SCOPE OF WORK

Interior Construction, Renovation and Upgrades

State Office Building
135 West Hanover Street
Trenton, Mercer County, NJ

Project No. A1349-00

STATE OF NEW JERSEY

Honorable Philip D. Murphy, Governor
Honorable Sheila Y. Oliver, Lt. Governor

DEPARTMENT OF THE TREASURY

Elizabeth Maher Muoio, Treasurer

DIVISION OF PROPERTY MANAGEMENT AND CONSTRUCTION

Christopher Chianese, Director

Date: April 9, 2021

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I. OBJECTIVE

The objective of this project is to rehabilitate the interior of The State Office Building. The project will include architectural, HVAC, electrical, fire protection, life safety and fire suppression systems, plumbing and elevator upgrades. Hazardous materials will be abated.

II. CONSULTANT QUALIFICATIONS

A. CONSULTANT & SUB-CONSULTANT PRE-QUALIFICATIONS

The Consultant shall be a firm pre-qualified with the Division of Property Management & Construction (DPMC) in the following discipline(s):

- **P001 Architecture**

The Consultant shall also have in-house capabilities or Sub-Consultants pre-qualified with DPMC in:

- **P002 Electrical Engineering**
- **P003 HVAC Engineering**
- **P004 Plumbing Engineering**
- **P008 Mechanical Engineering**
- **P010 Fire Protection Engineering**
- **P025 Estimating/ Cost Analysis**
- **P037 Asbestos Design**
- **P038 Asbestos Safety Control Monitoring**
- **P048 Security Systems**
- **P065 Lead Paint Evaluation**

As well as, **any and all** other Architectural, Engineering and Specialty Disciplines necessary to complete the project as described in this Scope of Work (SOW).

III. PROJECT BUDGET

A. CONSTRUCTION COST ESTIMATE (CCE)

The initial Construction Cost Estimate (CCE) for this project is $6,000,000.

The Consultant shall review this Scope of Work and provide a narrative evaluation and analysis of the accuracy of the proposed project CCE in their technical proposal based on their professional experience and opinion.

B. CURRENT WORKING ESTIMATE (CWE)

The Current Working Estimate (CWE) for this project is $7,450,000.

The CWE includes the construction cost estimate and all consulting, permitting and administrative fees.

The CWE is the Client Agency's financial budget based on this project Scope of Work and shall not be exceeded during the design and construction phases of the project unless DPMC approves the change in Scope of Work through a Contract amendment.

C. CONSULTANT'S FEES

The construction cost estimate for this project ***shall not*** be used as a basis for the Consultant's design and construction administration fees. The Consultant's fees shall be based on the information contained in this Scope of Work document and the observations made and/or the additional information received during the pre-proposal meeting.

IV. PROJECT SCHEDULE

A. SCOPE OF WORK DESIGN & CONSTRUCTION SCHEDULE

The following schedule identifies the estimated design and construction phases for this project and the estimated durations.

PROJECT PHASE		ESTIMATED DURATION (Calendar Days)
1. Site Access Approvals & Schedule Design Kick-off Meeting		**10**
2. Schematic Design Phase	**25% (Minimum)**	**40**
• *Project Team & DPMC Plan/Code Unit Review & Comment*		10
3. Design Development Phase	**50% (Minimum)**	**40**
• *Project Team & DPMC Plan/Code Unit Review & Comment*		10
4. Final Design Phase	**100%**	**40**
• *Project Team & DPMC Plan/Code Unit Review & Approval*		10
5. Final Design Re-Submission to Address Comments		**7**
• *Project Team & DPMC Plan/Code Unit Review & Approval*		14
6. Permit Application Phase		**7**
• *Issue Plan Release*		
7. Bid Phase		**42**
8. Award Phase		**28**
9. Construction Phase		**280**

B. CONSULTANT'S PROPOSED DESIGN & CONSTRUCTION SCHEDULE

The Consultant shall submit a project design and construction bar chart schedule with their technical proposal that is similar in format and detail to the schedule depicted in **Exhibit 'A'**. The bar chart schedule developed by the Consultant shall reflect their recommended project phases, phase activities, activity durations.

The Consultant shall estimate the duration of the project Close-Out Phase based on the anticipated time required to complete each deliverable identified in Section XIV of this

document entitled "Contract Deliverables - Project Close-Out Phase" and include this information in the bar chart schedule submitted.

A written narrative shall also be included with the technical proposal explaining the schedule submitted and the reasons why and how it can be completed in the time frame proposed by the Consultant.

This schedule and narrative will be reviewed by the Consultant Selection Committee as part of the evaluation process and will be assigned a score commensurate with clarity and comprehensiveness of the submission.

C. CONSULTANT DESIGN SCHEDULE

Based on the Notice to Proceed, Consultant shall update their approved schedule and shall distribute it at the design kickoff meeting. Note that this schedule shall be submitted in both paper format and on compact disk in a format compatible with *Microsoft Project*. This schedule will be binding for the Consultant's activities and will include the start and completion dates for each design activity. The Consultant and Project Team members shall use this schedule to ensure that all design milestone dates are being met for the project. The Consultant shall update the schedule to reflect performance periodically (minimally at each design phase) for the Project Team review and approval. Any recommendations for deviations from the approved design schedule must be explained in detail as to the causes for the deviation(s) and impact to the schedule.

D. BID DOCUMENT CONSTRUCTION SCHEDULE

The Consultant shall include a construction schedule in Division 1 of the specification bid document. This schedule shall contain, at minimum, the major activities and their durations for each trade specified for the project. This schedule shall be in "bar chart" format and will be used by the Contractors as an aid in determining their bid price. It shall reflect special sequencing or phased construction requirements including, but not limited to: special hours for building access, weather restrictions, imposed constraints caused by Client Agency program schedules, security needs, lead times for materials and equipment, anticipated delivery dates for critical items, utility interruption and shut-down constraints, and concurrent construction activities of other projects at the site and any other item identified by the Consultant during the design phases of the project.

E. CONTRACTOR CONSTRUCTION PROGRESS SCHEDULE

The Contractor shall be responsible for preparing a coordinated combined progress schedule with the Sub-Contractors after the award of the contract. This schedule shall meet all of the requirements identified in the Consultant's construction schedule. The construction schedule shall be completed in accordance with the latest edition of the Instructions to Bidders and General Conditions and Bulletins that may be issued on the project.

The Consultant must review and analyze this progress schedule and recommend approval/disapproval to the Project Team until a satisfactory version is approved by the Project Team. The Project Team must approve the baseline schedule prior to the start of construction and prior to the Contractor submitting invoices for payment.

The Consultant shall note in Division 1 of the specification that the State will not accept the progress schedule until it meets the project contract requirements and any delays to the start of the construction work will be against the Contractor until the date of acceptance by the State.

The construction progress schedule shall be reviewed, approved, and updated by the Contractor, Consultant, and Project Team members at each regularly scheduled construction job meeting and the Consultant shall note the date and trade(s) responsible for project delays (as applicable).

V. PROJECT SITE LOCATION & TEAM MEMBERS

A. PROJECT SITE ADDRESS

The location of the project site is:

State Office Building
135 West Hanover Street
Trenton, Mercer County, NJ 08625

See **Exhibit 'B'** for the project site location map.

B. PROJECT TEAM MEMBER DIRECTORY

The following are the names, addresses, and phone numbers of the Project Team members.

1. DPMC Representative:

Name:	Babatunde Ogunnubi, Design Project Manager
Address:	Division Property Management & Construction
	20 West State Street, 3rd Floor
	Trenton, NJ 08608-1206
Phone No:	Office: (609) 633-7061 Cell: (609) 575-4972
E-Mail No:	babatunde.ogunnubi@treas.nj.gov

2. Department of the Treasury:

Name:	Mark Dae, Chief, Property Management
Address:	Division Property Management & Construction
	20 West State Street, 3rd Floor
	Trenton, NJ 08625
Phone No:	(609) 984-9711
E-Mail No:	Mark.Dae@treas.state.nj.us

VI. PROJECT DEFINITION

A. BACKGROUND

The State Office Building located at 135 West Hanover Street was built in 1929. It is currently vacant and in need of major upgrades to the interior.

Under DPMC Project A1310-00, the exterior envelope of the building was addressed, including the roof, penthouse, windows, exterior doors and joint sealant to prevent moisture intrusion into the building. This project will focus on the interior of the building including, but not limited to, HVAC, electrical, fire protection and life safety systems, elevators, restrooms, security systems, finishes, and hazardous materials.

B. FUNCTIONAL DESCRIPTION OF THE BUILDING

1. General:

The State Office Building has a basement and four floors above grade. It is rectangular in shape and each floor is about 9,600 square feet for a total of approximately 48,000 square feet. It is classified as a Business Use Group and Construction Type 2-B. In the past, it has functioned as an office facility for various State Agencies, including the State Police.

In 2015, the State commissioned a facility assessment for several buildings, including the State Office Building, by USA Architects under DPMC Project A1185-00. The following is from the assessment report.

From a systems perspective, the building is served by steam boilers with a distribution system to the multiple floors. There are areas served by newer air handlers and chiller systems for some of the renovated areas. Above ground floors are served by air handlers off of the original building systems and perimeter heating from hot water is used. Plumbing system types are varied and typical for this type of building. Roof drains and storm water piping is original to the build. There is a fire pump system with a dry pipe system and fire

hose cabinets locations. The lighting and electrical systems are of a variety of types and ages throughout the building. The building is served by two elevators that are overhead geared traction types.

The full report on the State Office Building by USA Architects will be provided to the Consultant. Additional drawings from past projects in the building will be provided.

Overall, the building mechanical, electrical and elevator systems have served their useful lives and are in need of improvement and modernization.

The State Office Building has recently been deemed eligible for listing on the New Jersey and National Register of Historic Places. The State House Historic District has expanded to include the State Office Building.

2. Studies:

A recent HVAC Assessment Study of the building completed in 2020 and prepared by Eastern Consultants, Inc. for Lammey & Giorgio Architects is shown in **Exhibit 'D'**. The study is provided for information only. HVAC and/or Electrical improvements are to be evaluated during the Schematic Phase to determine the best options for the State regarding capital costs, operation and maintenance costs, financial incentives and rebates.

Lammey & Giorgio also prepared an assessment of the elevators in 2020 with assistance from Vertical Transportation Excellence. The Elevator Assessment is shown in **Exhibit 'E'**.

A Condition Survey and Repair of the fire escapes was performed in 2020 by Joseph B. Callaghan, Inc. See **Exhibit 'F'** for the report.

3. Proposed Plan:

A set of drawings have been prepared showing the proposed plan for the building. The drawings include existing conditions and proposed layouts. They are presented as a guide to the Consultant with the understanding that the final programming of the building and future occupants have not been determined. The drawings are shown in **Exhibit 'G'** with a narrative to guide the Consultant.

VII. CONSULTANT DESIGN RESPONSIBILITIES

A. DESIGN REQUIREMENTS

1. General:

The Consultant shall survey the building and review existing documentation and provide construction documents to renovate and upgrade the interior of the State Office Building.

2. Architectural:

The Consultant shall provide construction documents to renovate the interiors of the buildings at the facility. Items to address include barrier free access, stair railings, acoustic ceiling tiles, accessibility issues, flooring, doors, painting, wall repair and wood casework.

Provide structural calculations as necessary ensuring that the roofing system can support any new HVAC equipment to be located there.

3. HVAC:

Provide construction documents for a new HVAC system for the building.

Provide calculations of the required building air supply and exhaust quantities. Provide a ventilation schedule for all building spaces.

Provide calculations of the cooling load requirements of the interior building spaces to be conditioned. Calculations shall be based on, but not be limited to items such as: conduction and convection heat transmission, air ventilation and infiltration, internal building heat sources, solar heat gain, etc.

Prior to issuance of a Certificate of Approval, all equipment, i.e., fans, controls, dampers, and devices requiring adjustments or regulation, shall be thoroughly cleaned, adjusted, or regulated for proper operation and freed from objectionable noise and vibration.

Testing and balancing shall be performed in complete accordance with the current Association Air Balancing Council Standards or other State approved associations. A copy of the certified report shall be provided to the DPMC Project Manager before a Certificate of Approval is recommended.

The Consultant shall witness the work of the certified HVAC Testing & Balancing firm during all balancing, adjusting and testing of the air distribution and exhaust systems and shall determine any system modifications necessary to make the system perform as designed. If a

retest is required in order to verify the modification changes, it shall be performed at no additional cost to the State.

4. Electrical Service:

Provide construction documents for new electric service within the building including substations and branch circuit panels. Submit electrical load calculations to the DPMC Code Review Group for review and approval.

The diesel generator and transfer switches are in relatively good condition and will be replaced at another time.

5. Fire Protection & Life Safety Systems:

Provide construction documents to replace the fire alarm system in the building including all devices such as pull stations and smoke detectors and ensure that notification devices comply with ADA codes and standards.

Egress lighting fixtures and exit signs will be replaced. Light fixtures shall be upgraded to more energy efficient lighting.

6. Fire Suppression System:

Provide construction documents for a new fire suppression system. Existing hose cabinets will be removed.

The Consultant and/or a pre-qualified Testing Lab shall conduct field tests of the nearest fire hydrants and determine the static and residual pressures and flow rates of water being supplied to the buildings. Schedule the fire hydrant testing such that representatives of the Client Agency, DPMC Code Plan Review Unit, the local fire department, the local municipal water company and the DCA code inspector may witness the test. All costs associated with the hydrant tests shall be estimated by the Consultant and the amount included in the base bid of their fee proposal.

The hydrant test results shall be used as the basis for hydraulic calculations to verify that there is adequate water pressure volume and flow for the building sprinkler systems. Signed and sealed calculations must be submitted to the DPMC Plan & Code Review Unit for record, review and approval. The Consultant shall estimate the costs associated with the potential requirement to upgrade the building water supply system and enter that amount in their fee proposal line item entitled **"Water Supply Upgrade Allowance",** refer to paragraph XI.E.

A statement shall be included in the specifications and on the drawings that states: "If the sprinkler Contractor prepares shop drawings that differ in design from those supplied by the

Consultant, they shall submit them, **through the consultant**, to DPMC Plan & Code Review Unit for approval prior to fabrication and installation of the system".

The new sprinkler system, sprinkler main valve supervision, flow and tamper switches must be integrated with any upgraded fire detection system in the building and must comply with both NFPA 13 and NFPA 72.

Upon completion of the project, and prior to issuance of the Certificate of Approval, the Contractor shall test the complete fire suppression and detection system making adjustments as required to secure all necessary approvals. The Consultant shall identify the testing requirements in the specifications including the hydrostatic test pressures, the test duration under pressure, and the amount of allowable leakage per hour.

All equipment testing shall be conducted in the presence of the Consultant and designated representatives of the DPMC, Client Agency, Contractors and DCA. The Consultant shall be responsible for the coordination and scheduling of all tests. All test results shall be collected and bound in a manual for reference.

7. Plumbing:

Provide construction documents to replace plumbing lines and fixtures. Replace all restroom fixtures such as urinals, water closets and sinks and associated valves. Replace the water heater.

8. Elevators:

Provide construction documents to replace the elevators and associated controls.

9. Fire Escapes:

This Consultant shall re-inspect the fire escapes at all wall connections and include any additional repairs found necessary (replace/supplement building anchors). The Consultant shall verify with DPMC Plan Review that the current design is structurally sound and is code compliant.

B. STATE HISTORIC PRESERVATION OFFICE APPROVAL

The Consultant shall complete an "Application for Project Authorization Under the New Jersey Register of Historic Places Act" and submit it to the State Historic Preservation Office for review and approval prior to securing the required UCC permits.

The "Application for Project Authorization Under the New Jersey Register of Historic Places Act" can be found at: http://www.nj.gov/dep/hpo/2protection/sr_revapp_min.pdf

C. HAZARDOUS BUILDING MATERIALS

The Consultant shall survey the building and, if deemed necessary, collect samples of materials that will be impacted by the construction/demolition activities and analyze them for the presence of hazardous materials including:

1. Asbestos in accordance with N.J.A.C. 5:23-8, Asbestos Hazard Abatement Subcode.

2. Lead in accordance with N.J.A.C. 5:17, Lead Hazard Evaluation and Abatement Code.

3. PCB's in accordance with 40 CFR 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions. Consultant shall engage a firm certified in the testing and analysis of materials containing PCB's.

4. Other materials such as mold, light tubes, light ballasts and mercury thermostats/gauges.

Consultant shall document their procedure, process and findings and prepare a "Hazardous Materials Survey Report" identifying building components impacted by construction activities requiring hazardous materials abatement. Consultant shall provide three copies of the "Hazardous Materials Survey Report" to the Project Manager.

Consultant shall estimate the cost of hazardous materials sample collection, destructive testing as necessary, tests and analysis and preparation of the Hazardous Materials Survey Report and include that amount in their fee proposal line item entitled **"Hazardous Materials Testing and Report Allowance"**, refer to paragraph XI.B.

Based on the Hazardous Materials Survey Report, Consultant shall provide construction documents for abatement of the hazardous materials impacted by the work in accordance with the applicable code, subcode and Federal regulations.

Consultant shall estimate the cost to prepare construction documents for hazardous materials abatement and include that amount in their fee proposal line item entitled **"Hazardous Materials Abatement Design Allowance"**, refer to paragraph XI.C.

Consultant shall estimate the cost to provide "Construction Monitoring and Administration Services" for hazardous materials abatement activities and include that amount in their fee proposal line item entitled **"Hazardous Materials Construction Administration Allowance",** refer to paragraph XI.D.

There shall be no "mark-up" of subconsultant or subcontractor fees if subconsultants or subcontractors are engaged to perform any of the work defined in paragraph VII.C "Hazardous Building Materials". All costs associated with managing, coordinating, observing and administrating subconsultants and subcontractors performing hazardous materials sampling,

testing, analysis, report preparation, hazardous materials construction administration services shall be included in the consultant's lump sum fee proposal.

D. GENERAL DESIGN OVERVIEW

1. Design Detail:

Section VII of this Scope of Work is intended as a guide for the Consultant to understand the overall basic design requirements of the project and is not intended to identify each specific design component related to code and construction items. The Consultant shall provide those details during the design phase of the project ensuring that they are in compliance with all applicable codes, regulating authorities, and the guidelines established in the DPMC Procedures for Architects and Engineers Manual.

The Consultant shall understand that construction documents submitted to DPMC shall go beyond the basic requirements set forth by the Uniform Construction Code N.J.A.C. 5:23-2.15(f). Drawings and specifications shall provide detail beyond that required to merely show the nature and character of the work to be performed. The construction documents shall provide sufficient information and detail to illustrate, describe and clearly delineate the design intent of the Consultant and enable all Contractors to uniformly bid the project.

The Consultant shall review and comply with the DPMC "Plan Review Instructions" which can be found on DPMC's web site at:

http://www.state.nj.us/treasury/dpmc/lists_and_publications.shtml

The Consultant shall ensure that all of the design items described in this scope of work are addressed and included in the project drawings and specification sections where appropriate.

It shall be the Consultant's responsibility to provide all of the design elements for this project. Under no circumstance may they delegate the responsibility of the design; or portions thereof, to the Contractor unless specifically allowed in this Scope of Work.

2. Specification Format:

The Consultant shall prepare the construction specifications in the Construction Specifications Institute (CSI) format entitled MasterFormat©, latest edition.

The project construction specifications shall include only those CSI MasterFormat© specification sections and divisions applicable to this specific project.

3. Submittal Schedule:

The Consultant shall include a submittal schedule in Division 1 of the specifications. The schedule (list of required submittals) shall identify the general conditions and/or specification section (number and name) and the type of submittal required (material data, product data, test results, calculations, etc.). The submittal schedule is a compilation of the submittals required on the project and is provided as an aid to the contractor.

4. Construction Cost Estimates:

The Consultant shall include with each design submittal phase identified in Paragraph IV.A, including the Permit Application Phase and Bid Phase, a detailed construction cost estimate itemized and summarized by the divisions and sections of the Construction Specification Institute (CSI) MasterFormat© latest edition applicable to the project.

The detailed breakdown of each work item shall include labor, equipment, material and total costs.

The construction estimate shall include all alternate bid items and all unit price items itemized and summarized by the divisions and sections of the specifications.

All cost estimates shall be adjusted for regional location, site factors, construction phasing, premium time, building use group, location of work within the building, temporary swing space, security issues, and inflation factors based on the year in which the work is to be performed.

The cost estimate shall include descriptions of all allowances and contingencies noted in the estimate.

All cost estimates must be submitted on a DPMC-38 Project Cost Analysis form at each design phase of the project supported by the detailed construction cost estimate. The Project Manager will provide cost figures for those items which may be in addition to the CCE such as art inclusion, CM services, etc. and must be included as part of the CWE. This cost analysis must be submitted for all projects regardless of the Construction Cost Estimate amount.

E. PROJECT COMMENCEMENT

A pre-design meeting shall be scheduled with the Consultant and the Project Team members at the commencement of the project to obtain and/or coordinate the following information:

1. Project Directory:

Develop a project directory that identifies the name and phone number of key designated representatives who may be contacted during the design and construction phases of this project.

2. Site Access:

Develop procedures to access the project site and provide the names and phone numbers of approved escorts when needed. Obtain copies of special security and policy procedures that must be followed during all work conducted at the facility and include this information in Division 1 of the specification.

3. Project Coordination:

Review and become familiar with any current and/or future projects at the site that may impact the design, construction, and scheduling requirements of this project. Incorporate all appropriate information and coordination requirements in Division 1 of the specification.

4. Existing Documentation:

Copies of the following documents will be provided to each Consulting firm at the pre-proposal meeting to assist in the bidding process.

- DPMC Project A1185-00: **Final Facility Assessment Report and Capital Improvement Plan**, Volume 4 of 19, **State Office Building**, November 16, 2016, USA Architects
- DPMC Project A0973-00: **Small Office Building Renovations**, 12/5/05, Ronald A. Sebring Associates, LLC
- DPMC Project A0864-00: **Boiler Replacement and Fuel Conversion**, 3/15/01, Maitra Associates, P.C.
- DPMC Project A0657-04: **Replacement of Roof State Office Building**, As-Built February 10, 1992, Paul Staudt, Jr. R.A. State Architect
- DPMC Project A0657-00: **State Office Building Interior Demolition Phase 1**, 2/27/91, Joseph R. Loring & Associates, Inc.
- DPMC Project A0657-00: **State Office Building Interim Renovations Phase 2**, 4/28/93, Joseph R. Loring & Associates, Inc.
- DBC Project A0535-00: **Emergency Exit**, 5/15/87, Horst W. Meuller, P.E.
- DBC Project A0492-00: **Second Floor Renovation**, 7/7/86, Alfred W. Wensley, State Architect

- DBC Project A0355-00: **Basement HVAC & Electrical Work**, 6/30/81, Gilbert L. Seltzer Associates

- DPMC Project A1310-00: **Limited Hazardous Material Report for Restoration Upgrades to Exterior Building Envelope at State Office Building**, July 15, 2019

Copies of the following documents are available in hardcopy form in the Office of Building Management and Operations at 20 West State Street, 3rd floor.

- DBC Project A0169-00: **Renovations to the State Office Building**, 11/21/78, Gilbert L. Seltzer Associates

- DPMC Project A0988-00: **AHERA Management Plan State Office Building Cultural Complex**, 9/1/2006, Powell-Harpstead, Inc.

Review these documents and any additional information that may be provided at a later date such as reports, studies, surveys, equipment manuals, as-built drawings, etc. The State does not attest to the accuracy of the information provided and accepts no responsibility for the consequences of errors by the use of any information and material contained in the documentation provided. It shall be the responsibility of the Consultant to verify the contents and assume full responsibility for any determination or conclusion drawn from the material used. If the information provided is insufficient, the Consultant shall take the appropriate actions necessary to obtain the additional information required.

All original documentation shall be returned to the provider at the completion of the project.

5. Scope of Work:

Review the design and construction administration responsibilities and the submission requirements identified in this Scope of Work with the Project Team members. Items such as: contract deliverables, special sequencing or phased construction requirements, special hours for construction based on Client Agency programs or building occupancy, security needs, delivery dates of critical and long lead items, utility interruptions or shut down constraints for tie-ins, weather restrictions, and coordination with other project construction activities at the site shall be addressed.

This information and all general administrative information; including a narrative summary of the work for this project, ***shall be included in Division 1*** of the specification. The Consultant shall assure that there are no conflicts between the information contained in Division 1 of the specification and the DPMC General Conditions.

6. Project Schedule:

Review and update the project design and construction schedule with the Project Team members.

F. BUILDING & SITE INFORMATION

The following information shall be included in the project design documents.

1. Building Classification:

Provide the building Use Group Classification and Construction Type on the appropriate design drawing.

2. Building Block & Lot Number:

Provide the site Block and Lot Number on the appropriate design drawing.

3. Building Site Plan:

Only when the project scope involves site work, or when the design triggers code issues that require site information to show code compliance, shall a site plan be provided that is drawn in accordance with an accurate boundary line survey. The site plan shall include, but not be limited to, the following as may be applicable:

- The size and location of new and existing buildings and additions as well as other structures.
- The distance between buildings and structures and to lot lines.
- Established and new site grades and contours as well as building finished floor elevations.
- New and existing site utilities, site vehicular and pedestrian roads, walkways and parking areas.

4. Site Location Map:

Provide a site location map on the drawing cover sheet that identifies the vehicular travel routes from major roadways to the project construction site and the approved access roads to the Contractor's worksite staging area.

G. DESIGN MEETINGS & PRESENTATIONS

1. Design Meetings:

Conduct the appropriate number of review meetings with the Project Team members during each design phase of the project so they may determine if the project meets their requirements,

question any aspect of the contract deliverables, and make changes where appropriate. The Consultant shall describe the philosophy and process used in the development of the design criteria and the various alternatives considered to meet the project objectives. Selected studies, sketches, cost estimates, schedules, and other relevant information shall be presented to support the design solutions proposed. Special considerations shall also be addressed such as: Contractor site access limitations, utility shutdowns and switchover coordination, phased construction and schedule requirements, security restrictions, available swing space, material and equipment delivery dates, etc.

It shall also be the responsibility of the Consultant to arrange and require all critical Sub-Consultants to be in attendance at the design review meetings.

Record the minutes of each design meeting and distribute within seven (7) calendar days to all attendees and those persons specified to be on the distribution list by the Project Manager.

2. Design Presentations:

The minimum number of design presentations required for each phase of this project is identified below for reference:

Schematic Phase: One (1) oral presentation at phase completion.

Design Development Phase: One (1) oral presentation at phase completion.

Final Design Phase: One (1) oral presentation at phase completion.

H. CONSTRUCTION BID DOCUMENT SUBMITTAL

In addition to submitting construction bid documents as defined in Section XIV Contract Deliverables, Consultant shall submit both specifications and drawings on compact disk (CD) in *Adobe Portable Document Format (.pdf).*

VIII. CONSULTANT CONSTRUCTION RESPONSIBILITIES

A. GENERAL CONSTRUCTION ADMINISTRATION OVERVIEW

This section of the Scope of Work is intended as a guide for the Consultant to understand their overall basic construction administration responsibilities for the project and does not attempt to identify each specific activity or deliverable required during this phase. The Consultant shall

obtain that information from the current publication of the DPMC Procedures for Architects and Engineers Manual and any additional information provided during the Consultant Selection Process.

B. PRE-BID MEETING

The Consultant shall attend, chair, record and distribute minutes of the Contractor pre-bid meetings. When bidders ask questions that may affect the bid price of the project, the Consultant shall develop a Bulletin(s) to clarify the bid documents in the format described in the Procedures for Architects and Engineers Manual, Section 9.2 entitled "Bulletins." These Bulletins must be sent to DPMC at least seven (7) calendar days prior to the bid opening date. DPMC will then distribute the document to all bidders.

C. POST BID REVIEW MEETING, RECOMMENDATION FOR AWARD

The Consultant; in conjunction with the Project Manager, shall review the bid proposals submitted by the various Contractors to determine the low responsible bid for the project. The Consultant; in conjunction with the Project Manager and Project Team members, shall develop a post bid questionnaire based on the requirements below and schedule a post bid review meeting with the Contractor's representative to review the construction costs and schedule, staffing, and other pertinent information to ensure they understand the Scope of the Work and that their bid proposal is complete and inclusive of all requirements necessary to deliver the project in strict accordance with the plans and specifications.

1. Post Bid Review:

Review the project bid proposals including the alternates, unit prices, and allowances within seven (7) calendar days from the bid due date. Provide a bid tabulation matrix comparing all bids submitted and make a statement about the high, low, and average bids received. Include a comparison of the submitted bids to the approved current construction cost estimate. When applicable, provide an analysis with supporting data, detailing why the bids did not meet the construction cost estimate.

2. Review Meeting:

Arrange a meeting with the apparent low bid Contractor to discuss their bid proposal and other issues regarding the award of the contract. Remind the Contractor that this is a Lump Sum bid. Request the Contractor to confirm that their bid proposal does not contain errors. Review and confirm Alternate pricing and Unit pricing and document acceptance or rejection as appropriate.

Comment on all omissions, qualifications and unsolicited statements appearing in the proposals. Review any special circumstances of the project. Ensure the Contractor's signature appears on all post bid review documents.

3. Substitutions:

Inquire about any potential substitutions being contemplated by the Contractor and advise them of the State's guidelines for the approval of substitutions and the documentation required. Review the deadline and advise the Contractor that partial submissions are not acceptable. Submission after the deadline may be rejected by the State.

Equal substitutions that are proposed by the Contractor that are of lesser value must have a credit change order attached with the submittal (See Article 4.7.5 "Substitutions" of the General Conditions). The State has the right to reject the submission if there is no agreement on the proposed credit. Contractor will be responsible to submit a specified item.

4. Schedule:

Confirm that the Contractor is aware of the number of calendar days listed in the contract documents for the project duration and that the Contractor's bid includes compliance with the schedule duration and completion dates. Particular attention shall be given to special working conditions, long lead items and projected delivery dates, etc. Review project milestones (if applicable). This could give an indication of Contractor performance, but not allow a rejection of the bid.

Review the submittal timeframes per the Contract documents. Ask the Contractor to identify what products will take over twenty-eight (28) calendar days to deliver from the point of submittal approval.

If a CPM Schedule is required, review the provisions and have Contractor acknowledge the responsibility. Ask for the name of the CPM Scheduler and the "ballpark" costs.

5. Performance:

Investigate the past performance of Contractor by contacting Architects and owners (generally three of each) that were listed in their DPMC pre-qualification package or other references that may have been provided. Inquire how the Contractor performed with workmanship, schedule, project management, change orders, cooperation, paper work, etc.

6. Letter of Recommendation:

The Consultant shall prepare a Letter of Recommendation for contract award to the Contractor submitting the lowest responsible bid within three (3) calendar days from the post bid review meeting. The document shall contain the project title, DPMC project number, bid due date and expiration date of the proposal. It shall include a detailed narrative describing each post bid meeting agenda item identified above and a recommendation to award the contract to the

apparent low bid Contractor based on the information obtained during that meeting. Describe any acceptance or rejection of Alternate pricing and Unit pricing.

Comment on any discussion with the Contractor that provides a sense of their understanding of the project and any special difficulties that they see, and how they might approach those problems.

Attach all minutes of the Post bid meeting and any other relevant correspondence with the Letter of Recommendation and submit them to the Project Manager.

7. Conformed Drawings:

The Consultant shall prepare and distribute two (2) sets of drawings stamped "Conformed Drawings" to the Project Manager that reflect all Bulletins and/or required changes, additions, and deletions to the pertinent drawings within fourteen (14) calendar days of the construction contract award date.

Any changes made in Bulletins, meeting minutes, post bid review requirements shall also be reflected in the specification.

D. DIRECTOR'S HEARING

The Consultant must attend any Director's hearing(s) if a Contractor submits a bid protest. The Consultant shall be present to interpret the intent of the design documents and answer any technical questions that may result from the meeting. In cases where the bid protest is upheld, the Consultant shall submit a new "Letter of Recommendation" for contract award. The hours required to attend the potential hearings and to document the findings shall be estimated by the Consultant and the costs will be included in the base bid of their fee proposal.

E. CONSTRUCTION JOB MEETINGS, SCHEDULES, LOGS

The Consultant shall conduct all of the construction job meetings, to be held bi-weekly for the duration of construction, in accordance with the procedures identified in the A/E manual and those listed below.

1. Meetings:

The Consultant and Sub-Consultant(s) shall attend the pre-construction meeting and all construction job meetings during the construction phase of the project. The Consultant shall chair the meeting, transcribe and distribute the job-meeting minutes for every job meeting to all attendees and to those persons specified to be on the distribution list by the Project Manager. The Agenda for the meeting shall include, but not be limited to the items identified in the Procedures for Architects and Engineers Manual, Section 10.3.1, entitled "Agenda."

Also, the Consultant is responsible for the preparation and distribution of minutes within three (3) calendar days of the meeting. The format to be used for the minutes shall comply with those identified in the "Procedures for Architects and Engineers Manual," Section 10.3.4, entitled, "Format of Minutes." All meeting minutes are to have an "action" column indicating the party that is responsible for the action indicated and a deadline to accomplish the assigned task. These tasks must be reviewed at each job progress meeting until it is completed and the completion date of each task shall be noted in the minutes of the meeting following the task completion.

2. Schedules:

The Consultant; with the input from the Client Agency Representative and Project Manager, shall review and recommend approval of the project construction schedule prepared by the Contractor. The schedule shall identify all necessary start and completion dates of construction, construction activities, submittal process activities, material deliveries and other milestones required to give a complete review of the project.

The Consultant shall record any schedule delays, the party responsible for the delay, the schedule activity affected, and the original and new date for reference.

The Consultant shall ensure that the Contractor provides a two (2) week "look ahead" construction schedule based upon the current monthly updated schedule as approved at the bi-weekly job meetings and that identifies the daily planned activities for that period. This Contractor requirement must also be included in Division 1 of the specification for reference.

3. Submittal Log:

Based on the Submittal Schedule in Division 1 of the specifications, the Consultant shall develop and implement a submittal log that includes all of the required project submittals as identified in the general conditions and technical specifications. The submittal log shall be provided to the contractor at the pre-construction meeting. The dates of submission shall be determined and approved by all affected parties during the pre-construction meeting.

Examples of the submissions to be reviewed and approved by the Consultant and Sub-Consultant (if required) include: project schedule, schedule of values, shop drawings, equipment and material catalog cuts, spec sheets, product data sheets, MSDS material safety data sheets, specification procedures, color charts, material samples, mock-ups, etc. The submittal review process must be conducted at each job progress meeting and shall include the Consultant, Sub-Consultant, Contractor, Project Manager, and designated representatives of the Client Agency.

The Consultant shall provide an updated submittal log at each job meeting that highlights the status of all required submissions.

F. CONSTRUCTION SITE ADMINISTRATION SERVICES

The Consultant and Sub-Consultant(s) shall provide construction site administration services during the duration of the project. The Consultant and Sub-Consultant(s) do not necessarily have to be on site concurrently if there are no critical activities taking place that require the Sub-Consultant's participation.

The services required shall include, but not be limited to; field observations sufficient to verify the quality and progress of construction work, conformance and compliance with the contract documents, and to attend/chair meetings as may be required by the Project Manager to resolve special issues.

Consultant and Sub-Consultant(s) shall conduct weekly site inspection/field observation visits. Site inspection/field observation visits may be conducted in conjunction with regularly scheduled bi-weekly construction job meetings, depending on the progress of work, for weeks that construction job meetings are scheduled. The Consultant and their Sub-Consultant(s) shall submit a field observation report for each site inspection to the Project Manager within three (3) calendar days of the site visit. Also, they shall conduct inspections during major construction activities including, but not limited to the following examples: concrete pours, steel and truss installations, code inspections, final testing of systems, achievement of each major milestone required on the construction schedule, and requests from the Project Manager. The assignment of a full time on-site Sub-Consultant does not relieve the Consultant of their site visit obligation.

The Consultant shall refer to Section XIV. Contract Deliverables of this Scope of Work subsection entitled "Construction Phase" to determine the extent of services and deliverables required during this phase of the project.

G. SUB-CONSULTANT PARTICIPATION

It is the responsibility of the Consultant to ensure that they have provided adequate hours and/or time allotted in their technical proposal so that their Sub-Consultants may participate in all appropriate phases and activities of this project or whenever requested by the Project Manager. This includes the pre-proposal site visit and the various design meetings and construction job meetings, site visits, and close-out activities described in this Scope of Work. Field observation reports and/or meeting minutes are required to be submitted to the Project Manager within three (3) calendar days of the site visit or meeting. All costs associated with such services shall be included in the base bid of the Consultant's fee proposal.

H. DRAWINGS

1. Shop Drawings:

Each Contractor shall review the specifications and determine the numbers and nature of each shop drawing submittal. Five (5) sets of the documents shall be submitted with reference made to the appropriate section of the specification. The Consultant shall review the Contractor's shop drawing submissions for conformity with the construction documents within seven (7) calendar days of receipt. The Consultant shall return each shop drawing submittal stamped with the appropriate action, i.e. "Approved", "Approved as Noted", "Approved as Noted Resubmit for Records", "Rejected", etc.

2. As-Built & Record Set Drawings:

The Contractor(s) shall keep the contract drawings up-to-date at all times during construction and upon completion of the project, submit their AS-BUILT drawings to the Consultant with the Contractor(s) certification as to the accuracy of the information prior to final payment. All AS-BUILT drawings submitted shall be entitled AS-BUILT above the title block and dated.

The Consultant shall review the Contractor(s)' AS-BUILT drawings at each job progress meeting to ensure that they are up-to-date. Any deficiencies shall be noted in the progress meeting minutes.

The Consultant shall acknowledge acceptance of the AS-BUILT drawings by signing a transmittal indicating they have reviewed them and that they reflect the AS-BUILT conditions as they exist.

Upon receipt of the AS-BUILT drawings from the Contractor(s), the Consultant shall obtain the original reproducible drawings from DPMC and transfer the AS-BUILT conditions to the original full sized signed reproducible drawings to reflect RECORD conditions within fourteen (14) calendar days of receipt of the AS-BUILT information.

The Consultant shall note the following statement on the original RECORD-SET drawings. "The AS-BUILT information added to this drawing(s) has been supplied by the Contractor(s). The Architect/Engineer does not assume the responsibility for its accuracy other than conformity with the design concept and general adequacy of the AS-BUILT information to the best of the Architect's/Engineer's knowledge."

Upon completion, The Consultant shall deliver the RECORD-SET original reproducible drawings to DPMC who will acknowledge their receipt in writing. This hard copy set of drawings and two (2) sets of current release AUTO CAD discs shall be submitted to DPMC. The discs shall contain all AS-BUILT drawings in both ".dwg" (native file format for AUTO CAD) and ".pdf" (*Adobe* portable document format) file formats.

I. CONSTRUCTION DEFICIENCY LIST

The Consultant shall prepare, maintain and continuously distribute an on-going deficiency list to the Contractor, Project Manager, and Client Agency Representative during the construction phase of the project. This list shall be separate correspondence from the field observation reports and shall not be considered as a punch list.

J. INSPECTIONS: SUBSTANTIAL & FINAL COMPLETION

The Consultant and their Sub-Consultant(s) accompanied by the Project Manager, Code Inspection Group, Client Agency Representative and Contractor shall conduct site inspections to determine the dates of substantial and final completion. The Project Manager will issue the only recognized official notice of substantial completion. The Consultant shall prepare and distribute the coordinated punch list, written warranties and other related DPMC forms and documents, supplied by the Contractor, to the Project Manager for review and certification of final contract acceptance.

If applicable, the punch list shall include a list of attic stock and spare parts.

K. CLOSE-OUT DOCUMENTS

The Consultant shall review all project close-out documents as submitted by the Contractors to ensure that they comply with the requirements listed in the "Procedure for Architects and Engineers' Manual." The Consultant shall forward the package to the Project Manager within fourteen (14) calendar days from the date the Certificate of Occupancy/Certificate of Approval is issued. The Consultant shall also submit a letter certifying that the project was completed in accordance with the contract documents, etc.

L. CLOSE-OUT ACTIVITY TIME

The Consultant shall provide all activities and deliverables associated with the "Close-Out Phase" of this project as part of their Lump Sum base bid. The Consultant and/or Sub-Consultant(s) may not use this time for additional job meetings or extended administrative services during the Construction Phase of the project.

M. TESTING, TRAINING, MANUALS AND ATTIC STOCK

The Consultant shall ensure that all equipment testing, training sessions and equipment manuals required for this project comply with the requirements identified below.

1. Testing:

All equipment and product testing conducted during the course of construction is the responsibility of the Contractor. However, the Consultant shall ensure the testing procedures comply with manufacturers recommendations. The Consultant shall review the final test reports and provide a written recommendation of the acceptance/rejection of the material, products or equipment tested within seven (7) calendar days of receipt of the report.

2. Training:

The Consultant shall include in the specification that the Contractor shall schedule and coordinate all equipment training with the Project Manager and Client Agency representatives. It shall state that the Contractor shall submit the Operation and Maintenance (O&M) manuals, training plan contents, and training durations to the Consultant, Project Manager and Client Agency Representative for review and approval prior to the training session.

The Consultant shall ensure that the training session is video recorded by the Contractor. A copy of the recording shall be transmitted to the Project Manager on compact disk who will forward the material to the Client Agency for future reference.

All costs associated with the training sessions shall be borne by the Contractor installing the equipment. A signed letter shall be prepared stating when the training was completed and must be accompanied with the training session sign-in sheet as part of the project close-out package.

3. Operation & Maintenance Manuals:

The Consultant shall coordinate and review the preparation and issuance of the equipment manuals provided by the Contractor(s) ensuring that they contain the operating procedures, maintenance procedures and frequency, cut sheets, parts lists, warranties, guarantees, and detailed drawings for all equipment installed at the facility.

A troubleshooting guide shall be included that lists problems that may arise, possible causes with solutions, and criteria for deciding when equipment shall be repaired and when it must be replaced.

Include a list of the manufacturer’s recommended spare parts for all equipment being supplied for this project.

A list of names, addresses and telephone numbers of the Contractors involved in the installations and firms capable of performing services for each mechanical item shall be included. The content of the manuals shall be reviewed and approved by the Project Manager and Client Agency Representative.

The Consultant shall include in the specification that the Contractor must provide a minimum of ten (10) "throwaway" copies of the manual for use at the training seminar and seven (7) hardbound copies as part of the project close-out package.

4. Attic Stock:

The Consultant shall determine and recommend whether "attic stock" should be included for all aspects of the project. If required, the Consultant shall specify attic stock items to be included in the project.

Prior to project close-out, the Consultant must prepare a comprehensive listing of all items for delivery by the Contractor to the Owner and in accordance with the appropriate specification/plan section. Items shall include, but not be limited to: training sessions, O&M manuals, as-built drawings, itemized attic stock requirements, and manufacturer guarantees/warranties.

N. CHANGE ORDERS

The Consultant shall review and process all change orders in accordance with the contract documents and procedures described below.

1. Consultant:

The Consultant shall prepare a detailed request for Change Order including a detailed description of the change(s) along with appropriate drawings, specifications, and related documentation and submit the information to the Contractor for the change order request submission. This will require the use of the current DPMC 9b form.

2. Contractor:

The Contractor shall submit a DPMC 9b Change Order Request form to the Project Manager within seven (7) calendar days after receiving the Change Order from the Consultant. The document shall identify the changed work in a manner that will allow a clear understanding of the necessity for the change. Copies of the original design drawings, sketches, etc. and specification pages shall be highlighted to clarify and show entitlement to the Change Order.

Copies shall be provided of job minutes or correspondence with all relative information highlighted to show the origin of the Change Order. Supplementary drawings from the Consultant shall be included if applicable that indicate the manner to be used to complete the changed work. A detailed breakdown of all costs associated with the change, i.e. material, labor, equipment, overhead, Sub-Contractor work, profit and bond, and certification of increased bond shall be provided.

If the Change Order will impact the time of the project, the Contractor shall include a request for an extension of time. This request shall include a copy of the original approved project schedule and a proposed revised schedule that reflects the impact on the project completion date. Documentation to account for the added time requested shall be included to support entitlement of the request such as additional work, weather, other Contractors, etc. This documentation shall contain dates, weather data and all other relative information.

3. Recommendation for Approval:

The Consultant shall evaluate the reason for the change in work and provide a detailed written recommendation for approval or disapproval of the Change Order Request including backup documentation of costs in CSI format and all other considerations to substantiate that decision.

4. Code Review:

The Consultant shall determine if the Change Order request will require Code review and shall submit six (6) sets of signed and sealed modified drawings and specifications to the DPMC Plan & Code Review Unit for approval, if required. The Consultant must also determine and produce a permit amendment request if required.

5. Cost Estimate:

The Consultant shall provide a detailed cost estimate of the proposed Change Order Request, as submitted by the Contractor, in CSI format (latest edition) for all appropriate divisions and sub-divisions using a recognized estimating formula. The estimate shall then be compared with that of the Contractor's estimate. If any line item in the Consultant's estimate is lower than the corresponding line item in the Contractor's estimate, the Consultant in conjunction with the Project Manager is to contact the Contractor by telephone and negotiate the cost differences. The Consultant shall document the negotiated agreement on the Change Order Request form. If the Contractor's total dollar value changes based on the negotiations, the Consultant shall identify the changes on the Change Order Request form accordingly.

When recommending approval or disapproval of the change order, the Consultant shall be required to prepare and process a Change Order package that contains at a minimum the following documents:

- DPMC 9b Change Order Request
- DPMC 10 Consultant's Evaluation of Contractor's Change Order Request
- Consultant's Independent Detailed Cost Estimate
- Notes of Negotiations

6. Time Extension:

When a Change Order Request is submitted with both cost and time factors, the Consultant's independent cost estimate is to take into consideration time factors associated with the changed work. The Consultant is to compare their time element with that of the Contractor's time request and if there is a significant difference, the Consultant in conjunction with the Project Manager is to contact the Contractor by telephone and negotiate the difference.

When a Change Order Request is submitted for time only, the Consultant is to do an independent evaluation of the time extension request using a recognized scheduling formula.

Requests for extension of contract time must be done in accordance with the General Conditions Article 10.1 "Changes in the Work".

7. Submission:

The Consultant shall complete all of the DPMC Change Order Request forms provided and submit a completed package to the Project Manager with all appropriate backup documentation within seven (7) calendar days from receipt of the Contractor's change order request. The Consultant shall resubmit the package at no cost to the State if the change order package contents are deemed insufficient by the Project Manager.

8. Meetings:

The Consultant shall attend and actively participate at all administrative hearings or settlement conferences as may be called by Project Manager in connection with such Change Orders and provide minutes of those meetings to the Project Manager for distribution.

9. Consultant Fee:

All costs associated with the potential Contractor Change Order Requests shall be anticipated by the Consultant and included in the base bid of their fee proposal.

If the Client Agency Representative requests a scope change; and it is approved by the Project Manager, the Consultant may be entitled to be reimbursed through an amendment and in accordance with the requirements stated in paragraph 10.01 of this Scope of Work.

IX. PERMITS & APPROVALS

A. NJ UNIFORM CONSTRUCTION CODE PERMIT

The project construction documents must comply with the latest adopted edition of the NJ Uniform Construction Code (NJUCC).

The latest NJUCC Adopted Codes and Standards can be found at:

http://www.state.nj.us/dca/divisions/codes/codreg/

The Consultant shall complete the NJUCC permit application and all applicable technical sub-code sections with all technical site data required. The Agent section of the application and certification section of the building sub-code section shall be signed. These documents shall be forwarded to the DPMC Project Manager.

The Consultant may obtain copies of all NJUCC permit applications at the following website:

http://www.state.nj.us/dca/divisions/codes/forms/

All other required project permits shall be obtained and paid for by the Consultant in accordance with the procedures described in Paragraph IX.B.

1. Prior Approval Certification Letters:

The issuance of a construction permit for this project may be contingent upon acquiring various "prior approvals" as defined by N.J.A.C. 5:23-1.4. It is the Consultant's responsibility to determine which prior approvals, if any, are required. The Consultant shall submit a general certification letter to the DPMC Plan & Code Review Unit Manager during the Permit Phase of this project that certifies all required prior approvals have been obtained.

In addition to the general certification letter discussed above, the following specific prior approval certification letters, where applicable, shall be submitted by the Consultant to the DPMC Plan & Code Review Unit Manager: Soil Erosion & Sediment Control, Water & Sewer Treatment Works Approval, Coastal Areas Facilities Review, Compliance of Underground Storage Tank Systems with N.J.A.C. 7:14B, Pinelands Commission, Highlands Council, Well Construction and Maintenance; Sealing of Abandoned Wells with N.J.A.C. 7:9D, Certification that all utilities have been disconnected from structures to be demolished, Board of Health Approval for Potable Water Wells, Health Department Approval for Septic Systems. It shall be noted that in accordance with N.J.A.C. 5:23-2.15(a)5, a permit cannot be issued until the letter(s) of certification is received.

2. Multi-building or Multi-site Permits:

A project that involves many buildings and/or sites requires that a separate permit shall be issued for each building or site. The Consultant must determine the construction cost estimate for *each* building and/or site location and submit that amount where indicated on the permit application.

3. Special Inspections:

In accordance with the requirements of the New Jersey Uniform Construction Code N.J.A.C. 5:23-2.20(b), Bulletin 03-5 and Chapter 17 of the International Building Code, the Consultant shall be responsible for the coordination of all special inspections during the construction phase of the project.

Bulletin 03-5 can be found at:

http://www.state.nj.us/dca/divisions/codes/publications/pdf_bulletins/b_03_5.pdf

a. Definition:

Special inspections are defined as an independent verification by a certified Special Inspector for **Class I buildings and smoke control systems in any class building**. The special inspector is to be independent from the Contractor and responsible to the Consultant so that there is no possible conflict of interest.

Special inspectors shall be certified in accordance with the requirements in the New Jersey Uniform Construction Code.

b. Responsibilities:

The Consultant shall submit with the permit application, a list of special inspections and the agencies or special inspectors that will be responsible to carry out the inspections required for the project. The list shall be a separate document, on letter head, signed and sealed.

B. OTHER REGULATORY AGENCY PERMITS, CERTIFICATES AND APPROVALS

The Consultant shall identify and obtain all other State Regulatory Agency permits, certificates, and approvals that will govern and affect the work described in this Scope of Work. An itemized list of these permits, certificates, and approvals shall be included with the Consultant's Technical Proposal and the total amount of the application fees should be entered in the Fee Proposal line item entitled, **"Permit Fee Allowance."**

The Consultant may refer to the Division of Property Management and Construction "Procedures for Architects and Engineers Manual", Section 6.4.8, which presents a compendium of State permits, certificates, and approvals that may be required for this project.

The Consultant shall determine the appropriate phase of the project to submit the permit application(s) in order to meet the approved project milestone dates.

Where reference to an established industry standard is made, it shall be understood to mean the most recent edition of the standard unless otherwise noted. If an industry standard is found to be revoked, or should the standard have undergone substantial change or revision from the time that the Scope of Work was developed, the Consultant shall comply with the most recent edition of the standard.

C. STATE INSURANCE APPROVAL

The Consultant shall respond in writing to the FM Global Insurance Underwriter plan review comments through the DPMC Plan & Code Review Unit Manager as applicable. The Consultant shall review all the comments and, with agreement of the Project Team, modify the documents while adhering to the project's SOW requirements, State code requirements, schedule, budget, and Consultant fee.

D. PUBLIC EMPLOYEES OCCUPATIONAL SAFETY & HEALTH PROGRAM

A paragraph shall be included in the design documents, if applicable to this project that states: The Contractor shall comply with all the requirements stipulated in the Public Employees Occupational Safety & Health Program (PEOSHA) document, paragraph 12:100-13.5 entitled "Air quality during renovation and remodeling". The Contractor shall submit a plan demonstrating the measures to be utilized to confine the dust, debris, and air contaminants in the renovation or construction area of the project site to the Project Team prior to the start of construction.

The link to the document is:

http://www.nj.gov/health/workplacehealthandsafety/peosh/peosh-health-standards/iaq.shtml

E. PERMIT MEETINGS

The Consultant shall attend and chair all meetings with Permitting Agencies necessary to explain and obtain the required permits.

F. MANDATORY NOTIFICATIONS

The Consultant shall include language in Division 1 of the specification that states the Contractor shall assure compliance with the New Jersey "One Call" Program (1-800-272-1000) if any excavation is to occur at the project site.

The One Call Program is known as the "New Jersey Underground Facility Protection Act", refer to N.J.A.C. 14:2.

G. CONSULTANT FEE

The Consultant shall determine the efforts required to complete and submit all permit applications, obtain and prepare supporting documentation, attend meetings, etc., and include the total cost in the base bid of their fee proposal under the "Permit Phase".

X. GENERAL REQUIREMENTS

A. SCOPE CHANGES

The Consultant must request any changes to this Scope of Work in writing. An approved DPMC 9c Consultant Amendment Request form reflecting authorized scope changes must be received by the Consultant prior to undertaking any additional work. The DPMC 9c form must be approved and signed by the Director of DPMC and written authorization issued from the Project Manager prior to any work being performed by the Consultant. Any work performed without the executed DPMC 9c form is done at the Consultant's own financial risk.

B. ERRORS AND OMISSIONS

The errors and omissions curve and the corresponding sections of the "Procedures for Architects and Engineers Manual" are eliminated. All claims for errors and omissions will be pursued by the State on an individual basis. The State will review each error or omission with the Consultant and determine the actual amount of damages, if any, resulting from each negligent act, error or omission.

C. ENERGY INCENTIVE PROGRAM

The Consultant shall review the programs described on the "New Jersey's Clean Energy Program" website at: http://www.njcleanenergy.com to determine if any proposed upgrades to the mechanical and/or electrical equipment and systems for this project qualify for "New Jersey

Clean Energy Program" rebates and incentives such as SmartStart, Pay4Performance, Direct Install or any other incentives.

The Consultant shall be responsible to complete the appropriate registration forms and applications, provide any applicable worksheets, manufacturer's specification sheets, calculations, attend meetings, and participate in all activities with designated representatives of the programs and utility companies to obtain the entitled financial incentives and rebates for this project. All costs associated with this work shall be estimated by the Consultant and the amount included in the base bid of their fee proposal.

XI. ALLOWANCES

A. PERMIT FEE ALLOWANCE

The Consultant shall obtain and pay for all of the project permits in accordance with the guidelines identified below.

1. Permits:

The Consultant shall determine the various permits, certificates, and approvals required to complete this project.

2. Permit Costs:

The Consultant shall estimate the application fee costs for all of the required project permits, certificates, and approvals (excluding the NJ Uniform Construction Code permit) and include that amount in their fee proposal line item entitled **"Permit Fee Allowance"**, refer to Paragraph IX.A. A breakdown of each permit and application fee shall be attached to the fee proposal for reference.

NOTE: The NJ Uniform Construction Code permit is excluded since it will be paid for by the State.

3. Applications:

The Consultant shall complete and submit all permit applications to the appropriate permitting authorities and the costs shall be paid from the Consultant's permit fee allowance. A copy of the application(s) and the original permit(s) obtained by the Consultant shall be given to the DPMC Project Manager for distribution during construction.

4. Consultant Fee:

The Consultant shall determine what is required to complete and submit the permit applications, obtain supporting documentation, attend meetings, etc., and include the total cost in the base bid of their fee proposal under the "Permit Phase" column.

Any funds remaining in the permit allowance will be returned to the State at the close of the project.

B. HAZARDOUS MATERIALS TESTING AND REPORT ALLOWANCE

Consultant shall estimate the costs to complete the hazardous materials survey, sample collection, testing and analysis and preparation of a "Hazardous Materials Survey Report" noted in paragraph VII.C and enter that amount on their fee proposal line item entitled **"Hazardous Materials Testing and Report Allowance"**. Consultant shall attach a detailed cost breakdown sheet for use by DPMC during the proposal review and potential fee negotiations. The cost breakdown sheet shall include, but not be limited to, the following information:

- Description of tasks and estimated cost for the following:
  - Sample collection
  - Sample testing
  - Preparation of an Hazardous Materials Survey Report

Any funds remaining in the Hazardous Materials Testing and Report Allowance will be returned to the State at the close of the project.

C. HAZARDOUS MATERIALS ABATEMENT DESIGN ALLOWANCE

Consultant shall estimate the costs to prepare construction documents for hazardous materials abatement noted in paragraph VII.C and enter that amount on their fee proposal line item entitled **"Hazardous Materials Abatement Design Allowance"**. Consultant shall attach a detailed cost breakdown sheet for use by DPMC during the proposal review and potential fee negotiations. The cost breakdown sheet shall include a description of the tasks to be performed and the estimated cost of each task.

Any funds remaining in the Hazardous Materials Abatement Design Allowance will be returned to the State at the close of the project.

D. HAZARDOUS MATERIALS CONSTRUCTION ADMINISTRATION ALLOWANCE

Consultant shall estimate the cost to provide Construction Monitoring and Administration Services for hazardous materials abatement as noted in paragraph VII.C and enter that amount on their fee proposal line item entitled **"Hazardous Materials Construction Administration Allowance"**. Consultant shall attach a detailed cost breakdown sheet for use by DPMC during the proposal review and potential fee negotiations. The cost breakdown sheet shall include a description of the tasks to be performed and the estimated cost of each task.

Any funds remaining in the Hazardous Materials Construction Administration Allowance will be returned to the State at the close of the project.

E. WATER SUPPLY UPGRADE ALLOWANCE

The hydrant test results shall be used as the basis for hydraulic calculations to verify that there is adequate water pressure and flow for the building sprinkler system. Signed and sealed calculations must be submitted to the DPMC Plan & Code Review Unit for record. The Consultant shall estimate the costs associated with the potential requirement to upgrade the building water supply system and enter that amount in their fee proposal line item entitled **"Water Supply Upgrade Allowance".**

Any funds remaining in the allowance account will be returned to the State at the close of the project.

XII. SUBMITTAL REQUIREMENTS

A. CONTRACT DELIVERABLES

All submissions shall include the Contract Deliverables identified in Section XIV of this Scope of Work and described in the DPMC Procedures for Architects and Engineers Manual.

B. CATALOG CUTS

The Consultant shall provide catalog cuts as required by the DPMC Plan & Code Review Unit during the design document review submissions. Examples of catalog cuts include, but are not limited to: mechanical equipment, hardware devices, plumbing fixtures, fire suppression and alarm components, specialized building materials, electrical devices, etc.

C. PROJECT DOCUMENT BOOKLET

The Consultant shall submit all of the required Contract Deliverables to the Project Manager at the completion of each phase of the project. All reports, meeting minutes, plan review comments, project schedule, cost estimate in CSI format (latest edition), correspondence, calculations, and other appropriate items identified on the Submission Checklist form provided in the A/E Manual shall be presented in an 8½" x 11" bound "booklet" format.

D. DESIGN DOCUMENT CHANGES

Any corrections, additions, or omissions made to the submitted drawings and specifications at the Permit Phase of the project must be submitted to DPMC Plan & Code Review Unit as a complete document. Corrected pages or drawings may not be submitted separately unless the Consultant inserts the changed page or drawing in the original documents. No Addendums or Bulletins will be accepted as a substitution to the original specification page or drawing.

E. SINGLE-PRIME CONTRACT

All references to "separate contracts" in the Procedures for Architects and Engineers Manual, Chapter 8, shall be deleted since this project will be advertised as a "Single Bid" (Lump Sum All Trades) contract. The single prime Contractor will be responsible for all work identified in the drawings and specifications.

The drawings shall have the required prefix designations and the specification sections shall have the color codes as specified for each trade in the DPMC Procedure for Architects and Engineers Manual.

The Consultant must still develop the Construction Cost Estimate (CCE) for each trade and the amount shall be included on the DPMC-38 Project Cost Analysis form where indicated. This document shall be submitted at each design phase of the project and updated immediately prior to the advertisement to bid.

XIII. SOW SIGNATURE APPROVAL SHEET

This Scope of Work shall not be considered a valid document unless all signatures appear in each designated area below.

The Client Agency approval signature on this page indicates that they have reviewed the design criteria and construction schedule described in this project Scope of Work and verifies that the work will not conflict with the existing or future construction activities of other projects at the site.

SOW PREPARED BY: James W. Wright 4/9/2021
JAMES WRIGHT, MANAGER DATE
DPMC PROJECT PLANNING & INITIATION

SOW APPROVED BY: 4.13.21
MARK DAE, MANAGER DATE
DPMC BUILDING MANAGEMENT AND OPERATIONS

SOW APPROVED BY: Ayode Ogunnubi 04/13/2021
BABATUNDE OGUNNUBI, PROJECT MANAGER DATE
DPMC OFFICE OF DESIGN AND CONSTRUCTION

SOW APPROVED BY: Richard S. Flodmand 4/15/2021
RICHARD FLODMAND, DEPUTY DIRECTOR DATE
DIV PROPERTY MGT & CONSTRUCTION

XIV. CONTRACT DELIVERABLES

The following is a listing of Contract Deliverables that are required at the completion of each phase of this project. The Consultant shall refer to the DPMC publication entitled, "Procedures for Architects and Engineers," Volumes I and II, 2nd Edition, dated January, 1991 to obtain a more detailed description of the deliverables required for each item listed below.

The numbering system used in this "Contract Deliverables" section of the scope of work corresponds to the numbering system used in the "Procedures for Architects and Engineers" manual and some may have been deleted if they do not apply to this project.

SCHEMATIC DESIGN PHASE: 25% Complete Design Documents (Minimum)

6.1 Project Schedule (Update Bar Chart Schedule)

6.2 Meetings & Minutes (Minutes within seven (7) calendar days of meeting)

6.3 Correspondence

6.4 Submission Requirements

6.4.1 A/E Statement of Site Visit, As-Built Drawing Verification (if available)
6.4.2 Space Analysis & Program Requirements
6.4.3 Special Features Description
6.4.4 Site Evaluation
6.4.8 Regulatory Agency Approvals
6.4.10 Drawings: 6 sets
Cover Sheet (See A/E Manual for format)
Site Plan
Site Utility Plan
Floor Plans
Elevations
Sections/Details
Structural Narrative
HVAC Narrative
Electrical Narrative
6.4.11 Specifications: 6 sets (See A/E Manual for format, include Division 1 and edit to describe the administrative and general requirements of the project)
6.4.12 Current Working Estimate in CSI Format & Cost Analysis 38 Form
6.4.13 Bar Chart of Design and Construction Schedule
6.4.14 Oral Presentation of Submission to Project Team

6.4.15 SOW Compliance Statement
6.4.16 This Submission Checklist (See A/E Manual, Figure 6.4.16 for format)
6.4.17 Deliverables Submission in Booklet Form: 7 sets

6.5 Approval

6.5.1 Respond to Submission Comments

6.6 Submission Forms

Figure 6.4.10 Plan Review Record Sheet
Figure 6.4.12 Current Working Estimate/Cost Analysis
Figure 6.4.16 Submission Checklist

DESIGN DEVELOPMENT PHASE: 50% Complete Design Documents (Minimum)

7.1 Project Schedule (Update Bar Chart Schedule)

7.2 Meetings & Minutes (Minutes within seven (7) calendar days of meeting)

7.3 Correspondence

7.4 Submission Requirements

7.4.1 A/E Statement of Site Visit, As-Built Drawing Verification (if available)
7.4.2 Space Analysis & Program Requirements (if changed from Schematic Phase)
7.4.3 Special Features Description
7.4.4 Site Evaluation
7.4.8 Regulatory Agency Approvals
7.4.10 Drawings: 6 sets
Cover Sheet (See A/E Manual for format)
Site Plan
Site Utility Plan
Floor Plans
Elevations
Sections/Details
Structural Drawings, Seismic Design Load Criteria
HVAC Drawings, Heating & Cooling Equipment Schedules
Plumbing Drawings, Pipe Distribution & Riser Details, Fixture Schedule
Fire Protection Drawings, Hydraulic Calcs, Water Pressure & Flow Data
Electrical Drawings, Riser Diagram, Panel Schedules, Service Size, Lighting Design

7.4.11 Specifications: 6 sets (See A/E Manual for format, include Division 1 and edit to describe the administrative and general requirements of the project)
7.4.12 Current Working Estimate in CSI Format & Cost Analysis 38 Form
7.4.13 Bar Chart of Design and Construction Schedule
7.4.14 Oral Presentation of Submission to Project Team
7.4.15 SOW Compliance Statement
7.4.16 This Submission Checklist (See A/E Manual, Figure 6.4.16 for format)
7.4.17 Deliverables Submission in Booklet Form: 7 sets

7.5 Approval

7.5.1 Respond to Submission Comments

7.6 Submission Forms

Figure 7.4.12 Current Working Estimate/Cost Analysis
Figure 7.4.16 Submission Checklist

FINAL DESIGN PHASE 100% Complete Construction Documents

This Final Design Phase may require more than one submission based on the technical quality and code conformance of the design documents.

8.1 Schedule (Update Bar Chart Schedule)

8.2 Meeting & Minutes (Minutes within seven (7) calendar days of meeting)

8.3 Correspondence

8.4 Submission Requirements

8.4.1 A/E Statement of Site Visit
8.4.2 Space Analysis
8.4.3 Special Features Description
8.4.4 Site Evaluation
8.4.8 Regulatory Agency Approvals (Include itemized list specific to this project)
8.4.10 Drawings: 6 sets
8.4.11 Specifications: 6 sets
8.4.12 Current Working Estimate in CSI Format & Cost Analysis 38 Form
8.4.13 Bar Chart of Design and Construction Schedule
8.4.14 Oral Presentation of this Submission to Project Team
8.4.15 Plan Review/SOW Compliance Statement
8.4.16 This Submission Checklist

8.4.17 Deliverables Submission in Booklet Form: 7 sets

8.5 Approvals

8.5.1 Respond to Submission Comments

PERMIT APPLICATION PHASE

This Permit Application Phase should not include any additional design issues. Design documents shall be 100% complete at the Final Design Phase.

8.6 Permit Application Submission Requirements

8.6.1 - 8.6.7: If all of the deliverables of these sections have been previously submitted to DPMC and approved there are no further deliverables due at this time
8.6.8 Regulatory Agency Approvals
(a) UCC Permit Application & Technical Sub-codes completed by A/E
8.6.9 Utility Availability Confirmation
8.6.10 Signed and Sealed Drawings: 6 sets
8.6.11 Signed and Sealed Specifications: 6 sets
8.6.12 Current Working Estimate/Cost Analysis
8.6.13 Bar Chart Schedule
8.6.14 Project Presentation (N/A this Project)
8.6.15 Plan Review/SOW Compliance Statement
8/6.16 Submission Checklist

8.7 Approvals

8.8 Submission Forms

Figure 8.4.12 Current Working Estimate/Cost Analysis
Figure 8.4.16 Submission Checklist (Final Review Phase)
Figure 8.6.12-b Bid Proposal Form (Form DPMC -3)
Figure 8.6.12-c Notice of Advertising (Form DPMC -31)
Figure 8.6.16 Submission Checklist (Permit Phase)
Figure 8.7 Bid Clearance Form (Form DPMC -601)

BIDDING AND CONTRACT AWARD

9.0 Bidding Phase Requirements

9.01 Original Drawings signed & sealed by A/E and drawings on compact disk (CD) in *Adobe Portable Document Format (.*pdf)

9.02 One Unbound Specification Color Coded per A/E Manual Section 8.4.11 and specifications on compact disk (CD) in *Adobe Portable Document Format (*.pdf)
` 9.03 Bid Documents Checklist
9.04 Bid Proposal Form
9.05 Notice for Advertising

9.1 Chair Pre-Bid Conference/Mandatory Site Visit

9.2 Prepare Bulletins

9.3 Attend Bid Opening

9.4 Recommendation for Contract Award

9.4.1 Prepare Letter(s) of Recommendation for Award & Cost Analysis

9.5 Attend Post Bid Review Meeting(s)

9.6 Submission Checklist

9.7 Submission Forms

Figure 9.4.1 Cost Analysis
Figure 9.6 Submission Checklist

CONSTRUCTION PHASE

10.1 Site Construction Administration

10.2 Pre-Construction Meeting

10.3 Construction Job Meetings

10.3.1 Agenda: Schedule and Chair Construction Job Meetings
10.3.2 Minutes: Prepare and Distribute Minutes within 5 working days of meeting
10.3.3 Schedules; Approve Contractors' Schedule & Update
10.3.4 Minutes Format: Prepare Job Meeting Minutes in approved format, figure 10.3.4-a

10.4 Correspondence

10.5 Prepare and Deliver Conformed Drawings

10.7 Approve Contractors Invoicing and Payment Process

10.8 Approve Contractors 12/13 Form for Subs, Samples and Materials

10.10 Approve Test Reports

10.11 Approve Shop Drawings

10.12 Construction Progress Schedule

10.12.1 Construction Progress Schedule

10.13 Review & Recommend or Reject Change Orders

10.13.1 Scope Changes
10.13.2 Construction Change Orders
10.13.3 Field Changes

10.14 Construction Photographs

10.15 Submit Field Observation Reports

10.16 Submission Forms

Figure 10.3.4-a Job Meeting Format of Minutes
Figure 10.3.4-b Field Report
Figure 10.6 DPMC Insurance Form-24
Figure 10.6-a Unit Schedule Breakdown
Figure 10.6-b Monthly Estimate for Payment to Contractor DPMC 11-2
Figure 10.6-c Monthly Estimate for Payment to Contractor DPMC 11-2A
Figure 10.6-d Invoice DPMC 11
Figure 10.6-e Prime Contractor Summary of Stored Materials DPMC 11-3
Figure 10.6-f Agreement & Bill of Sale certificate for Stored Materials DPMC 3A
Figure 10.7-a Approval Form for Subs, Samples & Materials DPMC 12
Figure 10.7-b Request for Change Order DPMC 9b
Figure 10.9 Transmittal Form DPMC 13
Figure 10.10 Submission Checklist

PROJECT CLOSE-OUT PHASE

11.1 Responsibilities: Plan, Schedule and Execute Close-Out Activities

11.2 Commencement: Initiate Close-Out w/DPMC 20A Project Close-Out Form

11.3 Develop Punch List & Inspection Reports

11.4 Verify Correction of Punch List Items

11.5 Determination of Substantial Completion

11.6 Ensure Issuance of "Temporary Certificate of Occupancy or Approval"

11.7 Initiation of Final Contract Acceptance Process

11.8 Submission of Close-Out Documentation

11.8.1 As-Built & Record Set Drawings, 3 sets AUTOCAD Discs Delivered to DPMC
11.8.2 (a) Maintenance and Operating manuals, Warranties, etc.: 7 sets each
(b) Guarantees
(c) Testing and Balancing Reports
(d) Boiler Inspection Certificates
(e) Elevator Inspection Report
(f) Shop Drawings
(g) Letter of Contract Performance
11.8.3 Final Cost Analysis-Insurance Transfer DPMC 25
11.8.4 This Submission Checklist

11.9 Final Payment

11.9.1 Contractors Final Payment
11.9.2 A/E Invoice and Close-Out Forms for Final Payment

11.10 Final Performance Evaluation of the A/E and the Contractors

11.11 Ensure Issuance of a "Certificate of Occupancy or Approval"

11.12 Submission Forms

Figure 11.2 Project Close-Out Documentation List DPMC 20A
Figure 11.3-a Certificate of Substantial Completion DPMC 20D
Figure 11.3-b Final Acceptance of Consultant Contract DPMC 20C
Figure 11.5 Request for Contract Transition Close-Out DPMC 20X
Figure 11.7 Final Contract Acceptance Form DPMC 20
Figure 11.8.3-a Final Cost Analysis
Figure 11.8.3-b Insurance Transfer Form DPMC 25
Figure 11.8.4 Submission Checklist

XV. EXHIBITS

The attached exhibits in this section will include a sample project schedule, and any supporting documentation to assist the Consultant in the design of the project such as maps, drawings, photographs, floor plans, studies, reports, etc.

A. SAMPLE PROJECT SCHEDULE FORMAT
B. PROJECT SITE LOCATION MAP
C. STATE OFFICE BUILDING
D. FINAL REPORT HVAC ASSESSMENT STUDY
E. FINAL REPORT ELEVATOR ASSESSMENT
F. FIRE ESCAPE CONDITION SURVEY
G. PDF DRAWINGS

END OF SCOPE OF WORK

February 7, 1997
Rev.: January 29, 2002

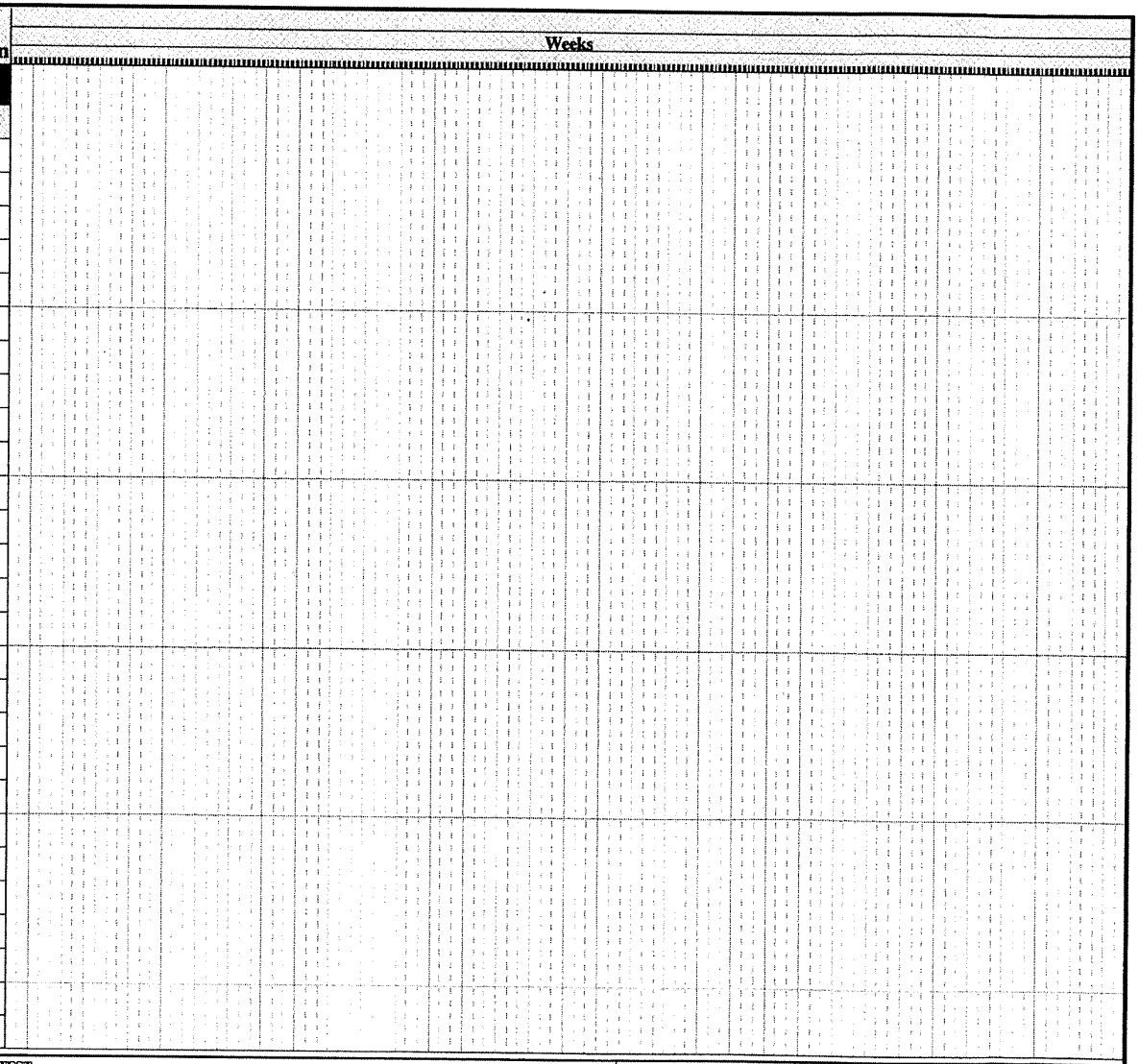
Responsible Group Code Table

The codes below are used in the schedule field "GRP" that identifies the group responsible for the activity. The table consists of groups in the Division of Property Management & Construction (DPMC), as well as groups outside of the DPMC that have responsibility for specific activities on a project that could delay the project if not completed in the time specified. For reporting purposes, the groups within the DPMC have been defined to the supervisory level of management (i.e., third level of management, the level below the Associate Director) to identify the "functional group" responsible for the activity.

CODE	DESCRIPTION	REPORTS TO ASSOCIATE DIRECTOR OF:
CM	Contract Management Group	Contract Management
CA	Client Agency	N/A
CSP	Consultant Selection and Prequalification Group	Technical Services
A/E	Architect/Engineer	N/A
PR	Plan Review Group	Technical Services
CP	Construction Procurement	Planning & Administration
CON	Construction Contractor	N/A
FM	Financial Management Group	Planning & Administration
OEU	Office of Energy and Utility Management	N/A
PD	Project Development Group	Planning & Administration

EXHIBIT 'A'

Activity ID	Description	Rspn
<PROJ>		
Design		
CV3001	Schedule/Conduct Predesign/Project Kick-Off Mtg.	CM
CV3020	Prepare Program Phase Submittal	AE
CV3021	Distribute Program Submittal for Review	CM
CV3027	Prepare & Submit Project Cost Analysis (DPMC-38)	CM
CV3022	Review & Approve Program Submittal	CA
CV3023	Review & Approve Program Submittal	PR
CV3024	Review & Approve Program Submittal	CM
CV3025	Consolidate & Return Program Submittal Comments	CM
CV3030	Prepare Schematic Phase Submittal	AE
CV3031	Distribute Schematic Submittal for Review	CM
CV3037	Prepare & Submit Project Cost Analysis (DPMC-38)	CM
CV3032	Review & Approve Schematic Submittal	CA
CV3033	Review & Approve Schematic Submittal	PR
CV3034	Review & Approve Schematic Submittal	CM
CV3035	Consolidate & Return Schematic Submittal Comment	CM
CV3040	Prepare Design Development Phase Submittal	AE
CV3041	Distribute D. D. Submittal for Review	CM
CV3047	Prepare & Submit Project Cost Analysis (DPMC-38)	CM
CV3042	Review & Approve Design Development Submittal	CA
CV3043	Review & Approve Design Development Submittal	PR
CV3044	Review & Approve Design Development Submittal	CM
CV3045	Consolidate & Return D.D. Submittal Comments	CM
CV3050	Prepare Final Design Phase Submittal	AE
CV3051	Distribute Final Design Submittal for Review	CM
CV3052	Review & Approve Final Design Submittal	CA
CV3053	Review & Approve Final Design Submittal	PR
CV3054	Review Final Design Submitl for Constructability	OCS



NOTE:
Refer to section "IV Project Schedule" of the Scope of Work for contract phase durations.

DBCA - TEST

Sheet 1 of 3

Bureau of Design & Construction Services
Routine Project

Exhibit "A"

Activity ID	Description	Rspn	Weeks
CV3055	Review & Approve Final Design Submittal	CM	
CV3056	Consolidate & Return Final Design Comments	CM	
CV3060	Prepare & Submit Permit Application Documents	AE	
CV3068	Prepare & Submit Bidding Cost Analysis (DPMC-38)	CM	
Plan Review-Permit Acquisition			
CV4001	Review Constr. Documents & Secure UCC Permit	PR	
CV4010	Provide Funding for Construction Contracts	CA	
CV4020	Secure Bid Clearance	CM	
Advertise-Bid-Award			
CV5001	Advertise Project & Bid Construction Contracts	CP	
CV5010	Open Construction Bids	CP	
CV5011	Evaluate Bids & Prep. Recommendation for Award	CM	
CV5012	Evaluate Bids & Prep. Recommendation for Award	AE	
CV5014	Complete Recommendation for Award	CP	
CV5020	Award Construction Contracts/Issue NTP	CP	
Construction			
CV6000	Project Construction Start/Issue NTP	CM	
CV6001	Contract Start/Contract Work (25%) Complete	CON	
CV6002	Preconstruction Meeting	CM	
CV6003	Begin Preconstruction Submittals	CON	
CV6004	Longest Lead Procurement Item Ordered	CON	
CV6005	Lead Time for Longest Lead Procurement Item	CON	
CV6006	Prepare & Submit Shop Drawings	CON	
CV6007	Complete Construction Submittals	CON	
CV6011	Roughing Work Start	CON	
CV6012	Perform Roughing Work	CON	
CV6010	Contract Work (50%+) Complete	CON	
CV6013	Longest Lead Procurement Item Delivered	CON	
CV6020	Contract Work (75%) Complete	CON	

NOTE:
Refer to section "IV Project Schedule" of the Scope of Work for contract phase durations.

DBCA - TEST

Sheet 2 of 3

Bureau of Design & Construction Services
Routine Project

Exhibit "A"

Activity ID	Description	Rspn	Weeks
CV6014	Roughing Work Complete	CON	
CV6021	Interior Finishes Start	CON	
CV6022	Install Interior Finishes	CON	
CV6030	Contract Work to Substantial Completion	CON	
CV6031	Substantial Completion Declared	CM	
CV6075	Complete Deferred Punch List/Seasonal Activities	CON	
CV6079	Project Construction Complete	CM	
CV6080	Close Out Construction Contracts	CM	
CV6089	Construction Contracts Complete	CM	
CV6090	Close Out A/E Contract	CM	
CV6092	Project Completion Declared	CM	

NOTE:
Refer to section "IV Project Schedule" of the Scope of Work for contract phase durations.

DBCA - TEST

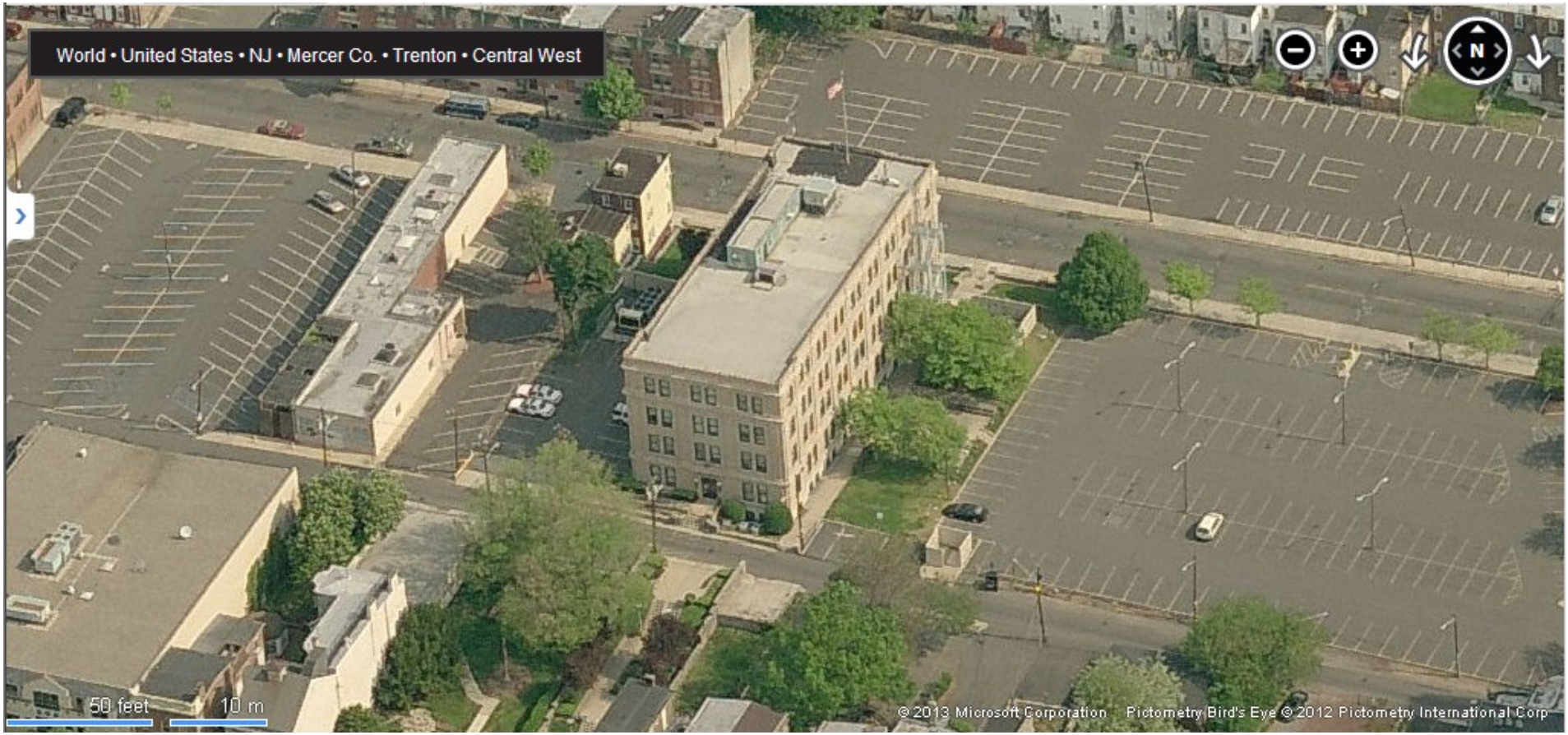
Sheet 3 of 3

Bureau of Design & Construction Services
Routine Project

Exhibit "A"

NJ State Office Building Location Map

EXHIBIT 'B'



State Office Building

EXHIBIT 'C'

FINAL REPORT

HVAC ASSESSMENT STUDY

135 WEST HANOVER STREET
TRENTON, MERCER COUNTY, N.J.

DPMC: J0360-00 / Work Order 15

LAMMEY + GIORGIO ARCHITECTS
215 HIGHLAND AVENUE, SUITE B
HADDON TOWNSHIP, NJ

EASTERN CONSULTANTS, INC.
MEP ENGINEERS

OCTOBER 12, 2020 (REVISED)

EXHIBIT 'D'

lgarch.com

Lammey + Giorgio / Architects
215 Highland Avenue, # B
Haddon Twp, NJ 08108

October 12, 2020

Mr. Mark Dae
State of New Jersey
Division of Property Management & Construction
20 West State Street
P.O. Box 235
Trenton, NJ 08625-0235

Re:	FINAL REPORT (Revised) HVAC Systems Assessment & Cost Estimating 135 West Hanover Street
ODC#:	J0360-00, Work Order 15
L&G:	18463.15

Dear Mr. Dae:

This following is our FINAL REPORT prepared by David Parsons, PE of Eastern Consultants, Inc., and revised to include the costs for removal of acoustical tile ceilings and lighting fixtures.

The Report concludes that the entire heating, cooling and ventilation system in the building is in need of replacement. Construction Costs associated with the systems replacement are estimated at $3,332,945, which includes existing ceiling and light fixture removal and replacement. Costs for using rooftop heating and cooling units versus interior air-handling units are essentially the same.

It should be noted that the costs do not include the following:

- Hazardous materials remediation is not included but based on our review of documents provided, should be expected.
- The costs for radiation removals is included, but not the costs associated with the perimeter wall enclosures. It is assumed that the wall removal costs will be included under a future building renovation project.
- Electrical costs for connecting new HVAC equipment are difficult to estimate at this time, however our estimate does include an Allowance for those costs ($100,000) which would have to be confirmed at the design phases of work.

L + G

- Costs for structural work that may be required to repair the floors or roof due to changes needed to remove existing and install new HVAC equipment are not included.

- Escalation is not included; we recommend adding four percent (4.0%) per year to the midpoint of construction.

DPMC provided us with drawings and input from Building Management regarding the existing conditions.

Zoning for the HVAC systems should not be completed at this time. In the COVID-19 environment we are faced with, any assumptions regarding zoning, outside air requirements, filtration, etc. would be speculative at best until codes and standards have been updated. These issues should be addressed by the engineer retained to design the replacement systems.

If you have any questions do not hesitate to contact me. Thank you for the opportunity to provide these services.

Sincerely,

LAMMEY & GIORGIO, P.A.

William P. Lammey, AIA

cc: D. Parsons, PE

EXHIBIT 'D'

HVAC ASSESSMENT STUDY
135 WEST HANOVER STREET
TRENTON, NJ

DAVID PARSONS, P.E.
EASTERN CONSULTANTS, INC
2211 LEHIGH STREET
EASTON, PA. 18042

FOR

LAMMEY + GIORGIO ARCHITECTS
215 Highland Ave, Suite B
Haddon Township, NJ 08108

October 12, 2020

EXHIBIT 'D'

HVAC EXISTING CONDITIONS

The present HVAC equipment was originally installed in in 1981. This system included multi-zone heating- cooling air handlers that supplied conditioned air to each floor, rooftop units that supplied air to the 4th floor, and perimeter steam radiation for heat at exterior walls. There are small outside air ducts and louvers on the west side of building for the air handlers. The air handler for the first floor is in a mechanical room in the basement with supply and return air ducted up to condition the first floor. There are outside air ducts and louvers for each air handler.

Boilers provide steam to the coils in the air handlers and wall-finned radiation around the perimeter of the 1st through 4th Floors. The two existing boilers installed currently have a combined boiler horsepower rating greater than 100 horsepower.

A chiller provides chilled water to cooling coils in air handling units that condition the basement, 1st, 2nd and 3rd floors of the building. Two packaged rooftop HVAC units provide cooling and ventilation for the 4th floor.

The basement has a multi-zone air handler with chilled water and steam heating coil to condition the basement. This was a multizone unit, but was converted to a single-zone by removing the zone dampers controls and adding a variable speed drive. The basement air handler is in a mechanical room in the center of the south end of the building. It has an outside air grille under the south entry landing at the first floor. The VFD drives on these units no longer are functional and the fans run at full speed and cannot reduce flow to the VAV diffusers to restrict flow due to higher pressures in the ductwork system. The central air handling units are 38 years old and need to be replaced with new equipment. The ductwork and diffusers are dirty and Have caused dirt to adhere to ceiling tiles. Dirt in the space is drawn up to the diffusers, recirculates through the ductwork and back into the spaces.

There is a small IT room in the basement with a computer room air handling unit that heats, cools, humidifies and dehumidifies the room, and has a remote exterior condensing unit.

In 1991 there was an upgrade to the building HVAC systems on the 1st through 3rd floors that converted the existing multi-zone air handlers to single zone units (cooling only) with variable speed fan control to supply air to VAV diffusers, with self-contained thermostats. The steam coils were disconnected in these AHU's. The 4th floor had two rooftop cooling units with electric reheat coils in ductwork to individual to zones that supplied VAV diffusers with self-contained thermostats. The perimeter steam radiation remained. A new chiller and a new rooftop cooling unit was added in 1991 along with building.

In the early 2000's self-contained thermostatic valves were installed by building maintenance to control the perimeter fin-tub radiation to prevent overheating.

Two new gas-fired steam boilers and a boiler feed unit were installed in 2001 to replace the existing boilers located in the basement.

In 2006, a portion of the first floor was altered to provide for the State Police security group to monitor CCTV cameras throughout the State. Split system ceiling air handlers and remote condensing units to provide additional cooling required by computers and equipment were also added to the 1st floor.

EXHIBIT 'D'

Ductwork modifications and air distribution in other areas of the first floor were also part of the alterations.

A process room requiring exhaust and adjacent control room were added in in the basement. This area has a makeup air handling unit and an exhaust fan was added. The exhaust air is ducted up to an outlet above the roof of the building. This process equipment in the room has been removed and the exhaust and makeup air equipment in no longer needed.

RECOMMENDATIONS:

The following HVAC recommendations are based on the assessment of the condition and age of the existing equipment, piping and ductwork in the building. Implementing the HVAC recommendations along with electrical, lighting and general construction improvements will provide a clean and healthy working environment. Adding insulation to the roof and exterior walls, new windows and doors, and installing new LED lighting fixtures will reduce the size of the HVAC equipment and distribution systems, which will reduce HVAC construction and operating costs.

The recommendations are based on standard office occupancy of 5 persons per 1000 square feet and ASHRAE ventilation standards. Changes in use and the occupancy in spaces within the building will affect final equipment sizes and construction costs.

1. Remove the steam boilers and steam piping throughout the building and replace with new hot water gas-fired condensing boilers. The steam pipes are at least 40 years old and control steam for the perimeter heat is costly. Hydronic heating is easier to control.

2. Remove the existing chiller and replace it with a new chiller. The existing chiller is almost 30 years old and has exceeded it expected life and should be replaced with a newer more efficient chiller.

3. Remove the existing air handlers, ductwork, diffusers and controls from all floors and basement.

4. New HVAC System for the 1st through 3rd floors: Provide new air handlers with chilled water coils and heating coils on all upper floors and provide new Variable Air Volume ducted air distribution systems on each floor. Multiple air handlers with variable frequency drives will be needed on each floor due to the size of units and the ability to get them into the building. Each floor will have perimeter hydronic baseboard with temperature reset controls to provide controlled heating to offset outside air temperatures.

5. New HVAC System for the 4th Floor:
   Option 1: Provide same system as for floors 1 through 3 by adding new mechanical rooms to the 4th floor.

   Option 2: Provide two new rooftop units with VAV distribution and hot water reheat in ductwork for air distribution, and perimeter hydronic baseboard radiation.

EXHIBIT 'D'

6. Basement: The basement has different spaces and could have different uses. New HVAC systems should employ HVAC units in each area based on the specific requirements, such as offices or storage.

   All HVAC systems must provide for heating, cooling and dehumidification of spaces, and outside air for required ventilation. For one space a single zone air handling unit with air distribution can be used, and where the space is split up, then an air handler with air distribution and variable air volume system could be used.

   Outside air could be brought into each air handler system, or it could be provided by one Direct Outside Air System (DOAS) with an HVAC unit that will heat, cool and dehumidify. Final design will have to incorporate which method to use based on the final use of the spaces.

   Remove existing air handling unit and ductwork, exhaust fan in the basement processing room, and exhaust air duct up to roof. Our understanding is that the vent on the roof will be removed as part of a roof replacement project that will be completed this year.

7. Remove and replace all existing toilet room exhaust fans in the building.

8. The final design should take into consideration the sizes of boilers to make sure the combined capacity of new boilers installed does not exceed 100 boiler horsepower. If it does, a boiler operator will have to be on-site whenever the building is occupied.

It should also be understood that the COVID-19 environment that we have been experiencing could have an impact on design decisions in the future. Codes and standards will most probably change, possibly requiring increased ventilation, filtration, etc. The engineers tasked with the design will be responsible for those determinations.

THE FOLLOWING ITEMS ARE NOT INCLUDED IN HVAC ASSESSMENT:

1. Please note that there may be environmental remediation required to remove HVAC piping insulation, ductwork, diffusers, equipment, ceilings, etc. is not included in the cost estimate prepared for this study. Determination of environmental remediation and removal is not included in this study and estimate.

2. Removal of enclosures along existing walls to remove radiation and repair the walls is not included in the HVAC cost estimate.

3. Estimated cost for electrical work required to provide connections to all new HVAC equipment and disconnect existing equipment is difficult to determine until there is a design in place. We have included an Electrical Allowance of $100,000 in our estimate.

4. Costs for any structural work required, including repairs to floors or roof due to changes required for the installation of the new HVAC and removal of existing HVAC equipment ductwork or piping made obsolete.

EXHIBIT 'D'

5. Escalation has not been included. We recommend using 4% per year from this date to the midpoint of construction.

ATTACHMENT: HVAC CONSTRUCTION COST ESTIMATE

EXHIBIT 'D'

Eastern Consultants, Inc

CONSTRUCTION COST ESTIMATE
HVAC ASSESSMENT STUDY
135 WEST HANOVER STREET
TRENTON, NEW JERSEY
10/12/2020 (Revised)

ITEM	QUAN.	UNIT AMOUNT LABOR	UNIT AMOUNT TOTAL	TOTAL LABOR	TOTAL LABOR & MATERIAL
DIVISION 1 - GENERAL REQUIREMENTS FOR HVAC WORK					
CRANE /WEEK	1	$ -	$ 5,550.00	$ -	$ 5,550
MOBILIZATION /L.S.	1	$ -	$ 5,000.00	$ -	$ 5,000
DEMOBILIZATION /L.S.	1	$ -	$ 5,000.00	$ -	$ 5,000
CLOSE-OUT /L.S.	1	$ -	$ 5,000.00	$ -	$ 5,000
1 % BOND /L.S.	1	$ -	$ 30,000.00	$ -	$ 30,000
CONCRETE TESTING /DAY	2	$ -	$ 600.00	$ -	$ 1,200
SUPERVISION /WEEK	40	$ -	$ 2,500.00	$ -	$ 100,000
SCAFFOLDING /L.S.	3	$ -	$ 5,000.00	$ -	$ 15,000
AREA ADJUSTMENT DIV. 9 23 & 26		$ 0.34	$ 0.14	$ 19,941.00	$ 22,511
HVAC DEMOLITION					
BOILER DEMOLITION/EA	2	$ 3,900.00	$ 3,900.00	$ 7,800.00	$ 7,800
REMOVE BOILER FEED UNIT	1	$ 1,500.00	$ 1,500.00	$ 1,500.00	$ 1,500
REMOVE STEAM PIPING/TON	5	$ 835.00	$ 835.00	$ 3,757.50	$ 3,758
REMOVE CHILLED WATER PIPING/T	2	$ 835.00	$ 835.00	$ 1,670.00	$ 1,670
REMOVE REFRIGERANT - CHILLER/I	75	$ 12.80	$ 12.80	$ 960.00	$ 960
REMOVE SPLIT SYSTEMS/LB	50	$ 12.80	$ 12.80	$ 640.00	$ 640
REMOVE EX AHUS/EA	5	$ 835.00	$ 835.00	$ 4,175.00	$ 4,175
REMOVE EX AHUS/EA	5	$ 835.00	$ 835.00	$ 4,175.00	$ 4,175
REMOVE EX DIFFUSERS AND GRILL	260	$ 10.00	$ 10.00	$ 2,600.00	$ 2,600
REMOVE EX ELECT DUCT HTRS/EA	5	$ 20.00	$ 30.00	$ 100.00	$ 150
REMOVE EX DUCTWORK/LF	3,000	$ 3.86	$ 3.86	$ 11,580.00	$ 11,580
DUMPSTER /EACH	10	$ -	$ 900.00	$ -	$ 9,000
AREA ADJUSTMENT DIV. 23		$ 0.34	$ 0.14	$ 2,991.82	$ 6,481
DIVISION 23 - HVAC					
HVAC					
SUBMITTALS	1	$ 4,000.00	$ 6,000.00	$ 4,000.00	$ 6,000
CHILLED WATER PIPING & EQUIPMENT					
CW CIRCULATION PUMP 1/EA	2	$ 800.00	$ 2,800.00	$ 1,600.00	$ 5,600
CW CIRCULATION PUMP VFD/EA	1	$ 400.00	$ 1,850.00	$ 400.00	$ 1,850
NEW 150 TON CHILLER/EA	1	$ 10,000.00	$ 132,000.00	$ 10,000.00	$ 132,000
CW EXPANSION TANK/EA	1	$ 500.00	$ 1,655.00	$ 500.00	$ 1,655
CW AIR CONTROL FITTING	1	$ 400.00	$ 1,945.00	$ 400.00	$ 1,945
CW THERMOMETERS & PRESSURE	1	$ 800.00	$ 1,200.00	$ 800.00	$ 1,200
1-1/4" CPVC CW PIPE/LF	50	$ 12.05	$ 21.85	$ 602.50	$ 1,093
1-1/2" CPVC CW PIPE/LF	200	$ 14.05	$ 23.90	$ 2,810.00	$ 4,780
2" CPVC CW PIPE/LF	70	$ 15.40	$ 26.75	$ 1,078.00	$ 1,873
2-1/2" CPVC CW PIPE/LF	300	$ 16.25	$ 27.15	$ 4,875.00	$ 8,145
3" CPVC CW PIPE/LF	150	$ 17.15	$ 30.25	$ 2,572.50	$ 4,538
4" CPVC CW PIPE/LF	300	$ 18.95	$ 48.45	$ 5,685.00	$ 14,535
CW PIPE FITTINGS/EA	150	$ 40.00	$ 80.00	$ 6,000.00	$ 12,000
1-1/4" CW PIPE 1" TK ARMAFLEX IN	50	$ 5.60	$ 9.36	$ 280.00	$ 468
1-1/2" CW PIPE 1" TK ARMAFLEX IN	200	$ 5.60	$ 10.85	$ 1,120.00	$ 2,170
2" CW PIPE 1" TK ARMAFLEX INSUL	70	$ 5.75	$ 12.25	$ 402.50	$ 858
2-1/2" CW PIPE 1" TK ARMAFLEX IN	300	$ 5.75	$ 13.25	$ 1,725.00	$ 3,975
3" CW PIPE 1" TK ARMAFLEX INSUL	150	$ 5.75	$ 13.25	$ 862.50	$ 1,988
4" CW PIPE 1" TK ARMAFLEX INSUL	300	$ 7.00	$ 21.50	$ 2,100.00	$ 6,450
CW PIPE INSULATION FOR FITTINGS	50	$ 60.00	$ 100.00	$ 3,000.00	$ 5,000

EXHIBIT 'D'

ITEM	QUAN.	UNIT AMOUNT		TOTAL	
		LABOR	TOTAL	LABOR	LABOR & MATERIAL
HEATING EQUIPMENT					
NEW GAS CONDENSING HW BOILEF	2	$ 6,500.00	$ 30,900.00	$ 13,000.00	$ 61,800
BOILER & PRIMARY PIPING/EA	2	$ 1,000.00	$ 2,000.00	$ 2,000.00	$ 4,000
GAS CONNECTION TO NEW BOILER/	1	$ 1,600.00	$ 3,000.00	$ 1,600.00	$ 3,000
NEW GAS PIPING/LF	40	$ 10.00	$ 24.00	$ 400.00	$ 960
NEW GAS VALVE/EA	2	$ 46.00	$ 130.00	$ 92.00	$ 260
DRAIN, FILL &TEST GAS PIPE/EA	1	$ 400.00	$ 1,000.00	$ 400.00	$ 1,000
AIR INTAKE & VENT FOR BOILER /EA	1	$ 400.00	$ 3,000.00	$ 400.00	$ 3,000
CONDENSATE DRAWINS FOR BOILE	2	$ 300.00	$ 600.00	$ 600.00	$ 1,200
BOILER STARTUP & 1 YEAR SERVIC	2	$ 1,500.00	$ 2,000.00	$ 3,000.00	$ 4,000
HEATING PRIMARY CIRCULATION PI	2	$ 200.00	$ 600.00	$ 400.00	$ 1,200
HEATING SECONDARY CIRC PUMPS	2	$ 400.00	$ 2,720.00	$ 800.00	$ 5,440
HEATING SECONDARY CIRC PUMP \	2	$ 500.00	$ 1,450.00	$ 1,000.00	$ 2,900
HEATING EXPANSION TANK/EA	1	$ 500.00	$ 1,790.00	$ 500.00	$ 1,790
HEATING AIR CONTROL FITTING	1	$ 230.00	$ 2,780.00	$ 230.00	$ 2,780
HEAT THERMOMETERS & PRESSUR	1	$ 800.00	$ 1,200.00	$ 800.00	$ 1,200
FINNED TUBE PERIMETER RADIATIC	840	$ 25.50	$ 73.50	$ 21,420.00	$ 61,740
1" SCH 40 BLK STEEL HEAT PIPES/L	455	$ 9.55	$ 13.97	$ 4,345.25	$ 6,356
1-1/4" SCH 40 BLK STEEL HEAT PIPE	840	$ 10.20	$ 15.40	$ 8,568.00	$ 12,936
1-1/2" SCH 40 BLK STEEL HEAT PIPE	120	$ 11.35	$ 17.05	$ 1,362.00	$ 2,046
2" SCH 40 BLK STEEL HEAT PIPES/L	280	$ 14.20	$ 25.75	$ 3,976.00	$ 7,210
2-1/2" SCH 40 BLK STEEL HEAT PIPE	120	$ 18.20	$ 33.85	$ 2,184.00	$ 4,062
3" SCH 40 BLK STEEL HEAT PIPES/L	300	$ 21.00	$ 39.85	$ 6,300.00	$ 11,955
HEAT PIPE FITTINGS/EA	180	$ 30.00	$ 65.00	$ 5,400.00	$ 11,700
1" HEAT PIPE FIBERGLASS INSULA	455	$ 3.68	$ 6.61	$ 1,674.40	$ 3,008
1-1/4" HEAT PIPE FIBERGLASS INSI	1,680	$ 3.77	$ 6.76	$ 6,333.60	$ 11,357
1-1/2" HEAT PIPE FIBERGLASS INSI	120	$ 3.97	$ 8.45	$ 476.40	$ 1,014
2" HEAT PIPE FIBERGLASS INSULA	280	$ 4.19	$ 8.89	$ 1,173.20	$ 2,489
2-1/2" HEAT PIPE FIBERGLASS INSI	120	$ 4.44	$ 9.74	$ 532.80	$ 1,169
3" HEAT PIPE FIBERGLASS INSULA	300	$ 4.75	$ 10.50	$ 1,425.00	$ 3,150
HEAT PIPE INSULATION FOR FITTIN(	180	$ 30.00	$ 55.00	$ 5,400.00	$ 9,900
	2,115				
AIR DISTRIBUTION UNITS DUCT & ACCESSORIES					
NEW LARGE AHUS -FLRS 1 TO 4 /EA	8	$ 2,500.00	$ 25,000.00	$ 20,000.00	$ 200,000
NEW LARGE AHUS VFDS/EA	2	$ 500.00	$ 1,450.00	$ 1,000.00	$ 2,900
HW & CW MIXING VALVES PER AHU/	8	$ 2,000.00	$ 4,000.00	$ 16,000.00	$ 32,000
NEW S/A DIFFUSERS/EA	256	$ 100.00	$ 350.00	$ 25,600.00	$ 89,600
NEW R/A GRILLES /EA	24	$ 40.00	$ 140.00	$ 960.00	$ 3,360
NEW LARGE O/A LOUVERS/EA	6	$ 400.00	$ 800.00	$ 2,400.00	$ 4,800
DUCT FIRE DAMPERS	16	$ 65.00	$ 160.00	$ 1,040.00	$ 2,560
NEW BSMT AHUS UNITS/EA	5	$ 900.00	$ 6,600.00	$ 4,500.00	$ 33,000
NEW DOAS MAKEUP AIR UNIT FOR I	1	$ 2,000.00	$ 19,500.00	$ 2,000.00	$ 19,500
HW & CW MIXING VALVES PER AHU/	6	$ 1,500.00	$ 3,500.00	$ 9,000.00	$ 21,000
NEW UNIT HEATERS MECH & ELECT	8	$ 160.00	$ 525.00	$ 1,280.00	$ 4,200
COMPUTER ROOM HVAC UNIT/EA	1	$ 2,050.00	$ 30,450.00	$ 2,050.00	$ 30,450
NEW AHU DUCTWORK/LBS	17,700	$ 9.40	$ 11.18	$ 166,380.00	$ 197,886
NEW DUCT INSULATION/SQ FT	15,600	$ 2.75	$ 3.15	$ 42,900.00	$ 49,140
NEW DUCT VOLUME DAMPERS	256	$ 23.00	$ 60.00	$ 5,888.00	$ 15,360
NEW FLEXIBLE AIR DUCTS/LF	1,280	$ 4.39	$ 6.40	$ 5,619.20	$ 8,192
NEW S/A DIFFUSERS/EA	216	$ 40.50	$ 65.00	$ 8,748.00	$ 14,040
NEW R/A GRILLES /EA	18	$ 40.00	$ 180.00	$ 720.00	$ 3,240
NEW SMALL O/A LOUVERS/EA	6	$ 200.00	$ 400.00	$ 1,200.00	$ 2,400
REMOVE EX EXHAUST FANS/EA	8	$ 200.00	$ 300.00	$ 1,600.00	$ 2,400
NEW INLINE EXHAUST FANS/EA	8	$ 800.00	$ 1,600.00	$ 6,400.00	$ 12,800

EXHIBIT 'D'

ITEM	QUAN.	UNIT AMOUNT LABOR	UNIT AMOUNT TOTAL	TOTAL LABOR	TOTAL LABOR & MATERIAL
BUILDING AUTOMATION SYSTEM (B/	1	$50,000.00	$140,000.00	$ 50,000.00	$ 140,000
AIR BALANCE AHU --11 HVAC SYSTE	12	$ 3,000.00	$ 3,500.00	$ 36,000.00	$ 42,000
AIR BALANCE EXHAUST FANS/EA	8	$ 160.00	$ 200.00	$ 1,280.00	$ 1,600
REMOVE EX ROOFTOP HVAC UNITS	2	$ 400.00	$ 800.00	$ 800.00	$ 1,600
ROOF EF VENT REMOVAL/EA	1	$ 50.00	$ 75.00	$ 50.00	$ 75
O&M MANUALS & CLOSEOUT	1	$ 3,000.00	$ 5,000.00	$ 3,000.00	$ 5,000
AREA ADJUSTMENT DIV. 23		$ 0.34	$ 0.14	$ 191,427.09	$ 189,249

CONSTRUCTION COST SUMMARY

GENERAL REQUIREMENTS FOR HVAC WORK

SUB TOTAL		$ 189,261
TOTAL LABOR	$ 19,941.00	
LABOR ADJUSTMENT FACTOR		$ 0
LABOR ADJUSTMENT AMOUNT		$ 1,994
SUBTOTAL		$ 191,255
OVERHEAD	$ 0.15	$ 28,688
PROFIT	$ 0.10	$ 21,994
TOTAL GENERAL CONSTRUCTION		**$ 241,938**

HVAC DEMOLITION WORK

SUB TOTAL		$ 54,489
TOTAL LABOR	$ 41,949.32	
LABOR ADJUSTMENT FACTOR		$ 0
LABOR ADJUSTMENT AMOUNT		$ 4,195
SUBTOTAL		$ 58,683
OVERHEAD	$ 0.15	$ 8,803
PROFIT	$ 0.10	$ 6,749
TOTAL HVAC DEMOLITION		**$ 74,235**

HVAC

SUB TOTAL		$ 1,591,094
TOTAL LABOR	$ 754,447.94	
LABOR ADJUSTMENT FACTOR		$ 0
LABOR ADJUSTMENT AMOUNT		$ 75,445
SUBTOTAL		$ 1,666,539
OVERHEAD	$ 0.15	$ 249,981
PROFIT	$ 0.10	$ 191,652
TOTAL HVAC WORK		**$ 2,108,172**

HVAC TOTAL INCLUDING DEMOLITION WORK

GENERAL CONSTRUCTION	**$ 241,938**
HVAC DEMOLITION	**$ 74,235**
HVAC	**$ 2,108,172**
HVAC GRAND TOTAL	**$ 2,424,345**

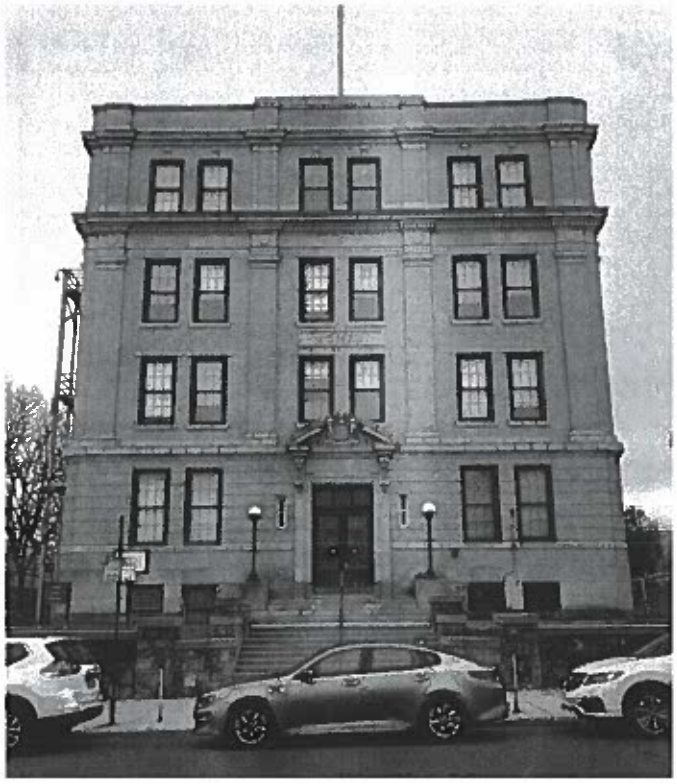
ELECTRICAL ALLOWANCE FOR HVAC	**$ 100,000**
LIGHTING REMOVAL & REPLACEMENT	**$ 408,600**
CEILING REMOVAL & REPLACEMENT	**$ 400,000**
GRAND TOTAL CONSTRUCTION COSTS	**$ 3,332,945**

NOTE: THE DEMOLITION WORK ASSUMES NO ENVIRONMENTAL REMEDIATION IS NEEDED SUCH AS REMOVAL OF ASBESTOS AND/OR LEAD, OR MOLD REMEDIATION FROM HVAC EQUIPMENT, DUCTWORK AND PIPING INSULATION. I NOTED DURING SURVEY A LOT OF BLACK PARTICLES ON AND AROUND DIFFUESRS THROUGHOUT THE BUILDING AND THERE MAY BE ASBESTOS ON PIPES OR FITTINGS ESPECIALLY IN CONCEALED SPACES SUCH AS HEATING FIN COIL RADIATION INSTALLED IN WOOD ENCLOSURES ALONG PERIMETER WALLS. TOTAL FOR HVAC WORK IS PROVIDED WITH DEMOLITION AND WITHOUT.

EXHIBIT 'D'

FINAL REPORT
Elevator Assessment
135 West Hanover Street
Trenton, NJ

DPMC: J0377-00 Work Order 02



STATE OF NEW JERSEY
DIVISION OF PROPERTY MANAGEMENT & CONSTRUCTION

LAMMEY + GIORGIO ARCHITECTS
215 HIGHLAND AVENUE, SUITE B
HADDON TOWNSHIP, NJ

VERTICAL TRANSPORTATION EXCELLENCE
ELEVATOR CONSULTANTS

August 12, 2020

EXHIBIT 'E'

lgarch.com

Lammey + Giorgio Architects
215 Highland Avenue, # B
Haddon Township, NJ 08108

August 12, 2020

Mr. Mark Dae
State of New Jersey
Division of Property Management & Construction
20 West State Street
PO Box 235
Trenton, NJ 08625-0235

Re:	Final Report - Elevator Assessment 135 West Hanover Street
DPMC No.	J0377-00 / Work Order 02
L+G:	20520.02

Dear Mr. Dae:

Enclosed please find our FINAL REPORT for the above referenced Project which consists of the following:

- Draft Report
- VTX Elevator Assessment Report dated 06.01.2020
- Construction Cost Estimate dated 06.10.2020
- Project Cost Analysis (DPMC-38) dated 06.10.2020

Kindly review this information and advise if you have any questions or require clarifications.

Sincerely,

LAMMEY + GIORGIO ARCHITECTS

William P. Lammey, AIA

Encl

L + G

EXHIBIT 'E'

lgarch.com

Lammey + Giorgio Architects
215 Highland Avenue, # B
Haddon Township, NJ 08108

FINAL REPORT

Elevator Assessment

135 West Hanover Street
Trenton, NJ

DPMC: J0377-00 / Work Order 02
L+G: 20520.02
Date: August 12, 2020

Executive Summary

The following is the FINAL REPORT that addresses the condition of the two (2) elevators that serve the four floors and basement at 135 West Hanover Street. DPMC has initiated multi-phased projects to put the building back into use in the Capitol Complex. Understanding the condition of the elevators and costs associated with upgrades is part of the planning needed to bring this building back online.

L+G's elevator subconsultant, Vertical Transportation Excellence (VTX) advises that the elevator controllers are at the end of their 30-year life, the manufacturer is no longer in business and technical support has been undependable. Upgrades to meet the Elevator Code, building and MEP support, and barrier-free accessibility will result in a complete modernization.

VTX estimates costs of approximately $600,000 for the elevator work. Additional costs to support the elevator upgrades, including general construction, fire protection, plumbing, heating and air-conditioning, and electrical brings the construction cost estimate (CCE) to approximately $930,444. The total construction working estimate (CWE), which includes construction costs, professional fees, DPMC management, contingencies, permits, and inspections is estimated at $1,229,934.

Combining the elevator work with other interior work required, such as replacement of the HVAC systems, hazardous materials abatement, plumbing upgrades, and ceiling and lighting replacements should be considered to take advantage of potential overall cost savings.

ARCH + DESIGN

L + G

EXHIBIT 'E'

Background

Lammey + Giorgio (L+G) was retained by DPMC to assess the condition of elevator equipment and provide a budget cost estimate for upgrades.

The L+G Team included Vertical Transportation Excellence (VTX) to assess the condition of the two (2) existing elevators that serve the four floors and basement of 135 West Hanover Street. L+G utilized the attached VTX report to address associated costs for work to support the replacement and upgrades.

Process

A Notice to Proceed was issued by DPMC on May 13, 2020. L+G provided VTX with floor plans of each of the five (5) floors served by elevators, as well as the Penthouse floor plan which houses the elevator machine and control rooms. No service information was available for review.

On May 26, 2020 Edward Shane of VTX visited the building to assess the conditions. At the time of his visit neither elevator was operational but he was still able to investigate the conditions. He issued an Assessment Report to L+G on June 1, 2020.

Bill Lammey of L+G visited the building on June 3, 2020 to review conditions associated with the VTX report. At the time of his visit both elevators were operational.

A Draft Report was submitted on June 10, 2020. There were no comments received from DPMC.

This is the Final Report that provides DPMC with the extent of elevator upgrades required, along with a construction cost estimate (CCE) and a construction working estimate (CWE). The CWE includes the cost of construction plus fees, contingencies, permits, etc.

Findings

A summary of findings is as follows:

1. The existing elevator equipment was replaced in 1990; some of the equipment has exceeded its life span.
2. Since the elevators were not running it was not possible to assess their operating condition.

EXHIBIT 'E'

3. The equipment in the machine and control rooms, top of hoistways, pits, elevator cars, and each lobby were accessed.

4. The elevator cars meet the minimum clear inside size requirements of A117.1 for handicapped accessibility. Replacement of elevator lobby signaling and call devices is required.

5. The VTX Report provides a general elevator summary plus building related items that need to be considered in the budget cost estimate.

Recommendations

VTX advises that the elevator controllers are at the end of their 30-year life expectancy. The manufacturer has been out of business since 2014, so reliance on this equipment for the future is not recommended. Once the upgrades are completed the elevators would be in compliance with the Elevator Safety Code as well as all other associated codes.

Building, plumbing, fire protection, HVAC and electrical work to support the elevator upgrades will be required as itemized in the VTX report under Building Related Items/MEP.

Construction Costs and Total Project Costs

Elevator equipment replacement and upgrades is estimated at $600,000 by VTX. Adding costs to support the elevator equipment upgrades, plus contractor's general requirements, overhead/profit, contingencies, and escalation brings the total budget Construction Cost Estimate (CCE) to $930,444. Please note that these costs do not include hazardous materials abatement, which will be required as part of the other work being planned.

The Construction Working Estimate (CWE) , including costs for construction, fees, contingencies, and permits is $1,229,934.

Attachments

- *VTX Elevator Assessment Report dated 06.01.2020 2020*
- *Construction Cost Estimate dated 06.10.2020*
- *Construction Working Estimate (DPMC-38) dated 06.10.2020*

Vertical Transportation Excellence
1515 Market Street-Suite 2020
Philadelphia, PA 19102
Office: (215) 561-4201
Fax: (215) 557-0337

Assessment Report

Contract No: 066753
Contract Title: ELEVATOR ASSESSMENT 135 WEST HANOVER STREET-TRENTON, NJ ELEVATORS P1 & P2
Inspection Date: 5-26-20

	LAMMEY & GIORGIO ARCHITECTS 215 HIGHLAND AVENUE, SUITE B HADDON TOWNSHIP, N.J. 08108	**Date:**	June 1 2020
		VTX Job #:	066753
Attn:	Mr. William Lammey	**Observer:**	Edward J. Shane-C.E.I.

PROJECT SCOPE:

Survey two (2) existing passenger elevators to conduct an assessment of the elevator equipment.

PROJECT OBJECTIVE:

Vertical Transportation Excellence (VTX) is to provide professional services for the comprehensive elevator equipment assessment of the two (2) elevators (#1 & #2) located at 135 West Hanover Street. The building was erected in the 1920's, and most of the original elevator equipment was removed and replaced with new as part of a comprehensive modernization, completed in 1990. Based upon this information and the general condition of the elevators, it is our opinion that some of the equipment has exceeded its expected life span and that both of the elevators are in need of a modernization. The intention was to provide a comprehensive assessment of the elevator installations and to provide recommendations for addressing repairs, code upgrades, and development of a comprehensive modernization program.

As the equipment continues to age, the elevator equipment may begin or continue to have operational issues and extended down time due to lack of support and parts availability. The lack of dependable operation is an inconvenience to those who depend on elevator performance on a daily basis. The elevator does meet the minimum requirements of the A117.1 accessibility code. in regards to the clear inside cab.

SUMMARY:

Upon arrival, both elevators were out of service. The ability to assess the condition of the elevators while running was not possible, so the assessment of the equipment located in the machine room, controller room, top of hoistways, pits, cabs, and each lobby was successful. The following equipment was replaced as part of the modernization program:

A. Elevator machine assemblies; gearbox, hoist motor, brake and drive sheave.
B. Hoist ropes.
C. Deflector sheaves located at the top of the hoistways.
D. Governors and pit tension weight assemblies.
E. Governor ropes.
F. Controllers.
G. Machine room and hoistway wiring.
H. Motor generators.
I. Cab enclosures.
J. Car and hall operating fixtures.
K. Car door operator and related car equipment.

EXHIBIT 'E'

L. Hoistway door equipment.

ELEVATOR SUMMARY

- 5 Stops/5 Openings in-line
- Floor designations – B-1-2-3-4
- Capacity – 2,500 LBS
- Car Speed - 150 FPM
- Guide Rails – 15 LB/FT
- 3'-4" x 6'-11" doors, single speed side opening, left and right-handed
- Hoistway Entrance frames and door panels – Baked enamel finish
- Clear inside cab – 6'-3" wide x 4'-5-1/2" deep (wall to wall) 4'-1" deep at Stainless Steel #4 bumper top at 16" aff.
- Car Door Panels – Steel with stainless steel #4 finish.
- Cab Fronts - Stainless Steel with brushed #4 finish
- Cab Walls – Plastic Laminated walls, with stainless steel #4 reveals, front returns, transom, base, handrail on rear wall only, and a bumper on the rear wall only
- Cab Ceiling – Stainless Steel #8 mirror finish panels with downlights
- Cab Flooring – Carpet
- Car and Hoistway Sills - Aluminum
- Hoistway Door Panels – Baked Enamel, UL labeled.
- Machines – Hollister-Whitney
- Controllers – Computerized Elevator Control Corp. (closed in 2014)
- Power Supply 208VAC, 3-phase
- Operation – Duplex
- Overhead – 12'-6" Approximately
- Net Travel – 49'-6 ½" Approximately
- Pit Depth – 4'-1"
- Car Operating Panel – Applied, Stainless Steel with brushed #4 finish
- Car position indicator – Mounted in car transom
- Hall Stations – Flush wall mounted between elevators with Stainless Steel with brushed #4 finish

Building related items/MEP

- Lighting – Machine and controller rooms currently have two (2) fixtures. Lighting needs to be 19-foot candles per code.
- Pits have two (2) fixtures vertical mounted. Lighting needs to be 10-foot candles per code.
- Electrical Receptacles –GFCI in machine and controller rooms and pit required.
- Sprinklers three (3) and heat detectors three (3) are within 2'-0" of each head in the machine and controller rooms, Shunt trip operation will be required.
- No sprinkler or heat detector, or smoke detector located in pit.
- Smoke detector is located at the top of hoistway.
- Smoke detectors are located at each elevator entrance.
- Fire alarm modules in machine room needed.
- Access doors to both need to be self lockable.
- ABC Fire Extinguisher required in machine room.
- Need 110 VAC disconnect for cab lighting and accessories
- Main disconnect switches to be evaluated by Electrical.
- Dedicated phone lines are located in the machine room.
- Machine room environment will need to stay within the temperature and humidity range required by the elevator equipment manufacturer. The range is typically 50-90 degrees F with non-condensing humidity between 10-90%. The capability of the existing ventilation needs to be verified

EXHIBIT 'E'

- No emergency power noted
- There is no drain in elevator pit. A sump pump may be required.

RECOMMENDATIONS:

The elevator controllers are at the 30-year useful life expectancy, plus the manufacturer has been closed since 2014. The parts are very hard to procure, technical support is no longer available, so consequently, the controllers are considered obsolete. When this work is completed, associated items required by A17.1 will also be required.

Elevator Scope of Work

- VVAC Non-proprietary microprocessor Traction Controller
- Landing system
- Machine work
- Hoist ropes
- Rope grippers
- Travel cable and wiring
- Guide rails – Retain, scrape, wire brush, and clean lower section in pit. Paint unmachined portion.
- Signal Fixtures Car and Hall do meet ADA. However, the Fire service in the cars do not meet the current ASME A17.1- code
- New cab enclosures and interiors
- Cab floor to be replaced with raised rubber flooring
- Roller Guides – On the car and counterweight assemblies

Budgetary cost for Elevator Work only: $600,000.00

Estimated Schedule:

Survey and engineering: 4 weeks
Shop drawings & submittals: 8 weeks
Material procurement: 14 weeks
Modernization of elevator: 10-12 weeks

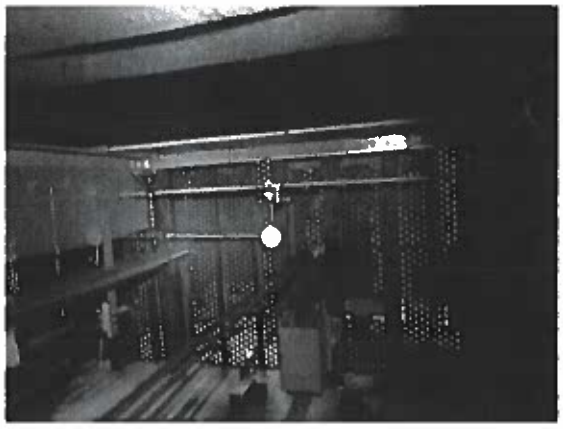
PHOTOS

Existing Machines

Existing Controllers

EXHIBIT 'E'

Top of elevator hoistway



Cab stainless steel reveals not adhering

Pit lights car #1

Existing side exits in cab

Elevator hoistway door panel label

Machine room door label painted over

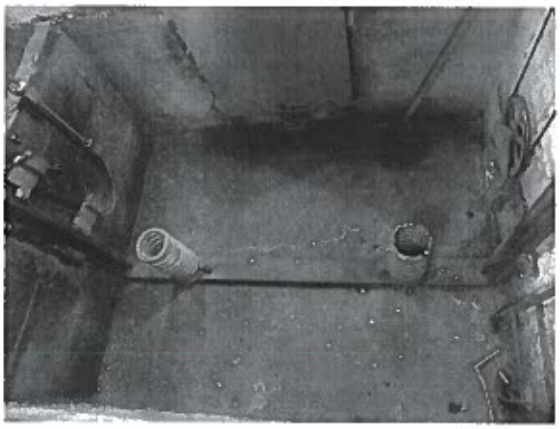
EXHIBIT 'E'

Elevator cab interior

Elevator lobby at floor 1

Elevator 1 pit

Elevator 2 pit



C.C. Mark DeCocinis-VTX President

EXHIBIT 'E'

ELEVATOR ASSESSMENT
135 WEST HANOVER STREET
TRENTON, NJ

DPMC:
L&G:
Prep: VTX & wpl
Date: 08.12.2020
Rev:
Page: 1 of 3

ORDER OF MAGNITUDE BUDGET CONSTRUCTION COST ESTIMATE

Group	Description		Subtotal	Total Cost	$'s/SF
1.0	**EXISTING CONDITIONS**			**$ 9,000**	
1.1	Demolition & Removals -General Construction only		$ 9,000		
2.0	**GENERAL CONSTRUCTION & FINISHES**			**$ 18,250**	
2.1	General Construction & Finishes		$ 18,250		
3.0	**CONVEYING**			**$ 600,000**	
3.1	Elevator Equipment & Cab Finish Replacement		$ 600,000		
4.0	**PLUMBING**			**$ 13,700**	
4.1	Plumbing		$ 13,700		
5.0	**FIRE PROTECTION**			**$ 7,500**	
5.1	Sprinklers		$ 7,500		
6.0	**HVAC**			**$ 4,500**	
6.1	HVAC		$ 4,500		
7.0	**ELECTRICAL**			**$ 31,200**	
7.1	Electrical		$ 31,200		
	SUBTOTAL			$ 684,150	
	General Requirements, Mobilization & Demobilization	10%		68,415	
	Overhead & Profit	10%		68,415	
	Contingencies	10%		68,415	
	Escalation to Midpoint of Construction (2021)	6%		41,049	
	TOTAL CONSTRUCTION COST ESTIMATE (CCE)			**$ 930,444**	

Limitations

1. No design has been completed.
2. The costs are based on current market prices assuming normal business hours.
3. The costs do not include A/E or DPMC fees, project contingencies, other soft costs, or FF&E. Refer to the Project Cost Analysis (DPMC 38).
4. Costs for HazMat abatement are not included.

EXHIBIT 'E'

ELEVATOR ASSESSMENT
135 WEST HANOVER STREET
TRENTON, NJ

DPMC:
L&G:
Prep: VTX & wpl
Date: 08.12.2020
Rev:
Page: 2 of 3

ORDER OF MAGNITUDE BUDGET CONSTRUCTION COST ESTIMATE

Group	Description			Unit Cost	Subtotal	Total Cost
1.0	**EXISTING CONDITIONS**					
2.1	Demolition & Removals - General Construction					
	- Removals	40	Hrs	100.00	4,000	
	- Protection & clean-up	1	Lump	2,500.00	2,500	
	- Trash Removal	1	Lump	1,500.00	1,500	
	- Dumpsters	1	Lump	1,000.00	1,000	
	Subtotal - 2.1				9,000	
	TOTAL - 1.0 - EXISTING CONDITIONS					**$ 9,000**
2.0	**GENERAL CONSTRUCTION & FINISHES**					
2.1	Miscellaneous General Construction					
	- Framing	5	Floors	750.00	3,750	
	- Wall finishes - plaster repairs & paint	5	Floors	1,500.00	7,500	
	- Elevator Machine Room Doors	2	EA	3,000.00	6,000	
	- Miscellaneous	1	Lump	1,000.00	1,000	
	Subtotal				18,250	
	TOTAL - 2.0 - GENERAL CONSTRUCTIONS & FINISHES					**$ 18,250**
3.0	**CONVEYING**					
3.1	Elevator equipment & cab finish replacement					
	- Refer to VTX Study	1	EA	600,000.00	600,000	
	TOTAL - 3.0 - CONVEYING					**$ 600,000**
4.0	**PLUMBING**					
4.1	Plumbing					
	- New sump pump	1	EA	3,500.00	3,500	
	- Remove & replace concrete	48	Hrs	100.00	4,800	
	- Excavation & backfill	24	Hrs	100.00	2,400	
	- Piping & connection to existing	1	Lump	3,000.00	3,000	
	Subtotal				13,700	
	TOTAL - 4.0 - PLUMBING					**$ 13,700**
5.0	**FIRE PROTECTION**					
5.1	Sprinklers					
	- New sprinklers	5	EA	1,500.00	7,500	
	Subtotal				7,500	
	TOTAL - 5.0 - FIRE PROTECTION					**$ 7,500**
6.0	**HVAC**					
6.1	New HVAC at Machine Room	1	EA	4,500.00	4,500	
	Subtotal				4,500	
	TOTAL - 5.0 - FIRE PROTECTION					**$ 4,500**

EXHIBIT 'E'

ELEVATOR ASSESSMENT
135 WEST HANOVER STREET
TRENTON, NJ

DPMC:
L&G:
Prep: VTX & wpl
Date: 08.12.2020
Rev:
Page: 3 of 3

ORDER OF MAGNITUDE BUDGET CONSTRUCTION COST ESTIMATE

Group	Description			Unit Cost	Subtotal	Total Cost
7.0	**ELECTRICAL**					
7.1	Electrical					
	- New lighting in Machine & Control Rooms	6	EA	600.00	3,600	
	- New elevator pit lighting	4	EA	750.00	3,000	
	- New receptacles - Machine & Control Rooms & pit	5	EA	350.00	1,750	
	- New smoke or heat detector in pit	1	EA	300.00	300	
	- New shunt trip breaker	1	EA	2,800.00	2,800	
	- New fire alarm modules in Machine Room	1	EA	1,500.00	1,500	
	- Disconnect for cab lighting & accessories	2	EA	750.00	1,500	
	- Replace main disconnect switches for elevators	2	EA	6,500.00	13,000	
	- Electrical for Machine Room HVAC	1	Lump	1,500.00	1,500	
	- Electrical for new cab lighting	2	EA	750.00	1,500	
	- Electrical for new pit sump pump	1	EA	750.00	750	
	Subtotal				31,200	
	TOTAL - 7.0 - ELECTRICAL					**$ 31,200**

EXHIBIT 'E'

PROJECT COST ANALYSIS	DPMC #	J0377-00/WO 02
Date: 08.12.2020		
STATE OF NEW JERSEY, DPMC	Project Phase:	Study/Assessment
ELEVATOR ASSESSMENT		
135 WEST HANOVER STREET		
#REF!		

COST PHASE " C " - CONSTRUCTION				
1.	General Construction	$ 930,444		
2.	Structural Steel			
3.	Plumbing			
4.	HVAC			
5.	Electrical			
6.	Other Trades (Specify) _____			
7.	**Total Construction Cost Estimate (CCE) (Lines 1 thru 6)**		*	$ 930,444
COST PHASE " D " - DESIGN				
8.	Consultant Design Fee	$ 74,436		
9.	Consultant Construction Administration Fee	$ 35,000		
10.	Asbestos Remediation Design Fee			
11.	Asbestos Monitoring Fee			
12.	Survey Services			
13.	Testing Services			
14.	Roofing Inspection			
15.	Other (Specify) Structural Allowance			
16.	**Total Design Services (Lines 8 thru 15)**		*	$ 109,436
COST PHASE " K " - AFFIRMATIVE ACTION				
17.	Affirmative Action (1/2% of Line 7)			$ 4,652
COST PHASE " M " - MANAGEMENT FEES				
18.	DPMC Management Fee - (8% of CCE (Line 7)			$ 74,436
COST PHASE " N " - CONSTRUCTION MANAGEMENT				
19.	Construction Management Services (CM/CPM)			$ -
COST PHASE " O " - CONTINGENCY				
20.	Construction (10% of line 7)	$ 93,044		
21.	Design (10% of Line 16)	$ 10,944		
22.	**Total Project Contingency (Lines 20 & 21)**			$ 103,988
COST PHASE " P " - PERMITS				
23.	U.C.C. (DCA or ODC) Plan Review Fee			
24.	U.C.C. Permit/Field Inspection/C.O. Fee (3/4% of Line 7)	$ 6,978		
25.	Soil Conservation			
26.	Other (Specify) _____			
27.	**Total Permit Fees (lines 23 thru 26)**			$ 6,978
COST PHASE " R " - ARTS INCLUSION				
28.	Arts Inclusion Allowance			
COST PHASE " B " - OTHER COSTS				
29.	Other (Specify) _____			
30.	Other (Specify) _____			
31.	**Total Other Costs (lines 29 & 30)**			$ -
32.	Current Working Estimate (CWE) (Lines 7+16+17+18+19+22+27+28+31)		*	**$ 1,229,934**

Form DPMC-38 Revised 9/02 (Automated Form)

EXHIBIT 'E'

November 2, 2020
November 23, 2020 (Rev)

Mr. Mark Dae
Assistant Deputy Director
Office of Building Management and Operations
New Jersey Division of Property Management and Construction
Trenton, New Jersey 08625

re: Fire Escape Condition Survey and Repairs
State Office Building
135 West Hanover Street
Trenton, New Jersey
(JBCI Project No. 20-5983)

Dear Mark:

In accordance with Work Order #14, Contract J0365-00 we are submitting our Fire Escape Condition Assessment for the State Office Building (SOB Building). Our survey included the steel framed, exterior egress stairs on the East and West building elevation. The project intent was to observe the in-situ condition and evaluate the safe live load capacity for the egress stairs. No existing building drawings were available for review. The egress stair locations relative to the building can be seen below:

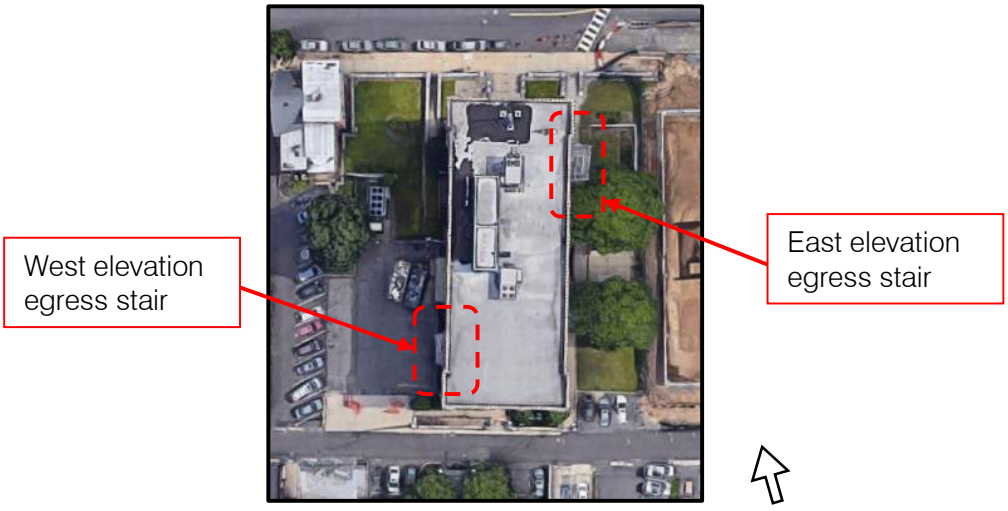


Photo No. 1 – Aerial View

JOSEPH B. CALLAGHAN, Inc.
Consulting Engineers
JBCIENGINEERS.COM P: 215.665.0497

PENNSYLVANIA
One Penn Center | Suite 1655
1617 John F. Kennedy Boulevard
Philadelphia, Pennsylvania 19103

NEW JERSEY
17 Ravenna Drive
West Berlin, New Jersey 08091

EXHIBIT 'F'

Our survey was completed between March 13, 2020 and September 28, 2020. During our surveys, we documented the stair tower in-situ conditions using photographs and field notes. Exploratory probes were performed at select anchorage locations. We are submitting a report of our findings.

We were assisted in our investigation by:

Datum Restoration, Inc.
Lansdowne, Pennsylvania

DESCRIPTION/HISTORY

The State Office Building is a four-story structure presumed to be constructed in the 1920's. No information on the building or egress tower construction was available for our review. The building contains a total of two, steel-framed exterior egress stairs, one on both the East and West building elevations. The West elevation stair tower exhibits traits of older construction, possibly original to the building construction. The East elevation stair tower appears to be newer construction and not original to the building. Each stair tower can be seen below:


Photo No. 2 – West elevation egress stair


Photo No. 3 – East elevation egress stair

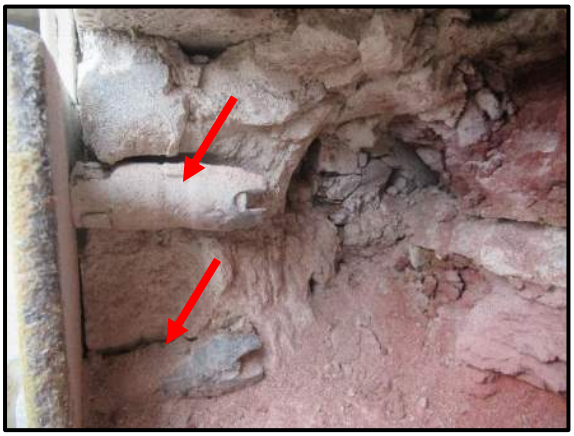
The typical construction of each stair tower is as follows:

West Stair Tower Construction
- Stair Width – 25"
- Walking Surface – 2" steel slats
- Typical stringers – steel plates
- Posts – L4x4/C4

East Stair Tower Construction
- Stair Width – 36"
- Walking Surface – 1" steel grating
- Typical stringers – steel channels
- Posts – L6x6

EXHIBIT 'F'

Both the East and West stair towers are anchored to the building at stair landings. Additionally, the railings are anchored to the building at select locations. During our investigation, we performed masonry probes at select anchor locations for a representative sampling of the in-situ condition of the stair tower connections to the building's exterior wall. The existing, post-installed masonry expansion anchors are in generally good condition. No visual evidence of masonry distress was observed on either stair tower. Additionally, the anchors exposed during our investigation exhibited little to no evidence of corrosion. Photos of the exposed anchors can be seen below:



Photos No. 4 – Landing wall connection probe

Photo No. 5 – Railing wall connection

CODE ANALYSIS

As part of our condition survey, we evaluated the existing exterior egress stairs for compliance with the International Building Code (IBC) 2018, International Existing Building Code (IEBC) 2018, The New Jersey Uniform Construction Code, and the International Fire Code (IFC). Per IFC 1104.16.5.1, "*Fire escape stairways and balconies shall be examined for structural adequacy and safety…by a registered design professional or others acceptable to the fire code official every 5 years."* The following code references were used to assist our analysis and we offer the following response:

A. General Requirements

A.1) *IFC 1104.16.5- Components of fire escape stairways shall be constructed of noncombustible materials. Fire escape stairways and balconies shall support the dead load plus a live load of not less than 100 pounds per square foot. Fire escape stairways and balconies shall be provided with a top and intermediate handrail on each side.*

Refer to the structural analysis section, page 5, for each stairway's capacity to support the required loading. The east and west stairways are provided with a top and intermediate handrail, or equivalent. In our opinion, the stairways are therefore acceptable under the current code.

EXHIBIT 'F'

A.2) IBC 1011.7.2- Outdoor Conditions – Outdoor stairways… shall be designed so that water will not accumulate on walking surfaces.

Water is unable to collect on the steel grating and slats used to construct the stairway landings and treads. In our opinion, the existing landing constructions are therefore acceptable under the current code.

B. Stair Geometry

B.0) Existing Conditions:

East Stair tower - Rise =7½", Run = 8½" Stair width = 36"
West Stair tower – Rise = 8½" Run = 7½" Stair width = 25"

B.1) *IBC 1011.2 Stairway Width – The minimum width shall not be less than 44"*

The existing stair towers do not meet the minimum stair width required for new construction egress stair towers.

B.2) *IBC 1011.5 Stair treads and risers – Stair riser heights shall be 7" maximum and 4" minimum. Rectangular tread depths shall be 11" minimum.*

The existing stair towers do not meet the riser and stair tread dimensions required for new construction egress stair towers.

B.3) IEBC 503.1- *An existing stairway shall not be required to comply with the requirements of Section 1011 of the International Building Code where the existing space and construction does not allow a reduction in pitch or slope.*

In our opinion, the existing site and building conditions do not allow for a reduction in pitch or slope and therefore does not need to conform to items B.1 and B.2 above. Lateral support for exterior stair towers is provided by anchorages at the landing levels to the exterior building face. Both the east and west stair towers have windows adjacent to the stairway landings that would prevent anchorage to the building wall if the stair slopes were reduced. In our opinion, the existing stair dimensions are therefore acceptable under current code.

C. Handrails

C.0) Existing Conditions

East Stair tower handrail height – 39½"
West Stair tower handrail height – 36"

C.1) IFC1104.13.1 – Handrail height, measured above the stair tread nosing, shall be uniform, not less than 30" and not more than 42".

The existing handrail dimensions are within the current code requirements for existing egress stairs. In our opinion, the existing handrails are therefore acceptable under the current code.

EXHIBIT 'F'

STRUCTURAL ANALYSIS

As part of our condition survey, we evaluated the ability of the exterior egress stair towers to safely support the minimum required live load of 100 psf for Fire Escapes per ASCE 7-16, Table 4-1 and the New Jersey Uniform Construction Code.

Based on our analysis, several members on the West elevation stair tower required reinforcing to adequately support the required loading. These members included landing framing angles and interior channel columns. Refer to the attached repair drawings (CS-1, GN-1, 100) that were prepared by our office dated May 4, 2020. The repair work was performed by Golden Crown Contractors, Inc. Yardville, NJ in July 2020. Photos of the repairs can be seen below:

Photos No. 6 – Installed cross bracing

Photo No. 7 – Installed column reinforcing

Photos No. 8 – Installed landing reinforcing

EXHIBIT 'F'

CONCLUSIONS & RECOMMENDATIONS

The West elevation fire escape has been reinforced in general accordance with the drawings prepared by our office. Based on our review of the available information, structural analysis, and select façade anchorage points, it is our professional opinion the East and West elevation egress stair towers are now capable of safely supporting the minimum required loading.

The conclusions reached in this report are based on our visual surveys and structural analysis of the accessible framing and connections. While we endeavor to document all areas of concern and distress by applying our engineering experience, prudent judgement, and reasonable care, it must be understood that hidden conditions and/or unavailable documents may exist that may impact our assessment.

The continued performance and ability of the egress stairs to safely support the required load is dependent on an adequate maintenance and inspection program completed on a 5-year cycle. A maintenance program should include a periodic inspection of the brick masonry at all wall connections for signs of distress and a long-term plan to replace/supplement all masonry expansion anchors with post-installed adhesive anchors and/or thru-bolt anchors. This program shall also include cleaning and painting of all exposed steel elements. Prior to painting, all steel elements shall be Wirebrush cleaned and prepare in accordance with specific manufacturer instructions. A paint selection shall be based on the intended application and exposure.

Estimated probable construction costs:

Replace/supplement building anchors	$10,000.00
Scrape clean & paint fire escapes	$ 5,000.00

Please contact our office if we can be of further assistance in this manner.

Sincerely,
JOSEPH B. CALLAGHAN, INC.

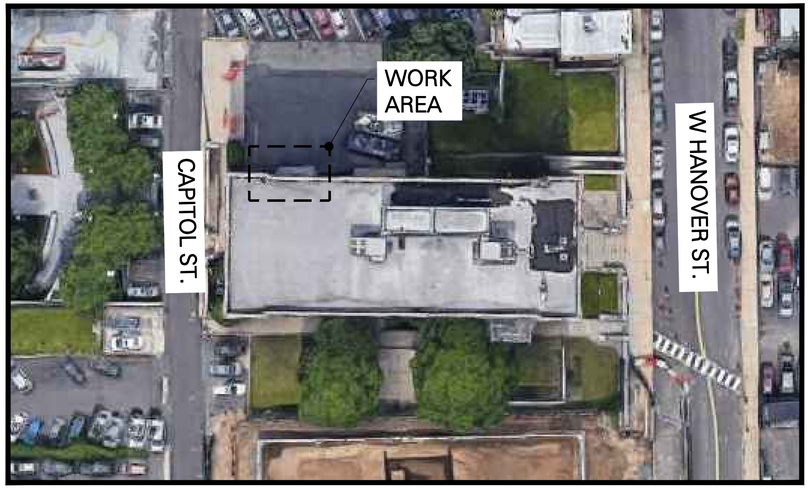
Allen Roth, PE
President
NJ License No: 03137400

Ken DeStefano, EIT
Senior Project Engineer

enclosures

NOTE: CONCLUSIONS REACHED IN THIS REPORT ARE BASED ON OUR VISUAL SURVEYS. WHILE WE ENDEAVORED TO DOCUMENT ALL ITEMS OF CONCERN AND DISTRESS BY APPLYING OUR ENGINEERING EXPERIENCE, PRUDENT JUDGMENT AND REASONABLE CARE, IT MUST BE UNDERSTOOD THAT HIDDEN CONDITIONS AND/OR UNAVAILABLE DOCUMENTS MAY EXIST WHICH MAY IMPACT OUR REPORT.

HIGH PRIORITY FIRE ESCAPE REPAIRS
STATE OFFICE BUILDING
TRENTON, MERCER COUNTY, NEW JERSEY



SITE PHOTO

STATE OF NEW JERSEY

HONORABLE PHILIP D. MURPHY, GOVERNOR
HONORABLE SHEILA Y. OLIVER, LIEUTENANT GOVERNOR

DEPARTMENT OF THE TREASURY
ELIZABETH MAHER MUOIO, STATE TREASURER

DIVISION OF PROPERTY MANAGEMENT AND CONSTRUCTION
CHRISTOPHER CHIANESE, DIRECTOR

LIST OF DRAWINGS	
DWG. NO.	TITLE
CS1	COVER SHEET
001	NOTES, ABBREV'S, & SYMBOLS
100	REPAIR SECTIONS & DETAILS

JOSEPH B. CALLAGHAN, INC. • CONSULTING ENGINEERS
1655 SUBURBAN STATION BLDG. • 1617 JOHN F. KENNEDY BLVD.
PHILADELPHIA, PA. 19103 • 215-665-0497 • WWW.JBCIENGINEERS.COM

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www.jbcieengineers.com

THE STATE OF NEW JERSEY
CERTIFICATE OF AUTHORIZATION NO. 24GA27923100
Allen Roth
PROFESSIONAL ENGINEER N.J. CERT. NO. 24GE03137

NO.	DATE	REVISIONS	BY

PROJECT NAME: STATE OFFICE BUILDING
140 W HANOVER STREET
TRENTON, NJ
HIGH PRIORITY FIRE ESCAPE REPAIRS

DRAWING TITLE: COVER SHEET

DRAWING SET: ISSUE FOR PRICING

DRAWN KD	CHKD MS
DATE 5/4/2020	SCALE AS SHOWN

PROJECT NO. 20-5983

DRAWING NO.
CS1

EXHIBIT 'F'

STRUCTURAL ABBREVIATIONS

AB	ANCHOR BOLT	JST	JOIST
ABV	ABOVE	JT	JOINT
ACI	AMERICAN CONC. INSTITUTE		
ADJ	ADJUSTABLE	K	KIP=1,000 LB
AFF	ABOVE FINISHED FLOOR	KSF	KIPS PER SQUARE FOOT
AGG	AGGREGATE		
AHU	AIR HANDLING UNIT	LB, #	POUNDS
ALT	ALTERNATE	LG	LONG
ALUM	ALUMINUM	LGMF	LIGHT GAGE METAL FRAMING
APPROX	APPROXIMATE	LIN	LINEAR OR LINEAL
AR	ANCHOR ROD	LL	LIVE LOAD
ARCH	ACHITECT(URE, URAL)	LLBB	LONG LEG BACK-TO-BACK
		LLH	LONG LEG HORIZONTAL
B/	BOTTOM OF	LLV	LONG LEG VERTICAL
BD	BOARD	LNTL	LINTEL
BET	BETWEEN	LP	LOW POINT
BLDG	BUILDING	LTWT	LIGHTWEIGHT
BLK	BLOCK	LVR	LOUVER(S)
BLKG	BLOCKING	LW	LONGWAY
BM	BEAM		
BOT	BOTTOM	MACH	MACHINE
BP	BASE PLATE	MAS	MASONRY
BRDG	BRIDGING	MATL	MATERIAL
BRG	BEARING	MAX	MAXIMUM
BRK	BRICK	MC	MOMENT CONNECTION
BS	BOTH SIDES	MECH	MECHANICAL
BSMT	BASEMENT	MEP	MECH/ELEC/PLUMBING
BT	BENT	MET	METAL
BYD	BEYOND	MFG	MANUFACTURER
		MIN	MINIMUM
C	CONDUIT	MISC	MISCELLANEOUS
C.C	CENTER TO CENTER	ML	MASONRY LINTEL
C.I.	CAST IRON	MO	MASONRY OPENING
CANT	CANTILEVER	MP	MASONRY PIER
CAP	CAPACITY	MTD	MOUNTED
CB	CONCRETE BEAM		
CF	CUBIC FEET	N	NORTH
CIP	CAST-IN-PLACE	N/A	NOT APPLICABLE
CJ	CONTROL JOINT OR	NIC	NOT IN CONTRACT
	CONSTRUCTION JOINT	NO	NUMBER
CL	CENTERLINE	NOM	NOMINAL
CLG	CEILING	NS	NEAR SIDE
CLR	CLEAR	NTS	NOT TO SCALE
CMU	CONCRETE MASONRY UNIT	NW	NORMAL WEIGHT
CO	CLEANOUT		
COL	COLUMN	OC	ON CENTER
CONC	CONCRETE	OD	OUTSIDE DIAMETER
CONN	CONNECTION	OF	OUTSIDE FACE
CONT	CONTINUOUS OR CONTINUE	OPNG	OPENING
CONTR	CONTRACTOR	OPP	OPPOSITE
COORD	COORDINATE		
CTRD	CENTERED	PAR	PARALLEL
CY	CUBIC YARD	PC	PIECE
		PCF	POUNDS PER CUBIC FOOT
DBA	DEFORMED BAR ANCHOR	PEN	PENETRATION
DBL	DOUBLE	PERP	PERPENDICULAR
DEMO	DEMOLITION	PL	PLATE
DET	DETAIL	PLMB	PLUMBING
DIA, Ø	DIAMETER	PLWD	PLYWOOD
DIAG	DIAGONAL	PSF	POUNDS PER SQUARE FOOT
DIM	DIMENSION	PSI	POUNDS PER SQUARE INCH
DJ	DOWEL JOINT	PT	PRESERVATIVE TREATED
DL	DEAD LOAD		
DN	DOWN	QTY	QUANTITY
DO	DITTO		
DWG	DRAWING	R/RAD	RADIUS
DWL	DOWEL	RD	ROOF DRAIN
		REF	REFERENCE
E	EAST	REINF	REINFORCE(MENT, ING)
EA	EACH	REQ'D	REQUIRED
EF	EACH FACE	REV	REVISION
EJ	EDGE JOINT	RO	ROUGH OPENING
EL	ELEVATION	RTU	ROOF TOP UNIT
ELEC	ELECTRICAL	RW	RETAINING WALL
ELEV	ELEVATOR		
EMBED	EMBEDMENT	S	SOUTH
EMER	EMERGENCY	SCH	SCHEDULE(D)
EOD	EDGE OF DECK	SECT	SECTION
EOS	EDGE OF SLAB	SIM	SIMILAR
EQ	EQUAL	SLB	SLAB
EQ SP	EQUAL SPACE	SOG	SLAB ON GRADE
EQUIP	EQUIPMENT	SPEC	SPECIFICATION
ETC	ETCETERA	SQ	SQUARE
EW	EACH WAY	SS	STAINLESS STEEL
EXH	EXHAUST	STD	STANDARD
EXIST	EXISTING	STIFF	STIFFENER
EXP	EXPANSION	STL	STEEL
EXTR	EXTERIOR	STR	STAIR
(E)	EXISTING	STRUCT	STRUCTURAL
		STOR	STORAGE
FD	FLOOR DRAIN	SW	SHORT WAY OR SHEARWALL
FDN	FOUNDATION	SYMM	SYMMETRICAL
FF	FINISHED FLOOR		
FIN	FINISH(ED)	T	TOP, TOP OF
FL	FLOOR	T&B	TOP AND BOTTOM
FLG	FLANGE	TCX	JOIST TOP CHORD EXTENSION
FOB	FACE OF BRICK	TEMP	TEMPERATURE
FOW	FACE OF WALL	THK	THICK(NESS)
FRT	FIRE RETARDANT TREATED	THRU	THROUGH
FS	FAR SIDE	TOC	TOP OF CONCRETE
FT, '	FOOT-FEET	TYP	TYPICAL
FTG	FOOTING	T/S	TOP OF SLAB
Fl	FLOOR FLATNESS	T/STL	TOP OF STEEL
Fl	FLOOR LEVELNESS	T/W	TOP OF WALL
GA	GAUGE	U/C	UNDERCUT
GALV	GALVANIZED	UL	UNDERWRITERS LABORATORY
GB	GRADE BEAM	U.N.O.	UNLESS NOTED OTHERWISE
GC	GENERAL CONTRACTOR		
GEN	GENERAL	V	VENT
GR	GRADE	VERT	VERTICAL
GRND	GROUND	VIN	VINYL
GYP BD	GYPSUM BOARD	VIF	VERIFY IN FIELD
HD	HEAD(ED)	W	WEST, WATER
HDW	HARDWARE	W/	WITH
HM	HOLLOW METAL	W/O	WITHOUT
HORIZ	HORIZONTAL	WD	WOOD
HP	HIGH POINT	WF	WALL FOOTING
HR	HOUR	WP	WORK POINT
HSA	HEADED STUD ANCHOR	WWF	WELDED WIRE REINFORCING
HSS	HOLLOW STRUCTURAL STEEL		
HT	HEIGHT		
INCL	INCLUDED		
ID	INSIDE DIAMETER		
IF	INSIDE FACE		
IN	INCH		
INSUL	INSULATION/INSULATED		
INTR	INTERIOR		

DESIGN LOAD CRITERIA

1. BUILDING CODE - THE STRUCTURAL DESIGN IS BASED ON THE NEW JERSEY UNIFORM CONSTRUCTION CODE WHICH REFERENCES THE 2018 INTERNATIONAL BUILDING CODE.
2. LIVE LOADS

EGRESS STAIR	100 PSF

STANDARD MATERIAL SYMBOLS

- CONCRETE
- CONCRETE MASONRY UNIT
- BRICK
- LIMESTONE
- STEEL/OTHER METALS
- WOOD, FINISHED
- WOOD, ROUGH FRAMING
- WOOD, BLOCKING
- PLYWOOD
- BATT INSULATION
- RIGID INSULATION

STANDARD GRAPHIC SYMBOLS

- COLUMN LINE (1 / A)
- REVISION & REVISION NUMBER (1)
- NORTH ARROW (NORTH)
- SECTION REFERENCE
- SECTION LINES & SECTION REFERENCES
- BREAK LINE: TO BREAK OFF PARTS OF A DRAWING
- DASHED LINE HIDDEN, FUTURE OR EXISTING CONSTRUCTION TO BE REMOVED
- DASH/DOT LINE CENTER, PROJECTIONS AND ELEVATION LINES

GENERAL

1. THE CONTRACT DOCUMENTS INCLUDE ALL DRAWINGS AND TECHNICAL SPECIFICATIONS CONTAINED HEREIN AND IN THE PROJECT MANUAL.
2. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS, SPECIFICATIONS AND THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, 2018 EDITION IN ADDITION TO ALL OTHER LOCAL, STATE AND FEDERAL REQUIREMENTS AND REGULATIONS..
3. THE CONTRACTOR IS TOTALLY AND SOLELY RESPONSIBLE TO CHECK AND VERIFY ALL DIMENSIONS, EXISTING CONDITIONS & RELATED CONSTRUCTION QUANTITIES AT THE PROJECT SITE.
4. THE CONTRACTOR SHALL COMPARE THE STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL AND MECHANICAL DRAWINGS BEFORE COMMENCING WITH THE WORK. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER IN WRITING OF ANY DISCREPANCIES, INCONSISTENCIES OR OMISSIONS REQUIRING CLARIFICATION OR REVISIONS. DO NOT SCALE STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN.
5. THE CONTRACTOR IS TOTALLY AND SOLELY RESPONSIBLE FOR COORDINATION OF THE WORK WITH ALL TRADES AND DISCIPLINES. THE CONTRACTOR MUST VERIFY DIMENSIONS AND INSPECT EXISTING CONDITIONS OF PRIOR WORK PERFORMED BY ALL TRADES BEFORE PROCEEDING WITH WORK. UNACCEPTABLE OR INCORRECT PRIOR WORK SHALL BE REPAIRED OR REPLACED BEFORE STARTING WORK. PROCEEDING WITH THE WORK SHALL CONSTITUTE CONTRACTOR'S ACCEPTANCE OF PRIOR WORK.
6. WORK NOT INDICATED ON A PART OF THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE REPEATED.
7. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE STABILITY AND INTEGRITY OF EXISTING STRUCTURES AND THE PROTECTION OF ADJACENT PROPERTY AND PUBLIC UNTIL COMPLETION OF THE WORK.
8. STRUCTURAL ELEMENTS THAT ARE UNCOVERED DURING THE COURSE OF THE WORK AND WHICH ARE FOUND TO BE UNSOUND OR OTHERWISE STRUCTURALLY DEFICIENT SHALL BE REINFORCED, SUPPORTED OR REPLACED. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER OF ANY UNCOVERED CONDITIONS FOUND TO BE UNSOUND OR STRUCTURALLY DEFICIENT FOR REVIEW AND REPAIR RECOMMENDATIONS.
9. REPRODUCTION OF STRUCTURAL CONTRACT DRAWINGS FOR USE AS SHOP DRAWINGS IS STRICTLY PROHIBITED. SHOP DRAWINGS WHICH ARE PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED WITHOUT REVIEW.

TEMPORARY WORK

1. ALL TEMPORARY WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE.
2. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING REQUIRED TO PERFORM THE CONTACT WORK.
3. THE CONTRACT DRAWINGS ILLUSTRATE THE COMPLETED STRUCTURE. THE CONTRACTOR IS TOTALLY RESPONSIBLE TO PROVIDE ALL NECESSARY SHORING, PROTECTION AND ALL TEMPORARY MEASURES REQUIRED DURING THE WORK.

MATERIALS

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL MATERIALS SHALL MEET THE LATEST REQUIREMENTS AS FOLLOWS:
   - A. ALL WIDE FLANGE (W-SHAPES) SHALL BE A992.
   - B. ALL ANGLES, CHANNELS, BARS, AND PLATES SHALL BE A36.
   - C. ALL HOLLOW TUBE STEEL (HSS) SHALL BE A500, GRADE B.
   - D. ALL STRUCTURAL PIPE STEEL SHALL BE A53.
3. ALL BOLTS, NUTS, & WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A325.
4. ALL WELDS SHALL BE E70XX ELECTRODES.
5. ALL DRYPACK/GROUT SHALL BE PREPACKAGED, NON-SHRINK, REQUIRING ONLY MIXING WATER AT THE SITE AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 8,000 PSI AT 28 DAYS.
6. FABRICATE BEAMS WITH NATURAL MILL CAMBER PLACED UP. PROVIDE CAMBERS WHERE INDICATED.
7. DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE LATEST AISC CODES AND SPECIFICATIONS INCLUDING CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS.
8. ALL WELD SIZES NOT INDICATED OR THOSE TO BE DESIGNED FOR MEMBER LOADS GIVEN ON THE DRAWINGS SHALL COMPLY WITH THE LATEST AWS D1.1, BUT WELD SIZE SHALL NOT BE LESS THAN 3/16 INCH.
9. MINIMUM CONNECTION PLATE OR ANGLE THICKNESS TO BE 5/16 INCH (EXCEPT FOR SHIMS) UNLESS NOTED OTHERWISE.

PAINT

1. PAINTING SCHEDULE:
   - A. NEW SUPPORT STEEL MEMBERS (FERROUS METALS - CHANNELS, ANGLES, PLATES)
   - B. PAINT: DTM ACRYLIC COATING, 100% ACRYLIC.
   - C. TOUCH-UP PRIMER PAINT: SAME AS STEEL FABRICATOR'S RUST INHIBITOR PRIMER.
   - D. TOP COAT: TWO COATS.
   - E. COLOR & GLOSS: MATCH EXISTING.
2. CLEAN SURFACES THOROUGHLY AND CORRECT DEFECTS PRIOR TO COATING APPLICATION.
3. PREPARE SURFACES TO SSPC-SP 3 USING POWER TOOL CLEANING METHODS.
4. APPLY PRODUCT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
5. DO NOT APPLY FINISH TO SURFACES THAT ARE NOT DRY. ALLOW APPLIED COATS TO DRY BEFORE NEXT COAT IS APPLIED.
6. APPLY EACH COAT TO A UNIFORM APPEARANCE. BRUSHWORK SHALL SHOW EVEN COATINGS FREE FROM BRUSH MARKS.
7. PREPARE ALL SURFACES BEFORE PAINTING, REMOVE DUST, GREASE AND MARKS FROM SURFACE. VACUUM CLEAN SURFACES OF LOOSE PARTICLES. USE TACK CLOTH TO REMOVE DUST AND PARTICLES JUST PRIOR TO APPLYING NEXT COAT.
8. APPLY TOUCH UP PAINT TO ALL FIELD DRILLED HOLES PRIOR TO FASTENING STRUCTURAL MEMBERS.
9. LEAD-CONTAINING PAINT MAY BE ENCOUNTERED DURING THE WORK. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS. EVIDENCE OF COMPLIANCE WITH THE OSHA LEAD STANDARD - CONSTRUCTION INDUSTRY (29 CFR 1926.62) AND RESPIRATORY PROTECTION STANDARD (29 CFR 1910.134) SHALL BE PROVIDED TO THE OWNER. THIS SHALL INCLUDE A COPY OF THE CONTRACTOR'S LEAD COMPLIANCE PROGRAM.

9.1. THE SURFACE PREPARATION METHOD SELECTED SHALL PRODUCE THE LEAST AMOUNT OF LEAD DUST AND/OR FUMES. THE USE OF ABRASIVE BLASTING OR TORCHES IS PROHIBITED.
9.2. THE CONTRACTOR SHALL POST PROPER WARNING SIGNS WHICH DELINEATE THE WORK AREA, INDICATING: CAUTION LEAD HAZARD DO NOT ENTER WORK AREA UNLESS AUTHORIZED.
9.3. THE CONTRACTOR MUST ENSURE THAT ALL ELECTRICAL CONNECTIONS ARE CHECKED FOR PROPER GROUNDING. FOR WET AREAS, GROUND FAULT PROTECTION IS REQUIRED.
9.4. THE CONTRACTOR SHALL CONDUCT DAILY CLEAN-UP BY VACUUMING ALL PAINT CHIPS AND DUST THROUGH HEPA FILTRATION.
9.5. THE CONTRACTOR SHALL PLACE ALL WASTE IN SUITABLE (DOT APPROVED) CONTAINERS, WHICH ARE TO BE SEALED SECURED, AND LABELED AT THE END OF EACH WORK DAY. WASTE SHALL BE SEGREGATED INTO THE FOLLOWING THREE WASTE STREAMS: SOLID WASTE GENERATED FROM SURFACE PREPARATION (E.G. PAINT SHIPS, DUST), OTHER SOLID WASTE (E.G. PLASTIC SHEETING, CLOTHING), AND LIQUID WASTE (E.G. WASTEWATER, TSP SOLUTION).

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THE STATE OF NEW JERSEY
CERTIFICATE OF AUTHORIZATION NO. 24SK07903100
Allen Roth
PROFESSIONAL ENGINEER - N.J. CERT. NO. 24GE01874

NO.	DATE	REVISIONS	BY

PROJECT NAME
STATE OFFICE BUILDING
140 W HANOVER STREET
TRENTON, NJ
HIGH PRIORITY FIRE ESCAPE REPAIRS

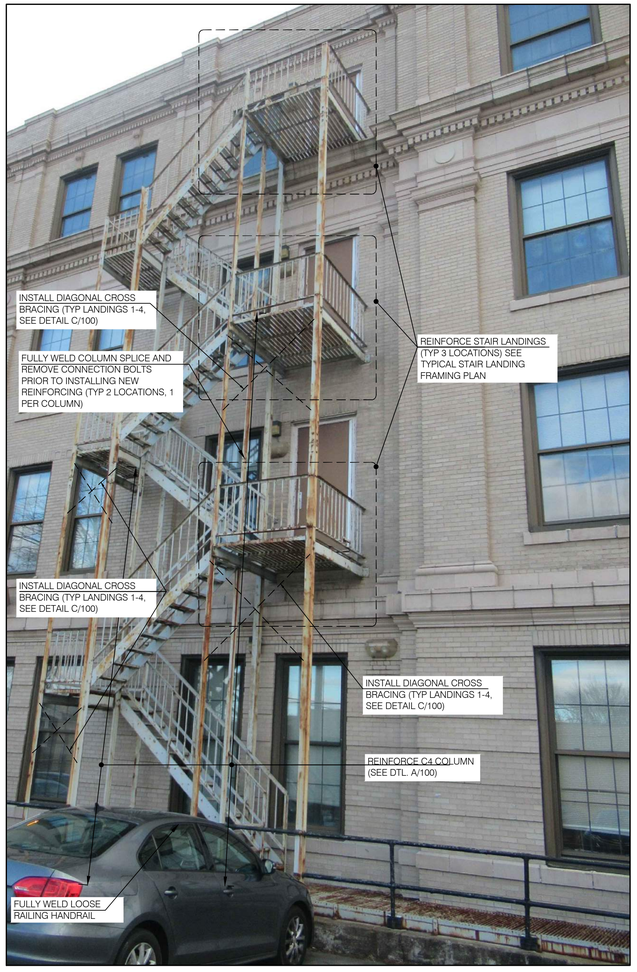
DRAWING TITLE
NOTES, SYMBOLS, & ABBREVS.

DRAWING SET
ISSUE FOR PRICING

DRAWN KD	CHKD MS
DATE 5/4/2020	SCALE AS SHOWN
PROJECT NO. 20-5983	

DRAWING NO.
GN-1

EXHIBIT 'F'



FIRE ESCAPE ELEVATION

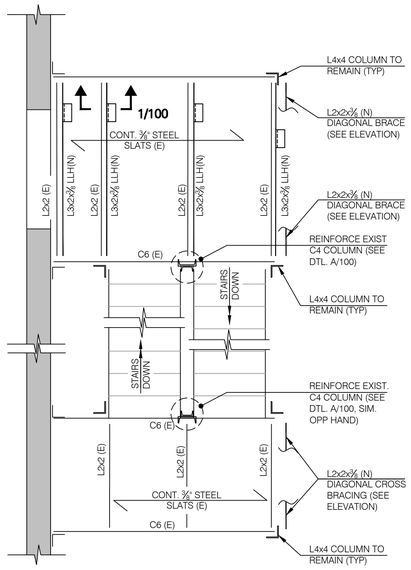
SCALE: N.T.S.

GENERAL REPAIR PROCEDURE

1. INSTALL TEMPORARY SIGNAGE AROUND WORK AREA. INSTALL SIGNAGE ON INTERIOR FACE OF ALL DOORS ENTERING THE WORK AREA. CONTRACTOR TO COORDINATE SIGNAGE WITH OWNER.
2. INSTALL NEW LANDING REINFORCING ANGLES TO LANDINGS 2,4 AND 6 AS SHOWN ON THE LANDING FRAMING PLAN. THE INTENT IS TO WELD THE NEW ANGLES TO THE EXISTING FRAMING ANGLES BETWEEN THE SLAT DECKING.

   NOTE: NEW FRAMING ANGLES SHALL STOP SHORT OF C6 BEARING WHERE BEARING IS INTERRUPTED BY CONNECTION ELEMENTS. REINFORCING ANGLE SHALL BE NO MORE THAN 3" FROM C6 BEARING.
3. INSTALL NEW COLUMN REINFORCING TO TWO (2) C4 COLUMNS TO THE HEIGHT SHOWN ON THE ELEVATION.

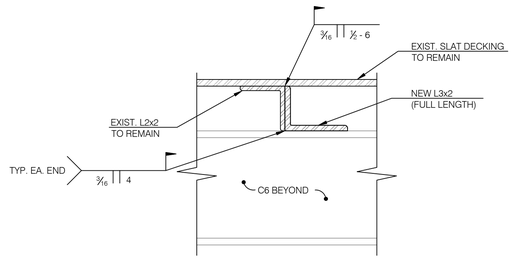
   NOTE: FULLY WELD EXISTING COLUMN SPLICE CONNECTIONS AND REMOVE BOLTS PRIOR TO INSTALLING NEW REINFORCING (TYP 2 LOCATIONS, ONE EACH COLUMN TO BE REINFORCED).
4. INSTALL NEW DIAGONAL CROSS BRACING BELOW LANDINGS 1-4. SEE DTL. C/100.
5. REMOVE ALL TEMPORARY SIGNAGE AND FENCING.



NORTH

STAIR LANDING FRAMING PLAN

SCALE: 1/2"= 1'-0

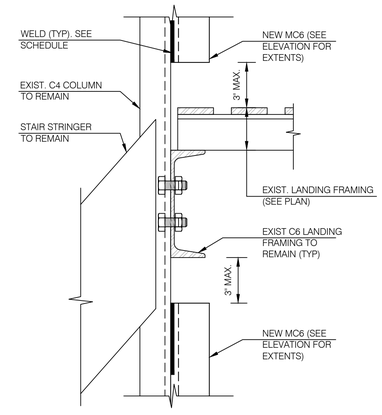


WELD (TYP). SEE

SECTION 1/100

LANDING ANGLE SECTION

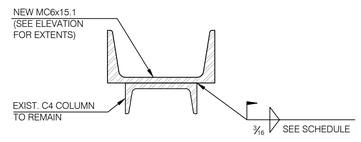
SCALE: 3" = 1'-0"



WELD SPACING SCHEDULE

0'-0"-5'-0"	3-12
> 5'-0"	2-12

NOTE: DISTANCE MEASURED FROM NEAREST LANDING



DETAIL A/100

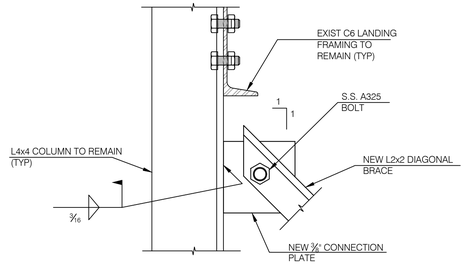
COLUMN REINFORCING DETAIL

SCALE: 3" = 1'-0"

DETAIL B/100

COLUMN REINFORCING AT LANDING

SCALE: 3" = 1'-0"



DETAIL C/100

DIAGONAL BRACING CONNECTION DETAIL

SCALE: 3" = 1'-0"

NOTE:

1. DIAGONAL BRACING CONNECTION NOT SHOWN SHALL BE FULLY WELDED TO THE OPPOSITE COLUMN. PROVIDE SIMILAR ATTACHMENT DETAIL AT EACH END OF EACH CROSS BRACING MEMBER.
2. IT IS THE INTENT THAT THE L2x2s BE INSTALLED "BACK TO BACK" w/ A SINGLE A325 BOLT AT CENTER OF THE " X" WHERE THE BRACES CROSS EACH OTHER.

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THE STATE OF NEW JERSEY
CERTIFICATE OF AUTHORIZATION NO. 24GA27923100
Allen Roth
PROFESSIONAL ENGINEER N.J. CERT. NO. 24GE31974

NO.	DATE	REVISIONS	BY

PROJECT NAME
STATE OFFICE BUILDING
140 W HANOVER STREET
TRENTON, NJ
HIGH PRIORITY FIRE ESCAPE REPAIRS

DRAWING TITLE
REPAIR SECTIONS & DETAILS

DRAWING SET
ISSUE FOR PRICING

DRAWN KD	CHKD MS
DATE 5/4/2020	SCALE AS SHOWN
PROJECT NO. 20-5983	

DRAWING NO.
100

EXHIBIT 'F'

PDF Drawings

The following are PDFs of AutoCAD drawings available to the consultant. These PDFs show 99% of the current As-Built conditions of the site. The Proposed is what Treasury – DPMC anticipates the future layout will be based on who we believe will backfill into this building. This is still a fluid situation and may change slightly. However, we anticipate 95% of what is shown to be demolished and constructed (difference from the as-built to proposed) will be required to be accomplished. The size of the workstations are mostly noted as 6' x 6' to enable the maximization of the space to occur. This may vary slightly once the consultant is hired and the final programming is completed. Consultant to coordinate final furniture conceptual drawings with electrical and telecommunication plans for both office and workstation locations. Every location where an employee will sit will require two new Cat6A cables. And, locations where multifunction devices will be need to be coordinated for electrical and will also require two new Cat6A cables. All old telecommunication wiring to be removed. The consultant will need to work with Treasury to design the Telecommunication (marked Telecom on drawings) closets for specifications development of the racks and the running of the copper and fiber that will need to be installed to the basement main closet. 24/7 AC may be required for the smaller closets and could be done via one rooftop device.

Current restrooms in the building are sex specific. However, the thought is to make the core restrooms Unisex/Gender Neutral. Since the toilets, partitions and sinks are old and outdated, the plan is to replace them. New stall partitions should go basically floor to ceiling, therefore HVAC, lighting and sprinklers should be modified/changed to embrace this concept. And, signage should reflect this as well. Please note a breakroom or sink/counter area has been located on most floors, which currently do not exist. A common room needs to be located (potentially in the basement) with a sink for a potential nursing/expressing room.

The PDF's also have initials of CR, AP and GB on them typically by suite doors, emergency exits/windows. These are the anticipated locations of CR = Card Readers, AP = Alarm Points and GB = Glass Breaks. The awarded consultant will need to work with Treasury ISU (Internal Security Unit) and DPMC's staff to determine the proper locations of these devices and may add/modify where exactly they are required based on the final programming of the building's interior. Not shown but will be required will be the design of camera installations both within and on the exterior of the building. The entire system needs to be designed to work with ISU's current system. The potential of a camera phone at both entrances of the building may be required as well as a remote release to the 1st floor guards station. Drawings will need to be coordinated with Electrical and Fire and be submitted as part of permit applications.

EXHIBIT 'G'

154'-0" +/-

63'-0" +/-

ELECTRIC RM 1
BO9B

OFFICE
B10B

OFFICE
B10C

UP

B10

ELECT RM 2
B10A

MEN
B11A

ELEVATOR BAY
B-1

ELEVATOR LOBBY
B11

STAIRS
B-2

PROCESSING OFFICE
B12

PROCESSING OFFICE
B12A

EVIDENCE STORAGE
B14

VESTIBULE
B13

TOILET
B13A

ELECTRICAL SERVICE ENTRY POINT

UTILITY VAULT
B01A

BOILER ROOM
B01

WATER AND FIRE SERVICE ENTRY POINT

MECHANICAL
B09A

TRAINING ROOM
B09

CORRIDOR
B04

CORRIDOR
B02

STORAGE
BO8

DOWN

DATA
B07

INTERVIEW ROOM
B06

MECHANICAL ROOM
B05

INTERVIEW OBSERVATION ROOM
B02A

STORAGE
B03A

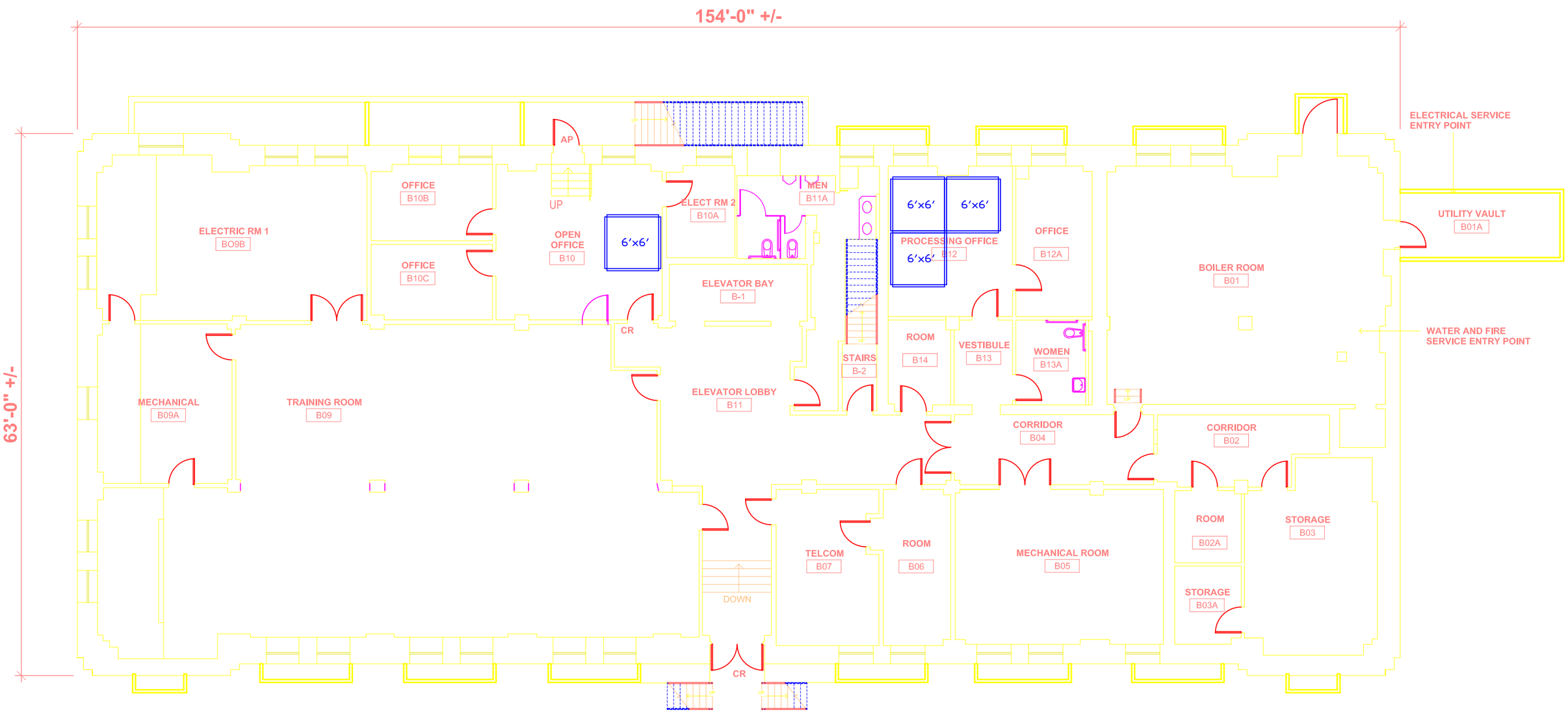
STORAGE
B03

AS-BUILT - BASEMENT PLAN

9,645 +/- SF GROSS

0 4 8 16 FT

EXHIBIT 'G'



PROPOSED - BASEMENT PLAN

9,645 +/- SF GROSS

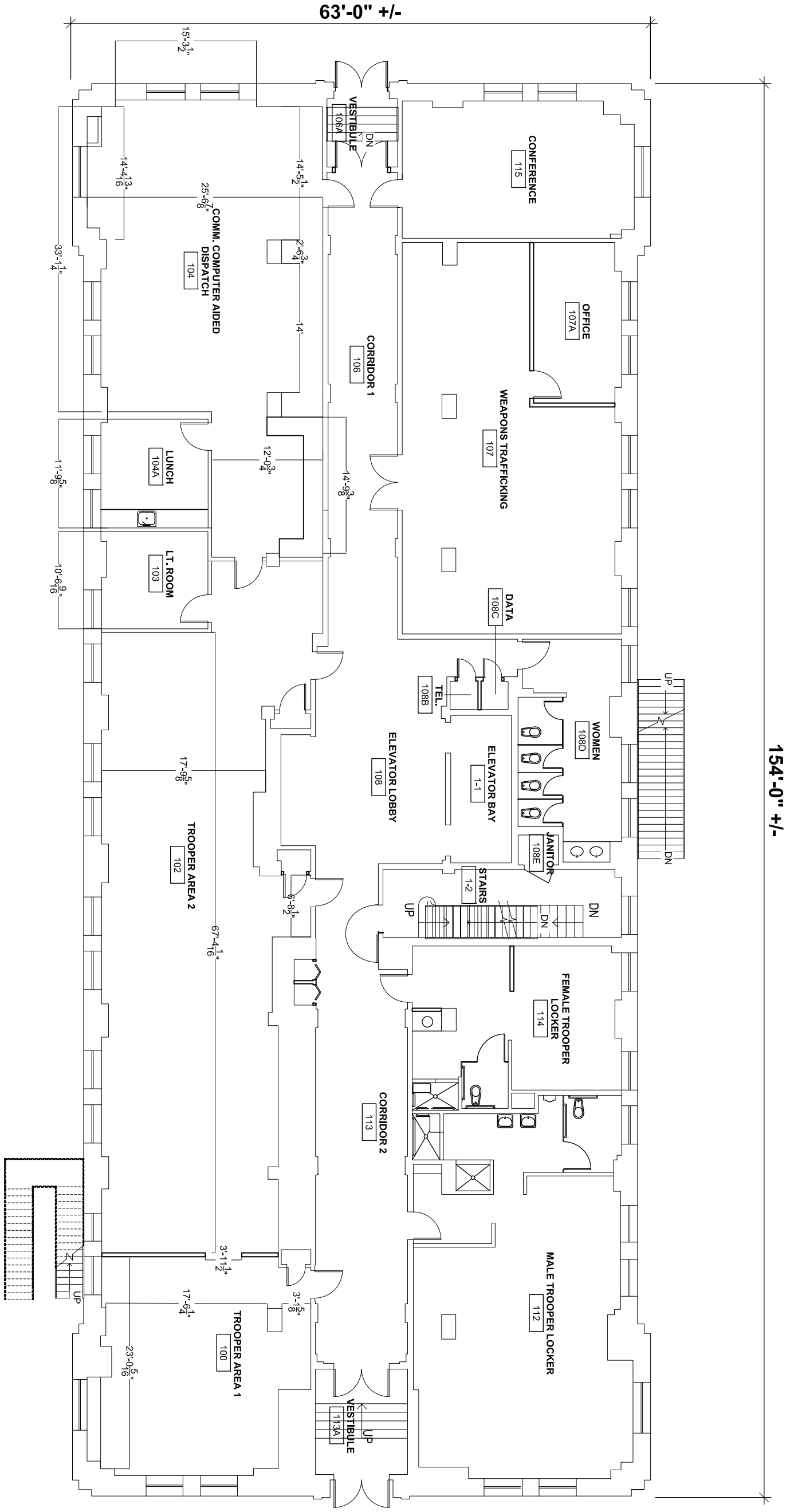
0 4 8 16 FT

EXHIBIT 'G'

AS-BUILT - FIRST FLOOR PLAN

9,610 +/- SF GROSS

0 4 8 16 FT



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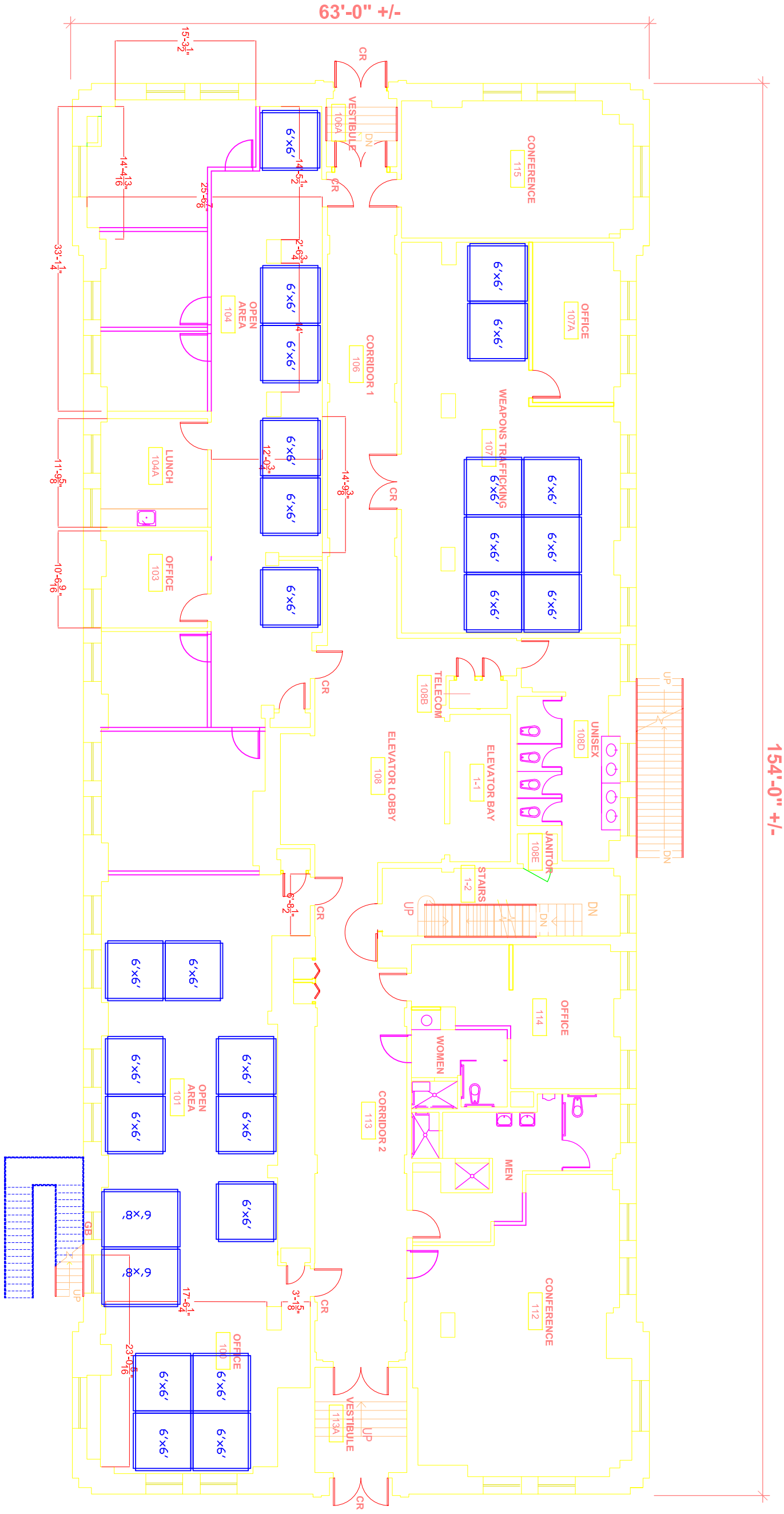

63'-0" +/-
154'-0" +/-
PROPOSED - FIRST FLOOR PLAN
9,610 +/- SF GROSS
0 4 8 16 FT
CONFERENCE 115
VESTIBULE 106A
OFFICE 107A
CORRIDOR 1 106
WEAPONS TRAFFICKING 107
OPEN AREA 104
LUNCH 104A
OFFICE 103
ELEVATOR LOBBY 108
TELECOM 108B
ELEVATOR BAY 1-1
UNISEX 108D
JANITOR 108E
STAIRS 1-2
OFFICE 114
WOMEN
MEN
CORRIDOR 2 113
VESTIBULE 113A
CONFERENCE 112
OPEN AREA 101
OFFICE 100
6'x9'
6'x8'
CR
UP
DN
GB

EXHIBIT 'G'

154'-0" +/-

63'-0" +/-

CONFERENCE 224

UP

OFFICE 222A

OFFICE 221

OFFICE 220

MEN'S ROOM 226

JANITOR 226D

CORRIDOR 226A

DATA 226C

TEL. 226B

ELEVATOR BAY 2-1

OFFICE 231

JOINT COMMITTEE ON PUBLIC SCHOOLS 229

OFFICE 229B

OFFICE 229A

OFFICE 218

OFFICE 216

OFFICE 215

WORK AREA 223

STAIRS 2-2

ELEVATOR LOBBY 225

VESTIBULE 201

OPEN AREA 230

VESTIBULE 227

OFFICE 214

GOVERNOR'S COUNCIL ON ALCOHOLISM AND DRUG ABUSE 222

CONFERENCE 208

OFFICE 202

JEWISH WAR VETERANS 201A

OFFICE 203

GARDEN STATE PRESERVATION TRUST 200

OFFICE 200A

OFFICE 213

OFFICE 212

OFFICE 211

OFFICE 210

OFFICE 209

MECH. 205

OFFICE 204

UP

FIRE ESCAPE

AS-BUILT - SECOND FLOOR PLAN

9,610 +/- SF GROSS

0 4 8 16 FT

EXHIBIT 'G'

154'-0" +/-

AP
GB
UP
CONFERENCE 224
6'x8'
OFFICE 222A
OFFICE 221
OFFICE 220
UNISEX 226
JANITOR 226D
CORRIDOR 226A
TELECOM 226B
ELEVATOR BAY 2-1
STAIRS 2-2
OFFICE 231
6'x6'
OFFICE 229B
OFFICE 229A
OFFICE 218
CR
ELEVATOR LOBBY 225
OPEN AREA 230
OFFICE 214
OPEN AREA 222
BREAK 208
OFFICE 203
OFFICE 204
OFFICE 213
OFFICE 212
OFFICE 211
OFFICE 210
OFFICE 209
MECH. 205
OFFICE 200A
GB
AP
FIRE ESCAPE

PROPOSED - SECOND FLOOR PLAN

9,610 +/- SF GROSS

0 4 8 16 FT

EXHIBIT 'G'

EXHIBIT 'G'

AS-BUILT - THIRD FLOOR PLAN

9,610 +/- SF GROSS

0 4 8 16 FT

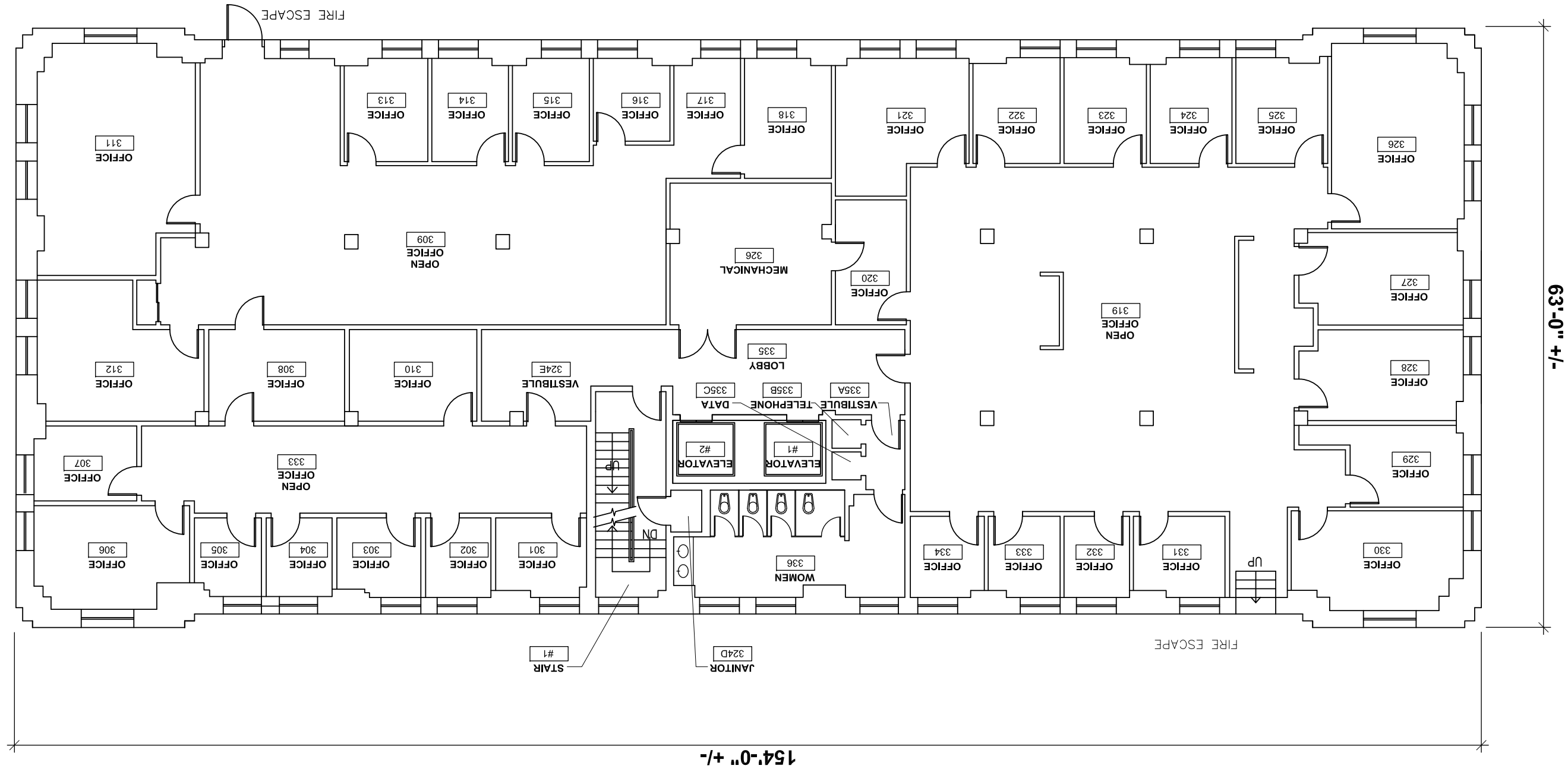
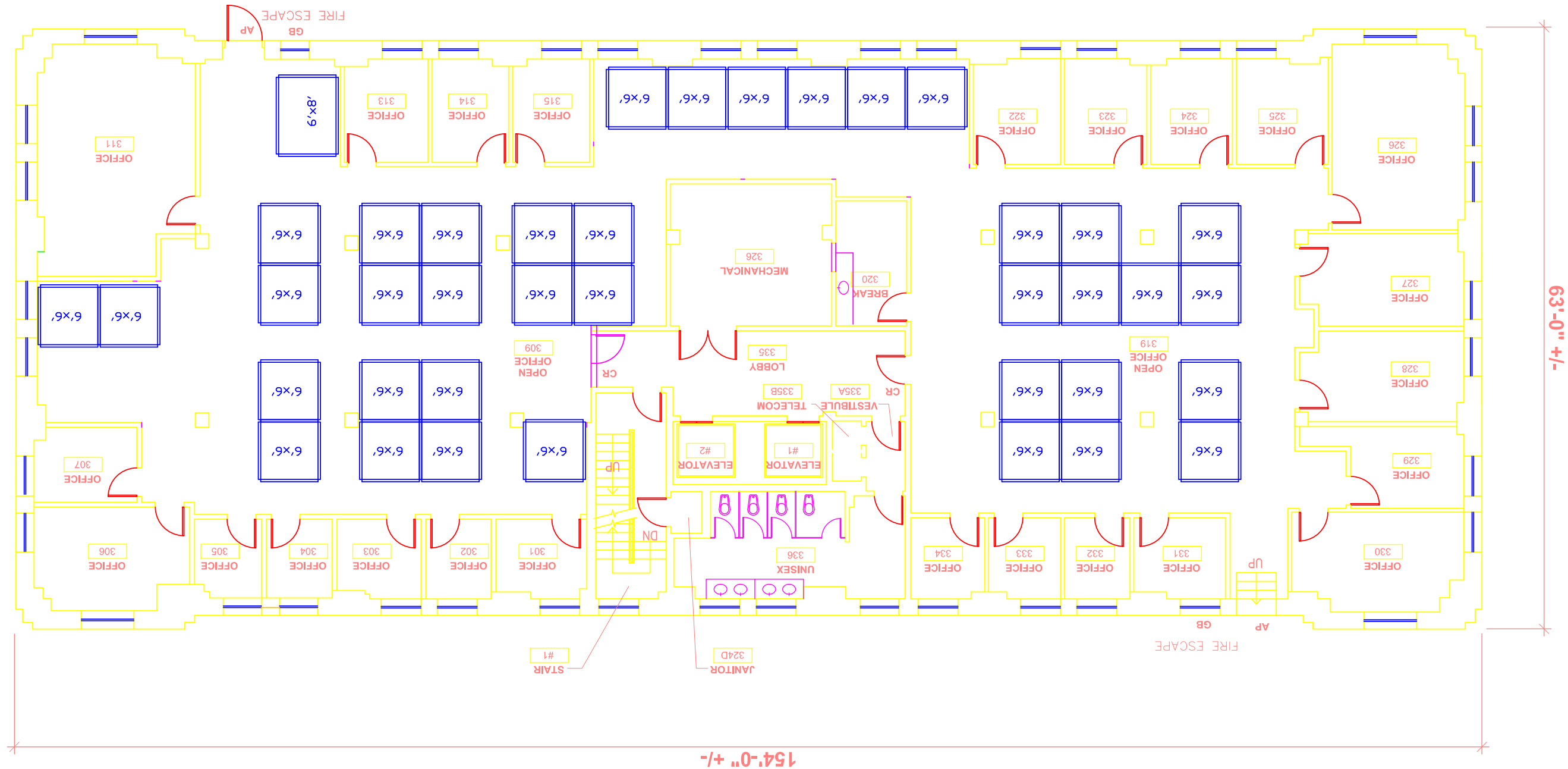


EXHIBIT G, SHEET 1

PROPOSED - THIRD FLOOR PLAN

9,610 +/- SF GROSS

0 4 8 16 FT



154'-0" +/-

63'-0" +/-

FIRE ESCAPE

JANITOR 443D

STAIR #1

OFFICE 428

OFFICE 427

OFFICE 426

OFFICE 425

OFFICE 424

UP

OFFICE 429

OFFICE 431

OFFICE 430A

OPEN OFFICE 430

MEN 444

DN

UP

ELEVATOR #1

ELEVATOR #2

VESTIBULE 433A

TELEPHONE 433B

DATA 433C

LOBBY 433

OFFICE 415

OFFICE 416

OFFICE 401

OFFICE 402

OFFICE 403

OFFICE 404

OFFICE 405

OFFICE 406

OPEN OFFICE 407

VESTIBULE 400

OFFICE 408

OPEN OFFICE 410

OFFICE 409

OFFICE 423

OFFICE 422

OFFICE 421

OFFICE 420

OFFICE 419

OFFICE 418

OFFICE 417

OFFICE 414

OFFICE 413

OFFICE 412

OFFICE 411

UP

FIRE ESCAPE

AS-BUILT - FOURTH FLOOR PLAN

9,610 +/- SF GROSS

0 4 8 16 FT

EXHIBIT 'G'

EXHIBIT G, SITE PLAN

PROPOSED - FOURTH FLOOR PLAN

9,610 +/- SF GROSS

0 4 8 16 FT

154'-0" +/-

63'-0" +/-

OFFICE 409
OFFICE 410
OFFICE 411
OFFICE 412
OFFICE 413
OFFICE 414
CONFERENCE 415
STORAGE 416
BREAK 416
OFFICE 419
OFFICE 420
OFFICE 421
OFFICE 422
OFFICE 423
OFFICE 424
OFFICE 425
OFFICE 426
OFFICE 427
OPEN OFFICE 430
OFFICE 431
OFFICE 429
OFFICE 406
OFFICE 405
OFFICE 404
OFFICE 403
OFFICE 402
OFFICE 401
OPEN OFFICE 400
LOBBY 433
ELEVATOR #2
ELEVATOR #1
TELECOM 433B
433A
UNISEX 444
STAIR #1
JANITOR 443D
UP
DN
CR
GB
AP
FIRE ESCAPE
6'x6'