

SCOPE OF WORK

F&A New Façade System

Finance and Administration Building, NJDOT HQ
Ewing, Mercer County, N.J.

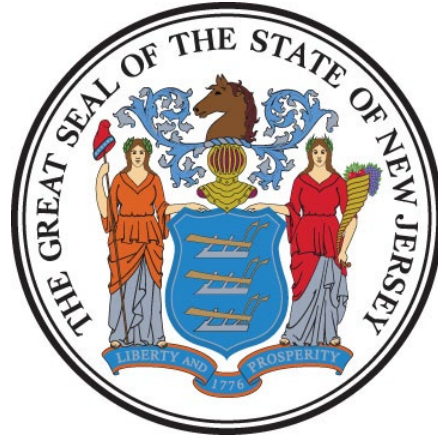
Project No. T0687-00

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: August 2, 2023

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PROJECT LOCATION: Finance and Administration Building NJDOT HQ
PROJECT NO: T0687-00
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I. OBJECTIVE

The objective of this project is to replace the windows and brick façade on the Finance and Administration Building at the New Jersey Department of Transportation Headquarters with a new façade system. The consultant shall provide a design for a modern look to the building with an energy efficient facade system

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:

- **P007 Structural Engineering**
- **P025 Estimating/Cost Analysis**
- **P037 Asbestos Design**
- **P038 Asbestos Safety Control Monitoring**
- **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 \$4,550,000.

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

B. CURRENT WORKING ESTIMATE (CWE)

The Current Working Estimate (CWE) for this project is \$6,222,500.

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	14
2. Investigation Phase	56
• <i>Project Team & DPMC Plan/Code Unit Review & Comment</i>	14
3. Schematic Design Phase	70
• <i>Project Team & DPMC Plan/Code Unit Review & Comment</i>	14
4. Design Development Phase	70
• <i>Project Team & DPMC Plan/Code Unit Review & Comment</i>	14
5. Final Design Phase	70
• <i>Project Team & DPMC Plan/Code Unit Review & Approval</i>	14
6. Final Design Re-Submission to Address Comments	7

• <i>Project Team & DPMC Plan/Code Unit Review & Approval</i>	14
7. DCA Submission Plan Review	30
8. Permit Application Phase	7
• <i>Issue Plan Release</i>	
9. Bid Phase	42
10. Award Phase	28
11. Construction Phase	240
12. Project Close Out Phase	30

B. CONSULTANT’S PROPOSED DESIGN & CONSTRUCTION SCHEDULE

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

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.

V. PROJECT SITE LOCATION & TEAM MEMBERS

A. PROJECT SITE ADDRESS

The location of the project site is:

NJ Department of Transportation Headquarters
Finance & Administration Building
1035 Parkway Ave
Trenton, New Jersey 08625-0600

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: Joseph Polizzi, Design Project Manager
Address: Division Property Management & Construction
20 West State Street, 3rd Floor
Trenton, NJ 08608-1206
Phone No: (609) 218-0260
E-Mail No: joseph.polizzi@treas.nj.gov

2. Department of Transportation:

Name: Jitendra Patel, Principal Engineer
Address: Department of Transportation
1035 Parkway Ave., PO Box 600
Trenton, New Jersey 08625
Phone No: (609) 963-2190
E-Mail No: Jitendra.Patel@dot.nj.gov

VI. PROJECT DEFINITION

A. BACKGROUND

The Department of Transportation (DOT) Ewing Headquarters Campus is the largest of the DOT facilities within the State. It provides workspace for approximately 1,950 employees and is comprised of several buildings ranging in age from 23 years to over 80 years old. The total square footage of the buildings in the complex is 861,274 square feet.

B. FUNCTIONAL DESCRIPTION OF THE BUILDING

1. General:

The DOT Finance and Administration (F&A) Building is a three-story steel framed structure with concrete masonry walls and brick façade. The building was built in 1969 and is connected to the south side of the Main Office Building via an enclosed connector. The building has been experiencing water infiltration for years. Attempts to reseal the existing single pane windows and seal basement walls have failed to stop the water intrusion. Many office cubicles are located on the perimeter of the building near the windows.

2. History:

The roof was replaced under DPMC Project T0522-00 in 2013 and is not believed to be the source of the water infiltration. The Joint Sealer and Masonry Restoration Project T0489-00 in 2013 failed to completely stop the water infiltration.

Two important infiltration studies by Ronald A. Sebring Associates in 2006 and 2017 tested the brick façade and window assemblies. These studies will be provided to the consultant.

Attempts to fix the water infiltration issue have failed, prompting further investigation with alternative ideas. A survey by Ronald A. Sebring Associates (RASA) in 2022 provided four alternative solutions for façade improvements. The report entitled “Façade and Foundation Water Infiltration Survey” by RASA is shown in **Exhibit ‘C’**. Basement waterproofing and installation of a new underground storm drainage system are also recommended and are being addressed in project T0659-00. Drawings associated with the RASA survey and additional drawings and reports will be provided to the Consultant at the pre-proposal meeting.

The F&A Building was investigated as part of exterior envelope and infrared studies by B/E Retrofit. The studies with recommendations by B/E Retrofit will be provided to the Consultant.

3. Hazardous Materials:

Asbestos containing materials in the building were abated or sealed off under DPMC Project T0521-00 in 2014. As such, ACM’s are expected to be encountered in this project. A report by Environmental Connection Inc. will be provided. Under the same project, microbial remediation was also performed but subsequent mold growth may have taken place.

4. Current Projects:

The entrance to the F&A building on the side facing the Central Steam Plant is being addressed under DPMC Project T0620-00. The doors will be replaced and a barrier free ramp will be installed. This project is presently in construction and will require coordination with Project T0659-00. All construction activities related to the proposed F&A ramp and stairs on the exterior of the building under project T0620-00 will not begin until after the completion of this section of the waterproofing related construction activities under project T0659-00. Hence, construction activities around this section of the building have to be completed by January 8, 2024. Final Permit drawings for T0620-00 will be provided to the Consultant.

DPMC Project T0668-00 is in the design stage, as of this writing, to install sprinklers in the F&A building. A new dedicated water service to the building may be required for this project.

5. Phasing:

It is uncertain as to DOT’s ability to completely vacate the building during construction. Limited swing space may result in only a partial vacation of the building. A phasing plan will likely be necessary.

VII. CONSULTANT DESIGN RESPONSIBILITIES

A. DESIGN REQUIREMENTS

1. Facade System:

The Consultant shall review the “Façade and Foundation Water Infiltration Survey” report by Ronald A. Sebring Associates, shown in **Exhibit ‘C’** and provide Design, Construction Administration, Permitting and Bid/Award services to replace the windows and brick façade on the Finance and Administration (F&A) Building at the Department of Transportation (DOT) Ewing Headquarters with a new facade system. The consultant shall eliminate existing multiple small windows and provide a design for the new modern look to the building with an energy efficient façade system. The existing concrete masonry unit back-up at the perimeter of the

building facade will need to be removed partially or fully in accordance with the new façade system. Replacement of rooftop copings is also required.

The consultant shall prepare mid-level 3D renderings of the different façade systems and present to the DOT for selection at the schematic design meeting. DOT will make a final design decision on the façade system after review of the different options.

2. Structural Evaluation:

The Consultant shall perform a structural evaluation of the building and investigate the ability of the existing structure to be renovated for the project scope. The consultant shall conduct a full survey of the building to verify sizes of the structural members and their condition. The consultant shall carryout onsite inspections of the conditions and connections of the framing members of the structure. In addition, the consultant shall verify configuration of the system components of the structural members.

The consultant shall carry out structural stability analysis of the building to check the Code required lateral and vertical capacity for the removal/modification/reconstruction of the concrete masonry at the perimeter of the building and façade system.

3. Building Envelope:

The consultant shall review the Building Envelope Improvement and IR Study Reports for the building by B/E Retrofit and shall address the thermal needs & deficiencies in the design of new façade system.

4. Rooftop Coping:

The consultant shall provide a design for the replacement of rooftop copings and flashings to accommodate replacement of the upper portion of the façade. The work shall not affect or void the roof warranty.

5. Fin Tube Radiators:

There is an existing fin tube radiator system on the perimeter of the building on each floor. The consultant shall provide for the removal and reinstallation of this system during the façade replacement work, if necessary.

Consultant shall estimate the costs to prepare construction documents for the removal and reinstallation of the perimeter fin tube radiator system on each floor of the building and enter that amount on their fee proposal line item entitled “**Fin Tube Radiator Allowance**”. Refer to paragraph XI.E.

6. Utilities:

The consultant shall provide the design for the removal, replacement, and modification of all the utilities to facilitate installation of the new façade system.

7. Basement Walls:

The consultant shall provide the design for the installation of insulation, sheetrock and finishing of the walls inside the basement in the area where this has been opened.

8. Phasing:

The Consultant shall coordinate with DOT Staff to address construction phasing to meet the needs of DOT.

B. HAZARDOUS MATERIALS SURVEY AND REPORT

Consultant shall survey the building, review past reports and documents 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:

- a. Asbestos in accordance with N.J.A.C. 5:23-8, Asbestos Hazard Abatement Subcode.
- b. Lead in accordance with N.J.A.C. 5:17, Lead Hazard Evaluation and Abatement Code.
- c. 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.
- d. Mold and other items as necessary.

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 section VII.B “Hazardous Materials Survey and Report”. All costs associated with managing, coordinating, observing and administering subconsultants and subcontractors performing hazardous materials sampling, testing, analysis, report preparation and hazardous materials construction administration services shall be included in the consultant’s lump sum fee proposal.

C. 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.

- **Addition to Transportation Office Building**, October 1, 1966, Alfred Clauss, A.I.A Architect
- **Asbestos Removal D.O.T. Annex Building**, 8/25/1981, Scrimenti, Shive Spinelli, Perantoni Architects
- **F&A Site Drainage Contours**, 2005
- **DPMC Project T0489-00: Joint Sealer Replacement and Masonry Restoration**, 5/13/2013, Ronald A. Sebring Associates, LLC
- **DPMC Project T0522-00: Roof Replacement NJDOT F&A Building**, 2/13/2014, Ronald A. Sebring Associates, LLC
- **New Jersey Department of Transportation Headquarters Findings & Recommendations Report: Building Envelope Measures**, March 21, 2018, B/E Retrofit
- **New Jersey Department of Transportation Headquarters Infrared Study Report**, March 21, 2018, B/E Retrofit
- **NJDOT F&A Building Façade and Foundation Water Infiltration Study**, May 12,2022, Ronald A. Sebring Associates, LLC

- **NJDOT F&A Building Façade and Foundation Water Infiltration Study Appendix C – Drawings**

- **DPMC Project T0521-00: Report: Environmental Remediation Air Conveyance System Cleaning & Asbestos Abatement**, February 10, 2014, Environmental Connection, Inc.
- **DPMC Project T0620-00: Alterations and Renovations to the NJ Department of Transportation Headquarters Complex: MOB, E&O and F&A Lobbies**, March 1, 2022, Mott Macdonald Architects, P.C.
- **Water Infiltration Study**, 8/10/2006, Ronald A. Sebring Associates, LLC
- **Water Infiltration Survey**, 11/29/2017, Ronald A. Sebring Associates, LLC

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.

VIII. PERMITS & APPROVALS

A. NJ UNIFORM CONSTRUCTION CODE PLAN REVIEW AND 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/>

1. NJ Uniform Construction Code (NJUCC) Plan Review

Consultant shall estimate the cost of the NJUCC Plan Review by DCA and include that amount in their fee proposal line item entitled “**Plan Review and Permit Fee Allowance**”, refer to paragraph XI.A.

Upon approval of the Final Design Phase Submission by DPMC, the Consultant shall submit the construction documents to the Department of Community Affairs (DCA), Bureau of Construction Project Review to secure a complete plan release.

As of July 25, 2022, the Department of Community Affairs (DCA) is only accepting digital signatures and seals issued from a third party certificate authority. The DCA ePlans site can be found at:

<https://www.nj.gov/dca/divisions/codes/offices/ePlans.html>

Procedures for submission to the DCA Plan Review Unit can be found at:

https://www.state.nj.us/dca/divisions/codes/forms/pdf_bcpr/pr_app_guide.pdf

Consultant shall complete the “Project Review Application” and include the following on Block 5 as the “Owner’s Designated Agent Name”:

Joyce Spitale, DPMC
PO Box 235
Trenton, NJ 08625-0235
Joyce.Spitale@treas.nj.gov 609-943-5193

The Consultant shall complete the NJUCC “Plan Review Fee Schedule”, determine the fee due and pay the NJUCC Plan Review fees, refer to Paragraph X.A.

The NJUCC “Plan Review Fee Schedule” can be found at:

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

2. NJ Uniform Construction Code Permit

Upon receipt of a complete plan release from the DCA Bureau of Construction Project Review, the Consultant shall complete the NJUCC permit application and all applicable technical sub-code sections. The “Agent Section” of the application and certification section of the building sub-code section shall be signed. These documents, with **six (6) sets of DCA approved, signed and sealed construction 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 VIII.B.

3. 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.

4. 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.

5. 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”, Paragraph **“9. REGULATORY AGENCY APPROVALS”** 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.

IX. ENERGY INCENTIVE PROGRAM

The Consultant shall review the programs available on the “New Jersey’s Clean Energy Program” website at: <http://www.njcleanenergy.com> as well as New Jersey electric and gas utility websites 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” or utility approved rebates and incentives.

Consultant shall identify all rebates and incentives in their technical proposal.

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 its fee proposal.

X. ALLOWANCES

A. PLAN REVIEW AND 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 its fee proposal line item entitled “**Plan Review and 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 its 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.B 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.B 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.B 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. FIN TUBE RADIATOR ALLOWANCE

Consultant shall estimate the costs to prepare construction documents for the removal and reinstallation of the perimeter fin tube radiator system on each floor of the building and enter that amount on their fee proposal line item entitled “**Fin Tube Radiator 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 Fin Tube Radiator Allowance will be returned to the State at the close of the project.

PROJECT NAME: F&A New Façade System
PROJECT LOCATION: Finance and Administration Building NJDOT HQ
PROJECT NO: T0687-00
DATE: August 2, 2023

XI. 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 (including the subsequent contract deliverables and exhibits) and verifies that the work will not conflict with the existing or future construction activities of other projects at the site.

SOW APPROVED BY: James Wright 8/2/2023
JAMES WRIGHT, MANAGER DATE
DPMC PROJECT PLANNING & INITIATION

SOW APPROVED BY: Dennis W. Meszaros 08/08/23
DENNIS MESZAROS, MANAGER DATE
DEPARTMENT OF TRANSPORTATION

SOW APPROVED BY: Joseph Polizzi 08/08/2023
JOSEPH POLIZZI, PROJECT MANAGER DATE
DPMC PROJECT MANAGEMENT GROUP

SOW APPROVED BY: Richard Flodmand for 8/8/23
RICHARD FLODMAND, DEPUTY DIRECTOR DATE
DIV PROPERTY MGT & CONSTRUCTION

XII. CONTRACT DELIVERABLES

The following are checklists listing the 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,” 3.0 Edition, dated September 2022 available at <https://www.nj.gov/treasury/dPMC/Assets/Files/ProceduresforArchitectsandEngineers.pdf> for a detailed description of the deliverables required for each submission item listed. References to the applicable paragraphs of the “Procedures for Architects and Engineers” are provided.

Note that the Deliverables Checklist may include submission items that are “S.O.W. Specific Requirements”. These requirements will be defined in the project specific scope of work and included on the deliverables checklist.

This project includes the following phases with the deliverables noted as “Required by S.O.W” on the Deliverables Checklist:

- **INVESTIGATION PHASE**
- **SCHEMATIC PHASE**
- **DESIGN DEVELOPMENT PHASE**
- **FINAL DESIGN PHASE**
- **PERMIT APPLICATION PHASE**
- **BIDDING AND CONTRACT AWARD**
- **CONSTRUCTION PHASE**
- **PROJECT CLOSE-OUT PHASE**

XIII. EXHIBITS

- A. **SAMPLE PROJECT SCHEDULE FORMAT**
- B. **PROJECT SITE LOCATION MAP**
- C. **FAÇADE AND FOUNDATION WATER INFILTRATION STUDY**

END OF SCOPE OF WORK

**Deliverables Checklist
Investigation Phase**

A/E Name: _____

A/E Manual Reference	Submission Item	Required by S.O.W.		Previously Submitted		Enclosed	
		Yes	No	Yes	No	Yes	No
12.3.1.	A/E Statement of Site Visit						
12.3.2.	Narrative Description of Project						
12.3.3.	Building Code Information Questionnaire						
12.3.4.	Space Analysis						
12.3.5.	Special Features						
12.3.6.	Catalog Cuts						
12.3.7.	Site Evaluation						
12.3.8.	Subsurface Investigation						
12.3.9.	Surveys						
12.3.10.	Fine Arts Inclusion						
12.3.11.	Design Rendering						
12.3.12.	Regulatory Approvals						
12.3.13.	Utility Availability						
12.3.14.	Diagrammatic Sketches/Drawings (6 Sets)						
12.3.15.	Outline Specifications (6 Sets)						
12.3.16.	Current Working Estimate/Cost Analysis						
12.3.17.	Project Schedule						
12.3.18.	Formal Presentation						
12.3.19.	Scope of Work Compliance Statement						
12.3.20.	Investigation Phase Deliverables Checklist						
S.O.W. Reference	S.O.W. Specific Requirements						

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC the status of all the deliverables required by the project specific Scope of Work.

Consultant Signature _____
Date

**Deliverables Checklist
Schematic Design Phase**

A/E Name: _____

A/E Manual Reference	Submission Item	Required by S.O.W.		Previously Submitted		Enclosed	
		Yes	No	Yes	No	Yes	No
13.4.1.	A/E Statement of Site Visit						
13.4.2.	Narrative Description of Project						
13.4.3.	Building Code Information Questionnaire						
13.4.4.	Space Analysis						
13.4.5.	Special Features						
13.4.6.	Catalog Cuts						
13.4.7.	Site Evaluation						
13.4.8.	Subsurface Investigation						
13.4.9.	Surveys						
13.4.10.	Arts Inclusion						
13.4.11.	Design Rendering						
13.4.12.	Regulatory Approvals						
13.4.13.	Utility Availability						
13.4.14.	Drawings (6 Sets)						
13.4.15.	Outline Specifications (6 Sets)						
13.4.16.	Current Working Estimate/Cost Analysis						
13.4.17.	Project Schedule						
13.4.18.	Formal Presentation						
13.4.19.	Scope of Work Compliance Statement						
13.4.20.	Schematic Design Phase Deliverables Checklist						
S.O.W. Reference	S.O.W. Specific Requirements						
VII.A.1	3D renderings of the different façade systems						

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC the status of all the deliverables required by the project specific Scope of Work.

Consultant Signature _____
Date

**Deliverables Checklist
Design Development Phase**

A/E Name: _____

A/E Manual Reference	Submission Item	Required by S.O.W.		Previously Submitted		Enclosed	
		Yes	No	Yes	No	Yes	No
14.4.1.	A/E Statement of Site Visit						
14.4.2.	Narrative Description of Project						
14.4.3.	Building Code Information Questionnaire						
14.4.4.	Space Analysis						
14.4.5.	Special Features						
14.4.6.	Catalog Cuts						
14.4.7.	Site Evaluation						
14.4.8.	Subsurface Investigation						
14.4.9.	Surveys						
14.4.10.	Arts Inclusion						
14.4.11.	Design Rendering						
14.4.12.	Regulatory Approvals						
14.4.13.	Utility Availability						
14.4.14.	Drawings (6 Sets)						
14.4.15.	Outline Specifications (6 Sets)						
14.4.16.	Current Working Estimate/Cost Analysis						
14.4.17.	Project Schedule						
14.4.18.	Formal Presentation						
14.4.19.	Plan Review/Scope of Work Compliance Statement						
14.4.20.	Design development Phase Deliverables Checklist						
S.O.W. Reference	S.O.W. Specific Requirements						

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC the status of all the deliverables required by the project specific Scope of Work.

Consultant Signature

Date

Deliverables Checklist Final Design Phase

A/E Name: _____

A/E Manual Reference	Submission Item	Required by S.O.W.		Previously Submitted		Enclosed	
		Yes	No	Yes	No	Yes	No
15.4.1.	A/E Statement of Site Visit						
15.4.2.	Narrative Description of Project						
15.4.3.	Building Code Information Questionnaire						
15.4.4.	Space Analysis						
15.4.5.	Special Features						
15.4.6.	Catalog Cuts						
15.4.7.	Site Evaluation						
15.4.8.	Subsurface Investigation						
15.4.9.	Surveys						
15.4.10.	Arts Inclusion						
15.4.11.	Design Rendering						
15.4.12.	Regulatory Approvals						
15.4.13.	Utility Availability						
15.4.14.	Drawings (6 Sets)						
15.4.15.	Outline Specifications (6 Sets)						
15.4.16.	Current Working Estimate/Cost Analysis						
15.4.17.	Project Schedule						
15.4.18.	Formal Presentation						
15.4.19.	Plan Review/Scope of Work Compliance Statement						
15.4.20.	Final Design Phase Deliverables Checklist						
S.O.W. Reference	S.O.W. Specific Requirements						

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC the status of all the deliverables required by the project specific Scope of Work.

Consultant Signature

Date

**Deliverables Checklist
Bidding and Contract Award Phase**

A/E Name: _____

A/E Manual Reference	Submission Item	Required by S.O.W.		Previously Submitted		Enclosed	
		Yes	No	Yes	No	Yes	No
17.1.1.	Notice of Advertising						
17.1.2.	Bid Proposal Form						
17.1.3.	Bid Clearance Form						
17.1.4.	Drawings (6 Sets)						
17.1.5.	Specifications (6 Sets)						
17.1.6.	Construction Schedule						
17.3	Pre-Bid Conference/Mandatory Site Visit						
17.3.1.	Meeting Minutes						
17.4	Bulletins						
17.5	Post Bid Meeting						
17.6.	Contract Award "Letter of Recommendation"						
17.8.	Bid Protests - Hearings						
17.9.	Bidding and Contract Award Phase Deliverables Checklist						
S.O.W. Reference	S.O.W. Specific Requirements						

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC the status of all the deliverables required by the project specific Scope of Work.

Consultant Signature

Date

Deliverables Checklist Construction Phase

A/E Name: _____

A/E Manual Reference	Submission Item	Required by S.O.W.		Previously Submitted		Enclosed	
		Yes	No	Yes	No	Yes	No
18.2.	Pre-Construction Meeting						
18.3.	Submittal Log						
18.4.	Construction Schedule						
18.5.	Project Progress Meetings						
18.7.	Contractor’s Invoicing and Payment Process						
18.8.	Contractor Submittals						
18.10.	Testing						
18.11.	Shop Drawings (6 Sets)						
18.12.	As-Built & Record Set Drawings (6 Sets)						
18.13.	Change Orders						
18.14.	Construction Photographs						
18.15.	Field Observations						
18.17.	Construction Phase Deliverables Checklist						
S.O.W. Reference	S.O.W. Specific Requirements						

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC the status of all the deliverables required by the project specific Scope of Work.

_____ Consultant Signature

_____ Date

Deliverables Checklist Project Close-Out Phase

A/E Name: _____

A/E Manual Reference	Submission Item	Required by S.O.W.		Previously Submitted		Enclosed	
		Yes	No	Yes	No	Yes	No
19.3.	Development of Punch List and Inspection Reports						
19.5.	Determination of Substantial Completion						
19.6.	Correction/Completion of Punch List						
19.7.	Submission of Close-Out Documentation						
19.7.1.	As-Built and Record Sets of Drawing (6 Sets)						
19.8.	Final Payment						
19.9.1.	Contractors Final Payment						
19.9.2.	A/E's Final Payment						
19.10.	Project Close-Out Phase Deliverables Checklist						
S.O.W. Reference	S.O.W. Specific Requirements						

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC the status of all the deliverables required by the project specific Scope of Work.

_____ Consultant Signature

_____ Date

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.

<u>CODE</u>	<u>DESCRIPTION</u>	<u>REPORTS TO ASSOCIATE DIRECTOR OF:</u>
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	Respon	Weeks
<PROJ>			
Design			
CV3001	Schedule/Conduct Pre-design/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	
CV2001	Distribute Final Design Submittal for Review	CM	
CV2002	Review & Approve Final Design Submittal	CA	
CV3053	Review & Approve Final Design Submittal	PR	
CV3054	Review Final Design Submittal for Constructability	OCS	

Sheet 1 of 3

Bureau of Design & Construction Services

EXHIBIT 'A'

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

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Activity ID	Description	Respn	Weeks				
CV2055	Review & Approve Final Design Submittal	CM					
CV2056	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					

DRCA - TEST

Sheet 2 of 3

Bureau of Design & Construction Services

EXHIBIT 'A'

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

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Activity ID	Description	Respn	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	

DBCA - TEST

Sheet 3 of 3

Bureau of Design & Construction Services

EXHIBIT 'A'

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

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**New Jersey
Department of Transportation
Ewing Complex**

1035 Parkway Avenue
Trenton, NJ 08625

*Created by the Division of IT
3/6/01*

FERNWOOD BUILDINGS

- Bldg. E Central Steam Plant
- Bldg. 1 Equipment Office/Car & Truck Shop
- Bldg. 1A Mower / Machine Shop
- Bldg. 2 Plow Shop
- Bldg. 4 Plant Maintenance Shops
- Bldg. 5 Storage
- Bldg. 6 Furniture Storage
- Bldg. 7 Equipment Receiving
- Bldg. 8 Pavement Management/Furniture Shop
- Bldg. 9 Vehicle Wash Building
- Bldg. 10 Vehicle (Gas & Natural Gas) Stations
- Bldg. 11 Inspection Shop
- Bldg. 13 Guard House
- Bldg. 16 Soils Building & Maintenance Storage
- Bldg. 17 Construction Shop
- Bldg. 18 Vacant Building
- Bldg. 19 Scale Prototype and Development
- Bldg. 20 Central Electrical Operations/Radio Shop
- Bldg. 21 Sign Shop
- Bldg. 22 Switch Gear
- Bldg. 23 Overhead Sign Crew
- Bldg. 24 DOT/DMV Warehouse/Stock Room
- Bldg. 25 Landscape Chemical Storage
- Bldg. 26 Body Shop
- Bldg. 28 Storage

- MOB** Main Office Building
- E&O** Engineering & Operations Building
- F&A** Finance and Administration Building

THIOKOL BUILDINGS

- ~~Bldg. 1 Bureau of Materials Office~~
- Bldg. 2 Bituminous Lab & Chemistry Lab
- Bldg. 3 Materials Testing Lab
- Bldg. 4 Physical Testing Lab
- Bldg. 5 Storage
- Bldg. 6 Accident Records & Geodetic Survey Offices & Sale of Plans/Triangle
- Bldg. 8 Print Shop
- Bldg. 9 Concrete Testing

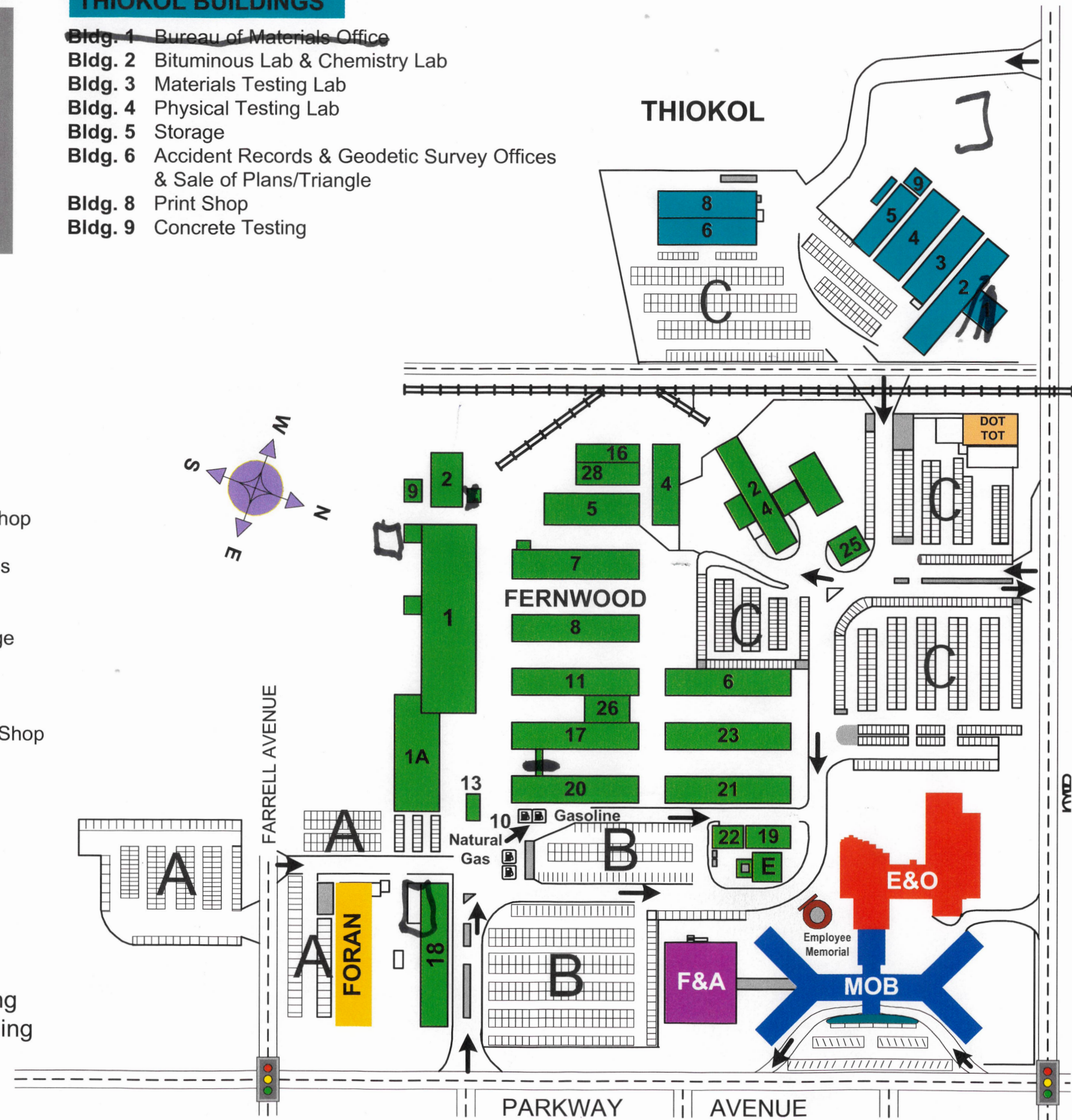


EXHIBIT 'B'

**FAÇADE AND FOUNDATION
WATER INFILTRATION SURVEY
FINANCE AND ADMINISTRATION BUILDING
NJ DEPARTMENT OF TRANSPORTATION
TRENTON, MERCER COUNTY, NEW JERSEY**



RONALD A. SEBRING ASSOCIATES, LLC, ARCHITECTURE AND DESIGN
2156 ROUTE 37 WEST, SUITE 201, MANCHESTER, NJ 08759 (732) 701-9444 FAX 701-9919
E-MAIL: architects@rasallc.com

5-HOLE STRUCTURAL ENGINEERING
3 QUAIL RUN, SOUTH BURLINGTON, VT 05403 (802) 338-0233
E-MAIL: structural5-hole@hotmail.com

ENVIRONMENTAL CONNECTION, INC.
120 NORTH WARREN STREET, TRENTON, NJ 08608 (609) 392-4200
www.vtihq.com

Prepared May 12, 2022, by

David A. Clark, R.A.
Principal Architect

EXHIBIT 'C'

EXECUTIVE SUMMARY

- The exterior brick is not designed with a cavity that will allow the moisture that enters through the brick to flow down to through-wall flashings and weep vents at the base of the wall. The head flashings and weeps at window heads should direct moisture that wicks through the wall outward, however, observations and testing indicate that the head flashings and through wall flashings at the windows are compromised.
- The existing window glazing is single-pane and is not energy-efficient.
- The NJDOT has determined that the windows throughout the building are to be replaced.
- Deconstruction and reconstruction of a majority of the existing brick masonry façade will be required to implement flashing and lintel repairs that could be relied upon.
- Spray-on or blown-on insulation, is known to be present on the perimeter steel beams supporting the F&A structure and abatement will be required for the recommended façade improvements.
- Recommendations for the façade improvements include:
 - **Alternative “A”:** Replacement of windows with new insulating glass units and reconstruction of brick façade.
 - Construction Cost Estimate (CCE) = \$4,313,634.
 - Current Working Estimate (CWE) = \$5,814,778.
 - **Alternative “B”:** Replacement of windows with new insulating glass units and new precast wall panels.
 - Construction Cost Estimate (CCE) = \$4,614,480.
 - Current Working Estimate (CWE) = \$6,220,319.
 - **Alternative “C”:** Replacement of windows with new insulating glass units and new insulated metal panels in new insulated metal stud walls.
 - Construction Cost Estimate (CCE) = \$4,610,580.
 - Current Working Estimate (CWE) = \$6,215,061.
 - **Alternative “D”:** Replacement of windows and brick façade with new curtainwall system throughout.
 - Construction Cost Estimate (CCE) = \$4,547,255.
 - Current Working Estimate (CWE) = \$6,129,699.
- The replacement of rooftop copings will need to be included with any of the alternatives to accommodate the replacement of the upper portion of the façade.
- Window gasket replacement and head flashing/lintel repairs alone is not recommended as it would not fully eliminate water infiltration or improve energy-efficiency, providing limited benefit for relatively high cost.
- Permanent foundation waterproofing along with new underground storm drainage system components and regrading of the site around the building perimeter is required to eliminate continuing water infiltration into the basement.
- The existing black tar damproofing material on the foundation walls is likely to be an Asbestos Containing Material. The material should be tested for asbestos content and all loose material removed/abated as part of the waterproofing work.
- The CCE for the foundation waterproofing and regrading is \$1,113,548 and the CWE is \$1,501,063.
- Combining the façade improvements with the foundation waterproofing and regrading work will result in coordinated phasing and less disruption to building occupants and will potentially save approximately \$60,000 in cost for general conditions.
- The total estimated construction cost to demolish the existing and construct a new building at the current location is \$14,442,070.

BACKGROUND AND CURRENT CONDITION

The Department of Transportation Finance and Administration Building is a three-story steel framed flat roof structure containing approximately 49,113 gross square feet. Review of original construction documents dates the construction as 1967-1969. The exterior walls are double wythe masonry with brick face and concrete masonry unit back-up. Fixed aluminum single glazed windows are installed in punched openings. The non-thermally broken aluminum window frame is secured to the building structure and sealed to the façade with sealant. Glass is retained by neoprene lock-strip gaskets. The windows are single pane, utilizes an obsolete lock-strip neoprene gasket glazing frame system, are not thermally efficient, and rely on joint sealers as the only means for water resistance.

The building contains a full basement and the foundation walls are cast-in-place mild-reinforced concrete construction. The basement floor is a concrete slab on grade

The roof construction consists of a concrete slab on metal deck spanning between steel wide flange beams framing to steel wide flange girders. The second and third floor construction is like the roof construction. The first-floor construction consists of 9-inch-thick cast-in-place mild-reinforced concrete slabs spanning between the girders. The steel girders at the floors and roof are supported by steel wide flange columns. These columns are founded on mild-reinforced cast-in-place concrete conventional spread footings. The lateral resistance for the building is provided by three concentrically braced interior steel frames. Review of the original structural drawings, particularly Drawing No.S-7, indicates that the lateral resistance system was designed to accommodate a 6-story structure with 13' floor-to floor heights.

The Finance and Administration Building has had water infiltration issues for many years. Building occupants have complained of water infiltration in and around windows and through foundation wall penetrations during times of moderate to heavy rain storms. The location of water infiltration occurs on all building exposures.

In attempts to identify the causes and to eliminate the water infiltration, two (2) studies, and several projects were implemented since 2006. The NJDOT commissioned Ronald A. Sebring Associates, LLC to conduct the initial water infiltration report in August 2006. The report provided direction for interim solutions to reduce the infiltration along with recommended solutions for improvements to reduce water infiltration, including masonry repairs, flashing reconstruction, joint sealant replacement and energy-efficient window replacement. Following the initial report, the NJDOT implemented a Joint Sealer Replacement and Masonry Restoration Project, which was completed in May of 2013. That Project, and the replacement of the low sloped roofing system completed in December of 2013, significantly reduced water infiltration into the Finance and Administration Building. Unfortunately, these Projects have not completely abated the water infiltration issues and complaints from occupants have persisted.

Since the Joint Sealer Replacement Project in 2013, water infiltration on the interior has been documented. Water infiltration has been recorded from the head of the window, staining ceiling tiles, along the horizontal metal trim separating each window, and along the window gaskets, and collecting on the metal sill.

In 2017 the NJDOT requested a limited Water Infiltration Study, focusing on reported leaks at several windows. The Study, that was completed by RASA in November of 2017, and included water testing of the façade, concluded that:

- Water infiltration was occurring through the brick façade and replacement of missing and damaged mortar joints in the masonry facade and repointing of the masonry is required.
- Water infiltration through window assemblies at deteriorated neoprene gaskets was detected. The replacement of the gaskets at the leaking windows was recommended to be performed.

- No water infiltration was detected through the replaced sealant joints between the window frame and the brick facade.
- Water testing revealed that through-wall head flashings at windows has failed or is not performing properly.
- Where windows have leaked repetitively on the interior over the window head, the brick headers over the windows need to be removed and reinstalled for installation of new head flashing and weep vents at through-wall flashing.
- Failure in the epoxy coating at the top of the masonry “fins” in the exterior façade may also be allowing water infiltration into the exterior façade.

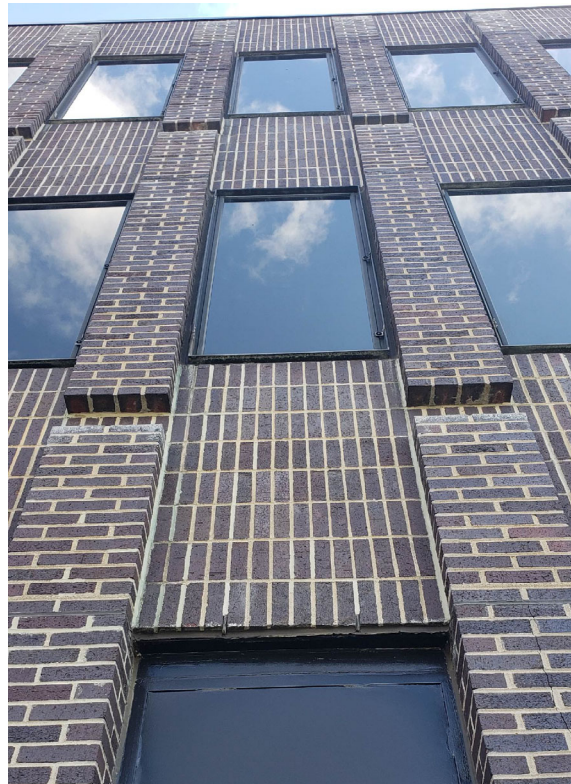
The recommended repair work was not performed.



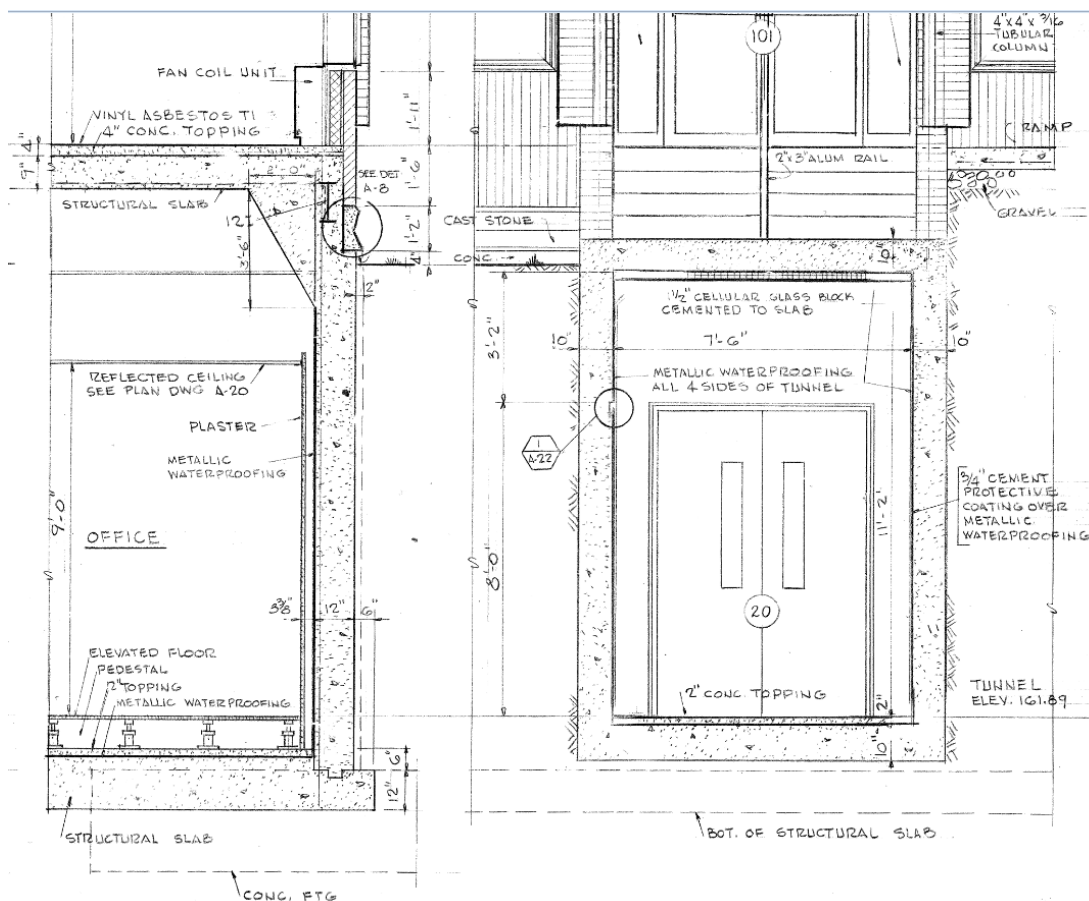
Water Testing Conducted During 2017 Study



Above: Close-Up View of Window Sill Below: Current Façade Conditions



Water infiltration has been a recurring issue within the basement. One known source was through-wall penetrations at the foundation walls. In 2014 a Project was implemented to provide new waterproofing at several through-wall penetrations along the North, East, and South walls. At the North wall penetrations, water infiltration is once again occurring. The water infiltration is attributed to significant ground water pressure against the foundation walls. The ground surrounding the perimeter of the building is poorly graded and often observed to be saturated. Existing conditions drawings indicate that there is a 6" diameter clay pipe foundation drain surrounded with crushed stone with 15lb felt cover surrounding the perimeter of the building below the basement slab level and above the top of footing. It is possible that the existing pipe has been compromised or damaged. The replacement of this system with the installation of new exterior foundation drainage was proposed to be included in the penetration waterproofing Project but was not implemented. The original drawings show that metallic waterproofing was to be installed over the structural basement floor slab with a 2" topping slab. The metallic waterproofing was to also be provided on the interior of the foundation walls.



Sections at Foundation/Basement Level from Original 1967 Construction Drawings

At the south side of the building, an existing concrete stair is present. At the west side of the basement, a subsurface tunnel is located below the connector enclosure that connects to the Main Office Building (MOB) to the west.

A 24" wide concrete apron was constructed around the perimeter of the building at the base of the exterior wall.

With the exception of the soil boring charts included on Drawings A-23 and A-24, presented in Appendix C of this Study, no geotechnical data was available for the preparation of this study.

RECOMMENDATIONS

Facade

Observation of the existing conditions and review of the original construction drawings for the building indicate that the exterior brick is not designed with a cavity that will allow the moisture that enters through the brick to flow down to through-wall flashings and weep vents at the base of the wall. The head flashings weeps at window heads should direct moisture that wicks through the wall outward, however, observations and testing indicate that the head flashings and through wall flashings at the windows are compromised.

The NJDOT has determined that the windows throughout the building are to be replaced. Deconstruction and reconstruction of a majority of the existing brick masonry façade will be required to implement flashing and lintel repairs that could be relied upon. The existing window glazing is single-pane and is not energy-efficient.

Recommendations for the façade improvements include:

- Replacement of windows with new insulating glass units, deconstruction/reconstruction of the brick masonry walls, and replacement of head flashings and deteriorated lintels, including joint sealants and replacement of rooftop copings.
- Replacement of windows with new insulating glass units, deconstruction of the brick masonry walls and replacement with precast concrete panels, with all new head flashings, joint sealants, and replacement of rooftop copings.
- Replacement of windows with new insulating glass units, deconstruction of the brick masonry walls and replacement with new insulated structural metal studs with gypsum sheathing, clad with insulated metal wall panels. New insulating glass windows in headered openings, with all new head flashings, joint sealants, and replacement of rooftop copings.
- Replacement of windows and brick masonry walls with a new complete curtainwall system throughout the exterior and replacement of rooftop copings would also be required.

Structural Stability

For each of the above alternatives, the effect that the removal of the existing masonry would have on the structural stability of the building was preliminarily evaluated. 5-Hole Structural Engineering Inc. (5-Hole SEI) has performed a limited structural analysis of the existing NJDOT F&A Building to assist in the Window and Façade Replacement Study. The purpose of the analysis was to assess the feasibility of removing the masonry façade and windows without causing any instability due to overstressing of structural members or increased lateral deflection of the building.

To assist in performing the structural analysis review and assessment, we were provided with an electronic copy of the referenced building Architectural Contract drawings A-4 to A-13, dated October 1, 1966, prepared by Alfred Clauss AIA., and William C. Cranmer, AIA., and the Structural Contract Drawings S-1 to S-8, dated November 1966 prepared by Bellante and Clauss Inc. Consulting Engineers. The review was limited to analysis of the existing structure shown on the structural drawings. 5-Hole SEI did not perform any on-site inspections or observations of the conditions, connections, or framing members of the building structure.

Analysis was performed utilizing the current Building Code in effect for New Jersey, the 2018 International Building Code, New Jersey Edition, and ASCE 7-16, and utilizing the Code in effect when the building was constructed, the 1965 BOCA Building Code. The analysis studied the loading effects from both wind forces and seismic forces. The 1965 BOCA Code seismic forces and the 2018 IBC wind forces governed in the analysis.

The analysis determined that the structure, as documented in the available drawings, is adequate to resist the Code required lateral and vertical forces during removal and reconstruction of the masonry façade and the windows. We recommend that prior to the construction work commencing the Structural Engineer of Record for the Window and Façade Replacement Project perform an as-built confirmation inspection to verify the framing and connections and perform an analysis of the lateral stability of the building structure.

Hazardous Materials

During the most recent environmental remediation project undertaken in the F&A Building, an assessment of the Facility's interior was performed. A wide array of asbestos containing materials were identified. Most of these materials were remediated during the renovation. However, one (1) material, spray-on or blown-on insulation, was identified on the perimeter steel beams supporting the F&A structure. If the windows for the F&A building are to be removed, with the potential of the brick exterior wall as well, this will open the wall cavities which likely contain fireproofing overspray and may also impact these perimeter beams, which will require the removal of the beam insulation.

This removal would be considered a Friable Abatement Project as identified by the State of New Jersey's Asbestos Hazard Abatement regulation (N.J.A.C 5:23-8, commonly referred to as Sub-chapter 8). All work of this Project would need to be completed within a series of phased full containments in accordance with the 5:23-8.19, Full Containment under Occupied Conditions. Work would also need to be completed in phases to allow for the window removal and/or brick façade demolition on each side of the building. Separation barriers would be required to be constructed on the interior of the building consisting of A-grade firerated lumber including 2"x4"s at 16" on center and then covered with an outer layer of 1/2" fire rated plywood, which is further isolated with two-layer inner and outer critical barriers of six-mil fire-retardant polyethylene sheeting. The work areas would then be further isolated with one-layer of fire-retardant polyethylene sheeted walls and two-layer fire-retardant polyethylene sheeted floors. The scaffolding constructed outside of façade would need to be constructed with tiers to allow for wall/window demolition within a full containment. Firerated plywood exterior barriers shall also be required on the exterior of the scaffold with the same polyethylene sheeting requirements as the interior containments, as well as an exterior three-stage decontamination unit.

Phasing

The design consultant will need to coordinate with the NJDOT to address construction phasing. All phasing requirements should be included in Division One of the Project Specifications. Due to the presence of hazardous materials requiring abatement and also the temporary exposure of the building interior to the exterior elements as the exterior walls are disassembled and constructed, occupants will need to be temporarily relocated to facilitate the construction. Requiring phasing that will occur in smaller sections will result in longer construction duration than allowing entire facades to be removed and constructed. Required construction and deconstruction of temporary interior barrier partitions would also be reduced if larger phasing areas are permitted. NJDOT will need to provide for available swing space for the occupants during construction.

Basement Waterproofing

The NJDOT has also determined that the continuing leaks at the basement level warrant the implementation of permanent foundation waterproofing along with a new underground storm drainage system and regrading of the site around the building perimeter to facilitate proper drainage and relieve the hydraulic pressure against the foundation walls. When the exterior waterproofing work is performed, all through wall penetrations should be properly sealed.

A walkthrough was conducted on April 8, 2022. A maintenance staff representative reported that he visits the basement level after every rainfall and has observed active water infiltration at through-wall

penetrations within the Electrical/Mechanical room at the southwest corner of the building. He advised, and it was confirmed through visual inspection, that the most significant water infiltration source was at a penetration of (8) 4" electrical feeder conduits at that location, with additional water infiltration observed at the adjacent penetration of (2) round intake and (1) exhaust header duct that serve the boilers. In the same room on the west wall additional conduit penetrants, (2) which appear capped and abandoned, are allowing water infiltration. At the (8) feeder conduits, Link-Seal penetrant sealant system was observed to be in place, which should be effective in preventing water infiltration. It is suspected that there may be a defect in the installation of the seal on the exterior as none were observed at the interior. The intake and exhaust ducts penetrate through metal panels installed in an areaway. Review of the original drawings show that this areaway contains a floor drain. The day of the inspection followed a day of rainfall and there was a significant amount of water within the space along the walls and also being directed across the floor to drains by fans placed by maintenance staff.

Electrical equipment is present along and adjacent to the walls at the basement electrical room and the water infiltration presents a risk of corrosion to the conduits that penetrate the floor and also to the boxes mounted on the wall.



Eight 4" Diameter Electrical Feeder Conduits Penetrating the Foundation Wall at the Southwest



Intake and Exhaust Air Ducts at Areaway at West End of South Wall



South Wall of Electrical/Mechanical Room



Sanitary Piping Penetrants at North Wall

It was also reported that previous water infiltration along the east foundation wall at penetrations was recently abated and no moisture was observed along the base of this wall.

Additional water infiltration was observed at the north wall where the sanitary drain lines exit the building.

The original and current site drawings show an ejector pit on the north side of the building that drains to an existing storm sewer pipe. The presence of the pit was verified. The pit is 17'-5" deep and contains a primary and secondary pump. Water was observed within the pit.

There are several grade level catch basin drains located about the perimeter of the building in a concrete perimeter apron that is sloped for drainage. There are catch basins and existing underground storm drainage piping located around the building perimeter. Unfortunately, the existing grading, particularly at the north and south facades, does not facilitate drainage to the catch basins and in fact, slopes toward the building. Several areas of standing water were observed adjacent to the building. It is reported that the ground in these areas is most often saturated.

The original construction drawings include a sketch drawing titled "Footing Drain Layout" which shows a perimeter 6" clay foundation drain pipe. The drawing is included in Appendix "C". Neither this drawing nor the original architectural drawings show the presence of exterior foundation waterproofing. An ejector pit was observed at the location of the "sand trap" shown on the Footing Drain Layout Drawing. A note on the Physical Plant Survey, dated March 1982, states that it is related to a "French Drain". Based on this information, it is assumed that a foundation drainage pipe is present at the base of the foundation of the building. Due to the frequency of the leaks into the building envelope at the foundation level, it is assumed that the existing drain is at least partially compromised.



Interior of Ejector Pump

It is recommended that all penetrants through the foundation walls be examined and sealed properly from the exterior. In addition, the entire perimeter of the existing foundation walls should receive new waterproofing, including an HDPE/Bentonite waterproof membrane, a drainage mat and 3/4" stone fill extending to a minimum of 12" from the face of the wall for the full height of the wall, with the upper 12" thick section consisting of river stone. The upper portion of the waterproofing system should be integrated into the through wall flashing system at the base of the façade. The existing drain pipe should be removed and a new 4" or greater diameter perforated drain pipe installed around the entire basement. The drain pipe will need to be installed with its invert no higher than the finish slab elevation. The drain will need to be tied into the existing ejector pit. The pumps within the ejector pit should be replaced with new pumps.

The grade around the perimeter of the building should be modified to slope at a minimum of 5% away from the exterior walls and toward the catch basins surrounding the building. If possible the regrading of the area to the north of the building adjacent to Parkway Avenue, should also be graded to drain as very significant standing water is always present after rainfalls.

The foundation waterproofing improvements would include:

- Underground utility location
- Geotechnical exploration (soil borings)
- Geotechnical engineering and reporting
- Temporary perimeter fencing
- Excavation of the entire perimeter of the building
- Removal of any deteriorated exterior asphaltic damp proofing which may contain asbestos
- Removal of the perimeter concrete apron
- Excavation to full depth of foundation walls utilizing sheet piling. Hand excavation will need to be utilized at areas where underground utilities are present.
- Installation of new foundation drainage board, drainage stone for full height of foundation wall, and installation of a perforated drain tile for the full perimeter

- Installation of drainage sump pumps and pits on the interior of the basement. The pumps would discharge to the new exterior storm drainage system.
- Installation of additional underground stormwater drain piping and inlets connected to the existing system at the Facility.
- Regrading of the ground surface to provide a minimum slope of 5% away from the exterior building walls for a minimum of 10'-0" around the perimeter of the building
- Deconstruction and reconstruction of the existing stair at the south side of the building
- Improved exterior protection at intake/exhaust vent areaway

Inspection of the outer walls of the F&A building, just above the concrete curb installed around its perimeter, reveals a black tar vapor barrier on the foundation walls. This type of vapor barrier has historically shown to be an Asbestos Containing Material (ACM).

To access the remainder of the foundation walls for the examination and treatment of this material as well as for the application of new waterproofing and drainage, the concrete curbing that was placed around the F&A Building will require demolition and the entire foundation excavated. To create this trench or ramped excavation, all requisite requirements of the Occupational Safety and Health Administration's (OSHA's) regulations (i.e., 29 CFR 1926, Parts 650, 651 and 652) will require strict adherence. This includes pre-determination of the locations of underground utilities, the proper excavation methodology and the ramping of the excavation or the installation of protection against collapse. Once the proper excavation is completed, the work for the removal of any degrading vapor barrier/wall parging shall be employed within a full containment in accordance with the State of New Jersey's Department of Labor and workforce Development (NJDOLWD) and Department of Health and Senior Services (NJDOHSS) regulations (i.e., N.J.A.C. 12:120 and N.J.A.C. 8:60) for the removal of the spot areas of degrading vapor barrier as warranted. Work shall be completed under full containment, with negative pressure and the installation of a three-stage decontamination unit as well as a two-stage waste unit for abated material disposal. It is anticipated that the remediation will not involve the complete foundation, but those areas where the vapor barrier or the vapor barrier/substrate parging are degrading.

Special phasing should not be required for the waterproofing work with the exception that required egress pathways must be maintained, or acceptable alternate egress routes provided, during construction when the building, or portion thereof, is occupied.

The excavations about the perimeter will present a life safety hazard and 8'-0" chain-link fencing should be erected around the entire perimeter of the work area to prevent unauthorized access.

The estimated construction cost estimate (CCE) for the recommended foundation waterproofing and penetration sealing is approximately \$1,113,548. The total estimated current working estimate (CWE) for Alternative "A" is approximately \$1,501,063.

Alternatives for Window Replacement and Façade Reconstruction

Alternative “A”: Window Replacement and Reconstruction of Brick Masonry Façade

This alternative includes the replacement of windows with new insulating glass units, deconstruction/reconstruction of the brick masonry walls to match the existing configuration, including the projecting “fins”, the replacement of head flashings and deteriorated lintels, installation of new joint sealants and replacement of rooftop copings. The copings will require replacement to allow for the reconstruction of the upper portion of the exterior walls.

This Alternative will most accurately reproduce and preserve the existing aesthetic of the building exterior. The construction, being new and utilizing modern construction materials and techniques will reduce the potential for water infiltration, however, the nature of the design, particularly the brick masonry projecting “fins” and the quantity of window frame to masonry joints may invite future potential maintenance issues. The brick façade should be designed to alleviate and drain moisture that wicks through the masonry out through effective and properly installed through-wall flashings and weep vents at the window heads and at the base of the wall.

This alternative can be constructed in phased sections to limit the disturbance to the interior and occupants of the building throughout construction.

The construction will require the erection and dismantling of scaffolding in stages around the entire perimeter of the building. Containment will need to be constructed at the interior and exterior of the building to allow for abatement of the asbestos containing spray-applied or blown-in insulation.

The estimated construction cost estimate (CCE) for Alternative “A” is approximately \$4,313,634. The total estimated current working estimate (CWE) for Alternative “A” is approximately \$5,814,778.

Alternative “B”: Window Replacement and New Precast Concrete Façade

This alternative includes the Replacement of windows with new insulating glass units, deconstruction of the brick masonry walls and replacement with precast concrete panels, with all new head flashings, joint sealants, and replacement of rooftop copings. The copings will require replacement to allow for the reconstruction of the upper portion of the exterior walls.

This Alternative will provide a more modern exterior aesthetic and will also provide large sections of exterior wall panels as opposed to the many individual brick that make up the current façade. The projecting “fins” would not be reproduced, unless desired by the NJDOT. This alternative will significantly reduce the potential for water infiltration. The façade should be designed to alleviate and drain moisture that penetrates through the precast wall system through effective and properly installed through-wall flashings and weep vents at the window heads and at the base of the wall.

This alternative can also be constructed in phased sections to limit the disturbance to the interior and occupants of the building throughout construction.

The construction will require the erection and dismantling of scaffolding in stages around the entire perimeter of the building. Containment will need to be constructed at the interior and exterior of the building to allow for abatement of the asbestos containing spray-applied or blown-in insulation.

The estimated construction cost estimate (CCE) for Alternative “B” is approximately \$4,614,480. The total estimated current working estimate (CWE) for Alternative “B” is approximately \$6,220,319.

Alternative “C”: Window and Brick Replacement with New Insulated Metal Wall Panel System

This alternative includes the Replacement of windows with new insulating glass units, deconstruction of the brick and concrete masonry walls and replacement with new 6” structural metal stud exterior walls constructed between the floor slabs and structural steel beams at each level, the new walls would be insulated with R-21 fiberglass batt insulation and sheathed on the exterior with gypsum sheathing. The interior work would require deconstruction and reconstruction of the prefinished metal convector covers and column covers as well as installation of new painted gypsum wall board.

At the exterior, new prefinished insulated metal wall panels over a vapor retarder building wrap would clad the wall. Window sizes could be adjusted to provide for wider windows than the existing.

This Alternative will also provide a modern exterior aesthetic and will also provide sections of exterior wall panels as opposed to the many individual brick that make up the current façade. The projecting “fins” would not be reproduced, unless desired by the NJDOT. This alternative will significantly reduce the potential for water infiltration. The façade should be designed to alleviate and drain moisture that penetrates through the metal panel wall system.

This alternative can also be constructed in phased sections to limit the disturbance to the interior and occupants of the building throughout construction.

The construction will require the erection and dismantling of scaffolding in stages around the entire perimeter of the building. Containment will need to be constructed at the interior and exterior of the building to allow for abatement of the asbestos containing spray-applied or blown-in insulation.

The estimated construction cost estimate (CCE) for Alternative “C” is approximately \$4,610,580. The total estimated current working estimate (CWE) for Alternative “C” is approximately \$6,215,061.

Alternative “D”: Window and Brick Replacement with New Curtainwall System

This alternative includes the Replacement of windows and deconstruction of the brick masonry walls and replacement with a new curtainwall system integrating both new insulating glass windows and insulated metal panels. The curtainwall will likely consist of 2 1/4” x 6” aluminum tube framing with infills of glass and metal panels. The framing will need to be engineered to resist the Code established wind loadings. The curtainwall framing would be attached to the building structure at the floor diaphragms with connections designed to transfer the wind and gravity loads of the curtainwall system to the building structure. The rooftop copings will require replacement to allow for the reconstruction of the upper portion of the exterior walls.

This Alternative will also provide a modern exterior aesthetic and will also provide large sections of exterior wall panels as opposed to the many individual brick that make up the current façade. The projecting “fins” would not be reproduced. This alternative will most significantly reduce the potential for water infiltration and could be warranted as a complete system. Curtainwalls are designed to relieve moisture that enters the system to escape through a system of weeps. At the base of the system, through-wall flashing should be provided both to provide a pathway to the exterior for the moisture, but also to cap the base of the curtainwall framing to prevent pests from entering.

This alternative can also be constructed in phased sections to limit the disturbance to the interior and occupants of the building throughout construction.

The construction will require the erection and dismantling of scaffolding in stages around the entire perimeter of the building. Containment will need to be constructed at the interior and exterior of the building to allow for abatement of the asbestos containing spray-applied or blown-in insulation.

The estimated construction cost estimate (CCE) for Alternative “D” is approximately \$4,547,255. The total estimated current working estimate (CWE) for Alternative “D” is approximately \$6,129,699.

Alternative of Window Gasket Replacement and Head Flashing/Lintel Repairs

Neoprene gaskets retain the windows in the aluminum frame. The gasket profile is an “H” shape and is aged and weathered. The gaskets are integrated into the supporting aluminum frame. The system offers no redundancy and minimal protection against uncontrolled water leakage once in failure. Over time the neoprene gaskets have become hard and inflexible. In some cases, the neoprene gaskets have shrunk in size lengthwise creating gaps where water may infiltrate into the building envelope.

Research into the window gaskets revealed that the neoprene gasket product is still available in the same profile. The existing neoprene gaskets are 20 years beyond their warranted service life. New custom gaskets with molded corner can be purchased to match the exact size required for the window frame and opening.

The existing window glazing is single-pane and is not energy efficient. If the budget does not allow for replacement of the windows in their entirety, the replacement of the glazing gaskets and repair of head flashings would improve, but likely not eliminate water infiltration through the façade.

During the Joint Sealer Replacement Project, steel lintels and head flashings were observed to be compromised and some were repaired as part of the Project. Based on water testing, it was determined that the window head flashings failed in additional locations resulting in water infiltration.

The estimated cost to replace the glazing gaskets on a per window basis is \$1,000. The estimated cost to repair the head flashings and lintels at each window is approximately \$2,100. There are (333) windows throughout the building façade. The total estimated cost of replacing the gaskets, including scaffolding, and including Contractor’s overhead and profit, supervision, and Bond costs, is approximately \$1,350,000. This method is **not recommended** as it would not eliminate water infiltration or improve energy-efficiency, providing limited benefit for relatively high cost.

Advantages of Combining the Façade and Foundation Improvements

If the façade improvements and foundation waterproofing and penetration sealing work is included in a single lump sum bid Project, the phasing for both operations can be controlled within the same Project resulting in less disruption to the normal operations of the Facility. Also, a savings in general conditions would be provided as the excavation, waterproofing, and backfilling can occur either prior to, or following, the erection and dismantling of the scaffolding for façade work on each side of the building, and the perimeter fencing can be shared for both activities, resulting in a reduction of potentially 2 months in construction duration and approximately \$60,000 in cost.

Alternative to Construct New Equivalent Office Building

The estimated construction cost of a new building, of the same construction type, height, and area, based on R.S. Means Square Foot Cost Data, projected to 2024, is approximately \$13,172,069. The approximate cost to demolish the existing Finance and Administration Building is \$870,000. Site improvements related to new construction at the existing location, including ramps, stairs, pads, and landscaping would add approximately \$400,000. The total estimated construction cost to demolish the existing and construct a new building at the current location is \$14,442,070.

Pedestrian Protection

The design of the curtain wall rehabilitation or replacement will need to consider and provide requirements for pedestrian protection from overhead work. These measures may consist of sidewalk sheds, temporary fencing, other acceptable pedestrian barriers and signage, or a combination thereof.

Access

The Contractor will require an adequate area for placement of on-site stored materials, dumpsters, temporary toilets and for access to for demolition and excavation and for staging of materials for installation.

The parking area to the west of the building is the most logical place to provide for staging for the Contractor, avoiding changes in level, landscaped areas, and primary points of staff and visitor access. As part of the design, the area for staging and site access restrictions should be reviewed in detail with the NJDOT representatives and determined for inclusion in specifications for construction.

Curtain Wall Manufacturer's Warranty

New curtain wall systems can be provided with warranties covering defects in the system components for up to ten (10) years.

CONCLUSION

Façade Improvements

Each of the proposed alternatives for replacement of the façade are relatively similar in construction cost. The recommended system for replacement would be the full curtain wall system as it provides a unified and integrated exterior wall envelope that can be warranted in its entirety. The curtainwall system also should prove to be the most capable of rapid construction when compared to the other recommended alternatives.

Foundation Waterproofing

The continuing water infiltration into the basement of the building needs to be remediated as soon as possible. Spot repair at the known locations of penetrants through the exterior foundation walls could be performed, however, this may result in new locations of water infiltration through the foundation walls. The recommended permanent solution is to fully excavate the perimeter and provide new penetration waterproofing systems along with a full height engineered waterproofing and drainage board system along with replacement of the drain tile and installation of drainage stone. Existing ejector pumps at the exterior sump pit should also be replaced. The site surrounding the building should be regraded to provide a 5% slope to the existing yard drains and catch basins.

DESIGN AND CONSTRUCTION SCHEDULE

The following durations should be considered in preparation of a schedule for the Project and Scope of Work:

Investigation	30 Calendar Days
DPMC/DOE Review	14 Calendar Days
Design Development	42 Calendar Days
DPMC/DOE Review	14 Calendar Days
Final Design	42 Calendar Days
DPMC/DOE Review	14 Calendar Days
Final Design2	7 Calendar Days
DPMC/DOE Review	14 Calendar Days
DCA Submission and Review	30 Calendar Days
Permit-Bid Documents	7 Calendar Days
Bid and Award	70 Calendar Days
Construction	240 Calendar Days*
Close-out	21 Calendar Days

* Construction Duration is approximate and includes time for submittal review and punch list inspections for each facade. The actual duration will vary based on phasing, whether foundation waterproofing and regrading is included, lead-times for materials at time of bid.

Right to Revisions

The findings in this report are based upon information available to us at the time of our assessment review. We reserve the right to, update, add, or delete any information contained herein once our review and analysis of any new information is complete.

Appendix “A”
Construction Cost Estimates

11 PAGES

EXHIBIT 'C'

**FAÇADE AND FOUNDATION WATER INFILTRATION STUDY
 NJDOT FINANCE AND ADMINISTRATION (F&A) BUILDING
 ALTERNATIVE "A" WINDOW REPLACEMENT & RECONSTRUCTION OF BRICK FAÇADE
 CONSTRUCTION COST ESTIMATE**

ITEM	QUAN.	UNIT AMOUNT		TOTAL	
		LABOR	TOTAL	LABOR	TOTAL
DIVISION 1 GENERAL REQUIREMENTS					
GENERAL REQUIREMENTS					
STEEL TUBE SCAFFOLDING ERECT AND DISMANTLE /C.S.F.	200.00	\$164.00	\$261.00	\$32,800.00	\$52,200.00
SCAFFOLDING RENT 6 MONTHS /C.S.F.	24.00	\$2,010.00	\$4,500.00	\$48,240.00	\$108,000.00
PLANKS FOR SCAFFOLDING 2x10x16' /EACH	108.00	\$0.00	\$10.90	\$0.00	\$1,177.20
PLANKS ERECT AND REMOVE /EACH	536.00	\$18.25	\$29.00	\$9,782.00	\$15,544.00
OVERHEAD PROTECTION AT WALKS AND ENTRANCES /L.F.	120.00	\$21.00	\$40.00	\$2,520.00	\$4,800.00
TEMPORARY BARRICADE FENCING /L.F.	400.00	\$27.00	\$46.50	\$10,800.00	\$18,600.00
TEMPORARY SIGNAGE /L.S.	1.00	\$150.00	\$500.00	\$150.00	\$500.00
TEMPORARY TOILETS /MONTH	6.00		\$300.00	\$0.00	\$1,800.00
MOBILIZATION / DEMOBILIZATION /L.S.	1.00		\$60,000.00	\$0.00	\$60,000.00
DAILY CLEANUP /DAY	120.00	\$45.00	\$65.00	\$5,400.00	\$7,800.00
SUPERVISION /WEEK	28.00	\$0.00	\$2,500.00	\$0.00	\$70,000.00
BOND L.S.	1.00		\$70,000.00	\$0.00	\$70,000.00
DIVISION 2 DEMOLITION					
DEMOLITION					
REMOVE BRICK /S.F.	13968.00	\$2.84	\$4.24	\$39,669.12	\$59,224.32
REMOVE BRICK FINS /V.L.F.	4270.00	\$8.90	\$13.25	\$38,003.00	\$56,577.50
REMOVE WINDOWS /EACH	333.00	\$27.50	\$41.00	\$9,157.50	\$13,653.00
REMOVE COPING /L.F.	508.00	\$1.48	\$2.41	\$751.84	\$1,224.28
REMOVE AND REINSTALL INT. METAL PANELS /S.F.	2880.00	\$12.00	\$22.00	\$34,560.00	\$63,360.00
REMOVE AND REINSTALL INT. FAN COIL COVERS /L.F.	1530.00	\$18.00	\$26.00	\$27,540.00	\$39,780.00
RUBBISH HANDLING /C.Y.	800.00	\$55.00	\$65.00	\$44,000.00	\$52,000.00
DUMPSTER /EACH	16.00		\$900.00	\$0.00	\$14,400.00
ASBESTOS ABATEMENT					
INTERIOR PROTECTION - DUST PARTITIONS /S.F.	15360.00	\$2.19	\$7.75	\$33,638.40	\$119,040.00
EXTERIOR PROTECTION - DUST PARTITIONS /S.F.	15360.00	\$2.25	\$7.90	\$34,560.00	\$121,344.00
DECONTAMINATION UNIT /EACH	4.00	\$900.00	\$2,600.00	\$3,600.00	\$10,400.00
REMOVE SPRAY ON FIREPROOFING /S.F.	3200.00	\$35.00	\$50.00	\$112,000.00	\$160,000.00
AREA ADJUSTMENT DIVISION 2		5.20%	0.00%	\$19,628.95	\$0.00
DIVISION 4 MASONRY					
MASONRY					
NEW 4" BRICK VENEER /S.F.	13968.00	\$10.75	\$22.50	\$150,156.00	\$314,280.00
FOR CAVITY WALL ADD 15% LABOR /S.F.	13968.00	\$1.61	\$1.85	\$22,523.40	\$25,901.91
ADD 16% OF LABOR FOR 3 STORY HEIGHT /EACH	13968.00	\$1.98	\$3.90	\$27,628.70	\$54,429.11
NEW BRICK FINS /V.L.F.	4270.00	\$31.00	\$63.00	\$132,370.00	\$269,010.00
NEW MASONRY TIES AND ANCHORS /S.F.	13968.00	\$1.50	\$2.75	\$20,952.00	\$38,412.00
ADD 25% LABOR FOR ANCHORING TO EXISTING /S.F.	13968.00	\$1.88	\$2.34	\$26,190.00	\$32,737.50
MORTAR MESH /L.S.	1.00	\$1,149.00	\$2,298.00	\$1,149.00	\$2,298.00
TRANSPORTING BRICK TO SCAFFOLDING /C.Y.	160.00	\$59.00	\$88.50	\$9,440.00	\$14,160.00
CLEAN BRICK /S.F.	13968.00	\$2.10	\$3.30	\$29,332.80	\$46,094.40
AREA ADJUSTMENT DIVISION 4		38.30%	22.60%	\$160,761.15	\$180,194.98

DIVISION 7 MOISTURE PROTECTION

SEALANTS , FLASHINGS, AND WATERPROOFING

NEW SPRAY-APPLIED FIREPROOFING /S.F.	3200.00	\$1.50	\$3.78	\$4,800.00	\$12,096.00
REMOVE AND RECONSTRUCT HEAD FLASHING /L.F.	1500.00	\$11.00	\$26.00	\$16,500.00	\$39,000.00
THROUGH-WALL FLASHING AT BASE /L.F.	508.00	\$3.25	\$9.50	\$1,651.00	\$4,826.00
THROUGH-WALL FLASHING AT FLOORS /L.F.	1524.00	\$3.25	\$9.50	\$4,953.00	\$14,478.00
NEW ROOFTOP COPING /L.F.	508.00	\$14.00	\$23.00	\$7,112.00	\$11,684.00
CUSTOM COPING MITERS AND TRANSITIONS/ EACH	8.00	\$25.00	\$150.00	\$200.00	\$1,200.00
NEW 1" RIGID INSULATION /S.F.	13144.00	\$0.55	\$1.50	\$7,229.20	\$19,716.00
NEW 1 1/2" RIGID INSULATION BEAMS /S.F.	3060.00	\$0.60	\$1.75	\$1,836.00	\$5,355.00
NEW 1 1/2" RIGID INSULATION COLUMNS /S.F.	3120.00	\$0.60	\$1.75	\$1,872.00	\$5,460.00
NEW JOINT SEALANT /L.F.	12716.00	\$0.30	\$2.75	\$3,814.80	\$34,969.00
AREA ADJUSTMENT DIVISION 7		36.50%	16.60%	\$18,238.32	\$24,698.14

DIVISION 8 OPENINGS

WINDOWS

NEW INSULATING GLASS ALUMINUM WINDOWS /EACH	333.00	\$98.00	\$700.00	\$32,634.00	\$233,100.00
ADD 10% OF LABOR FOR 3 STORY HEIGHT /EACH	333.00	\$9.80	\$11.27	\$3,263.40	\$3,752.91
AREA ADJUSTMENT DIVISION 8		33.80%	7.80%	\$12,133.32	\$18,474.53

DIVISION 9 FINISHES

FINISHES

RESTORE INTERIOR FINISHES /S.F.	8000.00	\$10.00	\$20.00	\$80,000.00	\$160,000.00
AREA ADJUSTMENT DIVISION 8 (INCLUDED)		0.00%	0.00%	\$0.00	\$0.00

TOTALS

SUB TOTAL				\$2,687,751.78
TOTAL LABOR	\$1,283,540.91			
LABOR ADJUSTMENT FACTOR		20.00%		
LABOR ADJUSTMENT AMOUNT			\$256,708.18	
SUBTOTAL				\$2,944,459.96
CONTINGENCY 20%		20.00%		\$588,891.99
OVERHEAD		15.00%		\$441,668.99
PROFIT		10.00%		\$338,612.90
TOTAL ALTERNATIVE "A"				\$4,313,633.84

PROJECT COST ANALYSIS

DPMC NUMBER: _____

Date: 5/12/2022Project Phase: **Program**Project Name: ALT A - Window Replacement & Reconstruction of Brick FaçadeLocation: NJDOT F&A Building**Cost Phase "C" - Construction**

1 General Construction	4,313,634
2 Structural Steel	0
3 Plumbing	0
4 HVAC	0
5 Electrical	0
6.a Other Trades (specify): _____	0
6.b Other Trades (specify): _____	0
7 TOTAL CONSTRUCTION COST ESTIMATE (CCE) (Lines 1 thru 6)	<u>4,313,634</u>

Cost Phase "D" - Design

8 Consultant Design Fee	517,636
9 Consultant Construction Administration Fee	258,818
10 Asbestos Remediation Design Fee	0
11 Asbestos Monitoring Fees	0
12 Survey Services	0
13 Testing Services	0
14 Roofing Inspection	0
15 Other (specify): <u>0</u>	0
16 TOTAL DESIGN SERVICES (Lines 8 thru 15)	<u>776,454</u>

Cost Phase "K" - Affirmative Action

17 Affirmative Action (1/2 % of Line 7)	<u>21,568</u>
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Cost Phase "M" - Management Fees

18 DPMC Management Fee (8% of Line 7)	<u>345,091</u>
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Cost Phase "N" - Construction Management

19 Construction Management Services (CM/CPM)	<u>0</u>
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Cost Phase "O" - Contingency

20 Construction (5% of Line 7)	215,682
21 Design (10% of Line 16)	77,645
22 TOTAL PROJECT CONTINGENCY (Lines 20 & 21)	<u>293,327</u>

Cost Phase "P" - Permits

23 U.C.C. (DCA or DPMC) Plan Review Fee	32,352
24 U.C.C. Permit/Field Inspection/C.O. Fee	32,352
25 Soil Conservation	0
26 Other (specify): _____	0
27 TOTAL PERMIT FEES (Lines 23 thru 26)	<u>64,705</u>

Cost Phase "R" - Arts Inclusion

28 Arts Inclusion Allowance	<u>0</u>
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Cost Phase "B" - Other Costs

29 Other (specify): _____	0
30 Other (specify): _____	0
31 TOTAL OTHER COSTS (Lines 29 & 30)	<u>0</u>

32 CURRENT WORKING ESTIMATE (CWE) (Lines 7+16+17+18+19+22+27+28+31) \$5,814,778

**FAÇADE AND FOUNDATION WATER INFILTRATION STUDY
 NJDOT FINANCE AND ADMINISTRATION (F&A) BUILDING
 ALTERNATIVE "B" WINDOW & BRICK REPLACEMENT WITH PRECAST CONCRETE PANELS
 CONSTRUCTION COST ESTIMATE**

ITEM	QUAN.	UNIT AMOUNT		TOTAL	
		LABOR	TOTAL	LABOR	TOTAL
DIVISION 1 GENERAL REQUIREMENTS					
GENERAL REQUIREMENTS					
STEEL TUBE SCAFFOLDING ERECT AND DISMANTLE /C.S.F.	200.00	\$164.00	\$261.00	\$32,800.00	\$52,200.00
SCAFFOLDING RENT 6 MONTHS /C.S.F.	24.00	\$2,010.00	\$4,500.00	\$48,240.00	\$108,000.00
PLANKS FOR SCAFFOLDING 2x10x16' /EACH	108.00	\$0.00	\$10.90	\$0.00	\$1,177.20
PLANKS ERECT AND REMOVE /EACH	536.00	\$18.25	\$29.00	\$9,782.00	\$15,544.00
OVERHEAD PROTECTION AT WALKS AND ENTRANCES /L.F.	120.00	\$21.00	\$40.00	\$2,520.00	\$4,800.00
TEMPORARY BARRICADE FENCING /L.F.	400.00	\$27.00	\$46.50	\$10,800.00	\$18,600.00
TEMPORARY SIGNAGE /L.S.	1.00	\$150.00	\$500.00	\$150.00	\$500.00
TEMPORARY TOILETS /MONTH	6.00		\$300.00	\$0.00	\$1,800.00
MOBILIZATION / DEMOBILIZATION /L.S.	1.00		\$60,000.00	\$0.00	\$60,000.00
DAILY CLEANUP /DAY	120.00	\$45.00	\$65.00	\$5,400.00	\$7,800.00
SUPERVISION /WEEK	28.00	\$0.00	\$2,500.00	\$0.00	\$70,000.00
BOND L.S.	1.00		\$70,000.00	\$0.00	\$70,000.00
DIVISION 2 DEMOLITION					
DEMOLITION					
REMOVE BRICK /S.F.	13968.00	\$2.84	\$4.24	\$39,669.12	\$59,224.32
REMOVE BRICK FINS /V.L.F.	4270.00	\$8.90	\$13.25	\$38,003.00	\$56,577.50
REMOVE WINDOWS /EACH	333.00	\$27.50	\$41.00	\$9,157.50	\$13,653.00
REMOVE COPING /L.F.	508.00	\$1.48	\$2.41	\$751.84	\$1,224.28
REMOVE AND REINSTALL INT. METAL PANELS /S.F.	2880.00	\$12.00	\$22.00	\$34,560.00	\$63,360.00
REMOVE AND REINSTALL INT. FAN COIL COVERS /L.F.	1530.00	\$18.00	\$26.00	\$27,540.00	\$39,780.00
RUBBISH HANDLING /C.Y.	800.00	\$55.00	\$65.00	\$44,000.00	\$52,000.00
DUMPSTER /EACH	16.00		\$900.00	\$0.00	\$14,400.00
ASBESTOS ABATEMENT					
INTERIOR PROTECTION - DUST PARTITIONS /S.F.	15360.00	\$2.19	\$7.75	\$33,638.40	\$119,040.00
EXTERIOR PROTECTION - DUST PARTITIONS /S.F.	15360.00	\$2.25	\$7.90	\$34,560.00	\$121,344.00
DECONTAMINATION UNIT /EACH	4.00	\$900.00	\$2,600.00	\$3,600.00	\$10,400.00
REMOVE SPRAY ON FIREPROOFING /S.F.	3200.00	\$35.00	\$50.00	\$112,000.00	\$160,000.00
AREA ADJUSTMENT DIVISION 2		5.20%	0.00%	\$19,628.95	\$0.00
DIVISION 4 MASONRY					
MASONRY					
NEW PRECAST CONCRETE WALL PANELS /S.F.	13968.00	\$15.00	\$70.00	\$209,520.00	\$977,760.00
NEW MASONRY TIES AND ANCHORS /S.F.	13968.00	\$1.50	\$2.50	\$20,952.00	\$34,920.00
MORTAR MESH /L.S.	1.00	\$1,149.00	\$2,298.00	\$1,149.00	\$2,298.00
AREA ADJUSTMENT DIVISION 4		38.30%	22.60%	\$88,710.84	\$229,385.03

DIVISION 7 MOISTURE PROTECTION

SEALANTS , FLASHINGS, AND WATERPROOFING

NEW SPRAY-APPLIED FIREPROOFING /S.F.	3200.00	\$1.50	\$3.78	\$4,800.00	\$12,096.00
REMOVE AND RECONSTRUCT HEAD FLASHING /L.F.	1500.00	\$11.00	\$26.00	\$16,500.00	\$39,000.00
THROUGH-WALL FLASHING AT BASE /L.F.	508.00	\$3.25	\$9.50	\$1,651.00	\$4,826.00
NEW ROOFTOP COPING /L.F.	508.00	\$14.00	\$23.00	\$7,112.00	\$11,684.00
CUSTOM COPING MITERS AND TRANSITIONS/ EACH	8.00	\$25.00	\$150.00	\$200.00	\$1,200.00
NEW 2" RIGID INSULATION /S.F.	13968.00	\$0.60	\$1.75	\$8,380.80	\$24,444.00
NEW 1 1/2" RIGID INSULATION BEAMS /S.F.	3060.00	\$0.60	\$1.75	\$1,836.00	\$5,355.00
NEW 1 1/2" RIGID INSULATION COLUMNS /S.F.	3120.00	\$0.60	\$1.75	\$1,872.00	\$5,460.00
NEW JOINT SEALANT /L.F.	12716.00	\$0.30	\$2.75	\$3,814.80	\$34,969.00
AREA ADJUSTMENT DIVISION 7		36.50%	16.60%	\$16,850.81	\$23,079.64

DIVISION 8 OPENINGS

WINDOWS

NEW INSULATING GLASS ALUMINUM WINDOWS /EACH	333.00	\$98.00	\$700.00	\$32,634.00	\$233,100.00
ADD 16% OF LABOR FOR 3 STORY HEIGHT /EACH	333.00	\$15.68	\$18.03	\$5,221.44	\$6,004.66
AREA ADJUSTMENT DIVISION 8		33.80%	7.80%	\$12,795.14	\$18,650.16

DIVISION 9 FINISHES

FINISHES

RESTORE INTERIOR FINISHES /S.F.	8000.00	\$10.00	\$20.00	\$80,000.00	\$160,000.00
AREA ADJUSTMENT DIVISION 8 (INCLUDED)		0.00%	0.00%	\$0.00	\$0.00

TOTALS

SUB TOTAL				\$2,945,655.79
TOTAL LABOR	\$1,020,800.64			
LABOR ADJUSTMENT FACTOR			20.00%	
LABOR ADJUSTMENT AMOUNT				\$204,160.13
SUBTOTAL				\$3,149,815.92
CONTINGENCY 20%		20.00%		\$629,963.18
OVERHEAD		15.00%		\$472,472.39
PROFIT		10.00%		\$362,228.83
TOTAL ALTERNATIVE "B"				\$4,614,480.32

PROJECT COST ANALYSIS

DPMC NUMBER: _____

Date: 5/12/2022Project Phase: **Program**Project Name: ALT B - Window Replacement & Precast Wall PanelsLocation: NJDOT F&A Building**Cost Phase "C" - Construction**

1 General Construction	4,614,480	
2 Structural Steel	<u>0</u>	
3 Plumbing	<u>0</u>	
4 HVAC	<u>0</u>	
5 Electrical	<u>0</u>	
6.a Other Trades (specify): _____	<u>0</u>	
6.b Other Trades (specify): _____	<u>0</u>	
7 TOTAL CONSTRUCTION COST ESTIMATE (CCE) (Lines 1 thru 6)		<u>4,614,480</u>

Cost Phase "D" - Design

8 Consultant Design Fee	553,738	
9 Consultant Construction Administration Fee	<u>276,869</u>	
10 Asbestos Remediation Design Fee	<u>0</u>	
11 Asbestos Monitoring Fees	<u>0</u>	
12 Survey Services	<u>0</u>	
13 Testing Services	<u>0</u>	
14 Roofing Inspection	<u>0</u>	
15 Other (specify): <u>0</u>	<u>0</u>	
16 TOTAL DESIGN SERVICES (Lines 8 thru 15)		<u>830,606</u>

Cost Phase "K" - Affirmative Action

17 Affirmative Action (1/2 % of Line 7)		<u>23,072</u>
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Cost Phase "M" - Management Fees

18 DPMC Management Fee (8% of Line 7)		<u>369,158</u>
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Cost Phase "N" - Construction Management

19 Construction Management Services (CM/CPM)		<u>0</u>
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Cost Phase "O" - Contingency

20 Construction (5% of Line 7)	230,724	
21 Design (10% of Line 16)	<u>83,061</u>	
22 TOTAL PROJECT CONTINGENCY (Lines 20 & 21)		<u>313,785</u>

Cost Phase "P" - Permits

23 U.C.C. (DCA or DPMC) Plan Review Fee	34,609	
24 U.C.C. Permit/Field Inspection/C.O. Fee	<u>34,609</u>	
25 Soil Conservation	<u>0</u>	
26 Other (specify): _____	<u>0</u>	
27 TOTAL PERMIT FEES (Lines 23 thru 26)		<u>69,217</u>

Cost Phase "R" - Arts Inclusion

28 Arts Inclusion Allowance		<u>0</u>
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Cost Phase "B" - Other Costs

29 Other (specify): _____	<u>0</u>	
30 Other (specify): _____	<u>0</u>	
31 TOTAL OTHER COSTS (Lines 29 & 30)		<u>0</u>

32 CURRENT WORKING ESTIMATE (CWE) (Lines 7+16+17+18+19+22+27+28+31)		<u>\$6,220,319</u>
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**FAÇADE AND FOUNDATION WATER INFILTRATION STUDY
 NJDOT FINANCE AND ADMINISTRATION (F&A) BUILDING
 ALTERNATIVE "C" WINDOW & BRICK REPLACEMENT W/ NEW METAL WALL PANELS
 CONSTRUCTION COST ESTIMATE**

ITEM	QUAN.	UNIT AMOUNT		TOTAL	
		LABOR	TOTAL	LABOR	TOTAL
DIVISION 1 GENERAL REQUIREMENTS					
GENERAL REQUIREMENTS					
STEEL TUBE SCAFFOLDING ERECT AND DISMANTLE /C.S.F.	200.00	\$164.00	\$261.00	\$32,800.00	\$52,200.00
SCAFFOLDING RENT 6 MONTHS /C.S.F.	24.00	\$2,010.00	\$4,500.00	\$48,240.00	\$108,000.00
PLANKS FOR SCAFFOLDING 2x10x16' /EACH	108.00	\$0.00	\$10.90	\$0.00	\$1,177.20
PLANKS ERECT AND REMOVE /EACH	536.00	\$18.25	\$29.00	\$9,782.00	\$15,544.00
OVERHEAD PROTECTION AT WALKS AND ENTRANCES /L.F.	120.00	\$21.00	\$40.00	\$2,520.00	\$4,800.00
TEMPORARY BARRICADE FENCING /L.F.	400.00	\$27.00	\$46.50	\$10,800.00	\$18,600.00
TEMPORARY SIGNAGE /L.S.	1.00	\$150.00	\$500.00	\$150.00	\$500.00
TEMPORARY TOILETS /MONTH	6.00		\$300.00	\$0.00	\$1,800.00
MOBILIZATION / DEMOBILIZATION /L.S.	1.00		\$60,000.00	\$0.00	\$60,000.00
DAILY CLEANUP /DAY	120.00	\$45.00	\$65.00	\$5,400.00	\$7,800.00
SUPERVISION /WEEK	28.00	\$0.00	\$2,500.00	\$0.00	\$70,000.00
BOND L.S.	1.00		\$70,000.00	\$0.00	\$70,000.00
DIVISION 2 DEMOLITION					
DEMOLITION					
REMOVE BRICK /S.F.	13968.00	\$2.84	\$4.24	\$39,669.12	\$59,224.32
REMOVE 4" CMU /S.F.	13968.00	\$0.66	\$0.98	\$9,218.88	\$13,688.64
REMOVE BRICK FINS /V.L.F.	4270.00	\$8.90	\$13.25	\$38,003.00	\$56,577.50
REMOVE WINDOWS /EACH	333.00	\$27.50	\$41.00	\$9,157.50	\$13,653.00
REMOVE COPING /L.F.	508.00	\$1.48	\$2.41	\$751.84	\$1,224.28
REMOVE AND REINSTALL INT. METAL PANELS /S.F.	2880.00	\$12.00	\$22.00	\$34,560.00	\$63,360.00
REMOVE AND REINSTALL INT. FAN COIL COVERS /L.F.	1530.00	\$18.00	\$26.00	\$27,540.00	\$39,780.00
RUBBISH HANDLING /C.Y.	800.00	\$55.00	\$65.00	\$44,000.00	\$52,000.00
DUMPSTER /EACH	16.00		\$900.00	\$0.00	\$14,400.00
ASBESTOS ABATEMENT					
INTERIOR PROTECTION - DUST PARTITIONS /S.F.	15360.00	\$2.19	\$7.75	\$33,638.40	\$119,040.00
EXTERIOR PROTECTION - DUST PARTITIONS /S.F.	15360.00	\$2.25	\$7.90	\$34,560.00	\$121,344.00
DECONTAMINATION UNIT /EACH	4.00	\$900.00	\$2,600.00	\$3,600.00	\$10,400.00
REMOVE SPRAY ON FIREPROOFING /S.F.	3200.00	\$35.00	\$50.00	\$112,000.00	\$160,000.00
AREA ADJUSTMENT DIVISION 2		5.20%	0.00%	\$20,108.33	\$0.00
DIVISION 5 METALS					
STRUCTURAL METAL STUD FRAMING					
NEW 6" METAL STUD FRAMED EXTERIOR WALL /S.F.	13968.00	\$17.15	\$46.50	\$239,551.20	\$649,512.00
NEW BOXED HEADER /L.F.	1500.00	\$6.50	\$24.50	\$9,750.00	\$36,750.00
GYPSUM SHEATHING /S.F.	13968.00	\$0.80	\$1.81	\$11,174.40	\$25,282.08
MISCELLANEOUS POSTS AND BRACING /L.S.	1.00	\$15,000.00	\$25,000.00	\$15,000.00	\$25,000.00
AREA ADJUSTMENT DIVISION 7		8.10%	1.10%	\$22,313.52	\$8,101.98

DIVISION 7 MOISTURE PROTECTION

SEALANTS , FLASHINGS, AND WATERPROOFING

NEW SPRAY-APPLIED FIREPROOFING /S.F.	3200.00	\$1.50	\$3.78	\$4,800.00	\$12,096.00
REMOVE AND RECONSTRUCT HEAD FLASHING /L.F.	1500.00	\$11.00	\$26.00	\$16,500.00	\$39,000.00
THROUGH-WALL FLASHING AT BASE /L.F.	508.00	\$3.25	\$9.50	\$1,651.00	\$4,826.00
NEW ROOFTOP COPING /L.F.	508.00	\$14.00	\$23.00	\$7,112.00	\$11,684.00
CUSTOM COPING MITERS AND TRANSITIONS/ EACH	8.00	\$25.00	\$150.00	\$200.00	\$1,200.00
NEW INSULATED METAL WALL PANELS /S.F.	13968.00	\$3.50	\$15.50	\$48,888.00	\$216,504.00
NEW INSULATED METAL WALL PANEL ACCESSORIES /S.F.	13968.00	\$1.00	\$2.50	\$13,968.00	\$34,920.00
FRAMES & ANCHORS FOR METAL PANEL SYSTEM /S.F.	13968.00	\$1.70	\$8.00	\$23,745.60	\$111,744.00
NEW 1 1/2" RIGID INSULATION BEAMS /S.F.	3060.00	\$0.60	\$1.75	\$1,836.00	\$5,355.00
NEW 1 1/2" RIGID INSULATION COLUMNS /S.F.	3120.00	\$0.60	\$1.75	\$1,872.00	\$5,460.00
NEW 6" FIBERGLASS BATT INSULATION /S.F.	9060.00	\$0.32	\$1.42	\$2,899.20	\$12,865.20
NEW BUILDING WRAP /S.F.	9060.00	\$0.15	\$0.40	\$1,359.00	\$3,624.00
NEW JOINT SEALANT /L.F.	12716.00	\$0.30	\$2.75	\$3,814.80	\$34,969.00

AREA ADJUSTMENT DIVISION 7		36.50%	16.60%	\$46,955.64	\$82,045.04
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DIVISION 8 OPENINGS

WINDOWS

NEW INSULATING GLASS ALUMINUM WINDOWS /EACH	333.00	\$98.00	\$700.00	\$32,634.00	\$233,100.00
ADD 16% OF LABOR FOR 3 STORY HEIGHT /EACH	333.00	\$15.68	\$18.03	\$5,221.44	\$6,004.66

AREA ADJUSTMENT DIVISION 8		33.80%	7.80%	\$12,795.14	\$18,650.16
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DIVISION 9 FINISHES

FINISHES

GYPSUM BOARD INTERIOR /S.F.	13968.00	\$0.80	\$1.81	\$11,174.40	\$25,282.08
PAINT GYPSUM BOARD WALLS /S.F.	13968.00	\$0.57	\$1.12	\$7,961.76	\$15,644.16
RESTORE INTERIOR FINISHES /S.F.	8000.00	\$10.00	\$20.00	\$80,000.00	\$160,000.00

AREA ADJUSTMENT DIVISION 8		33.80%	7.80%	\$6,468.02	\$3,192.25
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TOTALS

SUB TOTAL				\$2,917,924.55
TOTAL LABOR	\$1,146,144.20			
LABOR ADJUSTMENT FACTOR			20.00%	
LABOR ADJUSTMENT AMOUNT				\$229,228.84
SUBTOTAL				\$3,147,153.39
CONTINGENCY 20%		20.00%		\$629,430.68
OVERHEAD		15.00%		\$472,073.01
PROFIT		10.00%		\$361,922.64
TOTAL ALTERNATIVE "C"				\$4,610,579.71

PROJECT COST ANALYSIS

DPMC NUMBER: _____

Date: 5/12/2022Project Phase: **Program**Project Name: ALT C - Window Replacement & Metal Wall PanelsLocation: NJDOT F&A Building**Cost Phase "C" - Construction**

1 General Construction	4,610,580	
2 Structural Steel	<u>0</u>	
3 Plumbing	<u>0</u>	
4 HVAC	<u>0</u>	
5 Electrical	<u>0</u>	
6.a Other Trades (specify): _____	<u>0</u>	
6.b Other Trades (specify): _____	<u>0</u>	
7 TOTAL CONSTRUCTION COST ESTIMATE (CCE) (Lines 1 thru 6)		<u>4,610,580</u>

Cost Phase "D" - Design

8 Consultant Design Fee	553,270	
9 Consultant Construction Administration Fee	<u>276,635</u>	
10 Asbestos Remediation Design Fee	<u>0</u>	
11 Asbestos Monitoring Fees	<u>0</u>	
12 Survey Services	<u>0</u>	
13 Testing Services	<u>0</u>	
14 Roofing Inspection	<u>0</u>	
15 Other (specify): <u>0</u>	<u>0</u>	
16 TOTAL DESIGN SERVICES (Lines 8 thru 15)		<u>829,904</u>

Cost Phase "K" - Affirmative Action

17 Affirmative Action (1/2 % of Line 7)		<u>23,053</u>
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Cost Phase "M" - Management Fees

18 DPMC Management Fee (8% of Line 7)		<u>368,846</u>
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Cost Phase "N" - Construction Management

19 Construction Management Services (CM/CPM)		<u>0</u>
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Cost Phase "O" - Contingency

20 Construction (5% of Line 7)	230,529	
21 Design (10% of Line 16)	<u>82,990</u>	
22 TOTAL PROJECT CONTINGENCY (Lines 20 & 21)		<u>313,519</u>

Cost Phase "P" - Permits

23 U.C.C. (DCA or DPMC) Plan Review Fee	34,579	
24 U.C.C. Permit/Field Inspection/C.O. Fee	<u>34,579</u>	
25 Soil Conservation	<u>0</u>	
26 Other (specify): _____	<u>0</u>	
27 TOTAL PERMIT FEES (Lines 23 thru 26)		<u>69,159</u>

Cost Phase "R" - Arts Inclusion

28 Arts Inclusion Allowance		<u>0</u>
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Cost Phase "B" - Other Costs

29 Other (specify): _____	<u>0</u>	
30 Other (specify): _____	<u>0</u>	
31 TOTAL OTHER COSTS (Lines 29 & 30)		<u>0</u>

32 CURRENT WORKING ESTIMATE (CWE) (Lines 7+16+17+18+19+22+27+28+31)		<u>\$6,215,061</u>
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**FAÇADE AND FOUNDATION WATER INFILTRATION STUDY
 NJDOT FINANCE AND ADMINISTRATION (F&A) BUILDING
 ALTERNATIVE "D" WINDOW & BRICK REPLACEMENT WITH FULL CURTAINWALL
 CONSTRUCTION COST ESTIMATE**

ITEM	QUAN.	UNIT AMOUNT		TOTAL	
		LABOR	TOTAL	LABOR	TOTAL
DIVISION 1 GENERAL REQUIREMENTS					
GENERAL REQUIREMENTS					
STEEL TUBE SCAFFOLDING ERECT AND DISMANTLE /C.S.F.	200.00	\$164.00	\$261.00	\$32,800.00	\$52,200.00
SCAFFOLDING RENT 6 MONTHS /C.S.F.	24.00	\$2,010.00	\$4,500.00	\$48,240.00	\$108,000.00
PLANKS FOR SCAFFOLDING 2x10x16' /EACH	108.00	\$0.00	\$10.90	\$0.00	\$1,177.20
PLANKS ERECT AND REMOVE /EACH	536.00	\$18.25	\$29.00	\$9,782.00	\$15,544.00
OVERHEAD PROTECTION AT WALKS AND ENTRANCES /L.F.	120.00	\$21.00	\$40.00	\$2,520.00	\$4,800.00
TEMPORARY BARRICADE FENCING /L.F.	400.00	\$27.00	\$46.50	\$10,800.00	\$18,600.00
TEMPORARY SIGNAGE /L.S.	1.00	\$150.00	\$500.00	\$150.00	\$500.00
TEMPORARY TOILETS /MONTH	6.00		\$300.00	\$0.00	\$1,800.00
MOBILIZATION / DEMOBILIZATION /L.S.	1.00		\$60,000.00	\$0.00	\$60,000.00
DAILY CLEANUP /DAY	120.00	\$45.00	\$65.00	\$5,400.00	\$7,800.00
SUPERVISION /WEEK	28.00	\$0.00	\$2,500.00	\$0.00	\$70,000.00
BOND L.S.	1.00		\$70,000.00	\$0.00	\$70,000.00
DIVISION 2 DEMOLITION					
DEMOLITION					
REMOVE BRICK /S.F.	13968.00	\$2.84	\$4.24	\$39,669.12	\$59,224.32
REMOVE BRICK FINS /V.L.F.	4270.00	\$8.90	\$13.25	\$38,003.00	\$56,577.50
REMOVE WINDOWS /EACH	333.00	\$27.50	\$41.00	\$9,157.50	\$13,653.00
REMOVE COPING /L.F.	508.00	\$1.48	\$2.41	\$751.84	\$1,224.28
REMOVE AND REINSTALL INT. METAL PANELS /S.F.	2880.00	\$12.00	\$22.00	\$34,560.00	\$63,360.00
REMOVE AND REINSTALL INT. FAN COIL COVERS /L.F.	1530.00	\$18.00	\$26.00	\$27,540.00	\$39,780.00
RUBBISH HANDLING /C.Y.	800.00	\$55.00	\$65.00	\$44,000.00	\$52,000.00
DUMPSTER /EACH	16.00		\$900.00	\$0.00	\$14,400.00
ASBESTOS ABATEMENT					
INTERIOR PROTECTION - DUST PARTITIONS /S.F.	15360.00	\$2.19	\$7.75	\$33,638.40	\$119,040.00
EXTERIOR PROTECTION - DUST PARTITIONS /S.F.	15360.00	\$2.25	\$7.90	\$34,560.00	\$121,344.00
DECONTAMINATION UNIT /EACH	4.00	\$900.00	\$2,600.00	\$3,600.00	\$10,400.00
REMOVE SPRAY ON FIREPROOFING /S.F.	3200.00	\$35.00	\$50.00	\$112,000.00	\$160,000.00
AREA ADJUSTMENT DIVISION 2		5.20%	0.00%	\$19,628.95	\$0.00
DIVISION 7 MOISTURE PROTECTION					
SEALANTS , FLASHINGS, AND WATERPROOFING					
NEW SPRAY-APPLIED FIREPROOFING /S.F.	3200.00	\$1.50	\$3.78	\$4,800.00	\$12,096.00
REMOVE AND RECONSTRUCT HEAD FLASHING /L.F.	1500.00	\$11.00	\$26.00	\$16,500.00	\$39,000.00
THROUGH-WALL FLASHING AT BASE /L.F.	508.00	\$3.25	\$9.50	\$1,651.00	\$4,826.00
NEW ROOFTOP COPING /L.F.	508.00	\$14.00	\$23.00	\$7,112.00	\$11,684.00
CUSTOM COPING MITERS AND TRANSITIONS/ EACH	8.00	\$25.00	\$150.00	\$200.00	\$1,200.00
NEW 1 1/2" RIGID INSULATION BEAMS /S.F.	3060.00	\$0.60	\$1.75	\$1,836.00	\$5,355.00
NEW 1 1/2" RIGID INSULATION COLUMNS /S.F.	3120.00	\$0.60	\$1.75	\$1,872.00	\$5,460.00
NEW JOINT SEALANT /L.F.	12716.00	\$0.30	\$2.75	\$3,814.80	\$34,969.00
AREA ADJUSTMENT DIVISION 7		36.50%	16.60%	\$13,791.82	\$19,021.94

DIVISION 8 OPENINGS					
WINDOWS					
NEW CURTAINWALL TUBE FRAME /S.F.	21844.00	\$10.15	\$38.00	\$221,716.60	\$830,072.00
ADD 16% OF LABOR FOR 3 STORY HEIGHT /S.F.	21844.00	\$1.62	\$1.87	\$35,474.66	\$40,795.85
NEW 1" TINTED INSULATING GLASS /S.F.	7769.00	\$11.25	\$50.00	\$87,401.25	\$388,450.00
NEW PREFINISHED INSULATED SPANDREL PANELS /S.F.	7591.00	\$2.50	\$13.00	\$18,977.50	\$98,683.00
AREA ADJUSTMENT DIVISION 8		33.80%	7.80%	\$122,886.66	\$105,924.07

DIVISION 9 FINISHES					
FINISHES					
RESTORE INTERIOR FINISHES /S.F.	8000.00	\$10.00	\$20.00	\$80,000.00	\$160,000.00
AREA ADJUSTMENT DIVISION 8 (INCLUDED)		0.00%	0.00%	\$0.00	\$0.00

		TOTALS
SUB TOTAL		\$2,878,961.16
TOTAL LABOR	\$1,124,835.10	
LABOR ADJUSTMENT FACTOR		20.00%
LABOR ADJUSTMENT AMOUNT		\$224,967.02
SUBTOTAL		\$3,103,928.18
CONTINGENCY 20%	20.00%	\$620,785.64
OVERHEAD	15.00%	\$465,589.23
PROFIT	10.00%	\$356,951.74
TOTAL ALTERNATIVE "D"		\$4,547,254.78

PROJECT COST ANALYSIS

DPMC NUMBER: _____

Date: 5/12/2022Project Phase:
ProgramProject Name: ALT D - Window and Brick Replacement with New CurtainwallLocation: NJDOT F&A Building**Cost Phase "C" - Construction**

1 General Construction	4,547,255
2 Structural Steel	0
3 Plumbing	0
4 HVAC	0
5 Electrical	0
6.a Other Trades (specify): _____	0
6.b Other Trades (specify): _____	0
7 TOTAL CONSTRUCTION COST ESTIMATE (CCE) (Lines 1 thru 6)	<u>4,547,255</u>

Cost Phase "D" - Design

8 Consultant Design Fee	545,671
9 Consultant Construction Administration Fee	272,835
10 Asbestos Remediation Design Fee	0
11 Asbestos Monitoring Fees	0
12 Survey Services	0
13 Testing Services	0
14 Roofing Inspection	0
15 Other (specify): <u>0</u>	0
16 TOTAL DESIGN SERVICES (Lines 8 thru 15)	<u>818,506</u>

Cost Phase "K" - Affirmative Action

17 Affirmative Action (1/2 % of Line 7)	<u>22,736</u>
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Cost Phase "M" - Management Fees

18 DPMC Management Fee (8% of Line 7)	<u>363,780</u>
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Cost Phase "N" - Construction Management

19 Construction Management Services (CM/CPM)	<u>0</u>
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Cost Phase "O" - Contingency

20 Construction (5% of Line 7)	227,363
21 Design (10% of Line 16)	81,851
22 TOTAL PROJECT CONTINGENCY (Lines 20 & 21)	<u>309,213</u>

Cost Phase "P" - Permits

23 U.C.C. (DCA or DPMC) Plan Review Fee	34,104
24 U.C.C. Permit/Field Inspection/C.O. Fee	34,104
25 Soil Conservation	0
26 Other (specify): _____	0
27 TOTAL PERMIT FEES (Lines 23 thru 26)	<u>68,209</u>

Cost Phase "R" - Arts Inclusion

28 Arts Inclusion Allowance	<u>0</u>
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Cost Phase "B" - Other Costs

29 Other (specify): _____	0
30 Other (specify): _____	0
31 TOTAL OTHER COSTS (Lines 29 & 30)	<u>0</u>

32 CURRENT WORKING ESTIMATE (CWE) (Lines 7+16+17+18+19+22+27+28+31) **\$6,129,699**

**FAÇADE AND FOUNDATION WATER INFILTRATION STUDY
 NJDOT FINANCE AND ADMINISTRATION (F&A) BUILDING
 NEW FOUNDATION DRAINAGE IMPROVEMENTS
 CONSTRUCTION COST ESTIMATE**

ITEM	QUAN.	UNIT AMOUNT		TOTAL	
		LABOR	TOTAL	LABOR	TOTAL
DIVISION 1 GENERAL REQUIREMENTS					
GENERAL REQUIREMENTS					
TEMPORARY BARRICADE FENCING /L.F.	590.00	\$27.00	\$46.50	\$15,930.00	\$27,435.00
TEMPORARY SIGNAGE /L.S.	1.00	\$150.00	\$500.00	\$150.00	\$500.00
TEMPORARY TOILETS /MONTH	3.00		\$300.00	\$0.00	\$900.00
BACKHOE / MONTH	3.00		\$1,050.00	\$0.00	\$3,150.00
MOBILIZATION / DEMOBILIZATION /L.S.	1.00		\$20,000.00	\$0.00	\$20,000.00
DAILY CLEANUP /DAY	90.00	\$45.00	\$65.00	\$4,050.00	\$5,850.00
SUPERVISION /WEEK	12.00	\$0.00	\$2,500.00	\$0.00	\$30,000.00
BOND L.S.	1.00		\$20,000.00	\$0.00	\$20,000.00
DIVISION 2 DEMOLITION					
DEMOLITION					
REMOVE CONCRETE STAIRS AND RAMP /C.Y.	90.00	\$112.00	\$192.00	\$10,080.00	\$17,280.00
REMOVE CONCRETE PADS /C.Y.	60.00	\$74.50	\$127.00	\$4,470.00	\$7,620.00
REMOVE CONCRETE APRON /C.Y.	16.00	\$74.50	\$127.00	\$1,192.00	\$2,032.00
RUBBISH HANDLING /C.Y.	180.00	\$55.00	\$65.00	\$9,900.00	\$11,700.00
DUMPSTER /EACH	6.00		\$900.00	\$0.00	\$5,400.00
ASBESTOS ABATEMENT					
FOUNDATION DAMPROOFING ABATEMENT /S.F.	6120.00	\$10.00	\$15.00	\$61,200.00	\$91,800.00
AREA ADJUSTMENT DIVISION 2		5.20%	0.00%	\$4,515.78	\$0.00
DIVISION 7 MOISTURE PROTECTION					
SEALANTS , FLASHINGS, AND WATERPROOFING					
NEW PENETRATION SEALS /EACH	24.00	\$100.00	\$300.00	\$2,400.00	\$7,200.00
DRAINAGE MAT /S.F.	6120.00	\$0.18	\$0.82	\$1,101.60	\$5,018.40
WATERPROOFING /S.F.	6120.00	\$0.70	\$2.80	\$4,284.00	\$17,136.00
AREA ADJUSTMENT DIVISION 7		36.50%	16.60%	\$2,841.74	\$4,872.83
DIVISION 22 PLUMBING					
FACILITY STORM DRAINAGE					
PIT MOUNTED VERTICAL SUMP PUMP /EACH	2.00	\$1,400.00	\$8,200.00	\$2,800.00	\$16,400.00
AREA ADJUSTMENT DIVISION 7		33.70%	13.50%	\$943.60	\$2,214.00

DIVISION 31, 32, AND 33 EXCAVATION AND FILL AND EXTERIOR IMPROVEMENT:

EXCAVATION AND FILL

SHEET PILING /S.F.	6696.00	\$6.70	\$24.00	\$44,863.20	\$160,704.00
EXCAVATION BY HAND /C.Y.	500.00	\$118.00	\$177.00	\$59,000.00	\$88,500.00
EXCAVATION BY BACKHOE /C.Y.	2500.00	\$9.40	\$22.50	\$23,500.00	\$56,250.00
BACKFILL /C.Y.	2770.00	\$4.14	\$7.35	\$11,467.80	\$20,359.50
COMPACTION /C.Y.	2770.00	\$3.95	\$7.90	\$10,941.50	\$21,883.00
GRADING /S.Y.	6500.00	\$1.24	\$1.98	\$8,060.00	\$12,870.00
STONE FILL /C.Y.	230.00	\$2.45	\$37.00	\$563.50	\$8,510.00
NEW 4" HDPE PIPE /L.F.	550.00	\$3.16	\$9.95	\$1,738.00	\$5,472.50
NEW 6" HDPE PIPE /L.F.	80.00	\$3.38	\$17.35	\$270.40	\$1,388.00
RE-ESTABLISH LAWN /S.Y.	6500.00	\$2.00	\$4.00	\$13,000.00	\$26,000.00
AREA ADJUSTMENT DIVISION 31, 32, AND 33		5.20%	0.00%	\$9,017.03	\$0.00

TOTALS

SUB TOTAL		\$698,445.23
TOTAL LABOR	\$308,280.16	
LABOR ADJUSTMENT FACTOR		20.00%
LABOR ADJUSTMENT AMOUNT		\$61,656.03
SUBTOTAL		\$760,101.26
CONTINGENCY 20%	20.00%	\$152,020.25
OVERHEAD	15.00%	\$114,015.19
PROFIT	10.00%	\$87,411.65
TOTAL FND DRAINAGE IMPROVEMENTS		\$1,113,548.35

PROJECT COST ANALYSIS

DPMC NUMBER: _____

Date: 5/12/2022Project Phase: **Program**Project Name: Foundation WaterproofingLocation: NJDOT F&A Building**Cost Phase "C" - Construction**

1 General Construction	1,113,548
2 Structural Steel	0
3 Plumbing	0
4 HVAC	0
5 Electrical	0
6.a Other Trades (specify): _____	0
6.b Other Trades (specify): _____	0
7 TOTAL CONSTRUCTION COST ESTIMATE (CCE) (Lines 1 thru 6)	<u>1,113,548</u>

Cost Phase "D" - Design

8 Consultant Design Fee	133,626
9 Consultant Construction Administration Fee	66,813
10 Asbestos Remediation Design Fee	0
11 Asbestos Monitoring Fees	0
12 Survey Services	0
13 Testing Services	0
14 Roofing Inspection	0
15 Other (specify): <u>0</u>	0
16 TOTAL DESIGN SERVICES (Lines 8 thru 15)	<u>200,439</u>

Cost Phase "K" - Affirmative Action

17 Affirmative Action (1/2 % of Line 7)	<u>5,568</u>
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Cost Phase "M" - Management Fees

18 DPMC Management Fee (8% of Line 7)	<u>89,084</u>
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Cost Phase "N" - Construction Management

19 Construction Management Services (CM/CPM)	<u>0</u>
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Cost Phase "O" - Contingency

20 Construction (5% of Line 7)	55,677
21 Design (10% of Line 16)	20,044
22 TOTAL PROJECT CONTINGENCY (Lines 20 & 21)	<u>75,721</u>

Cost Phase "P" - Permits

23 U.C.C. (DCA or DPMC) Plan Review Fee	8,352
24 U.C.C. Permit/Field Inspection/C.O. Fee	8,352
25 Soil Conservation	0
26 Other (specify): _____	0
27 TOTAL PERMIT FEES (Lines 23 thru 26)	<u>16,703</u>

Cost Phase "R" - Arts Inclusion

28 Arts Inclusion Allowance	<u>0</u>
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Cost Phase "B" - Other Costs

29 Other (specify): _____	0
30 Other (specify): _____	0
31 TOTAL OTHER COSTS (Lines 29 & 30)	<u>0</u>

32 CURRENT WORKING ESTIMATE (CWE) (Lines 7+16+17+18+19+22+27+28+31)	<u>\$1,501,063</u>
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**FAÇADE AND FOUNDATION WATER INFILTRATION STUDY
 NJDOT FINANCE AND ADMINISTRATION (F&A) BUILDING
 COMBINED PROJECT SAVINGS IN GC
 CONSTRUCTION COST ESTIMATE**

ITEM	QUAN.	UNIT AMOUNT		TOTAL	
		LABOR	TOTAL	LABOR	TOTAL
DIVISION 1 GENERAL REQUIREMENTS					
GENERAL REQUIREMENTS					
TEMPORARY BARRICADE FENCING /L.F.	400.00	\$27.00	\$46.50	\$10,800.00	\$18,600.00
TEMPORARY SIGNAGE /L.S.	1.00	\$150.00	\$500.00	\$150.00	\$500.00
TEMPORARY TOILETS /MONTH	2.00		\$300.00	\$0.00	\$600.00
SUPERVISION /WEEK	8.00	\$0.00	\$2,500.00	\$0.00	\$20,000.00
				TOTALS	
SUB TOTAL					\$39,700.00
TOTAL LABOR				\$10,950.00	
LABOR ADJUSTMENT FACTOR					20.00%
LABOR ADJUSTMENT AMOUNT					\$2,190.00
SUBTOTAL					\$41,890.00
CONTINGENCY 20%				20.00%	\$8,378.00
OVERHEAD				15.00%	\$6,283.50
PROFIT				10.00%	\$4,817.35
GENERAL CONDITIONS SAVINGS					\$61,368.85

Appendix “B”

Photographs

10 PAGES

EXHIBIT 'C'



Overview of F&A Building From the Northeast



Overview of F&A Building From the Southwest

EXHIBIT 'C'



North Side of Site Adjacent to the F&A Building



Existing Stair and Ramp Construction at South Facade

EXHIBIT 'C'



Existing Stair and Ramp Construction at South Facade



View of Grade Along East Facade Looking North

EXHIBIT 'C'



Base of East Facade



Typical Yard Drain / Catch Basin

EXHIBIT 'C'



North Facade Looking East



West Facade Looking South



Standing Water and Improper Grading at North Side of F&A Building

EXHIBIT 'C'



Standing Water and Improper Grading at North Side of F&A Building



Concrete Apron at West Facade



Intake/Exhaust Vents at Area South Facade

EXHIBIT 'C'



Intake/Exhaust Vents at Area South Facade - Interior



Electrical Feeder Conduit Penetrations at South Facade - Interior

EXHIBIT 'C'



Capped Penetrants at South Wall



Southwest Corner at Electrical Room

EXHIBIT 'C'



Interior of Basement – Current Conditions



Moisture Along Base of North Wall

EXHIBIT 'C'



Above and Below: Views of Typical Interior Side of Exterior Wall



EXHIBIT 'C'

Appendix “C” Drawings

**12 PAGES
LARGE FORMAT**

Drawing No.	Description
N/A	Physical Plant Survey (Overall Site Plan)
FD-5	Footing Drain Layout
A-3	Basement Floor Plan
A-4	First Floor Plan
A-5	Second Floor Plan
A-6	Third Floor Plan
A-8	North and West Elevations
A-9	South and East Elevations
A-10	Cross and Longitudinal Sections
A-11	Wall Sections and Details
A-12	Wall Sections and Details
A-13	Wall Sections and Details
S-1	Foundation Plan and Sections – Structural
S-7	Column Schedule, Moment Schedule, and Typical Details
A-23	Test Boring Data
A-24	Test Boring Data

EXHIBIT 'C'