, self-extinguishing, one piece, self-locking, and Type 6/6 nylon.

1. Minimum Width: 3/16 inch
2. Tensile Strength at 73 deg F in accordance with ASTM D638: 12,000 psi.
3. Temperature Range: Minus 40 to plus 185 deg F.
4. Color: Black, except where used for color-coding.

PART 3 - EXECUTION

3.1 PREPARATION

A. Self-Adhesive Identification Products: Before applying electrical identification products, clean substrates of substances that could impair bond, using materials and methods recommended by manufacturer of identification product.

3.2 SELECTION OF COLORS AND IDENTIFICATION MARKINGS

A. Pipe and Conduit Labeling: Comply with ASME A13.1 and IEEE C2

B. Color-Coding for Phase- and Voltage-Level Identification, 1000 V or Less: Use colors listed below for ungrounded service, feeder, and branch-circuit conductors.

1. Color must be factory applied or field applied for sizes larger than 6 AWG when permitted by authorities having jurisdiction.
2. Colors for 208Y/120 V Circuits:

a. Phase A: Black.
b. Phase B: Red.
c. Phase C: Blue.

3. Color for Neutral (Grounded Conductor): White
4. Color for Equipment Ground: Green.

C. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, pull points, and locations of high visibility. Identify by system and circuit designation.

D. Locations of Underground Lines: Underground-line warning tape for power and lighting.

E. Handholes, and Pull and Junction Boxes, 1000 V or Less: For conductors in pull and junction boxes, and handholes, use self-adhesive wraparound labels, snap-around labels, snap-around color-coding bands or self-adhesive vinyl tape to identify phase.

1. Locate identification at changes in direction, at penetrations of walls and floors, at 50 ft maximum intervals in straight runs, and at 25 ft maximum intervals in congested areas.
2. Identify system voltage with black letters on orange field.

F. Conductors to Be Extended in Future: Attach or marker tape to conductors and list source of power.

G. Cable Ties: General purpose, for attaching tags, except as listed below:

1. Outdoors: UV-stabilized nylon.

3.3 INSTALLATION

A. Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment. Fasteners for Labels and Signs: Self-tapping, stainless steel screws or stainless steel machine screws with nuts and flat and lock washers.

B. Verify and coordinate identification names, abbreviations, colors, and other features with requirements in other Sections requiring identification applications, Drawings, Shop Drawings, manufacturer's wiring diagrams, and operation and maintenance manual. Use consistent designations throughout Project.

C. Verify identity of item before installing identification products.

D. Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and operation and maintenance manual.

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

F. Snap-Around Labels: Secure tight to surface at location with high visibility and accessibility.

G. Self-Adhesive Wraparound Labels: Secure tight to surface at location with high visibility and accessibility.

H. Snap-Around Color-Coding Bands: Secure tight to surface at location with high visibility and accessibility.

I. Marker Tapes: Secure tight to surface at location with high visibility and accessibility.

J. Self-Adhesive Vinyl Tape: Secure tight to surface at location with high visibility and accessibility.

1. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for minimum distance of 6 inch where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding.

K. Underground Line Warning Tape:

1. During backfilling of trenches, install continuous underground-line warning tape not less than 10 inch directly above cables or raceways buried 12 inch or more below grade. Use multiple tapes where width of multiple lines installed in common trench.
2. Install underground-line warning tape for cables in raceways.

L. Nonmetallic Preprinted Tags:

1. Place in location with high visibility and accessibility.
2. Secure using general-purpose cable ties.

END OF SECTION 260553

SECTION 265000 - LIGHTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Luminaires.
2. Luminaire fittings.

B. Related Requirements:

1. Section 260519 "Low-Voltage Electrical Power Conductors and Cables" specifies wiring connections installed by this Section.
2. Section 260553 "Identification for Electrical Systems" specifies electrical equipment labels and warning signs installed by this Section.

1.2 DEFINITIONS

A. BUG Rating: Backlight, uplight, and glare rating for light pollution from exterior luminaires.

B. CMH: Ceramic metal halide.

C. Correlated Color Temperature (CCT): The absolute temperature (in kelvins) of a blackbody whose chromaticity (color quality) most nearly resembles that of the light source.

D. Color Rendering Index (CRI): The measure of the degree of color shift objects undergo when illuminated by the light source as compared with the color of those same objects when illuminated by a reference light source. The lower the CRI of a light source, the more difficult it is to identify colors and stripes on electronic components and wiring.

E. HPS: High-pressure sodium.

F. LED: Light-emtting diode

1.3 ACTION SUBMITTALS

A. Product Data:

1. For LED luminaires.

a. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
b. Include operating characteristics, electrical characteristics, and furnished accessories.
c. Include life, output (lumens, CCT, and CRI), and energy-efficiency data.

d. Include manufacturer's sample warranty language.

2. For luminaire fittings.

a. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
b. Include operating characteristics, electrical characteristics, and furnished accessories.
c. Include manufacturer's sample warranty language.

1.4 CLOSEOUT SUBMITTALS

A. Warranty documentation.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Spare parts.

B. Extra stock material.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Protect exposed surface finishes on lighting equipment by applying strippable, temporary protective covering before shipping.

1.7 WARRANTY FOR LUMINAIRES

A. Special Installer Extended Warranty: Installer warrants that fabricated and installed luminaires perform in accordance with specified requirements and agrees to repair or replace products that fail to perform as specified within extended-warranty period. Warranty must convey to Owner upon acceptance of the Work.

1. Extended-Warranty Period: Two years from date of Substantial Completion; full coverage for labor, materials, and equipment.

B. Manufacturer Warranty: Manufacturer warrants that luminaires perform in accordance with specified requirements and agrees to provide repair or replacement of products that fail to perform as specified within warranty period.

1. Warranty Period: Five years from date of the luminaire manufacturing date.

PART 2 - PRODUCTS

2.1 LUMINAIRES

A. Performance Criteria:

1. Regulatory Requirements:

    a. Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
    b. See individual product types below for listing criteria.
    c. Marked in accordance with UL CCN HYXT, including UL 1598, for compatible power supply, installation location, and environmental conditions.

B. Source Quality Control:

1. Compile and submit product data.
2. Compile and submit sustainable design product data.
3. Compile and submit samples.

C. Pole Luminaire

1. Source Limitations: Sentry Lighting
2. Product Description: Tulip and pendant lamp heads/model
3. Product Listing Criteria: UL 1598 for Safety
4. Product Characteristics:

    a. LED luminaires
    b. LED components and driver securely affixed to the mechanical structures of the housing
    c. High-strength ASTM 356.1 cast aluminum and heavy gauge spun aluminum
    d. Injection-molded polycarbonate or acrylic globe
    e. Rated life of 50,000 hours at 70% lumen maintenance at 25 C.
    f. Ambient temperature operation from –40 C to 35 C
    g. Surge protected line-neutral, line-ground, and neutral-ground in accordance with ANSI/IEEE 62.41, Category C3
    h. High performance coating consisting of high gloss super durable polyester powder coat paint. Paint shall be weather, corrosion, abrasion, and UV resistant in compliance with American Architectural Manufacturers Association's specification AAMA 2604-05.

2.2 LUMINAIRE FITTINGS

A. Performance Criteria:

1. Regulatory Requirements:

    a. Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
    b. See individual product types below for listing criteria.

B. Source Quality Control:

1. Compile and submit product data.
2. Compile and submit sustainable design product data.
3. Compile and submit samples.

C. Luminaire Support Accessories:

1. Product Characteristics:

a. Sized and rated for luminaire weight.
b. Capable of maintaining luminaire position after cleaning and relamping.
c. Capable of supporting luminaire without causing deflection of ceiling or wall.
d. Capable of supporting horizontal force equal to 100 percent of luminaire weight and vertical force equal to 400 percent of luminaire weight.

PART 3 - EXECUTION

3.1 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 to verify actual locations of luminaire and electrical connections before luminaire installation.

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

3.2 PREPARATION

A. Temporary Lighting: If approved by Engineer, specified luminaires for Project may be installed for temporary lighting. Install and energize minimum quantity of luminaires necessary to meet needs of construction activities. When construction is sufficiently complete, remove, disassemble, clean, and relamp luminaires used for temporary lighting before reinstalling for Project delivery.

3.3 INSTALLATION OF LIGHTING

A. Comply with manufacturer's published instructions.

B. Reference Standards for Installation: Unless more stringent installation requirements are specified in Contract Documents or manufacturers' published instructions, comply with the following:

1. Installation of Exterior Lighting Systems: NECA NEIS 501.
2. Installation of Luminaires, Lampholders, and Lamps: Article 410 of NFPA 70.
3. Consult Engineer for resolution of conflicting requirements.

C. Special Installation Techniques:

1. Install luminaires at height and aiming angle as indicated on Drawings.
2. Coordinate layout and installation of luminaires with other construction.
3. Exterior Bollard Luminaires:

    a. Align units for optimum directional alignment of light distribution.

4. Install wiring connections for luminaires.
5. Identification: Provide labels for luminaires and associated electrical equipment.

    a. Identify field-installed conductors, interconnecting wiring, and components.
    b. Provide warning signs.
    c. Label each enclosure with engraved metal or laminated-plastic nameplate.

D. Systems Integration: Integrate lighting control devices and equipment with electrical power connections for operation of luminaires as specified.

3.4 FIELD QUALITY CONTROL OF LIGHTING

A. Field tests and inspections must be witnessed by authorities having jurisdiction.

B. Tests and Inspections:

1. Perform manufacturer's recommended tests and inspections.
2. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.
3. Verify operation of photoelectric controls.

C. Nonconforming Work:

1. Luminaire will be considered defective if it does not pass tests and inspections.
2. Remove and replace defective units and retest.

D. Field Quality-Control Reports: Collect, assemble, and submit test and inspection reports.

3.5 SYSTEM STARTUP

A. Perform startup service.

1. Complete installation and startup checks in accordance with manufacturer's published instructions.

3.6 CLOSEOUT ACTIVITIES

A. Maintenance Material Submittals:

1. Spare Parts: Furnish to Owner spare parts, for repairing lighting equipment, that are packaged with protective covering for storage on-site and identified with labels describing contents.

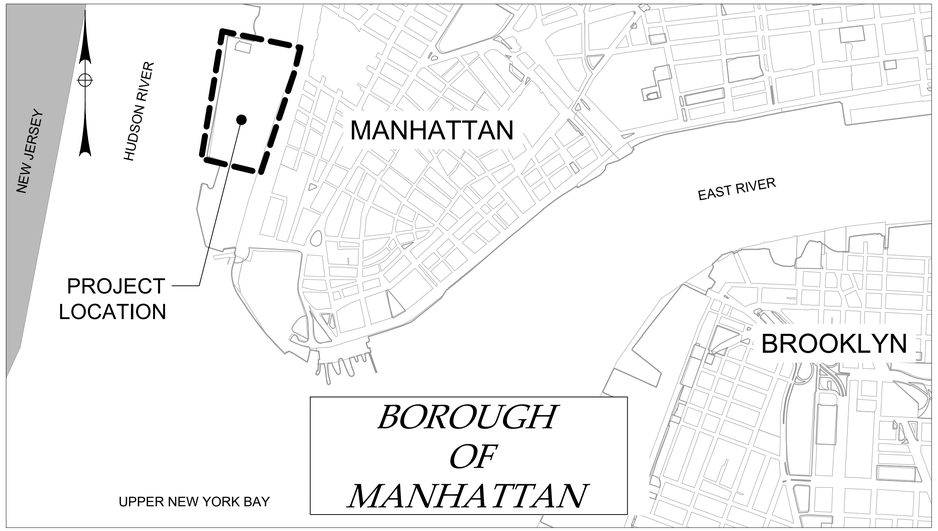
2. Extra Stock Material: Furnish to Owner extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents,include the following:

   a. LED Lamps: 10 for every 100 of each type and rating installed. Furnish at least one of each type.

3.7 PROTECTION

A. After installation, protect lighting equipment from construction activities. Remove and replace items that are contaminated, defaced, damaged, or otherwise caused to be unfit for use prior to acceptance by Owner.

END OF SECTION 265000



SCALE: 1" = 1000'

NORTH GRID ELECTRICAL UPGRADES DESIGN PROJECT

CONSTRUCTION DOCUMENTS

CONTRACT NO. 25-3454

BOROUGH OF MANHATTAN

NOVEMBER 3, 2025

TABLE OF CONTENTS

PROJECT

BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT

BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT

Stantec

SUB-CONSULTANTS:

GG ENGINEERING

Engineering and Land Surveying, P.C.

TROPHY POINT Construction Services & Consulting

REGISTRATION:

I/R	DATE	DESCRIPTION

ISSUES / REVISIONS

Project Status:	CONSTRUCTION DOCUMENTS
Date:	11/03/2025
Designed By:	A. BODNAR
Drawn By:	A. BODNAR
Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

SCALE: NO SCALE

0 1 BAR IS ONE INCH ON UNREDUCED DRAWING

SHEET TITLE:

GENERAL

TITLE SHEET & TABLE OF CONTENTS

SHEET NUMBER

T-001

GENERAL NOTES

1. THESE PLANS WERE DEVELOPED FROM VARIOUS RECORD PLANS AND AERIAL IMAGERY. NO SURVEY, OUTSIDE OF LIGHT POLE LOCATIONS, WAS OBTAINED FOR THIS PROJECT. THERE MAY BE VARIOUS CONDITIONS AT THE SITE WHICH DO NOT SHOW ON THE DRAWINGS OR DIFFER FROM THE CONDITIONS INDICATED ON THE DRAWINGS. IT IS IMPORTANT THAT EACH BIDDER VISIT THE SITE, FIELD VERIFY, AND CONFIRM THE EXISTING CONDITIONS AND TAKE THESE CONDITIONS INTO CONSIDERATION WHEN PREPARING THE BID. FIELD MEASUREMENTS MAY BE REQUIRED.

2. PERFORM ALL WORK IN ACCORDANCE WITH THE LATEST NEC, NYC ELECTRICAL CODE, NEMA, NFPA, AND OTHER APPLICABLE CODES AND REQUIREMENTS.

3. ALL WORK SHOWN IS NEW UNLESS OTHERWISE NOTED EXISTING TO REMAIN (EX.). MAINTAIN AND PROTECT ALL EXISTING EQUIPMENT TO REMAIN.

4. THE DRAWINGS ARE TO BE CONSIDERED SCHEMATIC, DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT ONLY. FIELD VERIFY ALL CONDITIONS AND DIMENSIONS SHOWN ON THE DRAWINGS. THE EXACT LOCATIONS OF EQUIPMENT SHALL BE DETERMINED IN THE FIELD.

5. FURNISH AND INSTALL ALL REQUIRED CONDUITS, WIRES AND CONDUCTORS, FITTINGS, BOXES, SUPPORTS, HARDWARE, ETC. IN ORDER TO MAKE A COMPLETE ELECTRICAL SYSTEM READY FOR OPERATION.

6. THE CONTRACTOR SHALL PERFORM ALL REQUIRED ELECTRICAL WORK SHOWN ON THE CONTRACT DRAWINGS AND WITHIN THE SPECIFICATIONS HEREIN INCLUDED AS PART OF THIS CONTRACT. IN THE EVENT OF ANY CONFLICT BETWEEN THE SPECIFICATIONS, DRAWINGS, AND/OR CODES, THE CONTRACTOR SHALL COMPLY WITH THE MOST STRINGENT REQUIREMENT UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

7. NOT ALL UTILITIES ARE SHOWN ON THE PLANS. LOCATE ALL EXISTING UTILITIES USING UTILITY MARKOUTS AND REVIEW OF SITE CONDITIONS. USE TEST PITS IF REQUIRED FOR MORE ACCURATE LOCATION OF UTILITIES. CONTRACTOR TO PROVIDE A LUMP SUM BID PRICE FOR TEST PITS AND UTILITY MARK OUTS. DAMAGE DONE TO EXISTING UTILITIES OR OTHER INSTALLATIONS SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER / AUTHORITY. SOME UTILITY COMPANIES MAY REQUIRE CERTAIN PORTIONS OF THE PROPOSED WORK TO BE COMPLETED IN THE PRESENCE OF A UTILITY REPRESENTATIVE. VERIFY ANY SUCH WORK AND ARRANGE FOR THE PRESENCE OF THE UTILITY PERSONNEL, IF REQUIRED. NO SEPARATE PAYMENT ITEMS SHALL BE MADE FOR THIS COORDINATION. ALL CONDUITS SHALL HAVE A MINIMUM OF 1FT HORIZONTAL AND VERTICAL CLEARANCE FROM EXISTING UNDERGROUND UTILITIES.

8. ALL WORK INVOLVING THE ELECTRIC SERVICE SHALL BE COORDINATED AND APPROVED BY THE UTILITY COMPANY.

9. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND PAYING ALL FEES ASSOCIATED WITH THIS WORK INCLUDING FILING WITH THE UTILITY COMPANY (AS REQUIRED), AND WITH THE LOCAL AUTHORITY HAVING JURISDICTION.

10. WHERE CONDUITS OR OTHER ELECTRICAL ITEMS ARE REQUIRED TO BE INSTALLED CROSSING UTILITIES OR TO AVOID SITE SPECIFIC CONSTRAINTS, MAINTAIN A MINIMUM OF 1FT HORIZONTAL AND VERTICAL CLEARANCE AND VARY DEPTH OF INSTALLATION OR ROUTING OF PROPOSED ITEMS TO AVOID CONFLICTS, WHERE CONTRACTOR PROPOSES INSTALLATION DEPTHS, AND/OR LOCATIONS THAT VARY FROM THOSE SHOWN ON THE PLANS. OBTAIN WRITTEN PERMISSION OF THE ENGINEER BEFORE PROCEEDING WITH THE INSTALLATION.

11. AT NO TIME SHALL A TRENCH BE LEFT OPEN AT THE END OF THE WORK DAY. EXCAVATE ONLY THE LENGTH THAT WILL BE COMPLETELY BACK-FILLED AT THE END OF THE DAY. TEMPORARY METHODS OF SECURING THE TRENCH MAY BE PROPOSED BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER. HOWEVER, RESPONSIBILITY FOR ALL LIABILITIES REMAINS WITH THE CONTRACTOR.

12. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO HIRE A THIRD PARTY ELECTRICAL INSPECTION AGENCY TO PROVIDE UL INSPECTIONS AND SUBMIT A CERTIFICATE OF INSPECTION PRIOR TO FINAL REQUEST FOR PAYMENT.

13. ALL CONDUCTORS SHALL BE COPPER, UNLESS OTHERWISE NOTED.

14. THE CONTRACTOR SHALL ONLY SPLICE CONDUCTORS IN THE POLE BASES, ROADWAY BOXES, AND DEDICATED ELECTRICAL CABINETS. THE CONTRACTOR SHALL MINIMIZE THE QUANTITY OF SPLICES TO THE GREATEST EXTENT AS PRACTICAL. ALL UNDERGROUND SPLICE KITS SHALL BE RESIN ENCAPSULATED SPLICE KITS AND BE MADE WATER PROOF.

15. THE CONTRACTOR SHALL NOT DISTURB ANY EXISTING LIGHTING TO REMAIN. EXISTING LIGHTING SHALL BE OPERATIONAL CONTINUOUSLY DURING THE NIGHTTIME HOURS AND INCLEMENT WEATHER, UNLESS OTHERWISE NOTED ON THE PLANS AND/OR SPECIFICATIONS.

16. DURING CONSTRUCTION SEQUENCING, THE CONTRACTOR SHALL MAINTAIN ALL EXISTING LIGHTING LEVELS UNTIL THE REPLACEMENT OF THE PROPOSED LIGHTING IS OPERATIONAL. IF DURING THE CONSTRUCTION SEQUENCE, IT IS NECESSARY TO REMOVE PART OF THE EXISTING WIRING SYSTEM, THE CONTRACTOR SHALL PROVIDE TEMPORARY WIRING TO THOSE AFFECTED LIGHTING UNITS AND / OR TEMPORARY LIGHTING IN ORDER TO MAINTAIN THE EXISTING LIGHTING AND LIGHTING LEVELS IN OPERATION UNTIL THEIR REPLACEMENT OF PERMANENT LIGHTING IS IN PLACE AND OPERATIONAL. THE TEMPORARY WIRES SHALL NOT BE PERMITTED TO BE EXPOSED AND SHALL BE INSTALLED AS PER NEC/NYC ELECTRICAL CODE REQUIREMENTS. CONTRACTOR TO PROVIDE LUMP SUM BID PRICE FOR TEMPORARY LIGHTING BASED ON THEIR MEANS AND METHODS.

GENERAL NOTES (CONT.)

17. CIRCUIT NUMBERS ARE FOR INFORMATION PURPOSES ONLY. ACTUAL CIRCUIT NUMBERS SHALL BE DETERMINED IN THE FIELD.

18. ALL ELECTRICAL EQUIPMENT, LUMINAIRES, ETC. SHALL BE APPROVED FOR USE BY THE OWNER.

19. ALL CONDUITS, FITTINGS, AND BOXES USED OUTDOORS, UNDERGROUND, OR AS DIRECTED BY THE ENGINEER, SHALL BE HOT-DIPPED RIGID GALVANIZED STEEL AND HAVE A FACTORY APPLIED POLYURETHANE COATING, INSIDE AND OUTSIDE.

20. ALL CONDUCTORS IN ROADWAY BOXES SHALL BE RACKED ON THE SIDE OF THE ROADWAY BOXES USING NONMETALLIC, GLASS-REINFORCED POLYMER RACKS. PROVIDE A MINIMUM SLACK OF 2FT FOR ALL CONDUCTORS RUNNING THROUGH THE ROADWAY BOXES.

21. THIS CONTRACT INCLUDES VARIOUS SCENARIOS WHERE THE REUSE OF EXISTING CONDUITS / DUCTS IS PROPOSED. FOR ALL SCENARIOS, FOLLOW THE PROCEDURES DETAILED IN THE SPECIFICATIONS AND CONTRACT DRAWINGS FOR CABLE INSTALLATION. THESE PROCEDURES DETAIL THE METHODS USED TO REMOVE, PROTECT, REINSTALL, AND REPLACE THE EXISTING CONDUCTORS WITH NEW CONDUCTORS. INSTALL OF THE NEW CONDUCTORS THROUGH EMPTY CONDUITS ONLY; INSTALLATION OF CONDUCTORS THROUGH A CONDUIT WITH EXISTING CONDUCTORS (PERFORMING A "PULL-BY") SHALL NOT BE PERMITTED. FISH CONDUIT SNAKE THROUGH THE CONDUIT TO ENSURE NEW CONDUCTORS CAN BE PULLED THROUGH. ROD THE CONDUITS WITH A MANDREL AND CLEAN WITH A WIRE BRUSH. IF THE CONDUITS ARE DAMAGED, DO NOT PROCEED WITH CLEANING THE CONDUIT AND INSTALLING NEW CONDUCTORS. FURNISH AND INSTALL NEW CONDUIT / DUCT AND CONDUCTORS. THOROUGHLY CLEAN ALL ATTACHED ROADWAY AND JUNCTION BOXES, REMOVING SEDIMENT, DIRT, DEBRIS, ETC, PROVIDING DRAINAGE AND REPAIRS, AND INSTALLING NEW BELL ENDS / COUPLINGS WHERE REQUIRED TO THE SATISFACTION OF THE ENGINEER.

22. CONTRACTOR TO PROVIDE BID PRICE FOR CONDUIT (LF) AND ROADWAY BOXES (EA) IN THE CASE THAT ANY EXISTING DUCTS OR ROADWAY BOXES CANNOT BE RE-USED. PRICE OF CONDUIT AND ROADWAY BOXES TO ALSO INCLUDE COSTS TO RESTORE GRADE IN-KIND.

22.A. CONTRACTOR TO SUBMIT A DETAILED SCOPE OF WORK AND ASSOCIATED COSTS IDENTIFYING WHICH DUCT(S) AND THE LOCATION OF THE DUCT(S) THAT CAN'T BE CLEANED AND/OR BE RE-USED FOR COMPENSATION OF ADDITIONAL WORK. CONTRACTOR SHALL NOT PROGRESS CONSTRUCTION WORK ASSOCIATED WITH THE NEW DUCTS UNTIL RECEIVING APPROVAL BY BPCA.

23. MURRAY ST AND WARREN ST, FROM N. END AVE TO EMPIRE STATE TRAIL, ARE OWNED BY NYCDOT. LIGHTPOLES WITHIN THESE LIMITS ARE MAINTAINED BY BPCA AND OWNED BY NYCDOT DIVISION OF STREET LIGHTING (DSL). LUMINAIRE UPGRADES TO LEDS ARE PART OF THIS CONTRACT. CONTRACTOR TO CONTACT NYCDOT ELECTRICAL INSPECTION 72 HOURS PRIOR TO BEGINNING WORK AT PARO@DOT.NYC.GOV AND ICHIN@DOT.NYC.GOV. STREET LIGHTING INSPECTION UNIT IS TO BE NOTIFIED 72 HOURS PRIOR TO THE INSTALLATION OF ANY STREET LIGHTING EQUIPMENT AT 212-839-3323. IF ANY ROADWAY RESTORATION OR CLOSURES ARE REQUIRED WITHIN THESE LIMITS, CONTRACTOR IS TO FOLLOW STANDARD NYCDOT PROCEDURES.

24. ALL TRAFFIC SIGNALS SHALL REMAIN OPERATIONAL DURING CONSTRUCTION. CONTRACTOR TO PROVIDE LUMP SUM BID PRICE FOR TEMPORARY POWER, AS REQUIRED FOR MEANS AND METHODS. REFER TO NYCDOT TRAFFIC SIGNAL PLATES LB12721M, LB15961M, LB14420M, AND LC600M FOR ADDITIONAL INFORMATION OF SIGNALIZED INTERSECTIONS WITHIN PROJECT LIMITS.

25. ALL COSTS ASSOCIATED WITH CON ED COORDINATION AND WORK SHALL BE INCLUDED IN A FIXED SUM ALLOWANCE BID ITEM.

26. IF GROUNDING STUD AND GROUNDING CONDUIT BUSHING WITHIN THE CABINET, BOX OR LIGHT POLES ARE DAMAGED OR MISSING, THE CONTRACTOR SHALL REPLACE THEM. PROVIDE UNIT COST PER STUD AND BUSHING TO BE INSTALLED IF AND WHEN DIRECTED.

27. THE CONTRACTOR IS TO ASSUME EVERY ROADWAY BOX REQUIRES A NEW GROUND ROD. IF AN EXISTING GROUND ROD IS WITHIN THE ROADWAY BOX, THE CONTRACTOR SHALL TEST AND CONFIRM THERE IS ADEQUATE RESISTANCE. IF INADEQUATE RESISTANCE, PROVIDE NEW GROUND ROD UNTIL ADEQUATE RESISTANCE IS MET.

28. CONTRACTOR TO COORDINATE WITH BPCA FOR THE WORK ZONE PHASING, DURATIONS, AND PARKING RESTRICTIONS.

29. CONTRACTOR TO COORDINATE WITH NYCDOT TRAFFIC SIGNAL DEPARTMENT FOR ANY LIGHT OR SIGNAL RELATED WORK WITHIN A SIGNALIZED INTERSECTION.

LEGEND

	PENCIL POLE
	BOLLARD POLE
B 3-A	TYPE B POLE WITH BLACK BATTERY PARK LUMINAIRE 3 - CIRCUIT NO. A - PHASE
BC 3-A	BISHOP CROOK POLE WITH BLACK TEAR DROP LUMINAIRE 3 - CIRCUIT NO. A - PHASE
M 3-A	TYPE M POLE WITH BLACK TEAR DROP LUMINAIRE 3 - CIRCUIT NO. A - PHASE
	TRAFFIC SIGNAL POST
	ELECTRICAL CONTROL CABINET
E #R	ROADWAY BOX WHERE #R DENOTES BOX SIZE (2R, U.O.N.)
C	COMMUNICATIONS BOX
FDNY	FDNY CALLBOX
T	NYCDOT TRAFFIC SIGNAL CONTROL CABINET
	NYCDOT TRAFFIC SIGNAL HEAD AND MAST ARM
M-63037	CON EDISON ELECTRICAL MANHOLE / VAULT
	EXISTING NYCDOT TRAFFIC SIGNAL CONDUIT
	EXISTING UNDERGROUND CONDUIT
CLL	CONTRACT LIMIT LINE

ABBREVIATIONS

A	AMPERE(S)
AC	ALTERNATING CURRENT
A.I.C	AMPERE INTERRUPTING CAPACITY
AFG	ABOVE FINISHED GRADE
AWG	AMERICAN WIRE GAUGE
BPCA	BATTERY PARK CITY AUTHORITY
CAT NO.	CATALOG NUMBER
CB	CIRCUIT BREAKER
CC	CONTROL CABINET
CKT/S	CIRCUIT/S
CONC.	CONCRETE
CP	CONTROL PANEL
CT	CURRENT TRANSFORMER
DIA	DIAMETER
DIM.	DIMENSION
DS	DISCONNECT SWITCH
DWG	DRAWING
EGC	EQUIPMENT GROUNDING CONDUCTOR
FDNY	THE FIRE DEPARTMENT OF NEW YORK CITY
FT	FEET
GND	GROUND
H.D.	HOT-DIP
HDPE	HIGH DENSITY POLYETHYLENE
HID	HIGH INTENSITY DISCHARGE
HPS	HIGH PRESSURE SODIUM
HR	HOUR
HT	HEIGHT
IN	INCHES
JB	JUNCTION BOX
KVA	KILOVOLT AMPERE
KW	KILOWATT
LED	LIGHT EMITTING DIODE
LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
LS	LUMP SUM
LT	LEFT
LTG	LIGHTING
MH	MANHOLE
MTG	MOUNTING
MM	MILLIMETERS
MV	MEDIUM VOLTAGE
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSO.
NFPA	NATIONAL FIRE PROTECTION AUTHORITY
NO.	NUMBER
N.T.S.	NOT TO SCALE
NYCDOT	NEW YORK CITY DEPARTMENT OF TRANSPORTATION
O.A.E.	OR APPROVED EQUAL
P	POLE
PB	PULL BOX
PF	POWER FACTOR
PPE	PERSONAL PROTECTIVE EQUIPMENT
PVC	POLYVINYL CHLORIDE
PVC-RGS	PVC-COATED RIGID GALVANIZED STEEL
RMC	RIGID METALLIC CONDUIT
RNMC	RIGID NONMETALLIC CONDUIT
RT	RIGHT
SCH	SCHEDULE
SDWK	SIDEWALK
S.S.	STAINLESS STEEL
STD	STANDARD
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
U.O.N.	UNLESS OTHERWISE NOTED
V	VOLT
W	WATT, WATTAGE
WP	WEATHER PROOF
XFMR	TRANSFORMER

PROJECT

BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT

BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT

Stantec

SUB-CONSULTANTS:

GG ENGINEERING

Engineering and Land Surveying, P.C.

TROPHY POINT Construction Services & Consulting

REGISTRATION:

I/R	DATE	DESCRIPTION

ISSUES / REVISIONS

Project Status:	CONSTRUCTION DOCUMENTS
Date:	11/03/2025
Designed By:	A. BODNAR
Drawn By:	A. BODNAR
Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

SCALE: NO SCALE

0 1 BAR IS ONE INCH ON UNREDUCED DRAWING

SHEET TITLE:

ELECTRICAL

GENERAL NOTES, LEGEND AND ABBREVIATIONS

SHEET NUMBER

E-001

ELECTRICAL AND LIGHTING KEY NOTES (1,2,...)

1. ALL EXISTING LIGHT POLES SHALL REMAIN, UNLESS OTHERWISE NOTED.

2. SAFELY DE-ENERGIZE AND DISCONNECT THE ELECTRICAL CONTROL CABINET FROM THE CON EDISON POWER SOURCE. REMOVE ALL INTERIOR ELECTRICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO CONDUCTORS, FUSE BOXES, FUSES, SOLENOIDS, CIRCUIT BREAKERS, PHOTOCELLS, ETC. WITHIN THE CONTROL CABINET. THE CONTROL CABINET IS TO REMAIN AND BE RE-USED. THE GROUND ROD IN THE CABINET IS TO REMAIN. VERIFY AND TEST THE GROUND ROD TO ENSURE SATISFACTORY LOW RESISTANCE TO GROUND AS PER NEC.

3. CLEAN THE INTERIOR OF THE ELECTRICAL CONTROL CABINET OF DIRT, DEBRIS, ETC.

4. THE ELECTRICAL CONTRACTOR SHALL REMOVE THE EXISTING ELECTRICAL POWER CONDUCTORS TO THE LUMINAIRES FROM THE FOLLOWING:
   - 4.A. ELECTRICAL CONTROL CABINET TO ALL ROADWAY BOXES
   - 4.B. ROADWAY BOX TO THE LIGHT POLE.

5. THE ELECTRICAL CONTRACTOR SHALL REMOVE THE EXISTING ELECTRICAL POWER CONDUCTORS FROM THE BPCA ELECTRICAL CONTROL CABINET UP TO THE CLOSEST ADJACENT ROADWAY BOX RUNNING TO THE NYCDOT TRAFFIC SIGNAL CONTROL CABINET (MOUNTED ONTO A LIGHT POLE OR TRAFFIC SIGNAL POLE).

6. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE EXISTING IN-LINE FUSES WITHIN THE LIGHT POLES.

7. CLEAN AND DRAIN THE EXISTING ROADWAY BOXES OF DIRT, DEBRIS, WATER, ETC.

8. THE ELECTRICAL CONTRACTOR SHALL UTILIZE A STEEL MANDREL WITH A WIRE BRUSH CLEANER TO CLEAN THE EXISTING CONDUITS / DUCTS FROM THE FOLLOWING:
   - 8.A. ELECTRICAL CONTROL CABINET TO ROADWAY BOX
   - 8.B. ROADWAY BOX TO ROADWAY BOX
   - 8.C. ROADWAY BOX TO LIGHT POLE

9. THE CONTRACTOR SHALL REMOVE THE EXISTING HID TYPE LUMINAIRES ON THE LIGHT POLES. COORDINATE WITH BPCA MAINTENANCE PERSONNEL FOR RETURNING 50 LUMINAIRES (OR AMOUNT OTHERWISE SPECIFIED) TO LOCATION SPECIFIED BY BPCA. CONTRACTOR TO DISPOSE OF REMAINING LUMINAIRES NOT RETURNED.

10. MAINTAIN AND PROTECT THE EXISTING POWER AND COMMUNICATION CONDUCTORS TO THE TRAFFIC SIGNALS IN THE LIGHT POLE / TRAFFIC SIGNAL POST. MAINTAIN AND PROTECT THE TRAFFIC SIGNAL POWER CONDUCTORS FROM THE CLOSEST ADJACENT ROADWAY BOX RUNNING TO THE TRAFFIC SIGNAL CONTROL CABINET. COORDINATE WITH NYCDOT FOR ANY POWER INTERRUPTIONS TO THE EQUIPMENT.

11. MAINTAIN AND PROTECT THE EXISTING POWER AND COMMUNICATION CONDUCTORS TO THE WIFI ANTENNAS ON THE LIGHT POLES. COORDINATE WITH BPCA FOR ANY POWER INTERRUPTIONS TO THE EQUIPMENT.

12. MAINTAIN AND PROTECT THE EXISTING POWER AND COMMUNICATION CONDUCTORS TO THE CAMERAS ON THE LIGHT POLES. COORDINATE WITH GOLDMAN SACHS FOR ANY POWER INTERRUPTIONS TO THE EQUIPMENT.

13. DE-ENERGIZE AND DISCONNECT THE POWER CONDUCTORS TO THE LUMINAIRES THAT ARE ALWAYS ON. THESE LUMINAIRES ARE ASSUMED TO BE POWERED DIRECTLY FROM CON EDISON. COORDINATE WITH CON EDISON FOR DE-ENERGIZING AND DISCONNECTING THE POWER CONDUCTORS.

14. THE CONTRACTOR SHALL REMOVE THE EXISTING PHOTOCELL ON THE LIGHT POLE AND RETURN THE PHOTOCELL TO BPCA MAINTENANCE PERSONNEL.

15. COORDINATE WITH CON EDISON TO FURNISH AND INSTALL NEW SERVICE CONDUCTORS FROM THE EXISTING MANHOLE TO THE EXISTING ELECTRICAL CONTROL CABINET.

16. FURNISH AND INSTALL NEW CONDUCTORS, CIRCUIT BREAKERS, FUSE BOXES, FUSES, CENTRALIZE PHOTOCELL, SECONDARY TIME CLOCK, SOLENOIDS, CONDUIT BUSHINGS, GROUND BUSHINGS, GROUNDING TERMINAL BLOCKS, SUPPORTS, HARDWARE, ETC. INTO THE EXISTING ELECTRICAL CONTROL CABINET.

17. FURNISH AND INSTALL A NEW 200A RATED NEUTRAL BUS BAR. THE NEUTRAL BUS BAR SHALL HAVE SUFFICIENT AMOUNT OF HOLES FOR THE CONNECTIONS IN THE CABINET.

18. FURNISH AND INSTALL NEW POWER CONDUCTORS AND ASSOCIATED SUPPORTS, HARDWARE, ETC. TO THE LUMINAIRES AS FOLLOWS:
   - 18.A. FROM ELECTRICAL CONTROL CABINET TO THE ROADWAY BOX
   - 18.B. FROM ROADWAY BOX TO THE LIGHT POLE

19. FURNISH AND INSTALL NEW POWER CONDUCTORS FROM THE BPCA ELECTRICAL CONTROL CABINET TO THE CLOSEST ADJACENT ROADWAY BOX RUNNING TO THE NYCDOT TRAFFIC SIGNAL CABINET MOUNTED ON A LIGHT POLE / TRAFFIC SIGNAL POST. INTERCEPT, SPLICE, AND EXTEND THE EXISTING POWER CONDUCTORS, IN THE CLOSEST ADJACENT ROADWAY BOX RUNNING TO THE NYCDOT TRAFFIC SIGNAL CABINET, WITH NEW POWER CONDUCTORS FROM THE BPCA ELECTRICAL CONTROL CABINET.

    THE POWER TO THE NYCDOT TRAFFIC SIGNAL CABINET SHALL BE POWERED FROM THE 24 HR CIRCUIT PHASE A AND PHASE B AS SHOWN ON THE PLANS.

20. FURNISH, INSTALL, AND ROUTE NEW POWER CONDUCTORS FROM THE ELECTRICAL CONTROL CABINET THROUGH EACH ROADWAY BOX FOR THE 24 HR SPARE CIRCUITS (PHASE A, B AND/OR C). LEAVE 6 FEET OF CABLE SLACK IN EACH ROADWAY BOX THE SPARE CIRCUIT ROUTES THROUGH. TIE BACK, INSULATE, AND PROTECT (WITH TEST CAP) THE CONDUCTORS IN THE LAST ROADWAY BOX IF THERE AREN'T ANY FINAL CONNECTIONS TO ANY EQUIPMENT.

21. RE-USE THE CLEANED DUCTS AND ROADWAY BOXES TO ROUTE THE NEW POWER CONDUCTORS FROM THE EXISTING BPCA ELECTRICAL CONTROL CABINET TO THE EXISTING LIGHT POLES AND NYCDOT TRAFFIC SIGNAL CABINET.

22. IF THE EXISTING DUCTS CAN'T BE CLEANED / RE-USED, FURNISH AND INSTALL NEW DIRECT BURIED UNDERGROUND DUCTS TO RUN THE NEW CONDUCTORS. INSTALL NEW DIRECT BURIED UNDERGROUND DUCTS AS NEEDED. RESTORE GRADE IN-KIND. SEE GENERAL NOTE 22.

23. RESET THE EXISTING ROADWAY BOX AND FLUSH WITH GRADE. INSTALL 6" OF CONCRETE SURROUNDING ALL SIDES OF THE ROADWAY BOX AND 6" DEEP. RESTORE THE GRADE IN-KIND. SEE GENERAL NOTE 22.

24. FURNISH AND INSTALL NEW 5A IN-LINE TIME-DELAY FUSES FOR PHASE AND NEUTRAL IN EACH LIGHT POLE. CONNECTIONS SHALL BE BREAKAWAY TYPE.

25. FURNISH AND INSTALL NEW LED TYPE LUMINAIRES WITH TYPE II OR TYPE IV DISTRIBUTION ONTO THE EXISTING B, BC, AND M POLES. NO INDIVIDUAL PHOTOCELLS ARE TO BE INSTALLED ON ANY OF THE LIGHT POLES. REFER TO DWG E-401 FOR EACH INDIVIDUAL LUMINAIRE'S DISTRIBUTION TYPE.

26. FURNISH AND INSTALL NEW GROUND RODS, GROUNDING AND BONDING CONDUCTORS TO THE EXISTING AND NEW ROADWAY BOXES, FRAMES, AND COVERS. SEE GENERAL NOTES 26 AND 27

27. INSTALL NEW BPCA PROVIDED IDENTIFICATION TAGS FOR THE PENCIL AND BOLLARD POLES.

28. FURNISH AND INSTALL A NEW 20A WEATHERPROOF RECEPTACLE ALONG WITH ASSOCIATED CONDUCTORS, SUPPORTS, HARDWARE, ETC. INSIDE THE LIGHT POLE. THE RECEPTACLE SHALL BE POWERED BY THE 24 HOUR CIRCUIT. FURNISH AND INSTALL A 20A IN-LINE FUSE AT THE LIGHT POLE FOR THE RECEPTACLE.

29. THERE IS NO LIGHT POLE AT THIS LOCATION CURRENTLY, ONLY A TRAFFIC SIGNAL SUPPORTED ON A WOODEN PYLON. MAINTAIN AND PROTECT THE FEEDERS TO THE TRAFFIC SIGNAL. FURNISH AND INSTALL NEW POWER CONDUCTORS UP TO THE ADJACENT ROADWAY BOX THAT RUNS TO THE LIGHT POLE LOCATION.

    THE POWER CONDUCTORS FOR THE LIGHT POLE (LUMINAIRE) SHALL NOT RUN TO THE LIGHT POLE LOCATION AND BE LEFT IN THE ADJACENT ROADWAY BOX FOR FUTURE INSTALLATION. TIE BACK, INSULATE, AND PROTECT THE CONDUCTORS IN THE ROADWAY BOX. LEAVE 8 FT OF CABLE SLACK.

30. FURNISH AND INSTALL NEW CONDUCTORS (3-PHASES + NEUTRAL + GND) UP TO THE ROADWAY BOXES FOR FUTURE CONNECTIONS TO THE OTHER LIGHT POLES (BPCA-D-1 TO BPCA-D-25) OUTSIDE OF THIS CONTRACT SCOPE. LEAVE 8 FEET OF CABLE SLACK. TIE BACK, INSULATE, AND PROTECT THE CONDUCTORS IN THE ROADWAY BOX.

31. COORDINATE WITH NYCDOT DSL FOR PROTECTION OF OVERHEAD EXPOSED WIRING FROM LIGHT POLE TO MURRAY ST AND N END WAY TRAFFIC CONTROL CABINET DURING CONSTRUCTION. IN ADDITION, COORDINATE WITH NYCDOT DSL FOR RE-FEEDING THE TRAFFIC CONTROL CABINET FROM THE CLOSEST ADJACENT ROADWAY BOX.

PROJECT

BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT

BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT

Stantec

SUB-CONSULTANTS:

GG ENGINEERING

K Engineering and Land Surveying, P.C.

TROPHY POINT Construction Services & Consulting

REGISTRATION:

I/R	DATE	DESCRIPTION

ISSUES / REVISIONS

Project Status:	CONSTRUCTION DOCUMENTS
Date:	11/03/2025
Designed By:	A. BODNAR
Drawn By:	A. BODNAR
Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

SCALE: NO SCALE

0 1 BAR IS ONE INCH ON UNREDUCED DRAWING

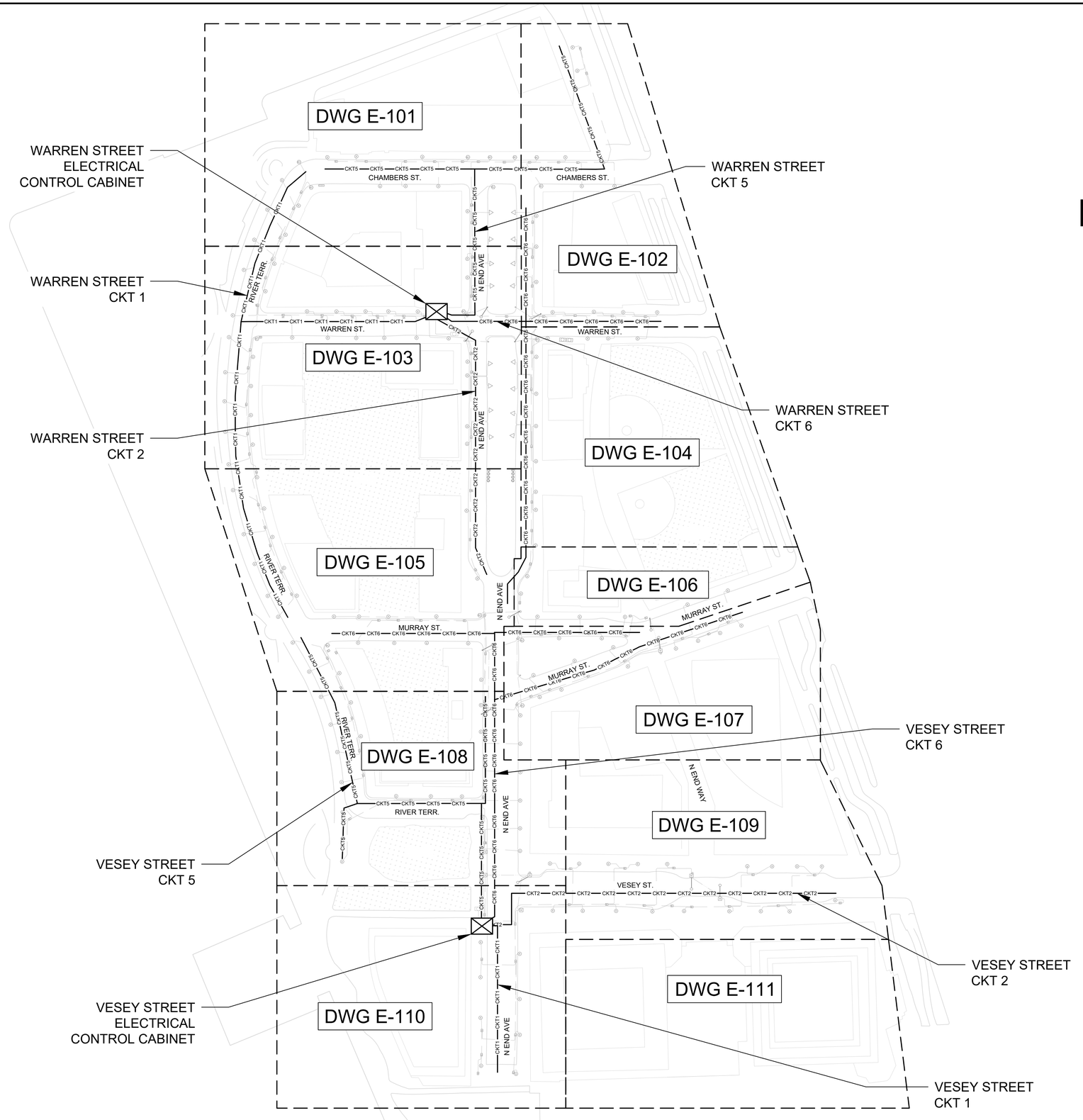
SHEET TITLE:

ELECTRICAL

ELECTRICAL AND LIGHTING KEY NOTES

SHEET NUMBER

E-002



NORTH

PROJECT

BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

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SCALE: N.T.S.

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SHEET TITLE:

GENERAL

KEY PLAN

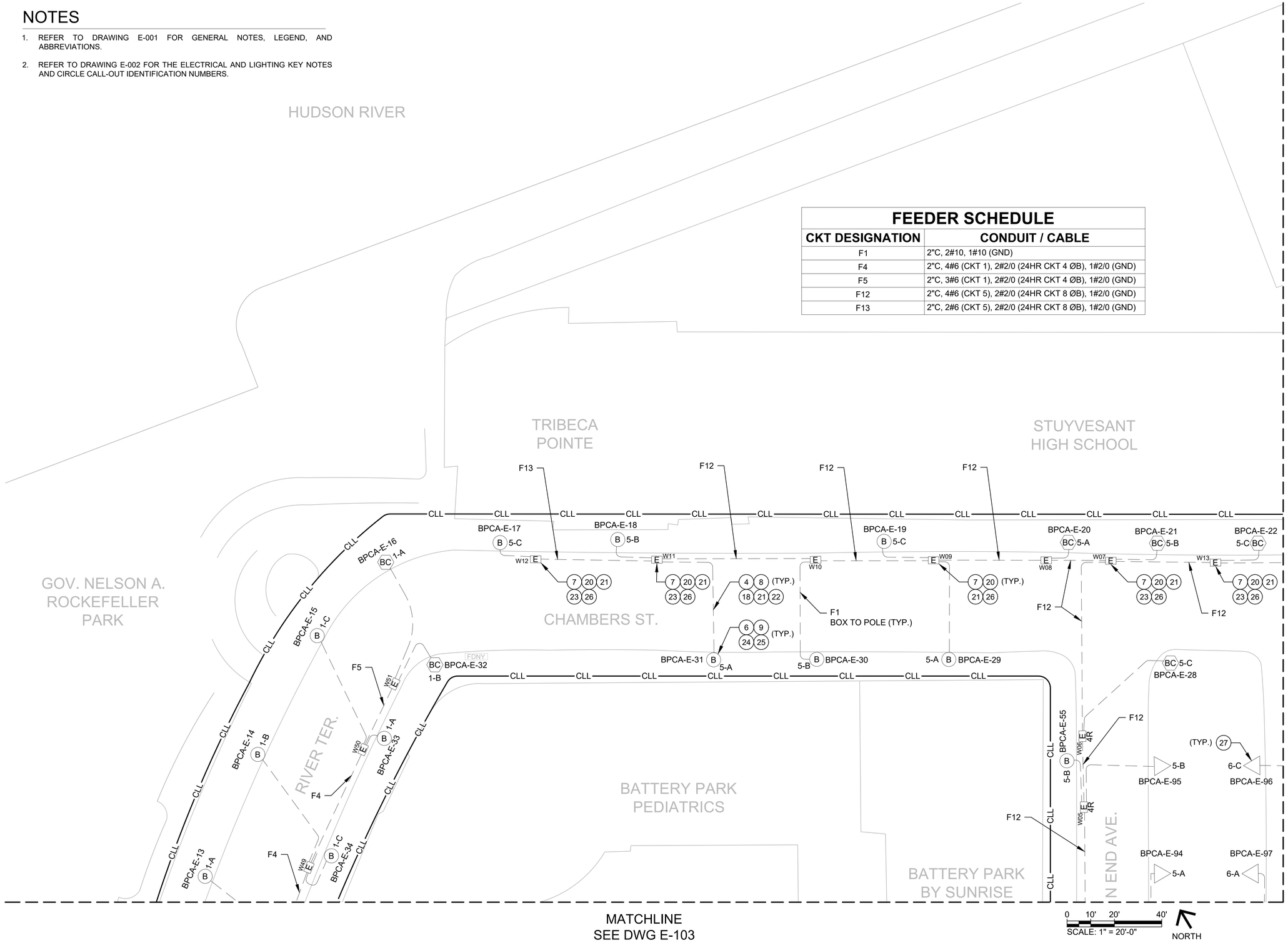
SHEET NUMBER

E-100

NOTES

1. REFER TO DRAWING E-001 FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS.
2. REFER TO DRAWING E-002 FOR THE ELECTRICAL AND LIGHTING KEY NOTES AND CIRCLE CALL-OUT IDENTIFICATION NUMBERS.

FEEDER SCHEDULE	
CKT DESIGNATION	**CONDUIT / CABLE**
F1	2"C, 2#10, 1#10 (GND)
F4	2"C, 4#6 (CKT 1), 2#2/0 (24HR CKT 4 ØB), 1#2/0 (GND)
F5	2"C, 3#6 (CKT 1), 2#2/0 (24HR CKT 4 ØB), 1#2/0 (GND)
F12	2"C, 4#6 (CKT 5), 2#2/0 (24HR CKT 8 ØB), 1#2/0 (GND)
F13	2"C, 2#6 (CKT 5), 2#2/0 (24HR CKT 8 ØB), 1#2/0 (GND)



PROJECT

BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT

BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT

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Contract Number: 25-3454

SCALE: 1" = 20'

BAR IS ONE INCH ON UNREDUCED DRAWING

SHEET TITLE:

ELECTRICAL

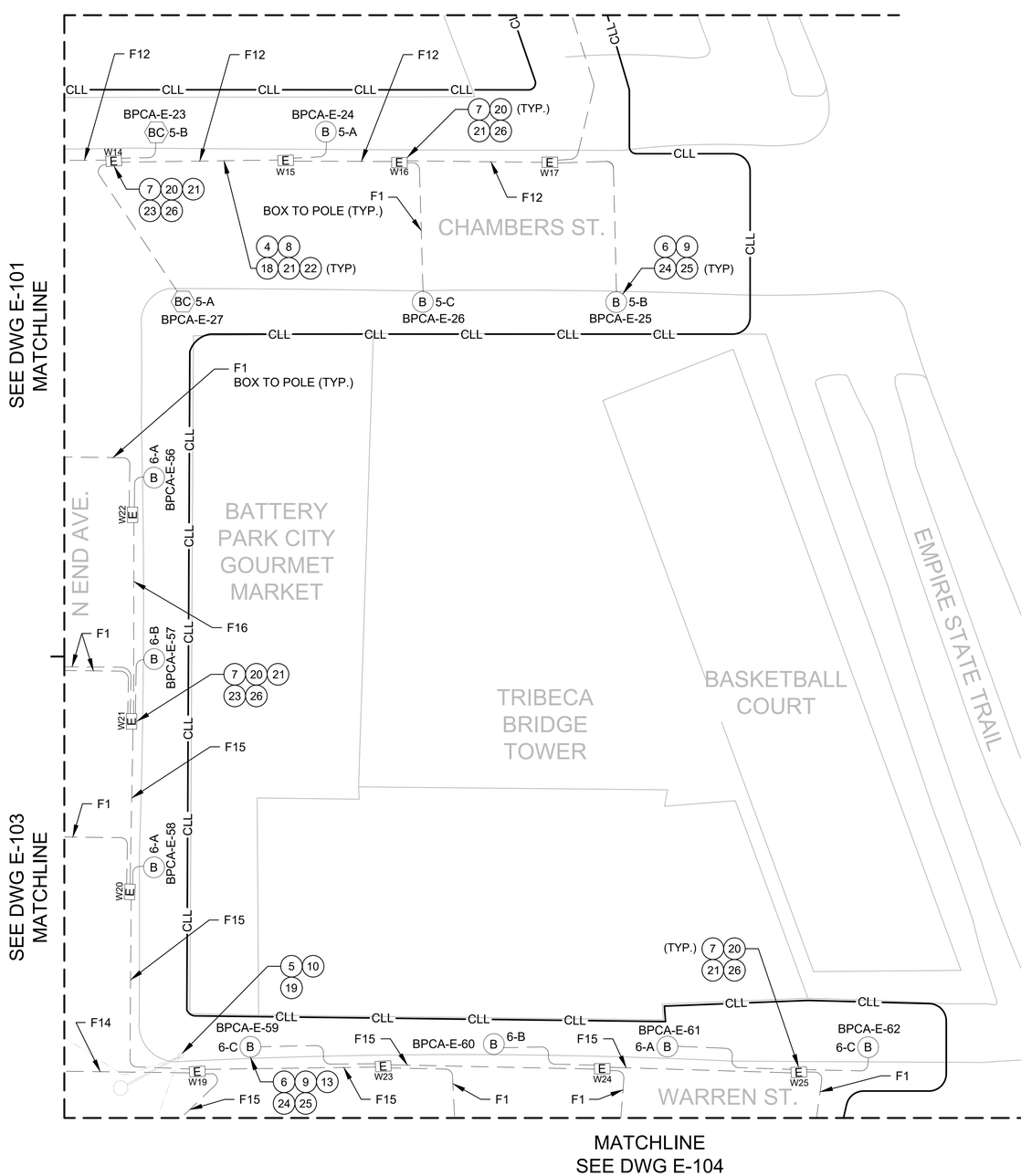
ELECTRICAL AND LIGHTING PLAN - 01

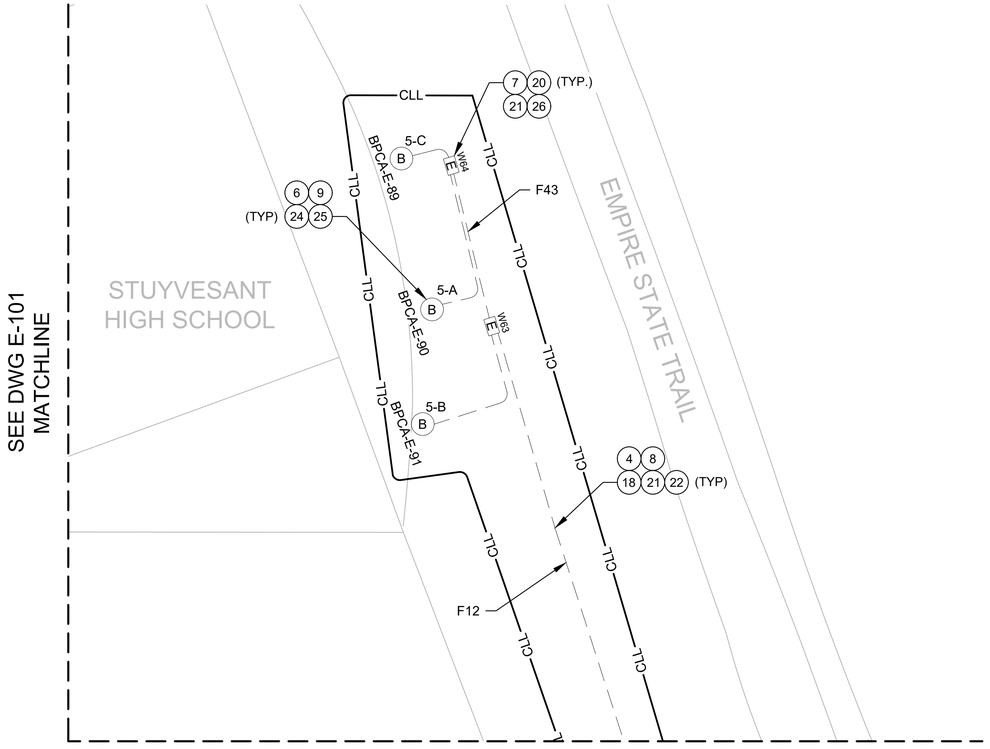
SHEET NUMBER

E-101

NOTES

1. REFER TO DRAWING E-001 FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS.
2. REFER TO DRAWING E-002 FOR THE ELECTRICAL AND LIGHTING KEY NOTES AND CIRCLE CALL-OUT IDENTIFICATION NUMBERS.





FEEDER SCHEDULE

CKT DESIGNATION	CONDUIT / CABLE
F1	2"C, 2#10, 1#10 (GND)
F12	2"C, 4#6 (CKT 5), 2#2/0 (24HR CKT 8 ØB), 1#2/0 (GND)
F14	3"C, 4#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)
F15	2"C, 4#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)
F16	2"C, 3#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)
F43	2"C, 3#6 (CKT 5), 2#2/0 (24HR CKT 8 ØB), 1#2/0 (GND)

0 10' 20' 40'
SCALE: 1" = 20'-0"
NORTH

PROJECT
BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT
BATTERY PARK CITY AUTHORITY

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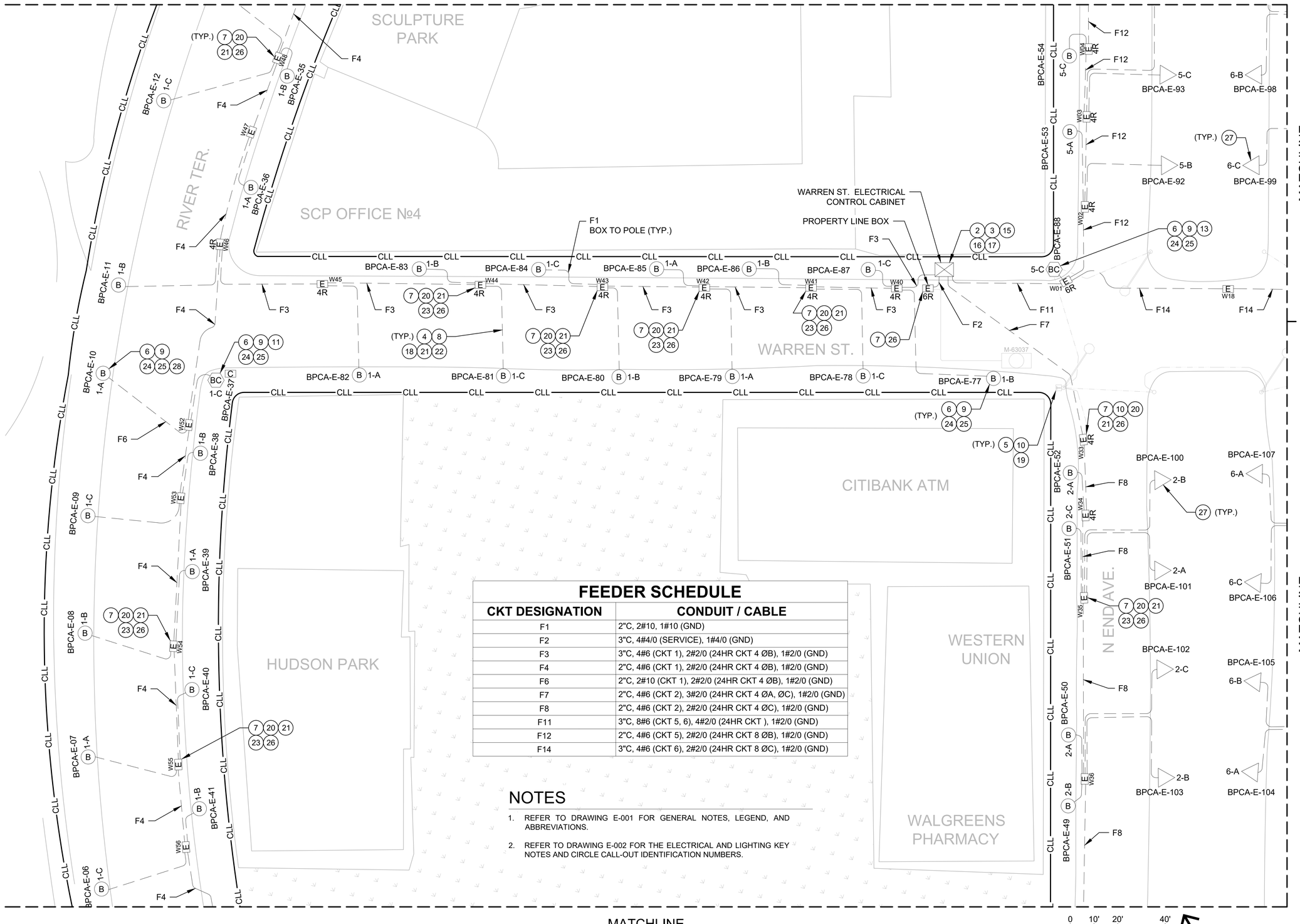
SHEET TITLE:
ELECTRICAL

ELECTRICAL AND LIGHTING PLAN - 02

SHEET NUMBER
E-102

SEE DWG E-101
MATCHLINE



FEEDER SCHEDULE

CKT DESIGNATION	CONDUIT / CABLE
F1	2"C, 2#10, 1#10 (GND)
F2	3"C, 4#4/0 (SERVICE), 1#4/0 (GND)
F3	3"C, 4#6 (CKT 1), 2#2/0 (24HR CKT 4 ØB), 1#2/0 (GND)
F4	2"C, 4#6 (CKT 1), 2#2/0 (24HR CKT 4 ØB), 1#2/0 (GND)
F6	2"C, 2#10 (CKT 1), 2#2/0 (24HR CKT 4 ØB), 1#2/0 (GND)
F7	2"C, 4#6 (CKT 2), 3#2/0 (24HR CKT 4 ØA, ØC), 1#2/0 (GND)
F8	2"C, 4#6 (CKT 2), 2#2/0 (24HR CKT 4 ØC), 1#2/0 (GND)
F11	3"C, 8#6 (CKT 5, 6), 4#2/0 (24HR CKT), 1#2/0 (GND)
F12	2"C, 4#6 (CKT 5), 2#2/0 (24HR CKT 8 ØB), 1#2/0 (GND)
F14	3"C, 4#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)

NOTES

1. REFER TO DRAWING E-001 FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS.
2. REFER TO DRAWING E-002 FOR THE ELECTRICAL AND LIGHTING KEY NOTES AND CIRCLE CALL-OUT IDENTIFICATION NUMBERS.

SCALE: 1" = 20'-0"
NORTH

PROJECT
BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT
BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT
Stantec

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SCALE: 1" = 20'
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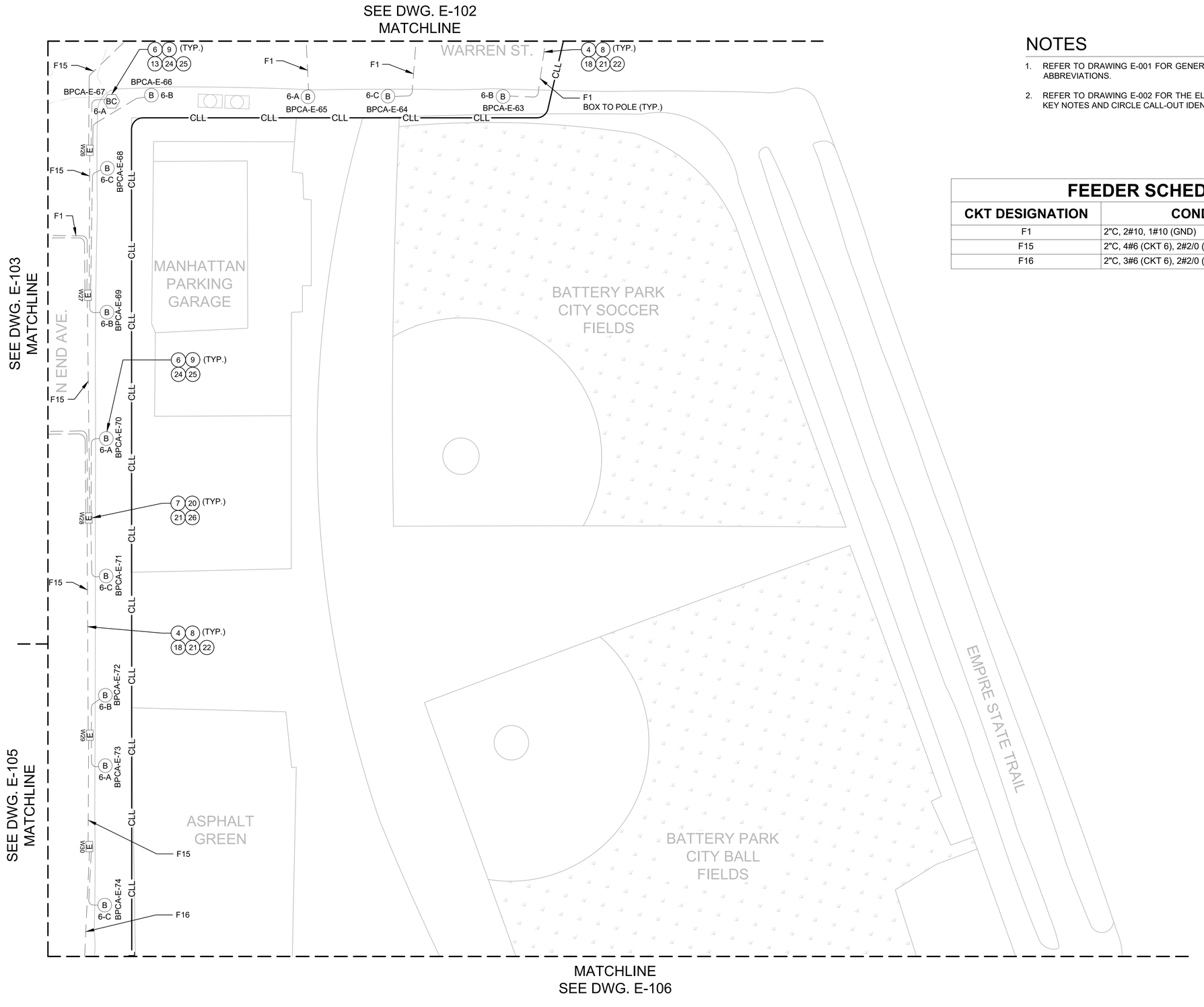
SHEET TITLE:
ELECTRICAL

ELECTRICAL AND LIGHTING PLAN - 03

SHEET NUMBER
E-103



NOTES

1. REFER TO DRAWING E-001 FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS.
2. REFER TO DRAWING E-002 FOR THE ELECTRICAL AND LIGHTING KEY NOTES AND CIRCLE CALL-OUT IDENTIFICATION NUMBERS.

FEEDER SCHEDULE

CKT DESIGNATION	CONDUIT / CABLE
F1	2"C, 2#10, 1#10 (GND)
F15	2"C, 4#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)
F16	2"C, 3#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)

PROJECT

BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT

BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT

Stantec

SUB-CONSULTANTS:

GG ENGINEERING

K Engineering and Land Surveying, P.C.

TROPHY POINT Construction Services & Consulting

REGISTRATION:

I/R	DATE	DESCRIPTION

ISSUES / REVISIONS

Project Status:	CONSTRUCTION DOCUMENTS
Date:	11/03/2025
Designed By:	W. FUNG
Drawn By:	W. FUNG
Checked By:	V. CUENCA
Approved By:	G. GOLDMAN, PE

Contract Number: 25-3454

SCALE: 1" = 20'

0 1 BAR IS ONE INCH ON UNREDUCED DRAWING

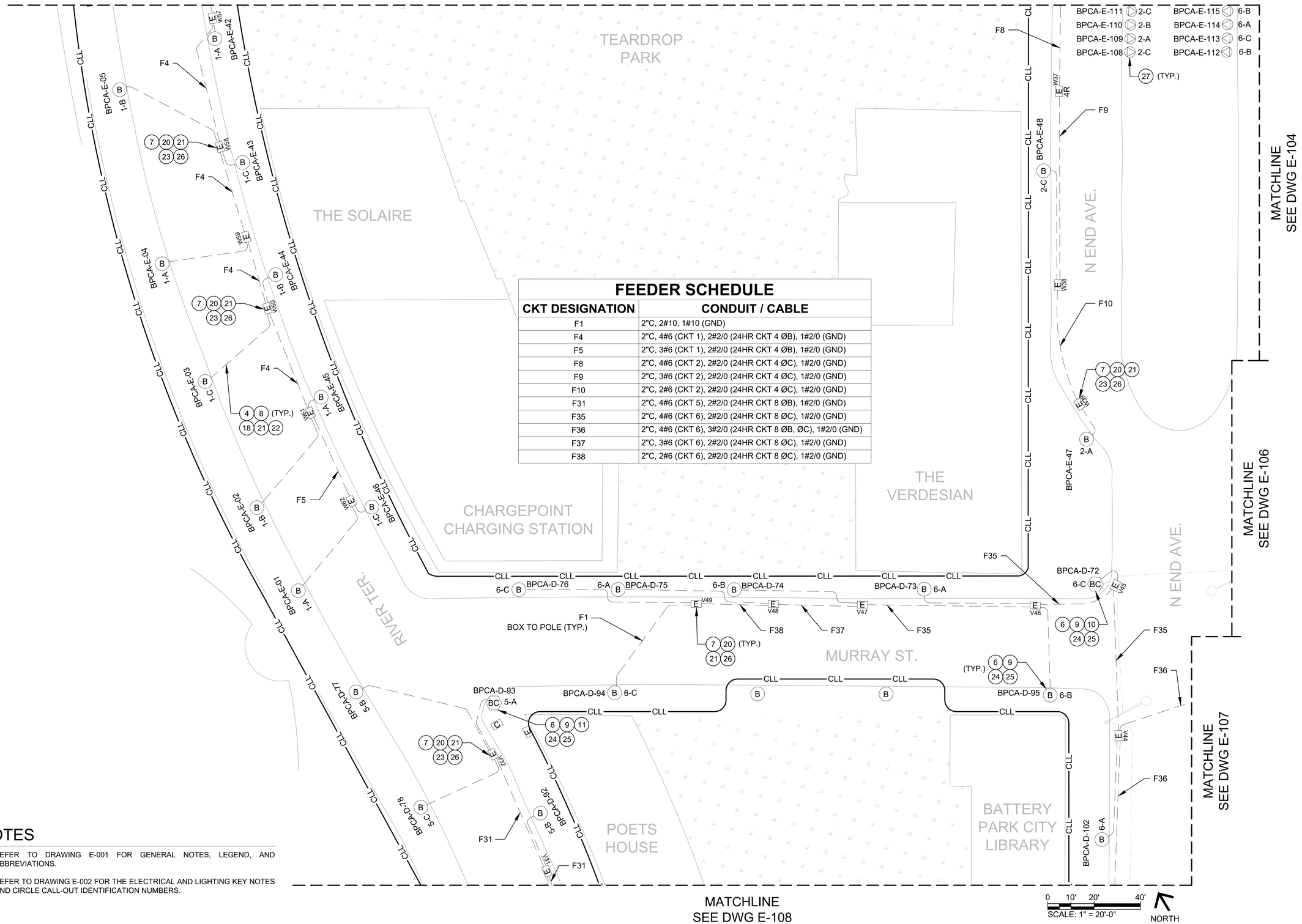
SHEET TITLE:

ELECTRICAL

ELECTRICAL AND LIGHTING PLAN - 04

SHEET NUMBER

E-104



FEEDER SCHEDULE

CKT DESIGNATION	CONDUIT / CABLE
F1	2"C, 2#10, 1#10 (GND)
F4	2"C, 4#6 (CKT 1), 2#2/0 (24HR CKT 4 ØB), 1#2/0 (GND)
F5	2"C, 3#6 (CKT 1), 2#2/0 (24HR CKT 4 ØB), 1#2/0 (GND)
F8	2"C, 4#6 (CKT 2), 2#2/0 (24HR CKT 4 ØC), 1#2/0 (GND)
F9	2"C, 3#6 (CKT 2), 2#2/0 (24HR CKT 4 ØC), 1#2/0 (GND)
F10	2"C, 2#6 (CKT 2), 2#2/0 (24HR CKT 4 ØC), 1#2/0 (GND)
F31	2"C, 4#6 (CKT 5), 2#2/0 (24HR CKT 8 ØB), 1#2/0 (GND)
F35	2"C, 4#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)
F36	2"C, 4#6 (CKT 6), 3#2/0 (24HR CKT 8 ØB, ØC), 1#2/0 (GND)
F37	2"C, 3#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)
F38	2"C, 2#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)

NOTES

1. REFER TO DRAWING E-001 FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS.
2. REFER TO DRAWING E-002 FOR THE ELECTRICAL AND LIGHTING KEY NOTES AND CIRCLE CALL-OUT IDENTIFICATION NUMBERS.

PROJECT

BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT

BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT

Stantec

SUB-CONSULTANTS:

GG ENGINEERING

K Engineering and Land Surveying, P.C.

TROPHY POINT Construction Services & Consulting

REGISTRATION:

I/R	DATE	DESCRIPTION

ISSUES / REVISIONS

Project Status:	CONSTRUCTION DOCUMENTS
Date:	11/03/2025
Designed By:	A. BODNAR
Drawn By:	A. BODNAR
Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

SCALE: 1" = 20'

BAR IS ONE INCH ON UNREDUCED DRAWING

SHEET TITLE:

ELECTRICAL

ELECTRICAL AND LIGHTING PLAN - 05

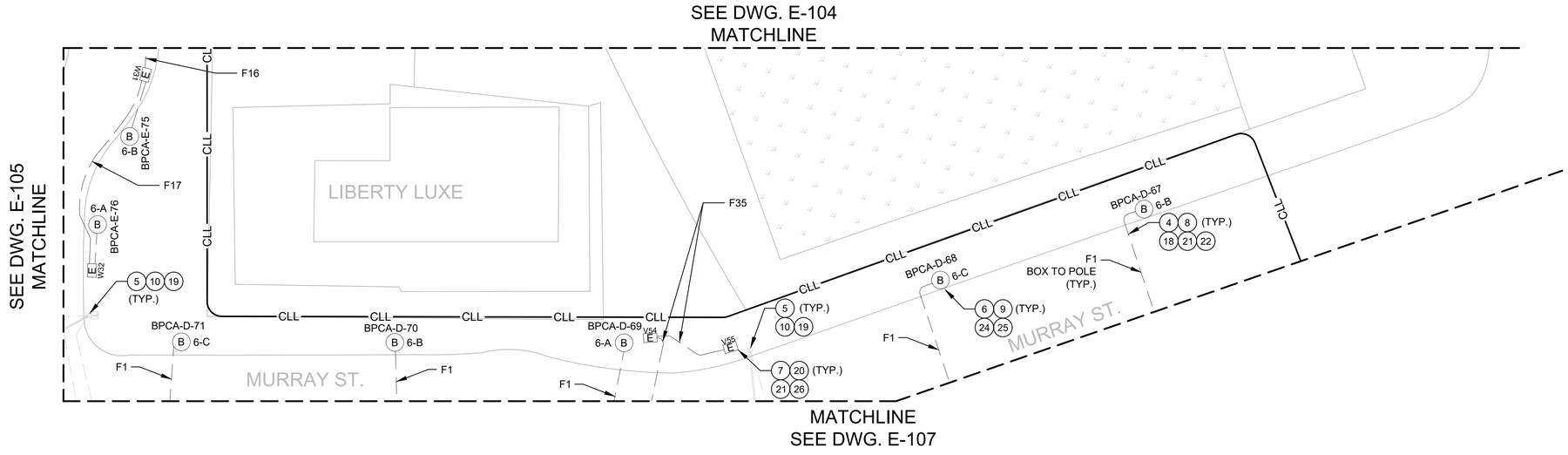
SHEET NUMBER

E-105

FEEDER SCHEDULE	
CKT DESIGNATION	**CONDUIT / CABLE**
F1	2"C, 2#10, 1#10 (GND)
F16	2"C, 3#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)
F17	2"C, 2#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)
F35	2"C, 4#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)

NOTES

1. REFER TO DRAWING E-001 FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS.
2. REFER TO DRAWING E-002 FOR THE ELECTRICAL AND LIGHTING KEY NOTES AND CIRCLE CALL-OUT IDENTIFICATION NUMBERS.



0 10' 20' 40'
SCALE: 1" = 20'-0"

NORTH

PROJECT

BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT

BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT

Stantec

SUB-CONSULTANTS:

GG ENGINEERING

Engineering and Land Surveying, P.C.

TROPHY POINT Construction Services & Consulting

REGISTRATION:

I/R	DATE	DESCRIPTION

ISSUES / REVISIONS

Project Status:	CONSTRUCTION DOCUMENTS
Date:	11/03/2025
Designed By:	W. FUNG
Drawn By:	W. FUNG
Checked By:	V. CUENCA
Approved By:	G. GOLDMAN, PE

Contract Number: 25-3454

SCALE: 1" = 20'

0 1
BAR IS ONE INCH ON UNREDUCED DRAWING

SHEET TITLE:

ELECTRICAL

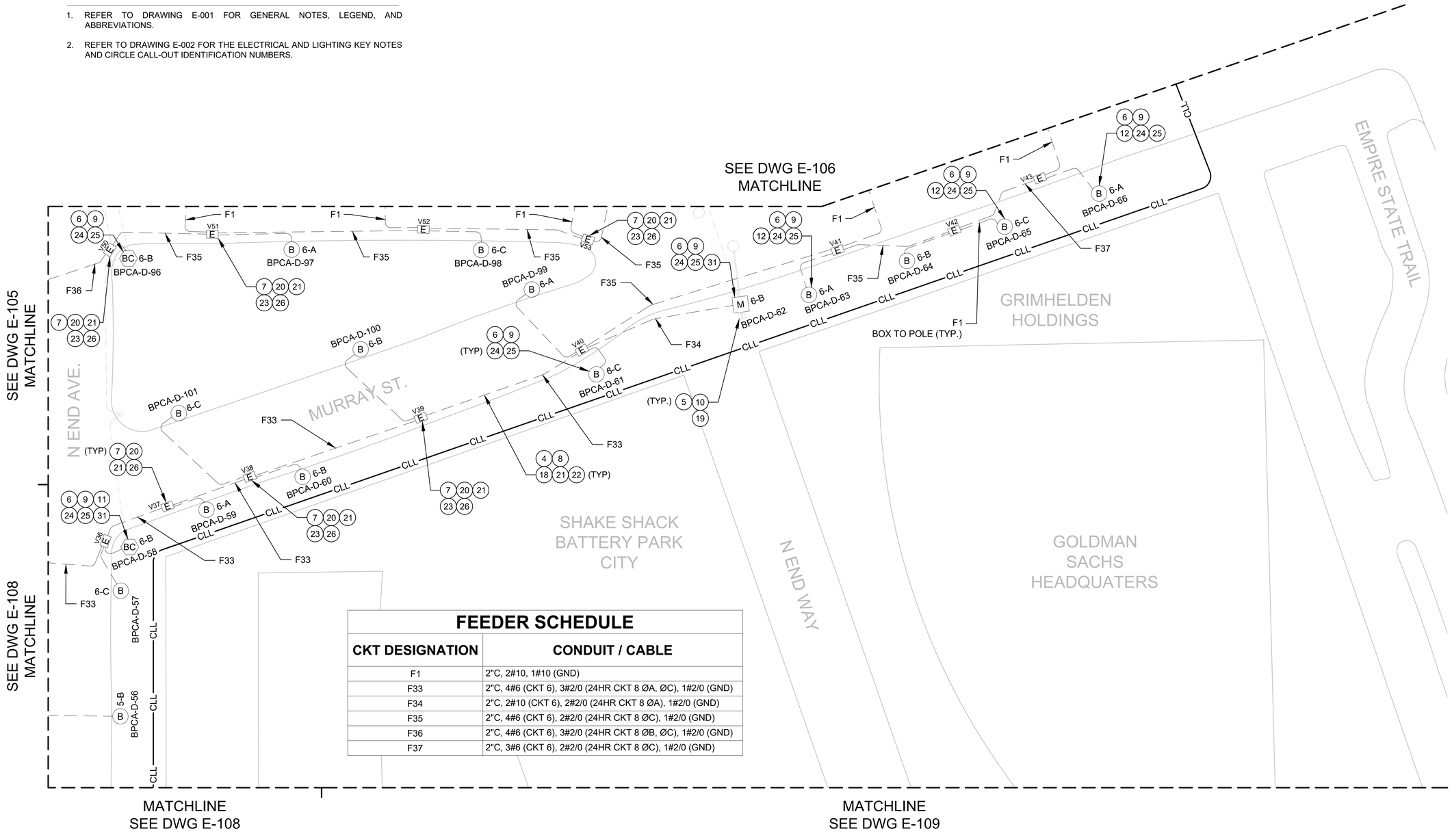
ELECTRICAL AND LIGHTING PLAN - 06

SHEET NUMBER

E-106

NOTES

1. REFER TO DRAWING E-001 FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS.
2. REFER TO DRAWING E-002 FOR THE ELECTRICAL AND LIGHTING KEY NOTES AND CIRCLE CALL-OUT IDENTIFICATION NUMBERS.



FEEDER SCHEDULE

CKT DESIGNATION	CONDUIT / CABLE
F1	2"C, 2#10, 1#10 (GND)
F33	2"C, 4#6 (CKT 6), 3#2/0 (24HR CKT 8 ØA, ØC), 1#2/0 (GND)
F34	2"C, 2#10 (CKT 6), 2#2/0 (24HR CKT 8 ØA), 1#2/0 (GND)
F35	2"C, 4#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)
F36	2"C, 4#6 (CKT 6), 3#2/0 (24HR CKT 8 ØB, ØC), 1#2/0 (GND)
F37	2"C, 3#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)

0 10' 20' 40'
SCALE: 1" = 20'-0"
NORTH

PROJECT
BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT
BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT
Stantec

SUB-CONSULTANTS:
GG ENGINEERING
Engineering and Land Surveying, P.C.
TROPHY POINT Construction Services & Consulting

REGISTRATION:

I/R	DATE	DESCRIPTION

ISSUES / REVISIONS

Project Status:	CONSTRUCTION DOCUMENTS
Date:	11/03/2025
Designed By:	A. BODNAR
Drawn By:	A. BODNAR
Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

SCALE: 1" = 20'
0 1
BAR IS ONE INCH ON UNREDUCED DRAWING

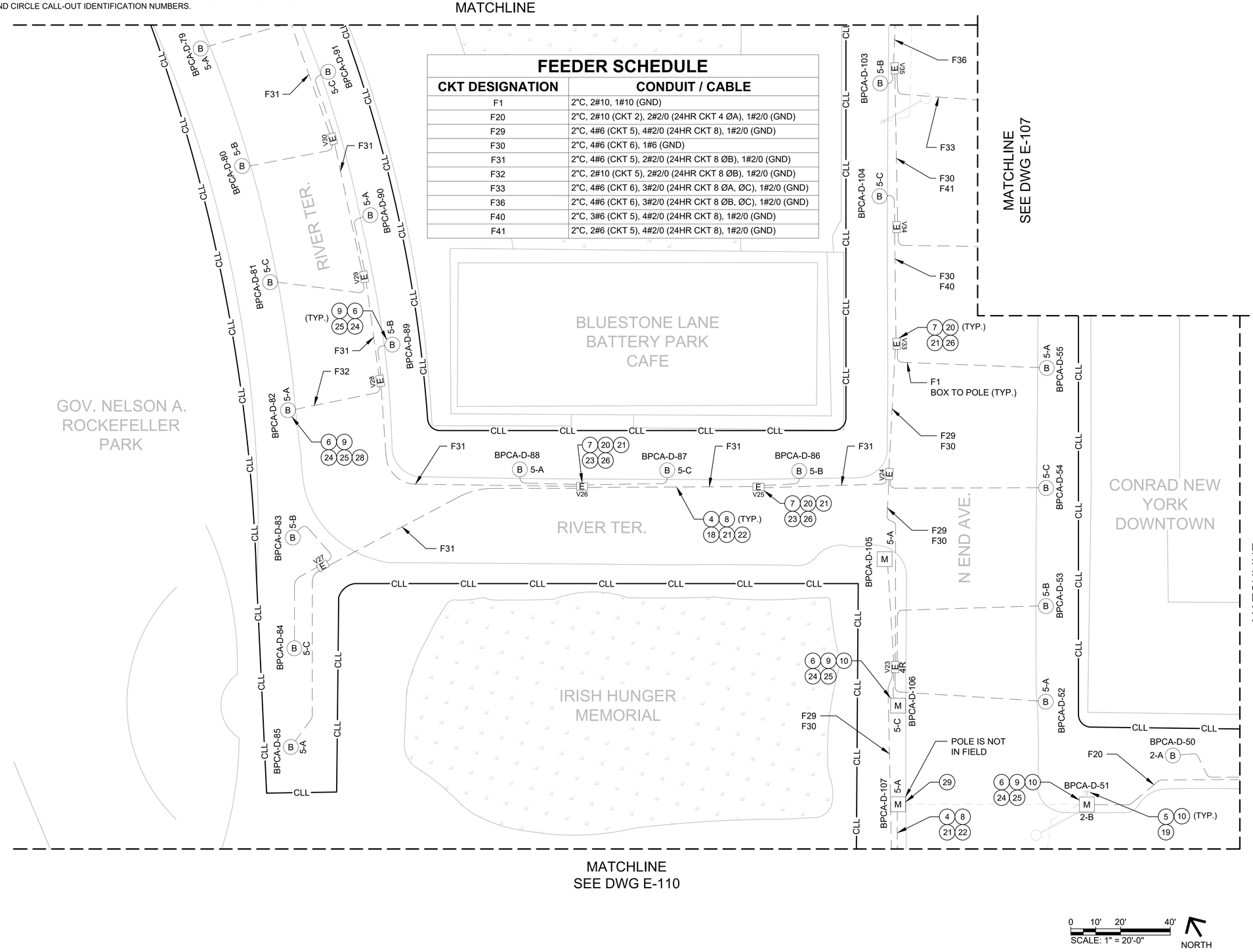
SHEET TITLE:
ELECTRICAL

ELECTRICAL AND LIGHTING PLAN - 07

SHEET NUMBER
E-107

NOTES

1. REFER TO DRAWING E-001 FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS.
2. REFER TO DRAWING E-002 FOR THE ELECTRICAL AND LIGHTING KEY NOTES AND CIRCLE CALL-OUT IDENTIFICATION NUMBERS.



FEEDER SCHEDULE

CKT DESIGNATION	CONDUIT / CABLE
F1	2"C, 2#10, 1#10 (GND)
F20	2"C, 2#10 (CKT 2), 2#2/0 (24HR CKT 4 ØA), 1#2/0 (GND)
F29	2"C, 4#6 (CKT 5), 4#2/0 (24HR CKT 8), 1#2/0 (GND)
F30	2"C, 4#6 (CKT 6), 1#6 (GND)
F31	2"C, 4#6 (CKT 5), 2#2/0 (24HR CKT 8 ØB), 1#2/0 (GND)
F32	2"C, 2#10 (CKT 5), 2#2/0 (24HR CKT 8 ØB), 1#2/0 (GND)
F33	2"C, 4#6 (CKT 6), 3#2/0 (24HR CKT 8 ØA, ØC), 1#2/0 (GND)
F36	2"C, 4#6 (CKT 6), 3#2/0 (24HR CKT 8 ØB, ØC), 1#2/0 (GND)
F40	2"C, 3#6 (CKT 5), 4#2/0 (24HR CKT 8), 1#2/0 (GND)
F41	2"C, 2#6 (CKT 5), 4#2/0 (24HR CKT 8), 1#2/0 (GND)

PROJECT

BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT

BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT

Stantec

SUB-CONSULTANTS:

GG ENGINEERING

Engineering and Land Surveying, P.C.

TROPHY POINT Construction Services & Consulting

REGISTRATION:

I/R	DATE	DESCRIPTION

ISSUES / REVISIONS

Project Status:	CONSTRUCTION DOCUMENTS
Date:	11/03/2025
Designed By:	A. BODNAR
Drawn By:	A. BODNAR
Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

SCALE: 1" = 20'

0 1 BAR IS ONE INCH ON UNREDUCED DRAWING

SHEET TITLE:

ELECTRICAL

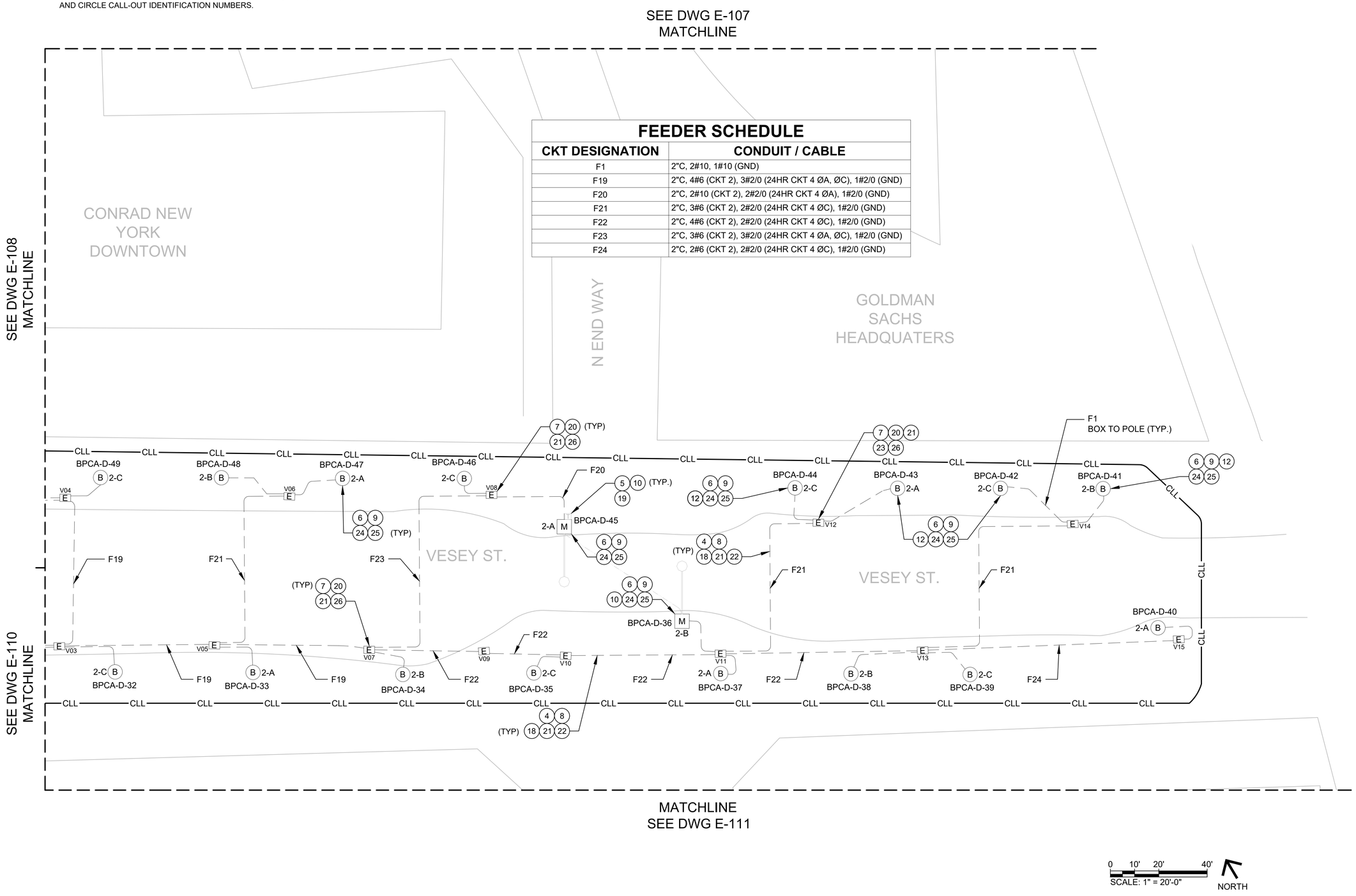
ELECTRICAL AND LIGHTING PLAN - 08

SHEET NUMBER

E-108

NOTES

1. REFER TO DRAWING E-001 FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS.
2. REFER TO DRAWING E-002 FOR THE ELECTRICAL AND LIGHTING KEY NOTES AND CIRCLE CALL-OUT IDENTIFICATION NUMBERS.



FEEDER SCHEDULE

CKT DESIGNATION	CONDUIT / CABLE
F1	2"C, 2#10, 1#10 (GND)
F19	2"C, 4#6 (CKT 2), 3#2/0 (24HR CKT 4 ØA, ØC), 1#2/0 (GND)
F20	2"C, 2#10 (CKT 2), 2#2/0 (24HR CKT 4 ØA), 1#2/0 (GND)
F21	2"C, 3#6 (CKT 2), 2#2/0 (24HR CKT 4 ØC), 1#2/0 (GND)
F22	2"C, 4#6 (CKT 2), 2#2/0 (24HR CKT 4 ØC), 1#2/0 (GND)
F23	2"C, 3#6 (CKT 2), 3#2/0 (24HR CKT 4 ØA, ØC), 1#2/0 (GND)
F24	2"C, 2#6 (CKT 2), 2#2/0 (24HR CKT 4 ØC), 1#2/0 (GND)

PROJECT

BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT

BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT

Stantec

SUB-CONSULTANTS:

GG ENGINEERING

Engineering and Land Surveying, P.C.

TROPHY POINT Construction Services & Consulting

REGISTRATION:

I/R	DATE	DESCRIPTION

ISSUES / REVISIONS

Project Status:	CONSTRUCTION DOCUMENTS
Date:	11/03/2025
Designed By:	A. BODNAR
Drawn By:	A. BODNAR
Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

SCALE:
1" = 20'

0 1
BAR IS ONE INCH ON UNREDUCED DRAWING

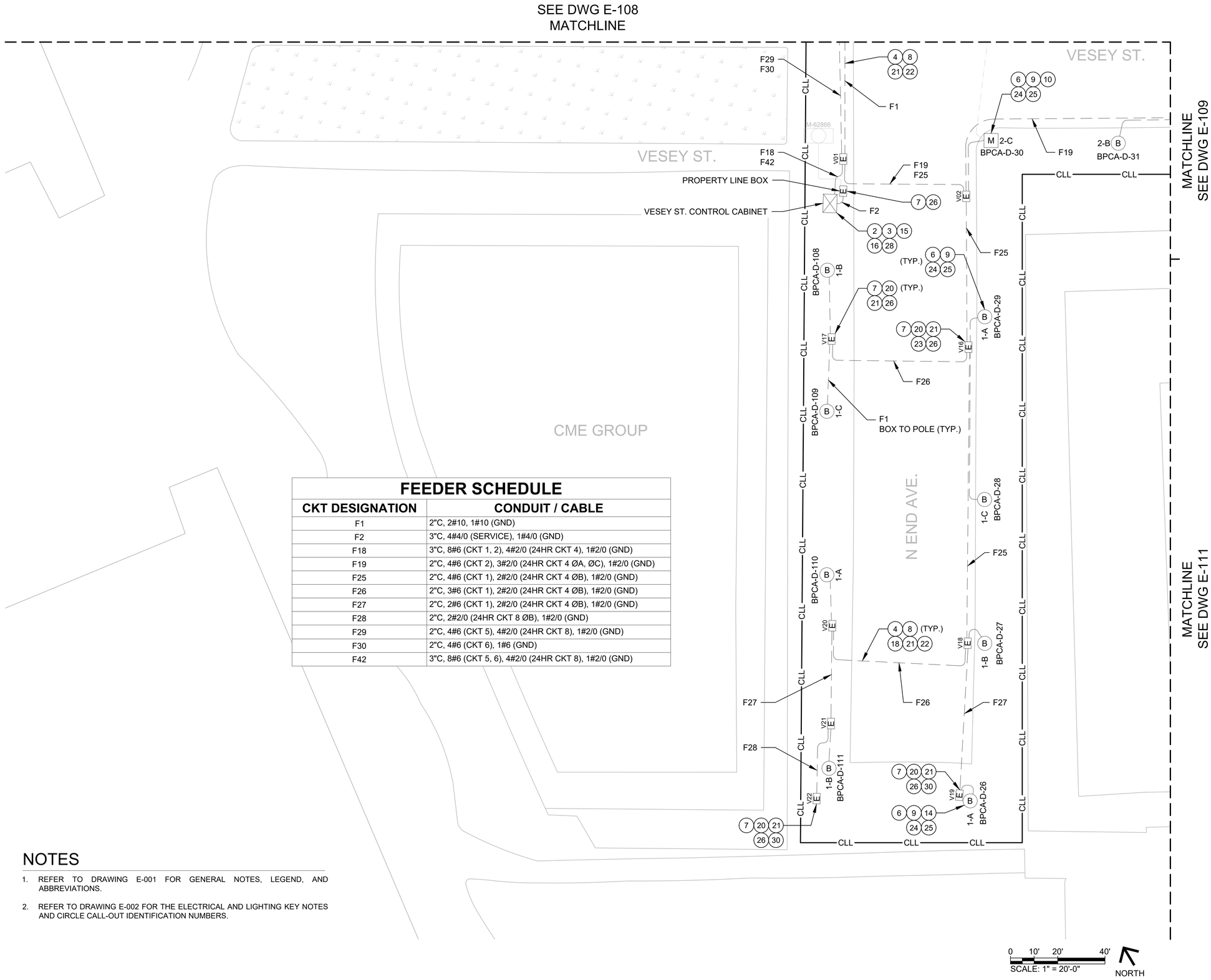
SHEET TITLE:

ELECTRICAL

ELECTRICAL AND LIGHTING PLAN - 09

SHEET NUMBER

E-109



FEEDER SCHEDULE

CKT DESIGNATION	CONDUIT / CABLE
F1	2"C, 2#10, 1#10 (GND)
F2	3"C, 4#4/0 (SERVICE), 1#4/0 (GND)
F18	3"C, 8#6 (CKT 1, 2), 4#2/0 (24HR CKT 4), 1#2/0 (GND)
F19	2"C, 4#6 (CKT 2), 3#2/0 (24HR CKT 4 ØA, ØC), 1#2/0 (GND)
F25	2"C, 4#6 (CKT 1), 2#2/0 (24HR CKT 4 ØB), 1#2/0 (GND)
F26	2"C, 3#6 (CKT 1), 2#2/0 (24HR CKT 4 ØB), 1#2/0 (GND)
F27	2"C, 2#6 (CKT 1), 2#2/0 (24HR CKT 4 ØB), 1#2/0 (GND)
F28	2"C, 2#2/0 (24HR CKT 8 ØB), 1#2/0 (GND)
F29	2"C, 4#6 (CKT 5), 4#2/0 (24HR CKT 8), 1#2/0 (GND)
F30	2"C, 4#6 (CKT 6), 1#6 (GND)
F42	3"C, 8#6 (CKT 5, 6), 4#2/0 (24HR CKT 8), 1#2/0 (GND)

NOTES

1. REFER TO DRAWING E-001 FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS.
2. REFER TO DRAWING E-002 FOR THE ELECTRICAL AND LIGHTING KEY NOTES AND CIRCLE CALL-OUT IDENTIFICATION NUMBERS.

PROJECT

BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT

BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT

Stantec

SUB-CONSULTANTS:

GG ENGINEERING

Engineering and Land Surveying, P.C.

TROPHY POINT Construction Services & Consulting

REGISTRATION:

I/R	DATE	DESCRIPTION

ISSUES / REVISIONS

Project Status:	CONSTRUCTION DOCUMENTS
Date:	11/03/2025
Designed By:	A. BODNAR
Drawn By:	A. BODNAR
Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

SCALE: 1" = 20'

0 1 BAR IS ONE INCH ON UNREDUCED DRAWING

SHEET TITLE:

ELECTRICAL

ELECTRICAL AND LIGHTING PLAN - 10

SHEET NUMBER

E-110

SEE DWG E-109
MATCHLINE

STARBUCKS

BROOKFIELD PLACE

AMERICAN EXPRESS TOWER

SEE DWG E-110
MATCHLINE

NO WORK ON THIS SHEET

0 10' 20' 40'
SCALE: 1" = 20'-0"

NORTH

PROJECT

BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT

BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT

Stantec

SUB-CONSULTANTS:

GG ENGINEERING

K Engineering and Land Surveying, P.C.

TROPHY POINT Construction Services & Consulting

REGISTRATION:

I/R	DATE	DESCRIPTION

ISSUES / REVISIONS

Project Status:	CONSTRUCTION DOCUMENTS
Date:	11/03/2025
Designed By:	A. BODNAR
Drawn By:	A. BODNAR
Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

SCALE:
1" = 20'

0 1
BAR IS ONE INCH ON UNREDUCED DRAWING

SHEET TITLE:

ELECTRICAL

ELECTRICAL AND LIGHTING PLAN - 11

SHEET NUMBER

E-111

LIGHT POLE SCHEDULE

NO.	POLE ID NUMBER	NEW PHASE CKT	ELECTRICAL GRID	POLE TYPE	EXIST. LUMINAIRE (TO BE REMOVED)		PROPOSED LUMINAIRE (TO BE INSTALLED)	
					WATTAGE (W)	LAMP TYPE	WATTAGE (W)	LAMP TYPE, DISTRIBUTION
1	BPCA-D-26	1-A	VESEY	B	150	HID	58	LED, TYPE 2
2	BPCA-D-27	1-B	VESEY	B	150	HID	58	LED, TYPE 2
3	BPCA-D-28	1-C	VESEY	B	150	HID	58	LED, TYPE 2
4	BPCA-D-29	1-A	VESEY	B	150	HID	58	LED, TYPE 2
5	BPCA-D-30	2-C	VESEY	M	250	HID	97	LED, TYPE 4
6	BPCA-D-31	2-B	VESEY	B	150	HID	58	LED, TYPE 2
7	BPCA-D-32	2-C	VESEY	B	150	HID	58	LED, TYPE 2
8	BPCA-D-33	2-A	VESEY	B	150	HID	58	LED, TYPE 2
9	BPCA-D-34	2-B	VESEY	B	150	HID	58	LED, TYPE 2
10	BPCA-D-35	2-C	VESEY	B	150	HID	58	LED, TYPE 2
11	BPCA-D-36	2-B	VESEY	M	250	HID	97	LED, TYPE 4
12	BPCA-D-37	2-A	VESEY	B	150	HID	58	LED, TYPE 2
13	BPCA-D-38	2-B	VESEY	B	150	HID	58	LED, TYPE 2
14	BPCA-D-39	2-C	VESEY	B	150	HID	58	LED, TYPE 2
15	BPCA-D-40	2-A	VESEY	B	150	HID	58	LED, TYPE 2
16	BPCA-D-41	2-B	VESEY	B	150	HID	58	LED, TYPE 2
17	BPCA-D-42	2-C	VESEY	B	150	HID	58	LED, TYPE 2
18	BPCA-D-43	2-A	VESEY	B	150	HID	58	LED, TYPE 2
19	BPCA-D-44	2-C	VESEY	B	150	HID	58	LED, TYPE 2
20	BPCA-D-45	2-A	VESEY	M	250	HID	97	LED, TYPE 4
21	BPCA-D-46	2-C	VESEY	B	150	HID	58	LED, TYPE 2
22	BPCA-D-47	2-A	VESEY	B	150	HID	58	LED, TYPE 2
23	BPCA-D-48	2-B	VESEY	B	150	HID	58	LED, TYPE 2
24	BPCA-D-49	2-C	VESEY	B	150	HID	58	LED, TYPE 2
25	BPCA-D-50	2-A	VESEY	B	150	HID	58	LED, TYPE 2
26	BPCA-D-51	2-B	VESEY	M	250	HID	97	LED, TYPE 4
27	BPCA-D-52	5-A	VESEY	B	150	HID	58	LED, TYPE 2
28	BPCA-D-53	5-B	VESEY	B	150	HID	58	LED, TYPE 2
29	BPCA-D-54	5-C	VESEY	B	150	HID	58	LED, TYPE 2
30	BPCA-D-55	5-A	VESEY	B	150	HID	58	LED, TYPE 2
31	BPCA-D-56	5-B	VESEY	B	150	HID	58	LED, TYPE 2
32	BPCA-D-57	6-C	VESEY	B	150	HID	58	LED, TYPE 2
33	BPCA-D-58	6-B	VESEY	BC	250	HID	97	LED, TYPE 4
34	BPCA-D-59	6-A	VESEY	B	150	HID	58	LED, TYPE 2
35	BPCA-D-60	6-B	VESEY	B	150	HID	58	LED, TYPE 2
36	BPCA-D-61	6-C	VESEY	B	150	HID	58	LED, TYPE 2
37	BPCA-D-62	6-B	VESEY	M	250	HID	97	LED, TYPE 4
38	BPCA-D-63	6-A	VESEY	B	150	HID	58	LED, TYPE 2
39	BPCA-D-64	6-B	VESEY	B	150	HID	58	LED, TYPE 2
40	BPCA-D-65	6-C	VESEY	B	150	HID	58	LED, TYPE 2
41	BPCA-D-66	6-A	VESEY	B	150	HID	58	LED, TYPE 2
42	BPCA-D-67	6-B	VESEY	B	150	HID	58	LED, TYPE 2
43	BPCA-D-68	6-C	VESEY	B	150	HID	58	LED, TYPE 2
44	BPCA-D-69	6-A	VESEY	B	150	HID	58	LED, TYPE 2
45	BPCA-D-70	6-B	VESEY	B	150	HID	58	LED, TYPE 2
46	BPCA-D-71	6-C	VESEY	B	150	HID	58	LED, TYPE 2
47	BPCA-D-72	6-C	VESEY	BC	250	HID	97	LED, TYPE 4
48	BPCA-D-73	6-A	VESEY	B	150	HID	58	LED, TYPE 2
49	BPCA-D-74	6-B	VESEY	B	150	HID	58	LED, TYPE 2
50	BPCA-D-75	6-A	VESEY	B	150	HID	58	LED, TYPE 2

LIGHT POLE SCHEDULE

NO.	POLE ID NUMBER	NEW PHASE CKT	ELECTRICAL GRID	POLE TYPE	EXIST. LUMINAIRE (TO BE REMOVED)		PROPOSED LUMINAIRE (TO BE INSTALLED)	
					WATTAGE (W)	LAMP TYPE	WATTAGE (W)	LAMP TYPE, DISTRIBUTION
51	BPCA-D-76	6-C	VESEY	B	150	HID	58	LED, TYPE 2
52	BPCA-D-77	5-B	VESEY	B	150	HID	58	LED, TYPE 2
53	BPCA-D-78	5-C	VESEY	B	150	HID	58	LED, TYPE 2
54	BPCA-D-79	5-A	VESEY	B	150	HID	58	LED, TYPE 2
55	BPCA-D-80	5-B	VESEY	B	150	HID	58	LED, TYPE 2
56	BPCA-D-81	5-C	VESEY	B	150	HID	58	LED, TYPE 2
57	BPCA-D-82	5-A	VESEY	B	150	HID	58	LED, TYPE 2
58	BPCA-D-83	5-B	VESEY	B	150	HID	58	LED, TYPE 2
59	BPCA-D-84	5-C	VESEY	B	150	HID	58	LED, TYPE 2
60	BPCA-D-85	5-A	VESEY	B	150	HID	58	LED, TYPE 2
61	BPCA-D-86	5-B	VESEY	B	150	HID	58	LED, TYPE 2
62	BPCA-D-87	5-C	VESEY	B	150	HID	58	LED, TYPE 2
63	BPCA-D-88	5-A	VESEY	B	150	HID	58	LED, TYPE 2
64	BPCA-D-89	5-B	VESEY	B	150	HID	58	LED, TYPE 2
65	BPCA-D-90	5-A	VESEY	B	150	HID	58	LED, TYPE 2
66	BPCA-D-91	5-C	VESEY	B	150	HID	58	LED, TYPE 2
67	BPCA-D-92	5-B	VESEY	B	150	HID	58	LED, TYPE 2
68	BPCA-D-93	5-A	VESEY	BC	250	HID	97	LED, TYPE 4
69	BPCA-D-94	6-C	VESEY	B	150	HID	58	LED, TYPE 2
70	BPCA-D-95	6-B	VESEY	B	150	HID	58	LED, TYPE 2
71	BPCA-D-96	6-B	VESEY	BC	250	HID	97	LED, TYPE 4
72	BPCA-D-97	6-A	VESEY	B	150	HID	58	LED, TYPE 2
73	BPCA-D-98	6-C	VESEY	B	150	HID	58	LED, TYPE 2
74	BPCA-D-99	6-A	VESEY	B	150	HID	58	LED, TYPE 2
75	BPCA-D-100	6-B	VESEY	B	150	HID	58	LED, TYPE 2
76	BPCA-D-101	6-C	VESEY	B	150	HID	58	LED, TYPE 2
77	BPCA-D-102	6-A	VESEY	B	150	HID	58	LED, TYPE 2
78	BPCA-D-103	5-B	VESEY	B	150	HID	58	LED, TYPE 2
79	BPCA-D-104	5-C	VESEY	B	150	HID	58	LED, TYPE 2
80	BPCA-D-105	5-A	VESEY	M	250	HID	97	LED, TYPE 4
81	BPCA-D-106	5-C	VESEY	M	250	HID	97	LED, TYPE 4
82	BPCA-D-107	-	-	-	-	-	-	-
83	BPCA-D-108	1-B	VESEY	B	150	HID	58	LED, TYPE 2
84	BPCA-D-109	1-C	VESEY	B	150	HID	58	LED, TYPE 2
85	BPCA-D-110	1-A	VESEY	B	150	HID	58	LED, TYPE 2
86	BPCA-D-111	1-B	VESEY	B	150	HID	58	LED, TYPE 2

NOTES:

1. LIGHT POLES BPCA-D-01 TO BPCA-D-25 ARE NOT INCLUDED IN THE CONTRACT.
2. LIGHT POLE BPCA-D-107 CURRENTLY DOES NOT EXIST IN THE FIELD. ONLY A TRAFFIC SIGNAL SUPPORTED ON A WOODEN PYLON IS PRESENT.

PROJECT

BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT

BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT

Stantec

SUB-CONSULTANTS:

GG ENGINEERING

K Engineering and Land Surveying, P.C.

TROPHY POINT Construction Services & Consulting

REGISTRATION:

I/R	DATE	DESCRIPTION

ISSUES / REVISIONS

Project Status:	CONSTRUCTION DOCUMENTS
Date:	11/03/2025
Designed By:	A. BODNAR
Drawn By:	A. BODNAR
Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

SCALE: NO SCALE

0 1 BAR IS ONE INCH ON UNREDUCED DRAWING

SHEET TITLE:

ELECTRICAL

LIGHT POLE SCHEDULE - 01

SHEET NUMBER

E-401

LIGHT POLE SCHEDULE

NO.	POLE ID NUMBER	NEW PHASE CKT	ELECTRICAL GRID	POLE TYPE	EXIST. LUMINAIRE (TO BE REMOVED)		PROPOSED LUMINAIRE (TO BE INSTALLED)	
					WATTAGE (W)	LAMP TYPE	WATTAGE (W)	LAMP TYPE, DISTRIBUTION
1	BPCA-E-01	1-A	WARREN	B	150	HID	58	LED, TYPE 2
2	BPCA-E-02	1-B	WARREN	B	150	HID	58	LED, TYPE 2
3	BPCA-E-03	1-C	WARREN	B	150	HID	58	LED, TYPE 2
4	BPCA-E-04	1-A	WARREN	B	150	HID	58	LED, TYPE 2
5	BPCA-E-05	1-B	WARREN	B	150	HID	58	LED, TYPE 2
6	BPCA-E-06	1-C	WARREN	B	150	HID	58	LED, TYPE 2
7	BPCA-E-07	1-A	WARREN	B	150	HID	58	LED, TYPE 2
8	BPCA-E-08	1-B	WARREN	B	150	HID	58	LED, TYPE 2
9	BPCA-E-09	1-C	WARREN	B	150	HID	58	LED, TYPE 2
10	BPCA-E-10	1-A	WARREN	B	150	HID	58	LED, TYPE 2
11	BPCA-E-11	1-B	WARREN	B	150	HID	58	LED, TYPE 2
12	BPCA-E-12	1-C	WARREN	B	150	HID	58	LED, TYPE 2
13	BPCA-E-13	1-A	WARREN	B	150	HID	58	LED, TYPE 2
14	BPCA-E-14	1-B	WARREN	B	150	HID	58	LED, TYPE 2
15	BPCA-E-15	1-C	WARREN	B	150	HID	58	LED, TYPE 2
16	BPCA-E-16	1-A	WARREN	BC	250	HID	97	LED, TYPE 4
17	BPCA-E-17	5-C	WARREN	B	150	HID	58	LED, TYPE 2
18	BPCA-E-18	5-B	WARREN	B	150	HID	58	LED, TYPE 2
19	BPCA-E-19	5-C	WARREN	B	150	HID	58	LED, TYPE 2
20	BPCA-E-20	5-A	WARREN	BC	250	HID	97	LED, TYPE 4
21	BPCA-E-21	5-B	WARREN	BC	250	HID	97	LED, TYPE 4
22	BPCA-E-22	5-C	WARREN	BC	250	HID	97	LED, TYPE 4
23	BPCA-E-23	5-B	WARREN	BC	250	HID	97	LED, TYPE 4
24	BPCA-E-24	5-A	WARREN	B	150	HID	58	LED, TYPE 2
25	BPCA-E-25	5-B	WARREN	B	150	HID	58	LED, TYPE 2
26	BPCA-E-26	5-C	WARREN	B	150	HID	58	LED, TYPE 2
27	BPCA-E-27	5-A	WARREN	BC	250	HID	97	LED, TYPE 4
28	BPCA-E-28	5-C	WARREN	BC	250	HID	97	LED, TYPE 4
29	BPCA-E-29	5-A	WARREN	B	150	HID	58	LED, TYPE 2
30	BPCA-E-30	5-B	WARREN	B	150	HID	58	LED, TYPE 2
31	BPCA-E-31	5-A	WARREN	B	150	HID	58	LED, TYPE 2
32	BPCA-E-32	1-B	WARREN	BC	250	HID	97	LED, TYPE 4
33	BPCA-E-33	1-A	WARREN	B	150	HID	58	LED, TYPE 2
34	BPCA-E-34	1-C	WARREN	B	150	HID	58	LED, TYPE 2
35	BPCA-E-35	1-B	WARREN	B	150	HID	58	LED, TYPE 2
36	BPCA-E-36	1-A	WARREN	B	150	HID	58	LED, TYPE 2
37	BPCA-E-37	1-C	WARREN	BC	250	HID	97	LED, TYPE 4
38	BPCA-E-38	1-B	WARREN	B	150	HID	58	LED, TYPE 2
39	BPCA-E-39	1-A	WARREN	B	150	HID	58	LED, TYPE 2
40	BPCA-E-40	1-C	WARREN	B	150	HID	58	LED, TYPE 2
41	BPCA-E-41	1-B	WARREN	B	150	HID	58	LED, TYPE 2
42	BPCA-E-42	1-A	WARREN	B	150	HID	58	LED, TYPE 2
43	BPCA-E-43	1-C	WARREN	B	150	HID	58	LED, TYPE 2
44	BPCA-E-44	1-B	WARREN	B	150	HID	58	LED, TYPE 2
45	BPCA-E-45	1-A	WARREN	B	150	HID	58	LED, TYPE 2
46	BPCA-E-46	1-C	WARREN	B	150	HID	58	LED, TYPE 2
47	BPCA-E-47	2-A	WARREN	B	150	HID	58	LED, TYPE 2
48	BPCA-E-48	2-C	WARREN	B	150	HID	58	LED, TYPE 2
49	BPCA-E-49	2-B	WARREN	B	150	HID	58	LED, TYPE 2
50	BPCA-E-50	2-A	WARREN	B	150	HID	58	LED, TYPE 2
51	BPCA-E-51	2-C	WARREN	B	150	HID	58	LED, TYPE 2
52	BPCA-E-52	2-A	WARREN	B	150	HID	58	LED, TYPE 2
53	BPCA-E-53	5-A	WARREN	B	150	HID	58	LED, TYPE 2
54	BPCA-E-54	5-C	WARREN	B	150	HID	58	LED, TYPE 2
55	BPCA-E-55	5-B	WARREN	B	150	HID	58	LED, TYPE 2
56	BPCA-E-56	6-A	WARREN	B	150	HID	58	LED, TYPE 2
57	BPCA-E-57	6-B	WARREN	B	150	HID	58	LED, TYPE 2
58	BPCA-E-58	6-A	WARREN	B	150	HID	58	LED, TYPE 2
59	BPCA-E-59	6-C	WARREN	B	150	HID	58	LED, TYPE 2
60	BPCA-E-60	6-B	WARREN	B	150	HID	58	LED, TYPE 2

LIGHT POLE SCHEDULE

NO.	POLE ID NUMBER	NEW PHASE CKT	ELECTRICAL GRID	POLE TYPE	EXIST. LUMINAIRE (TO BE REMOVED)		PROPOSED LUMINAIRE (TO BE INSTALLED)	
					WATTAGE (W)	LAMP TYPE	WATTAGE (W)	LAMP TYPE, DISTRIBUTION
61	BPCA-E-61	6-A	WARREN	B	150	HID	58	LED, TYPE 2
62	BPCA-E-62	6-C	WARREN	B	150	HID	58	LED, TYPE 2
63	BPCA-E-63	6-B	WARREN	B	150	HID	58	LED, TYPE 2
64	BPCA-E-64	6-C	WARREN	B	150	HID	58	LED, TYPE 2
65	BPCA-E-65	6-A	WARREN	B	150	HID	58	LED, TYPE 2
66	BPCA-E-66	6-B	WARREN	B	150	HID	58	LED, TYPE 2
67	BPCA-E-67	6-A	WARREN	BC	250	HID	97	LED, TYPE 4
68	BPCA-E-68	6-C	WARREN	B	150	HID	58	LED, TYPE 2
69	BPCA-E-69	6-B	WARREN	B	150	HID	58	LED, TYPE 2
70	BPCA-E-70	6-A	WARREN	B	150	HID	58	LED, TYPE 2
71	BPCA-E-71	6-C	WARREN	B	150	HID	58	LED, TYPE 2
72	BPCA-E-72	6-B	WARREN	B	150	HID	58	LED, TYPE 2
73	BPCA-E-73	6-A	WARREN	B	150	HID	58	LED, TYPE 2
74	BPCA-E-74	6-C	WARREN	B	150	HID	58	LED, TYPE 2
75	BPCA-E-75	6-B	WARREN	B	150	HID	58	LED, TYPE 2
76	BPCA-E-76	6-A	WARREN	B	150	HID	58	LED, TYPE 2
77	BPCA-E-77	1-B	WARREN	B	150	HID	58	LED, TYPE 2
78	BPCA-E-78	1-C	WARREN	B	150	HID	58	LED, TYPE 2
79	BPCA-E-79	1-A	WARREN	B	150	HID	58	LED, TYPE 2
80	BPCA-E-80	1-B	WARREN	B	150	HID	58	LED, TYPE 2
81	BPCA-E-81	1-C	WARREN	B	150	HID	58	LED, TYPE 2
82	BPCA-E-82	1-A	WARREN	B	150	HID	58	LED, TYPE 2
83	BPCA-E-83	1-B	WARREN	B	150	HID	58	LED, TYPE 2
84	BPCA-E-84	1-C	WARREN	B	150	HID	58	LED, TYPE 2
85	BPCA-E-85	1-A	WARREN	B	150	HID	58	LED, TYPE 2
86	BPCA-E-86	1-B	WARREN	B	150	HID	58	LED, TYPE 2
87	BPCA-E-87	1-C	WARREN	B	150	HID	58	LED, TYPE 2
88	BPCA-E-88	5-C	WARREN	BC	250	HID	97	LED, TYPE 4
89	BPCA-E-89	5-C	WARREN	B	150	HID	58	LED, TYPE 2
90	BPCA-E-90	5-A	WARREN	B	150	HID	58	LED, TYPE 2
91	BPCA-E-91	5-B	WARREN	B	150	HID	58	LED, TYPE 2
92	BPCA-E-92	5-B	WARREN	PENCIL	9	LED	-	-
93	BPCA-E-93	5-C	WARREN	PENCIL	9	LED	-	-
94	BPCA-E-94	5-A	WARREN	PENCIL	9	LED	-	-
95	BPCA-E-95	5-B	WARREN	PENCIL	9	LED	-	-
96	BPCA-E-96	6-C	WARREN	PENCIL	9	LED	-	-
97	BPCA-E-97	6-A	WARREN	PENCIL	9	LED	-	-
98	BPCA-E-98	6-B	WARREN	PENCIL	9	LED	-	-
99	BPCA-E-99	6-C	WARREN	PENCIL	9	LED	-	-
100	BPCA-E-100	2-B	WARREN	PENCIL	9	LED	-	-
101	BPCA-E-101	2-A	WARREN	PENCIL	9	LED	-	-
102	BPCA-E-102	2-C	WARREN	PENCIL	9	LED	-	-
103	BPCA-E-103	2-B	WARREN	PENCIL	9	LED	-	-
104	BPCA-E-104	6-A	WARREN	PENCIL	9	LED	-	-
105	BPCA-E-105	6-B	WARREN	PENCIL	9	LED	-	-
106	BPCA-E-106	6-C	WARREN	PENCIL	9	LED	-	-
107	BPCA-E-107	6-A	WARREN	PENCIL	9	LED	-	-
108	BPCA-E-108	2-C	WARREN	BOLLARD	9	LED	-	-
109	BPCA-E-109	2-A	WARREN	BOLLARD	9	LED	-	-
110	BPCA-E-110	2-B	WARREN	BOLLARD	9	LED	-	-
111	BPCA-E-111	2-C	WARREN	BOLLARD	9	LED	-	-
112	BPCA-E-112	6-B	WARREN	BOLLARD	9	LED	-	-
113	BPCA-E-113	6-C	WARREN	BOLLARD	9	LED	-	-
114	BPCA-E-114	6-A	WARREN	BOLLARD	9	LED	-	-
115	BPCA-E-115	6-B	WARREN	BOLLARD	9	LED	-	-

NOTES:

1. LIGHT POLES BPCA-E-92 TO BPCA-E-115 WILL NOT HAVE THEIR LUMINAIRES REPLACED; EXISTING LIGHTS IN THESE POLES ARE LED.

PROJECT

BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT

BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT

Stantec

SUB-CONSULTANTS:

GG ENGINEERING

K Engineering and Land Surveying, P.C.

TROPHY POINT Construction Services & Consulting

REGISTRATION:

I/R	DATE	DESCRIPTION

ISSUES / REVISIONS

Project Status:	CONSTRUCTION DOCUMENTS
Date:	11/03/2025
Designed By:	A. BODNAR
Drawn By:	A. BODNAR
Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

SCALE: NO SCALE

0 1 BAR IS ONE INCH ON UNREDUCED DRAWING

SHEET TITLE:

ELECTRICAL

LIGHT POLE SCHEDULE - 02

SHEET NUMBER

E-402

VESEY GRID

PANEL DESIGNATION: VESEY GRID - ELECTRICAL CONTROL CABINET

LOCATION: BETWEEN VESEY STREET AND NORTH END AVENUE

VOLTAGE: 208Y/120VAC, 3-PHASE, 4-WIRE WITH SOLID NEUTRAL

MAIN DISCONNECT: 100AS / 100AF — **IAC-RMS: 200kAIC (subject to change)**

	LOAD DESCRIPTION	CKT LOAD (kVA)	FUSE RATING (A)	LOAD (kVA) A	LOAD (kVA) B	LOAD (kVA) C	FUSE RATING (A)	CKT LOAD (kVA)	LOAD DESCRIPTION	
FUSE BLOCK 1	CKT 1 - LTG	0.130	30	0.509			30	0.379	CKT 2 - LTG	FUSE BLOCK 2
	CKT 1 - LTG	0.130	30		0.586		30	0.456	CKT 2 - LTG	
	CKT 1 - LTG	0.086	30			0.509	30	0.422	CKT 2 - LTG	
FUSE BLOCK 3	CKT 3 - SPARE	0	30	0.732			30	0.732	CKT 4 - 24HR	FUSE BLOCK 4
	CKT 3 - SPARE	0	30		0		30	0	CKT 4 - 24HR	
	CKT 3 - SPARE	0	30			0	30	0	CKT 4 - 24HR	
FUSE BLOCK 5	CKT 5 - LTG	0.662	30	1.051			30	0.389	CKT 6 - LTG	FUSE BLOCK 6
	CKT 5 - LTG	0.389	30		1.051		30	0.662	CKT 6 - LTG	
	CKT 5 - LTG	0.422	30			0.931	30	0.509	CKT 6 - LTG	
FUSE BLOCK 7	CKT 7 - SPARE	0	30	0.336			30	0.336	CKT 8 - 24HR	FUSE BLOCK 8
	CKT 7 - SPARE	0	30		0.780		30	0.780	CKT 8 - 24HR	
	CKT 7 - SPARE	0	30			0	30	0	CKT 8 - 24HR	
TOTAL LOAD (kVA) / PHASE				2.628	2.417	1.440				
TOTAL LOAD (kVA)					6.485					
TOTAL AMPS (A) / PHASE				21.900	20.140	12.000				

WARREN GRID

PANEL DESIGNATION: WARREN GRID - ELECTRICAL CONTROL CABINET

LOCATION: BETWEEN WARREN STREET AND NORTH END AVENUE

VOLTAGE: 208Y/120VAC, 3-PHASE, 4-WIRE WITH SOLID NEUTRAL

MAIN DISCONNECT: 100AS / 100AF — **IAC-RMS: 200kAIC (subject to change)**

	LOAD DESCRIPTION	CKT LOAD (kVA)	FUSE RATING (A)	LOAD (kVA) A	LOAD (kVA) B	LOAD (kVA) C	FUSE RATING (A)	CKT LOAD (kVA)	LOAD DESCRIPTION	
FUSE BLOCK 1	CKT 1 - LTG	0.682	30	1.051			30	0.370	CKT 2 - LTG	FUSE BLOCK 2
	CKT 1 - LTG	0.682	30		1.085		30	0.403	CKT 2 - LTG	
	CKT 1 - LTG	0.682	30			1.128	30	0.446	CKT 2 - LTG	
FUSE BLOCK 3	CKT 3 - SPARE	0	30	0.756			30	0.756	CKT 4 - 24HR	FUSE BLOCK 4
	CKT 3 - SPARE	0	30		0		30	0	CKT 4 - 24HR	
	CKT 3 - SPARE	0	30			0	30	0	CKT 4 - 24HR	
FUSE BLOCK 5	CKT 5 - LTG	0.576	30	1.478			30	0.902	CKT 6 - LTG	FUSE BLOCK 6
	CKT 5 - LTG	0.696	30		1.478		30	0.782	CKT 6 - LTG	
	CKT 5 - LTG	0.696	30			1.435	30	0.739	CKT 6 - LTG	
FUSE BLOCK 7	CKT 7 - SPARE	0	30	0			30	0	CKT 8 - 24HR	FUSE BLOCK 8
	CKT 7 - SPARE	0	30		0		30	0	CKT 8 - 24HR	
	CKT 7 - SPARE	0	30			0	30	0	CKT 8 - 24HR	
TOTAL LOAD (kVA) / PHASE				3.286	2.563	2.563				
TOTAL LOAD (kVA)					8.412					
TOTAL AMPS (A) / PHASE				27.380	21.360	21.360				

PROJECT

BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT

BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT

Stantec

SUB-CONSULTANTS:

GG ENGINEERING

Engineering and Land Surveying, P.C.

TROPHY POINT Construction Services & Consulting

REGISTRATION:

I/R	DATE	DESCRIPTION

ISSUES / REVISIONS

Project Status:	CONSTRUCTION DOCUMENTS
Date:	11/03/2025
Designed By:	A. BODNAR
Drawn By:	A. BODNAR
Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

SCALE: NO SCALE

0 1 BAR IS ONE INCH ON UNREDUCED DRAWING

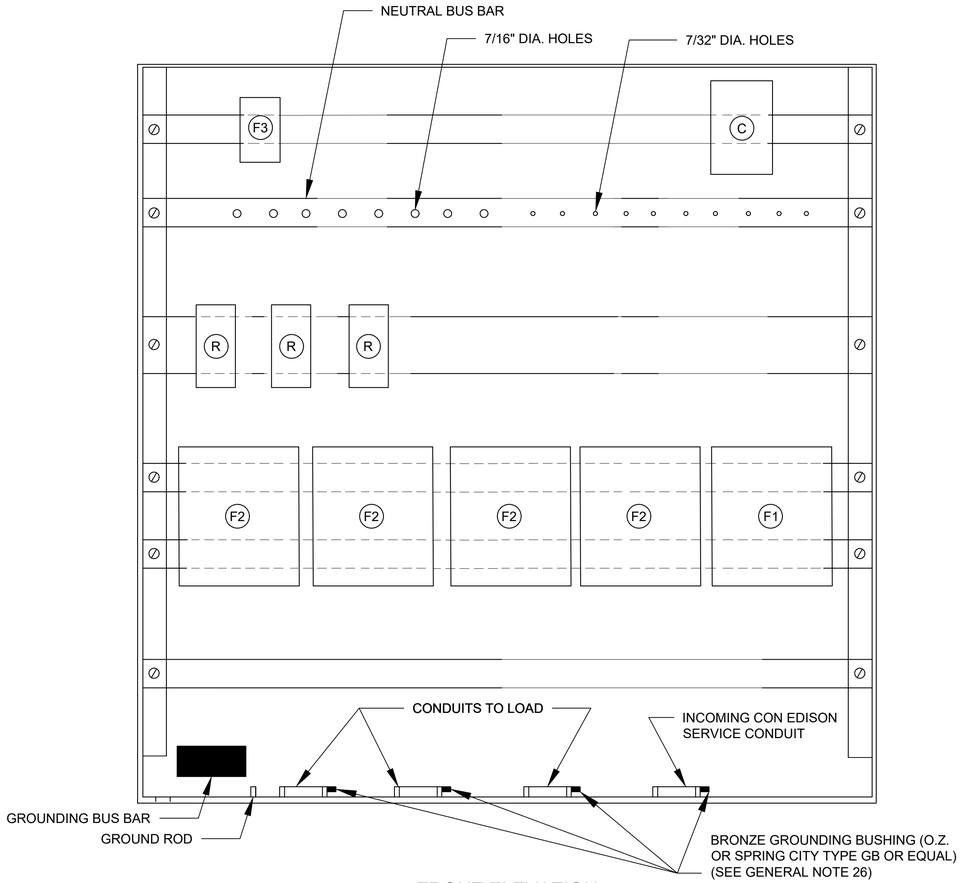
SHEET TITLE:

ELECTRICAL

ELECTRICAL CONTROL CABINET SCHEDULES

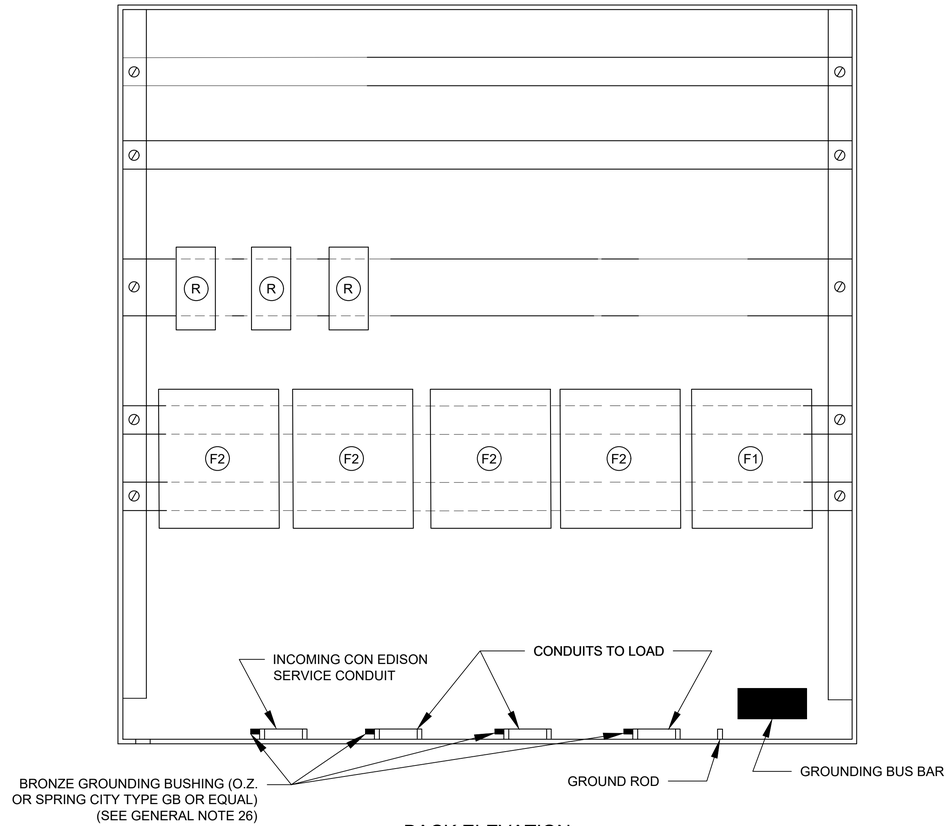
SHEET NUMBER

E-403



FRONT ELEVATION

N.T.S.



BACK ELEVATION

N.T.S.

ELECTRICAL EQUIPMENT TO BE FURNISHED AND INSTALLED

(CABINETS, BOXES, CONDUIT & WIRING NOT LISTED)

- (R) 120 VAC, 100 AMPS, SINGLE POLE NORMALLY OPENED MERCURY RELAY MDI CAT. NO. 100 NO-120A OR EQUAL.
- (F1) BOLTSWITCH PULLOUT SWITCH 100A, 600 VAC, CAT NO. PT363 OR EQUAL. CLASS T BUSSMAN 100A CURRENT LIMITING FAST ACTING FUSES, 600V, 200KAIC OR EQUAL.
- (F2) BOLTSWITCH PULLOUT SWITCH 30A, 600 VAC, CAT NO. PT361 OR EQUAL. CLASS T BUSSMAN 30A CURRENT LIMITING FAST ACTING FUSE, 600V, 200KAIC OR EQUAL.
- (F3) BUSSMAN 1 POLE 15A 250V FUSE BLOCK CAT. R250301 OR EQUAL. BUSSMAN 15A FAST ACTING FUSE CAT. NO. KTN-R-15 OR EQUAL.
- (P) LONG LIFE PHOTO ELECTRIC CONTROL WITH SURGE PROTECTOR OR EQUAL.
- (C) INTERMATIC 12 HOUR SPRING WOUND TIMER CAT. NO. FF312H OR EQUAL. CARLON TOGGLE SWITCH BACK BOX CAT. NO. B112HB OR EQUAL.

NOTES:

1. ONLY THE GENERAL ARRANGEMENT OF THE ELECTRICAL CONTROL CABINET'S INTERNAL EQUIPMENT IS SHOWN.

PROJECT

BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT

BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. | Battery Park City Authority

CONSULTANT

Stantec

SUB-CONSULTANTS:

GG ENGINEERING

K Engineering and Land Surveying, P.C.

TROPHY POINT Construction Services & Consulting

REGISTRATION:

I/R	DATE	DESCRIPTION

ISSUES / REVISIONS

Project Status:	CONSTRUCTION DOCUMENTS
Date:	11/03/2025
Designed By:	A. BODNAR
Drawn By:	A. BODNAR
Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

SCALE: N.T.S.

0 1 BAR IS ONE INCH ON UNREDUCED DRAWING

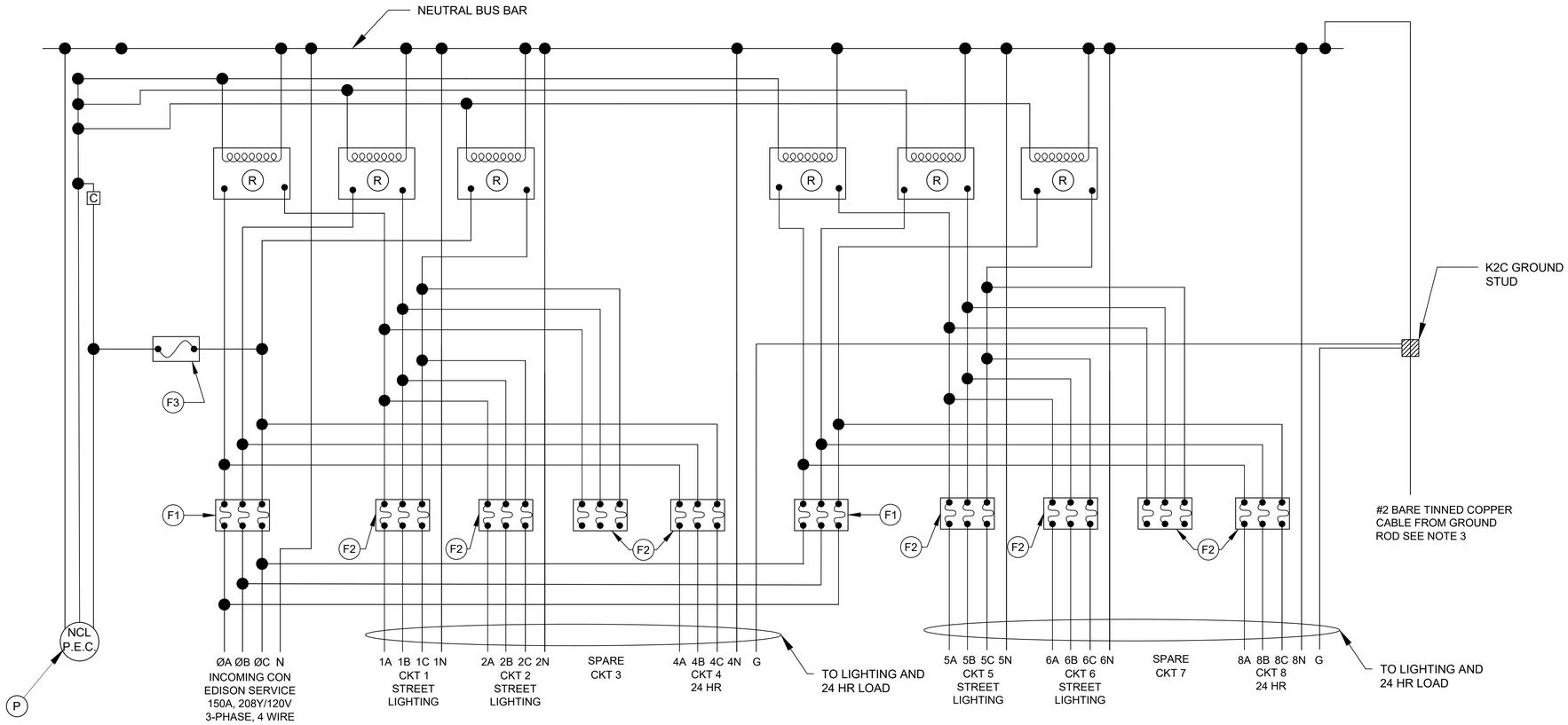
SHEET TITLE:

ELECTRICAL

CONTROL CABINET LAYOUT DETAIL

SHEET NUMBER

E-501



NOTES:

1. P.E.C.'S TO BE INSTALLED ON INSIDE OF CONTROL CABINET DOOR. ONE P.E.C. PER CONTROL CABINET SHALL CONTROL RELAYS FOR ALL LIGHTING CIRCUITS.
2. P.E.C.'S SHALL BE RATED FOR FULL WATTAGE USE IN CIRCUIT. IN CASE OF P.E.C. FAILURE, P.E.C. SHALL FAIL ON.
3. CONTRACTOR SHALL FURNISH AND INSTALL GROUNDING BUSHING AT SERVICE ENTRANCE TO CONTROL CABINET. FURNISH AND INSTALL GROUND WIRE AND BOND NEUTRAL TO CABINET.
4. NO. AND SIZE OF 24HRS WIRES SHALL CONFORM TO PLANS AND COULD BE OFF OF ANY PHASE. IF WIRES OF 24HR CIRCUITS ARE LARGER THAN LOAD CIRCUITS WIRES, THEN THE GROUNDING WIRE SHALL MATCH THE 24HR CIRCUIT CABLE SIZE.
5. PROVIDE AND UTILIZE A CONDUCTOR REDUCER TO #1/0 CONDUCTORS FOR THE CONNECTION TO THE BOLTSWITCH PULLOUT SWITCH.

ELECTRICAL EQUIPMENT TO BE FURNISHED AND INSTALLED

(CABINETS, BOXES, CONDUIT & WIRING NOT LISTED)

- (R) 120 VAC, 100 AMPS, SINGLE POLE NORMALLY OPENED MERCURY RELAY MDI CAT. NO. 100 NO-120A OR EQUAL.
- (F1) BOLTSWITCH PULLOUT SWITCH 100A, 600 VAC, CAT NO. PT363 OR EQUAL. CLASS T BUSSMAN 100A CURRENT LIMITING FAST ACTING FUSES, 600V, 200KAIC OR EQUAL.
- (F2) BOLTSWITCH PULLOUT SWITCH 30A, 600 VAC, CAT NO. PT361 OR EQUAL. CLASS T BUSSMAN 30A CURRENT LIMITING FAST ACTING FUSE, 600V, 200KAIC OR EQUAL.
- (F3) BUSSMAN 1 POLE 15A 250V FUSE BLOCK CAT. R250301 OR EQUAL. BUSSMAN 15A FAST ACTING FUSE CAT. NO. KTN-R-15 OR EQUAL.
- (P) LONG LIFE PHOTO ELECTRIC CONTROL WITH SURGE PROTECTOR OR EQUAL.
- (C) INTERMATIC 12 HOUR SPRING WOUND TIMER CAT. NO. FF312H OR EQUAL. CARLON TOGGLE SWITCH BACK BOX CAT. NO. B112HB OR EQUAL.

PROJECT

BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT

BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT

Stantec

SUB-CONSULTANTS:

GG ENGINEERING

K Engineering and Land Surveying, P.C.

TROPHY POINT Construction Services & Consulting

REGISTRATION:

I/R	DATE	DESCRIPTION

ISSUES / REVISIONS

Project Status:	CONSTRUCTION DOCUMENTS
Date:	11/03/2025
Designed By:	A. BODNAR
Drawn By:	A. BODNAR
Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

SCALE: N.T.S.

0 1 BAR IS ONE INCH ON UNREDUCED DRAWING

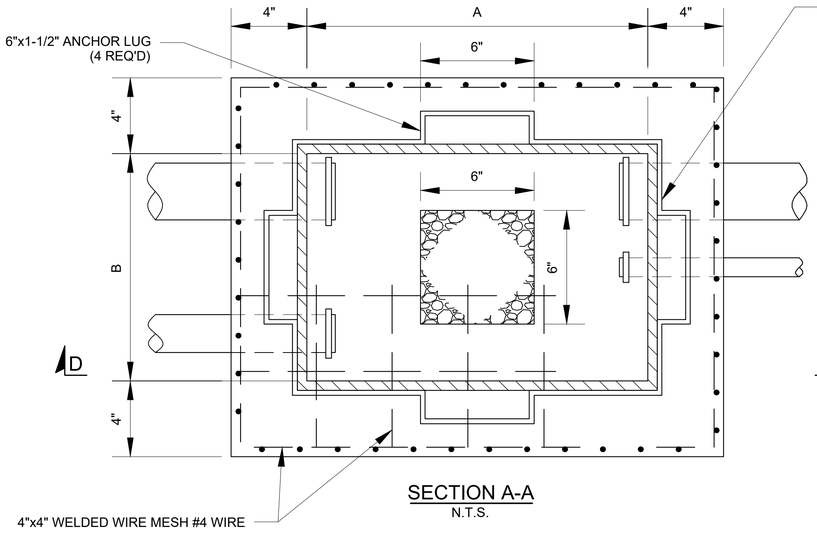
SHEET TITLE:

ELECTRICAL

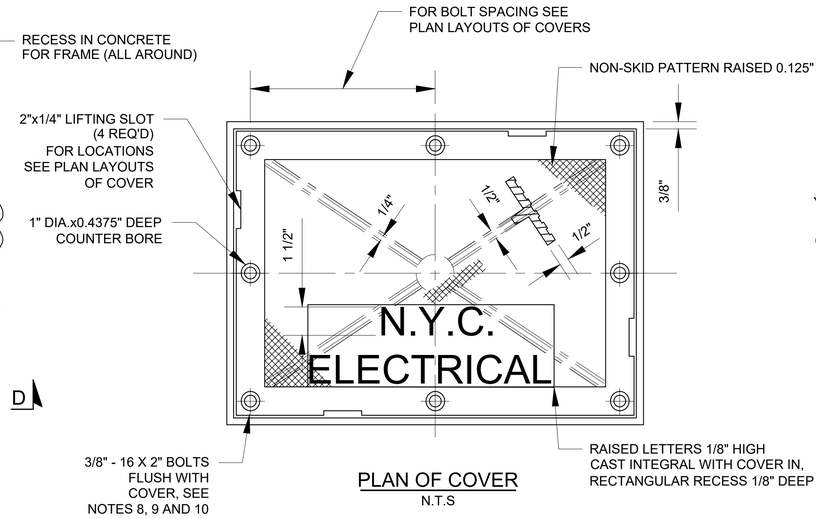
CONTROL CABINET WIRING DIAGRAM

SHEET NUMBER

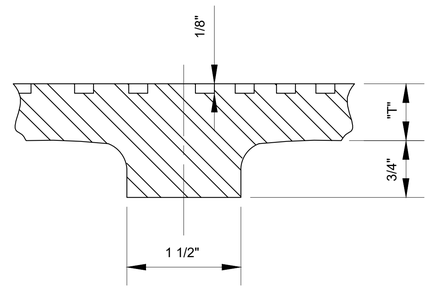
E-502



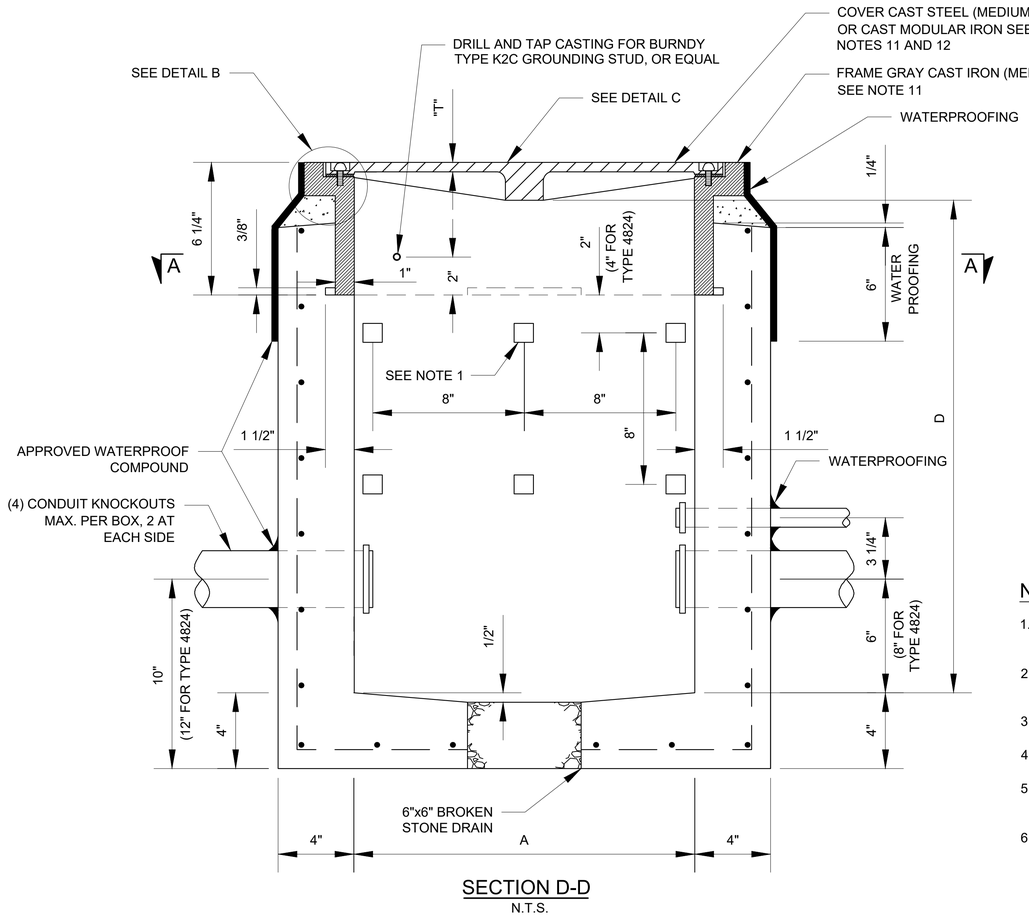
SECTION A-A
N.T.S.



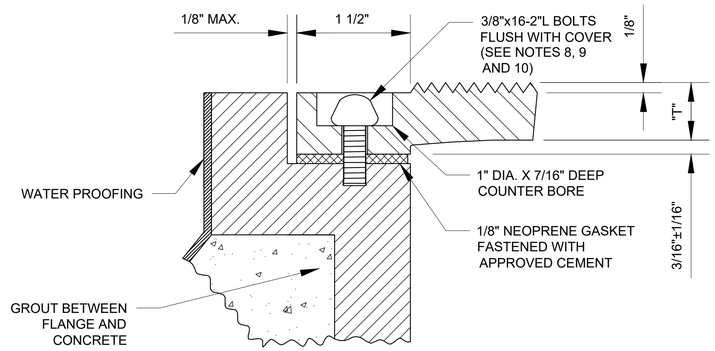
PLAN OF COVER
N.T.S



DETAIL C
N.T.S.



SECTION D-D
N.T.S.



DETAIL B
N.T.S.

NOTES:

1. INSERTS SHALL BE ON ALL 4 WALLS EVERY 8" OFF-CENTER STARTING CENTER LINE OF WALL.
2. CONDUITS TO RIDE FREELY THROUGH BOXES FOR ALLOWANCE OF EXPANSION AND CONTRACTION.
3. FOR SIZE AND NO. OF CONDUITS ENTERING BOX, SEE CONTRACT PLANS.
4. ALL NUTS, BOLTS, SCREWS, ETC. SHALL BE STAINLESS STEEL.
5. BOLTS SHALL BE EITHER MCGARD INC. PART NO. 127087, OR INNER TITE CORP. PART NO. TRS-01
6. FOR HIGHLY VANDALIZED AREAS AND IF ORDERED BY THE ENGINEER, A COMBINATION OF FOUR BOLTS FROM ONE TYPE AND THE REST FROM THE OTHER TYPE WILL BE REQUIRED.
7. INSTALLING AND REMOVING TAMPERPROOF BOLTS WILL REQUIRE WRITTEN AUTHORIZATION TO OBTAIN THE EXCLUSIVELY DESIGNED NEW YORK CITY KEY SYSTEM.
8. A HANGER SHALL BE PROVIDED FOR EACH STANCHION ARM HOLE.
9. MANUFACTURERS UNUSED KNOCKOUTS SHALL BE PLUGGED.
10. CONDUITS SHALL PROJECT INTO BOX BETWEEN 1" AND 2".
11. FOR DIMENSIONS A, B, D AND T, REFER TO TABLE ON DRAWING E-504.

PROJECT
BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

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BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. | Battery Park City Authority

CONSULTANT

Stantec

SUB-CONSULTANTS:

GG ENGINEERING

Engineering and Land Surveying, P.C.

TROPHY POINT Construction Services & Consulting

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Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

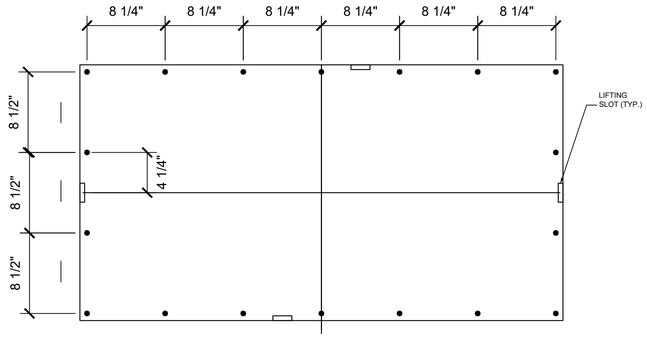
SCALE: N.T.S.

0 1 BAR IS ONE INCH ON UNREDUCED DRAWING

SHEET TITLE:
ELECTRICAL

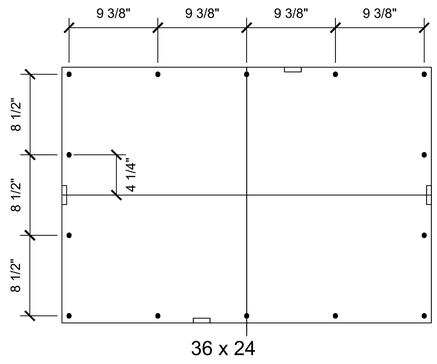
ROADWAY BOX DETAILS - 01

SHEET NUMBER
E-503

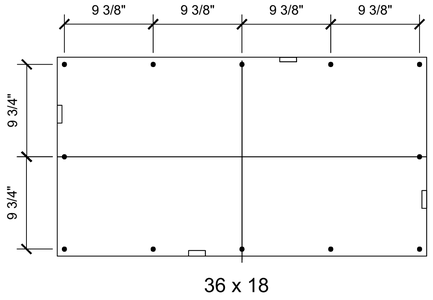


48 x 24

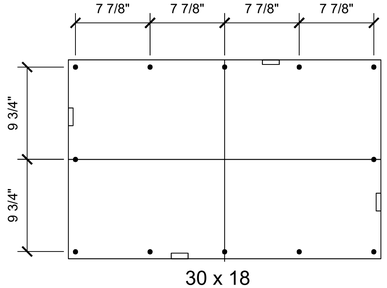
BOX NO.	TYPE	LENGTH A	WIDTH B	DEPTH D	CABLE SUPPORT DEVICES	"T"
1-R	1812	18"	12"	2'-2"	MANUFACTURED BY UNDERGROUND DEVICES OR APPROVED EQUAL	3/4"
2-R	2418	24"	18"	2'-2"		1"
3-R	3018	30"	18"	2'-2"		1"
4-R	3618	36"	18"	2'-2"		1"
5-R	3624	36"	24"	2'-2"		1 1/8"
6-R	4824	48"	24"	2'-6"		1 1/4"



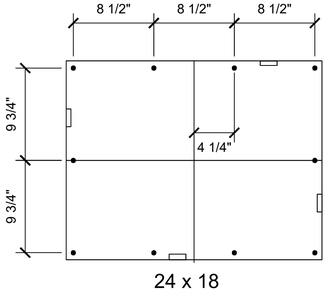
36 x 24



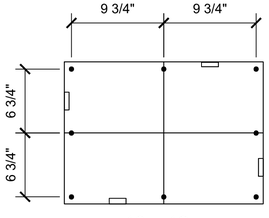
36 x 18



30 x 18



24 x 18



18 x 12

PLAN LAYOUTS OF COVERS SHOWING BOLT SPACING AND LIFTING SLOT LOCATION

NOTES:

1. ONLY ONE STANCHION IN CENTER OF EACH SIDE OF BOX FOR 24" x 18" BOX.
2. CONDUITS TO RIDE FREELY THROUGH BOXES FOR ALLOWANCE OF EXPANSION AND CONTRACTION.
3. FOR SIZE AND NUMBER OF CONDUITS ENTERING BOX, SEE CONTRACT PLANS.
4. ALL NUTS, BOLTS, SCREWS, ETC. SHALL BE STAINLESS STEEL. TYPE MCGARD INC. PART NO 117089, OR INNER TITLE CORP, PART NO. TRS-01.
5. A HANGER SHALL BE PROVIDED FOR EACH STANCHION ARM HOLE.
6. MANUFACTURER'S UNUSED KNOCKOUTS SHALL BE PLUGGED.
7. CONDUITS SHALL PROJECT INTO BOX BETWEEN 1" & 2".

PROJECT

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Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

SCALE: N.T.S.

0 1 BAR IS ONE INCH ON UNREDUCED DRAWING

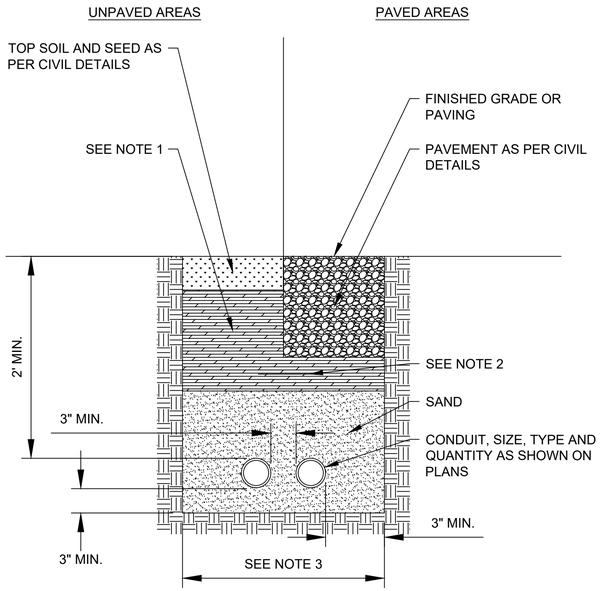
SHEET TITLE:

ELECTRICAL

ROADWAY BOX DETAILS - 02

SHEET NUMBER

E-504

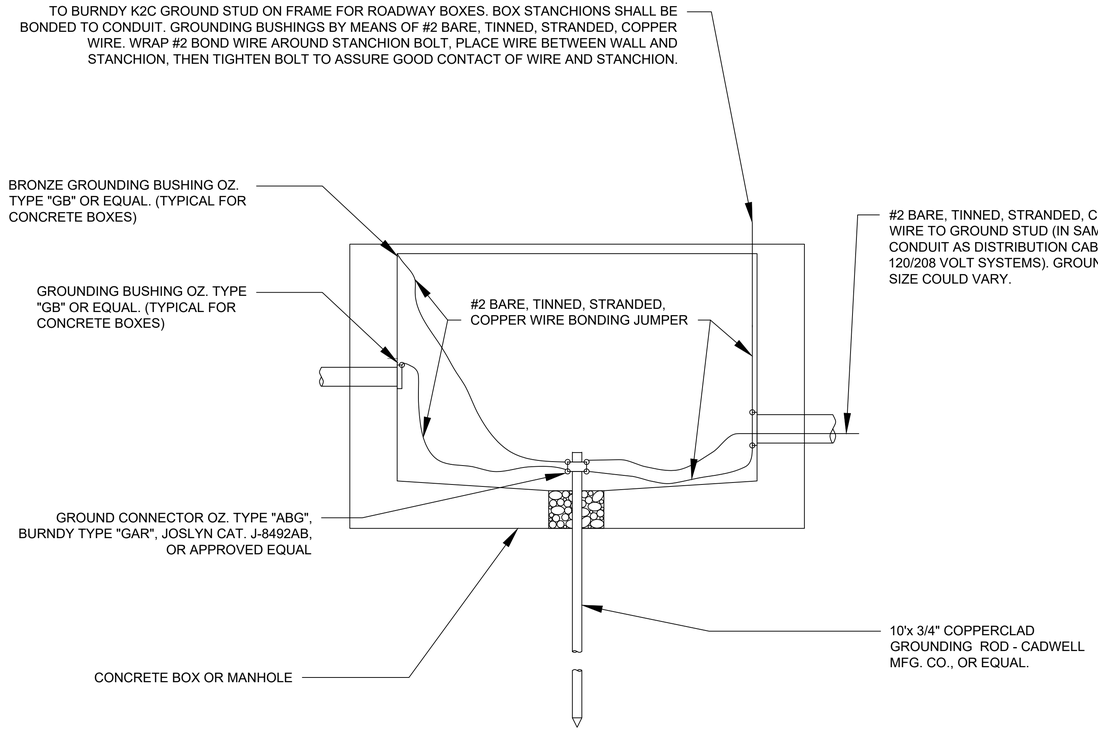


NOTES:

1. APPROVED COMPACTED BACKFILL (95% PROCTOR AS PER ASTM D1557 IN 6" LIFTS).
2. METALLIC TAPE BURIED 10" ABOVE CONDUITS. WHEN CONDUIT IS MORE THAN TWO ACROSS ADD A SECOND LINE OF TAPE.
3. TRENCH WIDTH SHALL BE 1' MINIMUM.
4. ELECTRICAL AND COMMUNICATIONS CONDUIT SHALL BE SEPARATED BY 1' MINIMUM.

CONDUIT TRENCH DETAIL

N.T.S.



NOTES:

1. CONTRACTOR SHALL ADD AN RFID NUMBER TO EACH BOX, USING 3M BALL MARKERS, "NO. 3M ID BALL MARKER 1428-XRID", OR APPROVED EQUAL. CONTRACTOR SHALL ADD SERIAL NUMBER FOR EACH RFID MARKER INSTALLED IN EACH BOX ON THE AS-BUILT PLANS.

ROADWAY BOX BONDING DETAIL

N.T.S.

PROJECT

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SCALE: N.T.S.

0 1 BAR IS ONE INCH ON UNREDUCED DRAWING

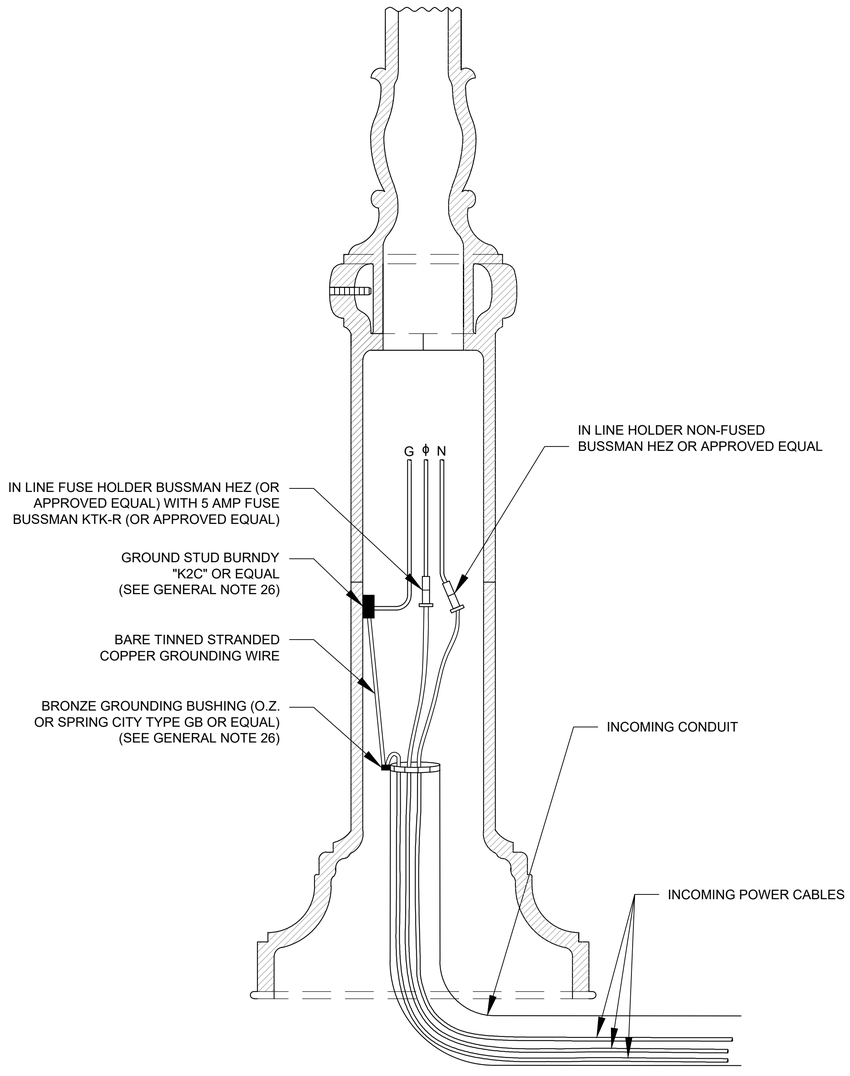
SHEET TITLE:

ELECTRICAL

TRENCH AND BONDING DETAIL

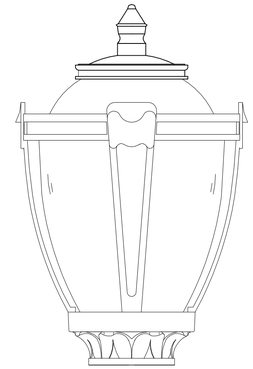
SHEET NUMBER

E-505



LAMPPOST FUSE AND GROUNDING DETAIL

N.T.S.

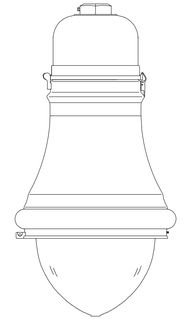


NOTES:

1. LUMINAIRE SHALL BE PER SENTRY SBP-OB-LEDV29B-1.05A-830-KHT2-BK.
2. LUMINAIRE FINISH SHALL BE BLACK.
3. LUMINAIRES ARE TO BE CONTROLLED VIA CENTRALIZED PHOTOCELL.

BATTERY PARK LUMINAIRE

N.T.S.



NOTES:

1. LUMINAIRE SHALL BE PER SENTRY SBC4-LEDV29B-1.75A-830-KHT4P3-BK.
2. LUMINAIRE FINISH SHALL BE BLACK.
3. LUMINAIRES ARE TO BE CONTROLLED VIA CENTRALIZED PHOTOCELL.

TEAR DROP LUMINAIRE

N.T.S.

PROJECT

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Drawn By:	A. BODNAR
Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

SCALE: N.T.S.

0 1 BAR IS ONE INCH ON UNREDUCED DRAWING

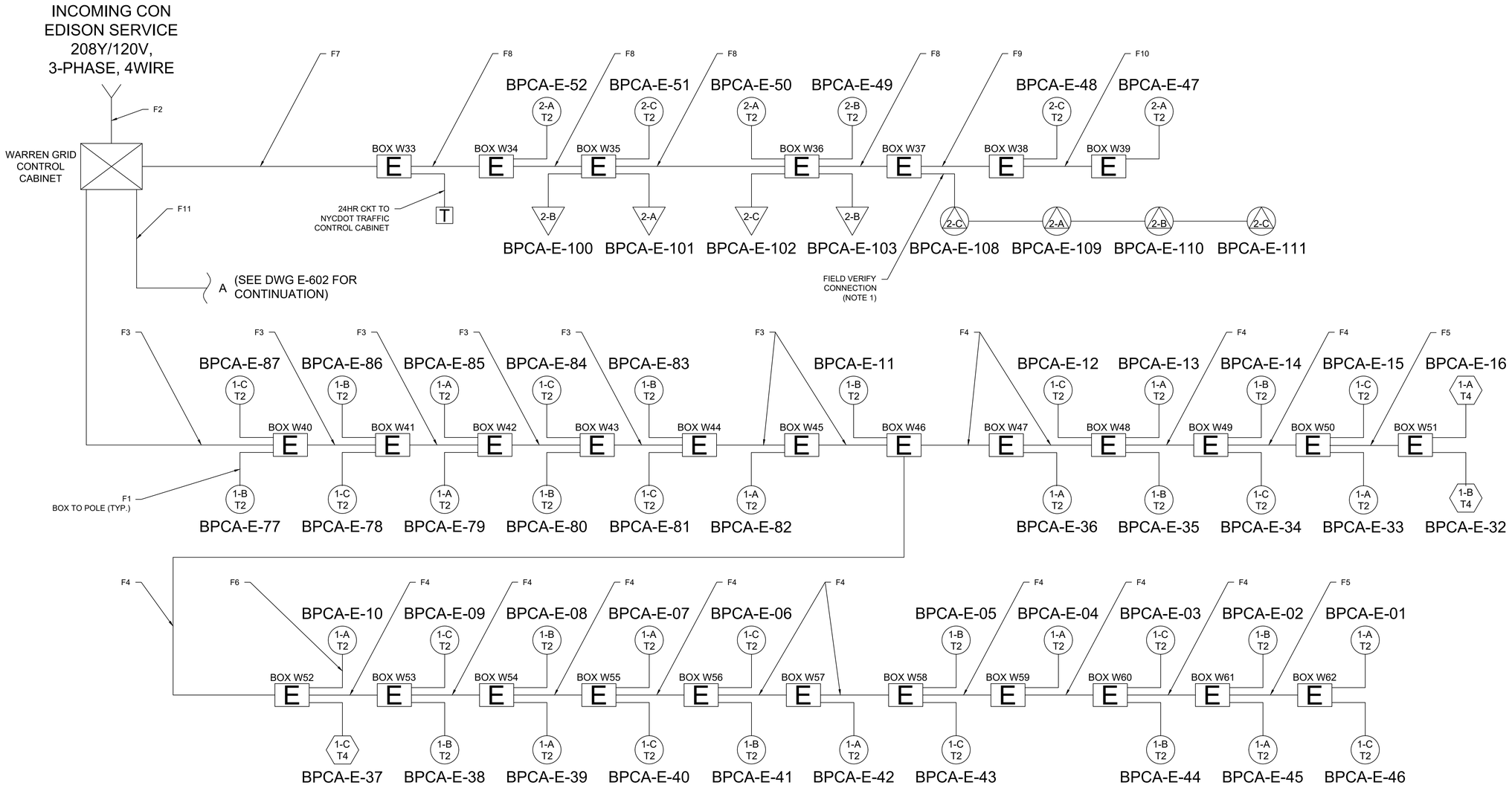
SHEET TITLE:

ELECTRICAL

FUSE, GROUNDING, AND LUMINAIRE DETAILS

SHEET NUMBER

E-506



1 SINGLE LINE DIAGRAM FOR WARREN GRID LIGHTING - 1
SCALE: N.T.S.

LIGHTING LEGEND

- E — ROADWAY BOX
- CONTROL CABINET
- T — NYCDOT TRAFFIC SIGNAL CONTROL CABINET
- XX / TX — TYPE B POLE (XX IS PHASE, TX IS DISTRIBUTION TYPE)
- XX / TX — TYPE BC POLE (XX IS PHASE, TX IS DISTRIBUTION TYPE)
- XX — BOLLARD LIGHT (XX IS PHASE)
- XX — PENCIL POLE (XX IS PHASE)

NOTES

1. CONNECTION IS ASSUMED, NO AS-BUILT OR SURVEY INFORMATION WAS AVAILABLE FOR CONNECTION. CONTRACTOR TO FIELD VERIFY THE CONDUIT ROUTE AND CONNECTIONS TO THE BOLLARD LIGHTS.

FEEDER SCHEDULE

CKT DESIGNATION	CONDUIT / CABLE	CKT DESIGNATION	CONDUIT / CABLE
F1	2"C, 2#10, 1#10 (GND)	F9	2"C, 3#6 (CKT 2), 2#2/0 (24HR CKT 4 ØC), 1#2/0 (GND)
F2	3"C, 4#4/0 (SERVICE), 1#4/0 (GND)	F10	2"C, 2#6 (CKT 2), 2#2/0 (24HR CKT 4 ØC), 1#2/0 (GND)
F3	3"C, 4#6 (CKT 1), 2#2/0 (24HR CKT 4 ØB), 1#2/0 (GND)	F11	3"C, 8#6 (CKT 5, 6), 4#2/0 (24HR CKT), 1#2/0 (GND)
F4	2"C, 4#6 (CKT 1), 2#2/0 (24HR CKT 4 ØB), 1#2/0 (GND)		
F5	2"C, 3#6 (CKT 1), 2#2/0 (24HR CKT 4 ØB), 1#2/0 (GND)		
F6	2"C, 2#10 (CKT 1), 2#2/0 (24HR CKT 4 ØB), 1#2/0 (GND)		
F7	2"C, 4#6 (CKT 2), 3#2/0 (24HR CKT 4 ØA, ØC), 1#2/0 (GND)		
F8	2"C, 4#6 (CKT 2), 2#2/0 (24HR CKT 4 ØC), 1#2/0 (GND)		

PROJECT
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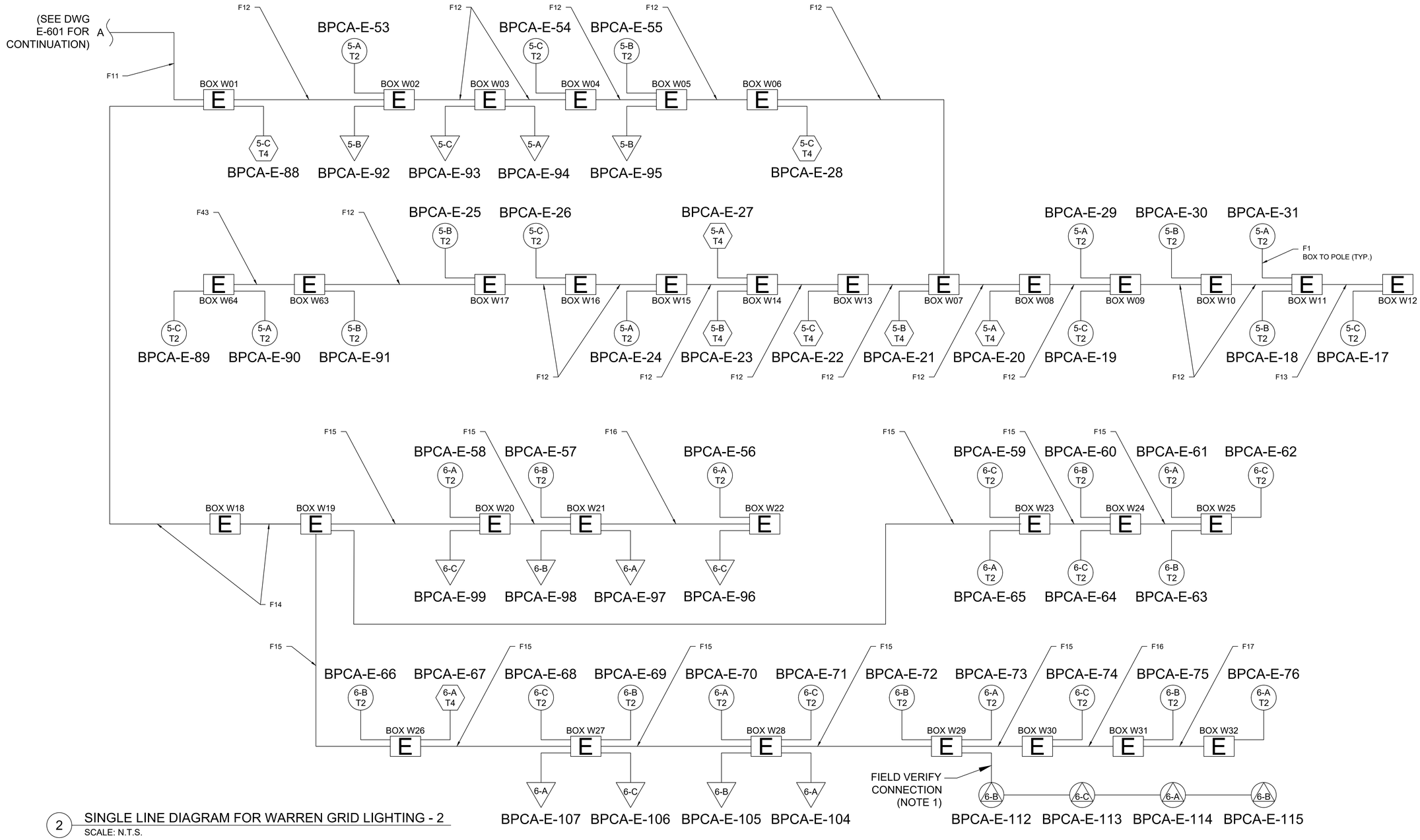
Contract Number: 25-3454

SCALE: N.T.S.
0 1 BAR IS ONE INCH ON UNREDUCED DRAWING

SHEET TITLE:
ELECTRICAL
LIGHTING SINGLE LINE DIAGRAM - 01

SHEET NUMBER
E-601



2 SINGLE LINE DIAGRAM FOR WARREN GRID LIGHTING - 2

SCALE: N.T.S.

LIGHTING LEGEND

- E — ROADWAY BOX
- CONTROL CABINET
- XX — PENCIL POLE (XX IS PHASE)
- XX TX — TYPE B POLE (XX IS PHASE, TX IS DISTRIBUTION TYPE)
- XX TX — TYPE BC POLE (XX IS PHASE, TX IS DISTRIBUTION TYPE)
- XX — BOLLARD LIGHT (XX IS PHASE)

NOTES

1. CONNECTION IS ASSUMED, NO AS-BUILT OR SURVEY INFORMATION WAS AVAILABLE FOR CONNECTION. CONTRACTOR TO VERIFY THE CONDUIT ROUTE AND CONNECTIONS TO THE BOLLARD LIGHTS.

FEEDER SCHEDULE

CKT DESIGNATION	CONDUIT / CABLE	CKT DESIGNATION	CONDUIT / CABLE
F1	2"C, 2#10, 1#10 (GND)	F43	2"C, 3#6 (CKT 5), 2#2/0 (24HR CKT 8 ØB), 1#2/0 (GND)
F11	3"C, 8#6 (CKT 5, 6), 4#2/0 (24HR CKT), 1#2/0 (GND)		
F12	2"C, 4#6 (CKT 5), 2#2/0 (24HR CKT 8 ØB), 1#2/0 (GND)		
F13	2"C, 2#6 (CKT 5), 2#2/0 (24HR CKT 8 ØB), 1#2/0 (GND)		
F14	3"C, 4#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)		
F15	2"C, 4#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)		
F16	2"C, 3#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)		
F17	2"C, 2#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)		

PROJECT

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NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT

Stantec

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Drawn By:	A. BODNAR
Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

SCALE: N.T.S.

0 1 BAR IS ONE INCH ON UNREDUCED DRAWING

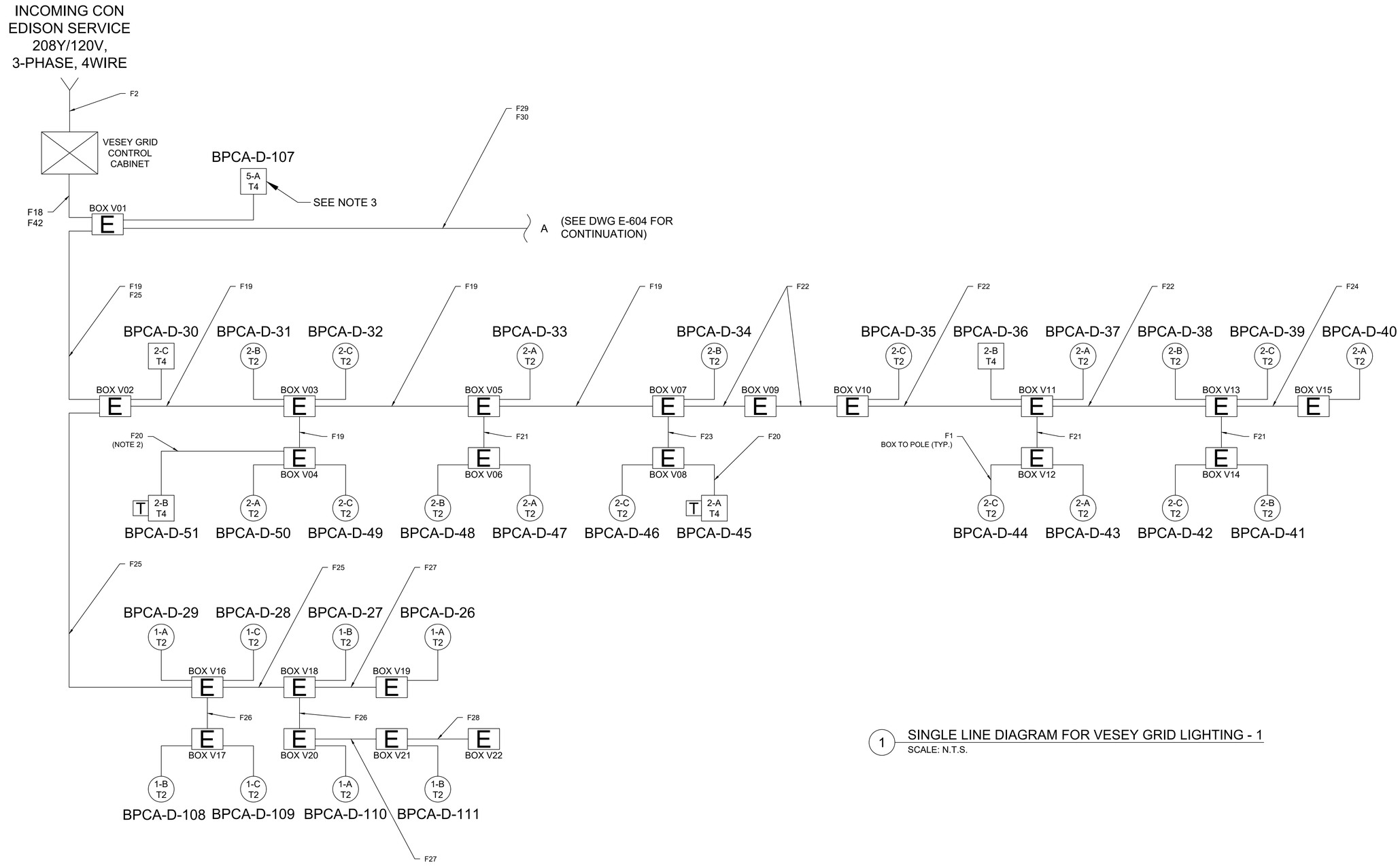
SHEET TITLE:

ELECTRICAL

LIGHTING SINGLE LINE DIAGRAM - 02

SHEET NUMBER

E-602



1 SINGLE LINE DIAGRAM FOR VESEY GRID LIGHTING - 1
SCALE: N.T.S.

LIGHTING LEGEND

- E — ROADWAY BOX
- CONTROL CABINET
- T — NYCDOT TRAFFIC SIGNAL CONTROL CABINET
- XX TX — TYPE B POLE (XX IS PHASE, TX IS DISTRIBUTION TYPE)
- XX TX — TYPE M POLE (XX IS PHASE, TX IS DISTRIBUTION TYPE)

NOTES

1. REFER TO DRAWING E-002 NOTE 29.
2. LIGHTING CIRCUIT BOX TO POLE (TYP.), 24HR CIRCUIT TO NYCDOT TRAFFIC CONTROL CABINET
3. LIGHT POLE BPCA-D-107 CURRENTLY DOES NOT EXIST IN THE FIELD. ONLY A TRAFFIC SIGNAL SUPPORTED ON A WOODEN PYLON IS PRESENT. SEE DRAWING E-002 NOTE 29.

FEEDER SCHEDULE

CKT DESIGNATION	CONDUIT / CABLE	CKT DESIGNATION	CONDUIT / CABLE
F1	2"C, 2#10, 1#10 (GND)	F24	2"C, 2#6 (CKT 2), 2#2/0 (24HR CKT 4 ØC), 1#2/0 (GND)
F2	3"C, 4#4/0 (SERVICE), 1#4/0 (GND)	F25	2"C, 4#6 (CKT 1), 2#2/0 (24HR CKT 4 ØB), 1#2/0 (GND)
F18	3"C, 8#6 (CKT 1, 2), 4#2/0 (24HR CKT 4), 1#2/0 (GND)	F26	2"C, 3#6 (CKT 1), 2#2/0 (24HR CKT 4 ØB), 1#2/0 (GND)
F19	2"C, 4#6 (CKT 2), 3#2/0 (24HR CKT 4 ØA, ØC), 1#2/0 (GND)	F27	2"C, 2#6 (CKT 1), 2#2/0 (24HR CKT 4 ØB), 1#2/0 (GND)
F20	2"C, 2#10 (CKT 2), 2#2/0 (24HR CKT 4 ØA), 1#2/0 (GND)	F28	2"C, 2#2/0 (24HR CKT 8 ØB), 1#2/0 (GND)
F21	2"C, 3#6 (CKT 2), 2#2/0 (24HR CKT 4 ØC), 1#2/0 (GND)	F29	2"C, 4#6 (CKT 5), 4#2/0 (24HR CKT 8), 1#2/0 (GND)
F22	2"C, 4#6 (CKT 2), 2#2/0 (24HR CKT 4 ØC), 1#2/0 (GND)	F30	2"C, 4#6 (CKT 6), 1#6 (GND)
F23	2"C, 3#6 (CKT 2), 3#2/0 (24HR CKT 4 ØA, ØC), 1#2/0 (GND)	F42	3"C, 8#6 (CKT 5, 6), 4#2/0 (24HR CKT 8), 1#2/0 (GND)

PROJECT
BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT
BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT
Stantec

SUB-CONSULTANTS:
GG ENGINEERING
Engineering and Land Surveying, P.C.
TROPHY POINT Construction Services & Consulting

REGISTRATION:

I/R	DATE	DESCRIPTION

ISSUES / REVISIONS

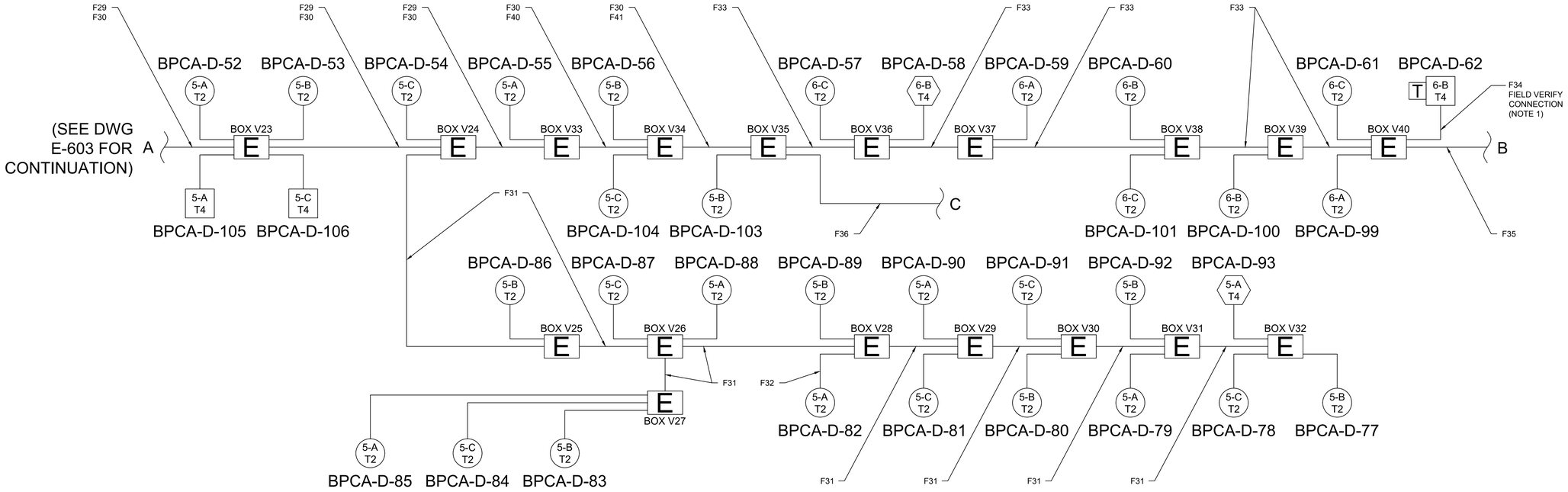
Project Status:	CONSTRUCTION DOCUMENTS
Date:	11/03/2025
Designed By:	A. BODNAR
Drawn By:	A. BODNAR
Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

SCALE: N.T.S.
0 1 BAR IS ONE INCH ON UNREDUCED DRAWING

SHEET TITLE:
ELECTRICAL
LIGHTING SINGLE LINE DIAGRAM - 03

SHEET NUMBER
E-603



2 SINGLE LINE DIAGRAM FOR VESEY GRID LIGHTING - 2

SCALE: N.T.S.

LIGHTING LEGEND

E	ROADWAY BOX	XX TX	TYPE B POLE (XX IS PHASE, TX IS DISTRIBUTION TYPE)
	CONTROL CABINET	XX TX	TYPE BC POLE (XX IS PHASE, TX IS DISTRIBUTION TYPE)
T	NYCDOT TRAFFIC SIGNAL CONTROL CABINET	XX TX	TYPE M POLE (XX IS PHASE, TX IS DISTRIBUTION TYPE)

NOTES

1. CONNECTION IS ASSUMED, NO AS-BUILT OR SURVEY INFORMATION WAS AVAILABLE FOR CONNECTION. CONTRACTOR TO FIELD VERIFY THE CONDUIT ROUTE AND CONNECTIONS TO THE LIGHT POLE AND TRAFFIC CONTROL.

FEEDER SCHEDULE

CKT DESIGNATION	CONDUIT / CABLE	CKT DESIGNATION	CONDUIT / CABLE
F1	2"C, 2#10, 1#10 (GND)	F36	2"C, 4#6 (CKT 6), 3#2/0 (24HR CKT 8 ØB, ØC), 1#2/0 (GND)
F29	2"C, 4#6 (CKT 5), 4#2/0 (24HR CKT 8), 1#2/0 (GND)	F37	2"C, 3#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)
F30	2"C, 4#6 (CKT 6), 1#6 (GND)	F38	2"C, 2#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)
F31	2"C, 4#6 (CKT 5), 2#2/0 (24HR CKT 8 ØB), 1#2/0 (GND)	F40	2"C, 3#6 (CKT 5), 4#2/0 (24HR CKT 8), 1#2/0 (GND)
F32	2"C, 2#10 (CKT 5), 2#2/0 (24HR CKT 8 ØB), 1#2/0 (GND)	F41	2"C, 2#6 (CKT 5), 4#2/0 (24HR CKT 8), 1#2/0 (GND)
F33	2"C, 4#6 (CKT 6), 3#2/0 (24HR CKT 8 ØA, ØC), 1#2/0 (GND)		
F34	2"C, 2#10 (CKT 6), 2#2/0 (24HR CKT 8 ØA), 1#2/0 (GND)		
F35	2"C, 4#6 (CKT 6), 2#2/0 (24HR CKT 8 ØC), 1#2/0 (GND)		

PROJECT

BATTERY PARK CITY NORTH GRID ELECTRICAL UPGRADES DESIGN SERVICES

CLIENT

BATTERY PARK CITY AUTHORITY

NEW YORK STATE OF OPPORTUNITY. Battery Park City Authority

CONSULTANT

Stantec

SUB-CONSULTANTS:

GG ENGINEERING

Engineering and Land Surveying, P.C.

TROPHY POINT Construction Services & Consulting

REGISTRATION:

I/R	DATE	DESCRIPTION

ISSUES / REVISIONS

Project Status:	CONSTRUCTION DOCUMENTS
Date:	11/03/2025
Designed By:	A. BODNAR
Drawn By:	A. BODNAR
Checked By:	L. LIANG, PE
Approved By:	D. BERGMAN, PE

Contract Number: 25-3454

SCALE: N.T.S.

0 1 BAR IS ONE INCH ON UNREDUCED DRAWING

SHEET TITLE:

ELECTRICAL

LIGHTING SINGLE LINE DIAGRAM - 04

SHEET NUMBER

E-604

EXHIBIT B
(Proposal Submission Packet)

I. PROPOSAL SUBMISSION CHECKLIST AND CONFIRMATION STATEMENT

[ ] The Proposer hereby certifies that they meet the Minimum Qualification Requirements as stated in Section IV.A of the RFP.

[ ] The Proposer hereby certifies that 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.

[ ] The Proposer hereby certifies that they have reviewed BPCA's form of contract that will be provided in a forthcoming addendum to the RFP, and either has no objections or has detailed their objections in an appendix to their Proposal.

[ ] The Proposer hereby certifies that they possess the experience, ability, resources and financial standing to perform the Services and shall, upon request by the Authority, provide documentation of such.

[ ] The Proposer hereby certifies that their Proposal submitted for BPCA North Grid Electric Upgrades includes the following required documents and forms, or that, where any required form or document may not be included, a written explanation has been provided for that omission:

1. Forms & Items included in this Exhibit:

[ ] This Checklist
[ ] Answers to "Information Required"
[ ] Vendor Responsibility Questionnaire / Certificate of No Change
[ ] Statement of Non-Collusion
[ ] Affirmation of Understanding of and Agreement Pursuant to State Finance Law §139-j(3) and §139-j(6)(b)
[ ] Certification of Compliance with New York State Finance Law §139-k(5)
[ ] Disclosure of Prior Non-Responsibility Determinations
[ ] Encouraging the Use of New York State Businesses Statement
[ ] Acknowledgement of Addenda Form
[ ] MWBE Utilization Plan
[ ] SDVOB Utilization Plan
[ ] Minority and Women Owned Business Enterprises And Equal Employment Opportunity Policy Statement
[ ] Diversity Practices Questionnaire
[ ] Executive Order 16 Certification

2. Additional Required Documents

[ ] Executive Summary
[ ] Copy of the Proposer's IRS W9 Form (https://www.irs.gov/pub/irs-pdf/fw9.pdf)
[ ] Copy of the Proposer's financial statements per section V.B.c.i
[ ] Copies of appendices listed in section V.B.c.iii

Name of Proposer:

Officer Name:

Officer Title:

_____
(Signature of Officer)

II. INFORMATION REQUIRED

The information requested in Sections A and B below is mandatory, and your Proposal shall be rejected as non-responsive if it does not contain responses to these questions. Answers may be written in the space provided, or included on separate pages, as part of the Proposal.

A. ***MINIMUM QUALIFICATIONS*** – Provide an itemized and brief narrative demonstrating how the Proposer meets each of the minimum qualifications requirements set forth in Section V(A) of the RFP. Any projects identified in the Minimum Qualifications section of the firm's proposal must include the project title, a brief description of the scope of work, start date, end date (if applicable), location, project owner, budget (construction cost).

_____
_____
_____

B. QUESTIONS AND INFORMATION SOUGHT RELATING TO THE WORK

Experience with Comparable Electrical Infrastructure Projects (45%)

1) Describe your firm's background, services, size, and history as these factors relate to the electrical infrastructure projects, including experience with upgrades to existing electrical grids, roadway lighting systems, conduit work, grounding, and coordination with public utilities (e.g., Con Edison) and City agencies.

_____
_____
_____

2) Please describe your experience performing comparable Electrical/Streetlighting upgrade projects, particularly those located within New York City and performed in compliance with NYC electrical and construction codes, standards, and permitting requirements.

_____
_____
_____

3) 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.

_____
_____
_____

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; (c) specific responsibilities under this contract. Include a brief summary of each individual's relevant experience on comparable electrical infrastructure projects.

_____
_____
_____

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. Describe their prior experience managing comparable NYC-based electrical infrastructure projects, including coordination with public agencies and utilities.

_____
_____
_____

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 subject to local permitting, inspection, and utility coordination requirements.

_____
_____
_____

8) Describe your proposed approach and methodology for performing the Work, including project management practices, quality control, safety measures, and coordination with BPCA, its subcontractors, and utility providers.

_____
_____
_____

Proposed Project Schedule and Work Sequencing plan (15%)

9) Provide a preliminary schedule and work sequencing plan identifying key milestones, anticipated durations for major activities, and strategies to minimize disruption to ongoing site operations and public use.

_____
_____
_____

10) Describe your firm's approach to schedule management, including methods for monitoring progress, addressing unforeseen conditions, and maintaining project delivery timelines.

_____
_____
_____

C. DIVERSITY QUESTIONNAIRE (10%) Complete and submit as part of your proposal package.

D. QUESTIONS AND INFORMATION SOUGHT RELATING TO PROPOSAL AND PROPOSER'S FIRM & ELIGIBILITY

11) 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.

12) Describe your firm's environmentally sustainable business practices or activities and how such practices may be brought to use in the performance of the Work.

13) 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.

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

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

16) 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.

17) 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.

18) List any professional or personal relationships your firm's Executives s may have with BPCA's Board Members and/or employees. A list of which is attached as Exhibit D.

19) 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.

20) 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.

III. VENDOR RESPONSIBILITY QUESTIONNAIRE

A. Instructions:

The Standard Vendor Responsibility Form should be filled out by someone in your firm who knows about tax filings, prior findings of non-responsibility by a governmental authority, etc., and can certify the accuracy of all information requested in the form (such as legal status, tax status, and debarment status).

You must answer every question on the questionnaire.

NOTE: You may fill out the "Certificate of No Change" form instead ONLY if your firm has submitted the Vendor Responsibility form to Battery Park City Authority already during this calendar year. If this is the first time your firm is proposing to do work for Battery Park City Authority this year, then you must fill out the entire Vendor Responsibility Questionnaire.

B. Standard Vendor Responsibility Questionnaire

a. Legal Business Name:	
b. Federal Employer Id No. (FEIN):	
c. D/B/A – Doing Business As (if applicable): County Filed:	
d. Website Address (If Applicable)	
e. Principal Place of Business	Address:
f. Telephone:	
g. Fax (If Applicable):	
h. Authorized Contact for this Questionnaire:	i. Name: ii. Title: iii. Telephone: iv. Email:
i. Type Of Business (please check appropriate box and provide additional information)	☐ Corporation (Sole Proprietor). State of Incorporation: ☐ Corporation (General Partnership). State of Incorporation: ☐ Corporation (Not-For-Profit). Charities Registration Number: ☐Corporation (Limited Liability Company/LLC). Jurisdiction Filed In: ☐Corporation (Limited Partnership). State/County filed in: ☐ Individual ☐ Other – Specify:
j. If not incorporated or formed in New York State, please provide a current Certificate of Good	

Standing from your state or applicable local jurisdiction.	
k. List the name and title of each principal owner, officer, major stockholder (10% or more of the voting shares for publicly traded companies, 25% or more of the shares for all other companies), director, and member, as applicable:	
l. Authorized Contact for the Proposed Contract:	i.Name: ii.Title: iii.Telephone: iv.Email:

Vendor Name:		Vendor FEIN:	

C. Does the vendor use, or has it used in the past five (5) years, any other business name, FEIN, or D/B/A other than what is listed in question a-c above? If yes, please provide the name(s), FEIN(s), and D/B/A(s) and the address for each such company and D/B/A on a separate page and attach to this response.	Yes ☐ No☐
D. Within the past five (5) years, has the vendor, any principal, owner, officer, major stockholder (10% or more of the voting shares for publicly traded companies, 25% or more of the shares for all other companies), affiliate[1] or any person involved in the bidding, contracting or leasing process been the subject of any of the following:	
a. a judgment or conviction for any business related conduct constituting a crime under federal, state or local government law including, but not limited to, fraud, extortion, bribery, racketeering, price-fixing or bid collusion or any crime related to truthfulness and/or business conduct?	Yes ☐ No☐
b. a criminal investigation or indictment for any business related conduct constituting a crime under federal, state or local government law including, but not limited to, fraud, extortion, bribery, racketeering, price-fixing or bid collusion or any crime related to truthfulness and/or business conduct?	Yes ☐ No☐
c. an unsatisfied judgment, injunction or lien for any business related conduct obtained by any federal, state or local government agency including, but not limited to, judgments based on taxes owed and fines and penalties assessed by any federal, state or local government agency?	Yes ☐ No☐
d. an investigation for a civil or criminal violation for any business related conduct by any federal, state or local agency?	Yes ☐ No☐
e. a grant of immunity for any business-related conduct constituting a crime under federal, state or local governmental law including, but not limited to, fraud, extortion, bribery, racketeering, price-fixing, bid collusion or any crime related to truthfulness and/or business conduct?	Yes ☐ No☐

[1]"Affiliate" meaning: (a) any entity in which the vendor owns more than 50% of the voting stock; (b) any individual, entity or group of principal owners or officers who own more than 50% of the voting stock of the vendor; or (c) any entity whose voting stock is more than 50% owned by the same individual, entity or group described in clause (b). In addition, if a vendor owns less than 50% of the voting stock of another entity, but directs or has the right to direct such entity's daily operations, that entity will be an "affiliate" for purposes of this questionnaire.

f.	a federal, state or local government suspension or debarment from the contracting process?	Yes ☐ No☐
g.	a federal, state or local government contract suspension or termination for cause prior to the completion of the term of a contract?	Yes ☐ No☐
h.	a federal, state or local government denial of a lease or contract award for non-responsibility?	Yes ☐ No☐
i.	an administrative proceeding or civil action seeking specific performance or restitution in connection with any federal, state or local contract or lease?	Yes ☐ No☐
j.	a federal, state or local determination of a willful violation of any public works or labor law or regulation?	Yes ☐ No☐
k.	a sanction imposed as a result of judicial or administrative proceedings relative to any business or professional license?	Yes ☐ No☐
l.	a consent order with the New York State Department of Environmental Conservation, or a federal, state or local government enforcement determination involving a violation of federal, state or local environmental laws?	Yes ☐ No☐
m.	an Occupational Safety and Health Act citation and Notification of Penalty containing a violation classified as serious or willful?	Yes ☐ No☐
n.	a rejection of a bid on a New York State contract or a lease with the State for failure to comply with the MacBride Fair Employment Principles?	Yes ☐ No☐
o.	a citation, violation order, pending administrative hearing or proceeding or determination issued by a federal, state or local government for violations of:	
	i. health laws, rules or regulations	Yes ☐ No☐
	ii. unemployment insurance or workers' compensation coverage or claim requirements	Yes ☐ No☐
	iii. ERISA (Employee Retirement Income Security Act)	Yes ☐ No☐
	iv. human rights laws	Yes ☐ No☐
	v. federal U.S. Citizenship and Immigration Services laws	Yes ☐ No☐
	vi. Sherman Act or other federal anti-trust laws	Yes ☐ No☐

p.	entered into an agreement to a voluntary exclusion from contracting with a federal, state or local governmental entity?	Yes ☐ No☐
q.	a denial, decertification, revocation or forfeiture of Women's Business Enterprise, Minority Business Enterprise or Disadvantaged Business Enterprise status?	Yes ☐ No☐
r.	a rejection of a low bid on a federal, state or local contract for failure to meet statutory affirmative action or Minority or Women's Business Enterprise or Disadvantaged Business Enterprise status requirements on a previously held contract?	Yes ☐ No☐
s.	a finding of non-responsibility by an agency or authority due to a violation of State Finance Law §139-j?	Yes ☐ No☐

For each YES answer to questions D.a-s above, provide details on additional pages regarding the finding, including but not limited to cause, current status, resolution, etc.

Vendor Name:		Vendor FEIN:	

E. During the past three (3) years has the vendor failed to:	
a. File returns or pay any applicable federal, state or local government taxes? If yes, identify the taxing jurisdiction, type of tax, liability year(s) and tax liability amount the company failed to file/pay and the current status of the liability.	Yes ☐ No☐
b. File returns or pay New York State Unemployment Insurance? If yes, indicate the years the company failed to file/pay the insurance and the current status of the liability.	Yes ☐ No☐
F. Have any bankruptcy proceedings been initiated by or against the vendor or its affiliates within the past seven (7) years (whether or not closed) or is any bankruptcy proceeding pending by or against the vendor or its affiliates, regardless of the date of filing? If yes, indicate if this is applicable to the submitting vendor or one of its affiliates: If it is an affiliate, include the affiliate's name and FEIN: Provide the court name, address and docket number: Indicate if the proceedings have been initiated, remain pending or have been closed: If closed, provide the date closed:	Yes ☐ No☐
G. Does the vendor have the financial resources necessary to fulfil the requirements of the proposed contract?	Yes ☐ No☐

Vendor Name:		Vendor FEIN:	

H. Certification:

State of:)

) ss:

County of:)

CERTIFICATION:

The undersigned, personally and on behalf of the vendor identified in questions B.a-c above, does hereby state and certify to Battery Park City Authority – State of New York that the information given above is true, accurate and complete. It is further acknowledged that Battery Park City Authority – State of New York will rely upon the information contained herein and in any attached pages for purposes of evaluating our company for vendor's responsibility for contract award and Battery Park City Authority – State of New York may, in its discretion, by means which it may choose, verify the truth and accuracy of all statements made herein. It is further acknowledged that intentional submission of false or misleading information may constitute a felony under Penal Law Section 175.35 or may constitute a misdemeanor under Penal Law Sections 175.30, or 210.45, and may also be punishable by a fine and/or imprisonment of up to five years under 18 USC Section 1001 and may result in a denial of contract award or contract termination.

Name of Business:

Address:

City, State, Zip:

Officer Name:

Officer Title:

_____

Signature of Officer

IV. CERTIFICATE OF NO CHANGE FORM

NOTE: You may fill out the "Certificate of No Change" form instead ONLY if your firm has submitted the Vendor Responsibility form to Battery Park City Authority already during this calendar year. If this is the first time your firm is proposing to do work for Battery Park City Authority this year, then you must fill out the entire Vendor Responsibility Questionnaire.

CERTIFICATE OF NO CHANGE

STATE OF ( )

COUNTY OF) ss.:

The undersigned, being duly sworn, deposes and says:

1. I am_____, the_____ (title) of _____ (hereinafter the "Contractor"), which is currently submitting an amendment to a State Contract.

2. Contractor previously submitted the completed Battery Park City Authority Standard Vendor Responsibility Questionnaire, dated_____, in connection with another State Contract.

3. Attached is an accurate and true copy of such previously submitted Standard Vendor Responsibility Questionnaire.

4. I hereby certify that with the exception of the information specified in Question 12, and as changed herein, there has been no material change in the information pertaining to the Contractor specified on such attached Questionnaire.

AUTHORIZED CONTACT FOR THE PROPOSED CONTRACT:

Name & Title: _____

Telephone Number: _____

Email: _____

_____
Signature

_____
Print Name

_____
Title

V. STATEMENT OF NON-COLLUSION

A. By submission of this Proposal, Proposer and each person signing on behalf of Proposer certifies, (and in the case of a joint Proposal each party thereto certifies) as to its own organization, under penalty of perjury, that to the best of his knowledge and belief:
    a. The prices in this Proposal have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other Proposer or with any competitor.
    b. or with any competitor. B) Unless otherwise required by law, the prices which have been quoted in this Proposal have not been knowingly disclosed by the Proposer and will not knowingly be disclosed by the Proposer prior to opening, directly or indirectly to any other Proposer or to any competitor.
    c. No attempt has been made or will be made by Proposer to induce any other person, partnership, firm or corporation to submit or not to submit a Proposal for the purpose of restricting competition.

B. A Proposal shall not be considered for award nor shall any award be made where sub-paragraphs A.a, A.b, and A.c above have not been complied with provided however, that if in any case Proposer cannot make the foregoing certification and the Proposer shall so state and shall furnish with its Proposal a signed statement which sets forth in detail the reasons therefore. Where sub-paragraphs A.a, A.b, and A.c above have not been complied with, Proposal shall not be considered for award nor shall any award be made unless the Authority determines that such disclosure was not made for the purpose of restricting competition.

   The fact that a Proposer (a) has published price lists, rates, or tariffs covering items Being procured, (b) has informed prospective customers of proposed or pending Publication of a new or revised price lists for such item, or (c) has sold the same items To other customers at the same prices being proposed, does not constitute, without more, a disclosure within the meaning of paragraph A.a above.

C. This Proposal, if made by a corporate Proposer, shall be deemed to have been authorized by the board of directors of the Proposer and such authorization shall be deemed to include the signing and submission of the Proposal and the inclusion thereof of the statement of non-collusion as the act and deed of the corporation.

(Insert Name of Proposer and Sign Below)

By: _____

(Print full legal name of person, firm, partnership, or corporation)

_____

(Signature)

_____

(Address)

_____ _____ _____

Corporate ID Number Federal ID Number Date

STATEMENT OF NON-COLLUSION Continued

If the Proposer is an individual, the Proposer's legal residence is as follows:

_____

Street Address City State ZIP

If Proposer is a Firm or Partnership, complete the following:

Name of Members or Partners	Legal Residence

If Proposer is a Corporation, complete the following:

Names of All Officers	
President:	
Vice President:	
Secretary:	
Treasurer:	
Other Officers/Titles (if applicable):	

VI. OFFEROR'S AFFIRMATION OF UNDERSTANDING OF AND AGREEMENT PURSUANT TO STATE FINANCE LAW §139-j(3) AND §139-j(6)(b)

For reference, the applicable sections of the New York State Finance Law can be found here: https://www.nysenate.gov/legislation/laws/STF/139-J

Offeror affirms that it understands and agrees to comply with the procedures of Battery Park City relative to permissible Contacts as required by State Finance Law §139-j(3) and §139-j(6)(b).

By: _____ Date: _____

_____
(Signature)

_____
(Name – Printed)

_____
(Title)

Contractor Name: _____
(Company)

Contractor Address: _____

VII. OFFEROR'S CERTIFICATION OF COMPLAINCE WITH STATE FINANCE LAW §139-k(5)

For reference, the applicable sections of the New York State Finance Law can be found here: https://www.nysenate.gov/legislation/laws/STF/139-K

I certify that all information provided to Battery Park City Authority, its subsidiaries and affiliates with respect to State Finance Law §139-k is complete, true and accurate.

By: _____ Date: _____

_____
(Signature)

_____
(Name – Printed)

_____
(Title)

Contractor Name: _____
(Company)

Contractor Address: _____

VIII. OFFEROR DISCLOSURE OF PRIOR NON-RESPONSIBILITY DETERMINATIONS

Name of Individual or Entity Seeking to Enter into the Procurement Contract:	
Address:	
Name and Title of Person Submitting this Form:	
Project Name:	
Date:	

1. Has any Governmental Entity made a finding of non-responsibility regarding the individual or entity seeking to enter into the Procurement Contract in the previous four years? If yes, please answer the next questions:	Yes ☐ No☐
2. Was the basis for the finding of non-responsibility due to a violation of State Finance Law §139-j?	Yes ☐ No☐
3. Was the basis for the finding of non-responsibility due to the intentional provision of false or incomplete information to a Governmental Entity?	Yes ☐ No☐
4. If you answered yes to any of the above questions, please provide details regarding the finding of non-responsibility below: Governmental Entity: Date of Finding of Non-responsibility: Basis of Finding of Non-Responsibility: (add additional pages if required)	
5. Has any Governmental Entity or other governmental agency terminated or withheld a Procurement Contract with the above-named individual or entity due to the intentional provision of false or incomplete information? If yes, please provide details below: Governmental Entity: Date of Termination or Withholding of Contract: Basis of Termination or Withholding: (add additional pages if required)	Yes ☐ No☐

Offeror certifies that all information provided to the Governmental Entity with respect to State Finance Law §139-k is complete, true and accurate.

By: _____ Date: _____

_____
(Signature)

_____
(Name – Printed)

_____
(Title)

Contractor Name: _____
(Company)

Contractor Address: _____

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

New York State businesses have a 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☐

X. ACKNOWLEDGEMENT OF ADDENDA FORM

RFP TITLE: _____

Complete Part I or Part II, whichever is applicable, and sign 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: _____

XI. MINORITY BUSINESS ENTERPRISE/WOMEN BUSINESS ENTERPRISE (MBW/WBE) UTILIZATION PLAN

Please fill out utilization plan for MBE/WBE(s) participation and use the same form for all additional MBE/WBE Firms.

Contractor Information:

Project Name:		
Project No.:	Site #:	Date:
Name of Contractor:		
Address:		
Contact Person:		
Phone:	Fax:	
Federal ID No.:	Tax ID:	
Is Your Firm: MBE ☐ WBE☐		
Work to Begin:	Work to be Completed:	

MBE/WBE Information:

Sub-Contractor or Vendor:		
Name:		
Address:		
Contact Person:		
Phone:	Fax:	
Federal ID No.:	Tax ID:	
Is This Firm: MBE ☐ WBE☐		
Total Percent of Contract Holder %	Trade:	
Scope of Work to be done by MBE/WBE:		
Work to Begin:	Work to be Completed:	

MBE/WBE Information:

Sub-Contractor or Vendor:	
Name:	
Address:	
Contact Person:	
Phone:	Fax:
Federal ID No.:	Tax ID:
Is This Firm: MBE ☐ WBE☐	
Total Percent of Contract Holder %	Trade:
Scope of Work to be done by MBE/WBE:	
Work to Begin:	Work to be Completed:

MINORITY BUSINESS ENTERPRISE/WOMEN BUSINESS ENTERPRISE (MBW/WBE) UTILIZATION PLAN (continued)

The Minimum MBE/WBE Business Participation Goal Expected for your Firm is as Follows:	Workforce Percentages set for this project is as Follows:
Trade(s)	Trade(s)
Minority Owned Business %	Minority Workforce %
Women Owned Business %	Female Workforce %

Please attach copies of the most recent New York State Certification Letters for all MBE/WBE Firms Listed on this Utilization Plan. If there are any changes in the information on this plan you must immediately re-submit this plan with the most recent date.

XII. SERVICE DISABLED VETERAN OWNED BUSINESSES (SDVOB) UTILIZATION PLAN

Please fill out utilization plan for SDVOB(s) participation and use the same format for all additional SDVOB sub-contractors.

Contractor Information

Contractor:	Date:
Name:	
Address:	
Contact Person:	Phone:
Federal ID No.:	Fax:

SDVOB Information

Sub-Contractor:	Federal ID No.:
Name:	Work to Begin
Address:	
Phone:	Work to Finish On:
Contact Person:	
Estimate % of Contract to be Awarded to SDVOB:	
Scope of Work to be Done by SDVOB:	

SDVOB Information

Sub-Contractor:	Federal ID No.:
Name:	Work to Begin
Address:	
Phone:	Work to Finish On:
Contact Person:	
Estimate % of Contract to be Awarded to SDVOB:	
Scope of Work to be Done by SDVOB:	

SDVOB Information

Sub-Contractor:	Federal ID No.:
Name:	Work to Begin
Address:	
Phone:	Work to Finish On:
Contact Person:	
Estimate % of Contract to be Awarded to SDVOB:	
Scope of Work to be Done by SDVOB:	

SERVICE DISABLED VETERAN OWNED BUSINESSES (SDVOB) UTILIZATION PLAN (continued)

Workforce Percentage Information

Trade (s)	
Minority Workforce:	%
Female Workforce:	%

XIII. MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISES EQUAL EMPLOYMENT OPPORTUNITY 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 _____

By _____

Print: _____ Title: _____

_____ is designated as the Consultant'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: _____

XIV. 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 ☐ 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 ☐ 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? Yes ☐ No☐

   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 ☐ 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 ☐ No☐

   If Yes, provide documentation of program activities and a copy of policy or program materials.

[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.

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 ☐ No☐

   If Yes, complete the attached Utilization Plan

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

XV. Certification Under Executive Order No. 16 Prohibiting State Agencies and Authorities from Contracting with Businesses Conducting Business in Russia

Executive Order No. 16 provides that "all Affected State Entities are directed to refrain from entering into any new contract or renewing any existing contract with an entity conducting business operations in Russia." The complete text of Executive Order No. 16 can be found here: https://www.governor.ny.gov/executive-order/no-16-prohibiting-state-agencies-and-authorities-contracting-businesses-conducting.

The Executive Order remains in effect while sanctions imposed by the federal government are in effect. Accordingly, vendors who may be excluded from award because of current business operations in Russia are nevertheless encouraged to respond to solicitations to preserve their contracting opportunities in case the sanctions are lifted during a solicitation or even after award in the case of some solicitations.

As defined in Executive Order No. 16, an "entity conducting business operations in Russia" means an institution or company, wherever located, conducting any commercial activity in Russia or transacting business with the Russian Government or with commercial entities headquartered in Russia or with their principal place of business in Russia in the form of contracting, sales, purchasing, investment, or any business partnership.

Is Vendor an entity conducting business operations in Russia, as defined above? Please answer by checking one of the following boxes:

[ ] 1. No, Vendor does not conduct business operations in Russia within the meaning of Executive Order No. 16.

[ ] 2.a. Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16 but has taken steps to wind down business operations in Russia or is in the process of winding down business operations in Russia. (Please provide a detailed description of the wind down process and a schedule for completion.)

[ ] 2.b. Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16 but only to the extent necessary to provide vital health and safety services within Russia or to comply with federal law, regulations, executive orders, or directives. (Please provide a detailed description of the services being provided or the relevant laws, regulations, etc.)

[ ] 3. Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16.

The undersigned certifies under penalties of perjury that they are knowledgeable about the Vendor's business
and operations and that the answer provided herein is true to the best of their knowledge and belief.

Vendor Name (Legal Entity): _____

By (Signature): _____

Name: _____

Title: _____

Date: _____

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 SDVOBs.

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 broker that shall be deemed to represent the commercially useful function performed by the MWBE shall be 25 percent of the total value of the contract]

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 as 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 Zag Kimpolo at zag.kimpolo@bpca.ny.gov or 212-417-2339. 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 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 Zag Kimpolo at BPCA, by email at zag.kimpolo@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 quarterly M/WBE Contractor Compliance & Payment Report to BPCA, by the 10th day following each end of quarter 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/business-search. 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 damages as specified in the Contract.

Such damages shall 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 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 Zag Kimpolo at BPCA, by email at zag.kimpolo@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 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.

Pursuant to Executive Order #162, contractors and subcontractors will 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 Zag Kimpolo at zag.kimpolo@bpca.ny.gov or 212-417-2339. 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 Zag Kimpolo atzag.kimpolo@bpca.ny.gov or 212-417-2339.

EXHIBIT D

(List of BPCA & BPCPC Board Members and Employees)

LIST OF BOARD MEMBERS

Donald Capoccia
Martha Gallo
Anthony Kendall
Catherine McVay Hughes
Lester Petracca
Clinton Plummer
Angela Sung Punsky

LIST OF EMPLOYEES

Afzal, Betzayda M.
Afzal, Curtis
Alvarez, Elsa C.
Anders, Dana J.
Anderson, Conrad J
Appenfeller, Gwendolyn
Atlas, Alexandra Skayne
Babb, David
Baichu, Sharmila
Baki, Muriel Barnett
Baptiste, Marie R
Basile, Dorothea
Beaver, Rebecca
Beecham, Brett D.
Belliard, Freddy
Bender, Marieke E
Benon, Yipin K.
Berendschot, Octavie
Bergen, Zachary
Berry, Tabatha
Billips, Marcus V
Birdseye, Emily
Bishop, John
Blake, Nidia Xcenia
Bonnelly, Sully
Buivid, Nancy
Buquicchio, Anthony
Butler, JaVaun
Campbell, Peter M.
Caraballo, Angel
Carmalt, Daniel
Centeno, Monica
Chen, David
Cho, Terence
Cid, Alexis Torres
Cogan, Jonathan William
Compaan, Jason
Curley, Jonathan
Curtin, Sarah F
Davis, Elizabeth Nelson
Davy, Raymond
Dawson, Nicole A.
De Padua, Gilbert
DeSantis, Phillip C
Diaz, Ismael
Diaz-Larui, Paul N.
Dickson, Daniel Allen
Dobens, Lawrence
Dopson, Tonasia T.
Eggleston, Terrence
Ehrlich, Abigail
Ellison, AnnMaria
Engler, Elise
Espinal, Jason
Faraino, Richard L.
Filomena, Claudia
Flores, Tamara G.
Fonseca, Juan
Fortune, Dennis
Frederick, Pamela M.
Gallagher, James J.
Garcia-Edwards, DonnaMarie
Geneus, Rebecca
Gerbi, Ameli
Gonzalez, Anatasia I.
Gould, Robert H.
Gregg, Evelyn
Gross, Jonathan A
Gutin, Dmitriy
Hansen, Robert T.
Heerah, Sankar
Hernandez, Raul
Heron, Mary C
Hing, Alexander Herrmann
Hoey, Brendan
Hood, Megan
Howard, Angela M.
Hudon, Craig A.
Jogie, Amy S.
Johnson, Jasmine Mikayla
Jones, Gamal A
Jones, Saladin
Julien, Ebonique M.
Kimpolo Nkaya, Zag Legrand
Kleinberg, Elaine
Koenig, Karl H.
Lalama Moreno, Cristina
Alexandra
Lei, Jeffrey
Leon, Boris
Lerner, Marianna
Leung, Jeremy K.
Lima, Triny
Liu, Johnny
Lopcy, Rene J.
Lopez, Janira C
Magana, Maria
Maggi, Michael Andrew
Maggi, Robert
Maisonet, Evelin
Mann, Rajinder
Manzella, Lenore
Martinez, Eric
Martinez, Maria
McCormack, James Patrick
McNeill, Princess K.
Mesine-Michael, Vanessa
Michel, Demoni
Mikati, Rayyan
Mimbella, Lilka
Miranda, Doreen
Mohammed, Ronnie
Moulketis, Irene
Muller, Sheray
Munson, Eric C.
Murray, Ryan Patrick
Murtha, Lauren M.
Nathan, Jahmeliah E.
Ngo, Jane Anh
Nishida, Yoshihiro
O'Hara, John
O'Toole, Kevin
Ortiz, Maril E.
Overath, Regina
Paillant, Willem
Parker, Jonathan J
Patel-Haribaran, Nimisha
Pearlman, Gladys
Perez, Brian
Petrov, Roman Eduardovich
Pimentel, Rynell
Powell, Katherine
Power, Sandra
Rachnowitz, Jason
Ramirez, Madelin G.
Ray-Chaudhuri, Debi
Reynolds, Aline E
Richards, Kwame
Rivera, Angel
Rivera, Manuel
Rivera, Ruben
Riveros Torres, Sylvia Juliana
Rogers, Nelson
Rufino, Joel
Russell, Paul C
Santiago, Carlos
Saul, Kimberlae

Sbordone, Nicholas T
Schwartz, Jean
Sewraj-Kumar, Rekha
Shacham, Yael
Simon, Sean A.
Singh, Kemnarine
Smedley, Sarah J.
Stern, Mireilla
Stewart, Shinay
Striggles, Patricia Antionette
Sturiano, Jerome E.
Taft, Marcella
Teelan, Michael
Thompson, Fatima
Torres Davila, Michelle K.
Torres, Ryan A.
Van Horn, Douglas J.
Vargas, Christian
Veve, Yves Emmanuel
Villalobos, Evangelio
Vitale, Matthew William
Wade, Sharon B.
Wallace, David B.
Wells, John
Wilken, Kieran
Williams, Dwight
Wisnewski, Jennifer
Wolfe, Sara N.
Wright, Al
Yohannes, Jouli
Yokoi, Erin L
Zeltser, Zachary
Zeng, Joanna
Zephir, Algernon M.

EXHIBIT E

(BPCA Sample Form of Contract)

TO BE PROVIDED VIA ADDENDUM

EXHIBIT F

(FORM OF COST PROPOSAL)

TASKS	**COST:**
Mobilization	
General Conditions	
Demolition	
Construction	
Allowance for Repairs	$150,000
TOTAL:	
Add Alternate #1: Additional costs for extended two-year warranty	$_____

UNIT PRICING	**COST:**
Additional cost per LED Luminaire	
Deduct price per LED Luminaire	
Additional cost to extend the warranty to 2 years	

EXHIBIT G
(Prevailing Wage Schedule)

Prevailing Rate Case Number (PRC# 2025013774 - North Grid Electric Upgrades)

To access the PDF file of the schedule, click on https://apps.labor.ny.gov/wpp/publicViewProject.do?method=showIt&id=1599194 or copy and paste into your browser