



**Battery Park  
City Authority**

**REQUEST FOR PROPOSALS**

**FOR**

**Battery Park City Site 23/24 Community Center Leak  
Remediation/Waterproofing Project:**

**General Contractor**

## Table of Contents

I.	SUMMARY.....	1
II.	GENERAL PROVISIONS .....	1
III.	TIMETABLE & DESIGNATED CONTACT .....	2
	A. Key Dates .....	2
	B. Anticipated Contract Term.....	2
IV.	GENERAL REQUIREMENTS.....	2
	A. Minimum Qualification Requirements.....	2
	B. MBE/WBE/SDVOB Participation, Joint Ventures, and Sub-contracting Goals .....	2
	C. Restricted Period .....	3
	D. Submission of Proposals .....	3
V.	PROPOSAL FORMAT AND CONTENTS.....	4
	A. Proposal Format .....	4
	B. Proposal Content .....	4
VI.	INFORMATION REQUIRED .....	4
	A. Questions and Information Sought Relating to the Work .....	4
	B. Questions and Information Sought Relating to Proposer’s Firm & Eligibility .....	6
	C. Required Attachments .....	6
VII.	INSURANCE AND BONDING REQUIREMENTS.....	7
	A. General Requirements .....	7
	B. Insurance Requirements for the Selected Proposer .....	7
	C. Insurance Requirements for all Subcontractors.....	8
	D. Provide a letter from your surety(ies) stating that you are able to provide a payment and performance bond as required in the standard form of contract (Exhibit I).].....	9
VIII.	COST PROPOSAL; FORMAT AND REQUIRED INCLUSIONS .....	9
IX.	SELECTION PROCESS .....	10
	A. Evaluation .....	10
	B. Interviews.....	10
	C. Evaluation Criteria for Selection.....	10
	D. Basis for Contract Award.....	10
X.	NON-COLLUSION.....	11
XI.	IRAN DIVESTMENT ACT .....	11
XII.	ENCOURAGING USE OF NEW YORK STATE BUSINESSES IN CONTRACT PERFORMANCE..	11
	EXHIBIT A – SCOPE OF WORK	
	EXHIBIT B – MBE/WBE/SDVOB REQUIREMENTS, MBE/WBE AND EEO POLICY STATEMENT & DIVERSITY PRACTICES QUESTIONNAIRE	
	EXHIBIT C – COST PROPOSAL FORM	
	EXHIBIT D – BID BREAKDOWN	
	EXHIBIT E – UNIT PRICING	
	EXHIBIT F – LABOR RATES	
	EXHIBIT G– ACKNOWLEDGEMENT OF ADDENDA	

EXHIBIT H – DRAWINGS AND SPECIFICATIONS  
EXHIBIT I – LIST OF EMPLOYEES  
EXHIBIT J – SAMPLE FORM OF CONTRACT

## **I. SUMMARY**

Battery Park City Authority d/b/a Hugh L. Carey Battery Park City Authority (“BPCA”) hereby requests proposals (each individually, a “Proposal” or collectively, the “Proposals”) from general construction contractors (each a “Proposer” and collectively the “Proposers”) to perform all work necessary to complete BPCA’s Site 23/24 Community Center Facility leak remediation and waterproofing project (hereafter the “Project” or the “Work”). The Project site is located at or about 212 North End Avenue, New York, NY (the “CC Facility”).

The Project scope includes, but is not limited to:

- (1) Demolition and removal of existing paving, and terrace overburden to expose waterproofing below;
- (2) Partial demolition and removal of granite façade to expose structural wall at windows on lower level;
- (3) Furnishing and installation of all waterproofing components including any and all flashings at newly exposed slab and wall;
- (4) Removal and storage of all pavers and granite brick in a manner that will allow it to be reinstalled as part of the restoration;
- (5) Restoration of all affected areas.

A detailed scope of work is attached to this RFP as Exhibit A. All Work shall be performed in accordance with the drawings and technical specifications attached hereto as Exhibit G (the “Construction Documents”).

Created in 1968, BPCA is a New York State public benefit corporation responsible for financing, developing, constructing, maintaining, and operating Battery Park City as a richly diversified mixed use community providing residential and commercial space, with related amenities such as parks, plazas, recreational areas, and a waterfront esplanade. A summary of BPCA’s structure, mission, and history, as well as the Battery Park City project area, may be viewed at: <http://bpca.ny.gov/>. Public information regarding BPCA’s finances, budget, internal controls, guidelines, and policies may be viewed at: <http://bpca.ny.gov/public-information/>. Information relating to the Battery Park City Parks Conservancy Corporation (“BPCPC”), BPCA’s affiliate, may be viewed at: <http://bpcparks.org/>.

New York State-certified Minority-Owned Business Enterprises (“MBE”) and Women-Owned Business Enterprises (“WBE”) are encouraged to submit Proposals.

## **II. GENERAL PROVISIONS**

This request for Proposals, including attachments, exhibits, and any amendments or addenda (collectively, the “RFP”) is subject to the rights reserved by BPCA, including, but not limited to BPCA’s right to:

- withdraw and/or cancel this RFP at any time before final award of the contract;
- request clarification and/or additional information from any or all Proposers;
- amend any term or requirement of this RFP at any time before award of a contract (Proposers may amend their Proposals, as directed by BPCA, if BPCA materially alters or amends the RFP after submission of Proposals);
- alter any key dates or deadlines related to this RFP;
- award the Work, in whole or in part, to one or more Proposers with or without negotiations;
- reject any Proposal that does not strictly conform to the requirements of this RFP;



- conduct one or more interviews with any or all of the Proposers, either in person or by phone, to aid the evaluation process;
- negotiate potential contract terms with any Proposer;

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

### **III. TIMETABLE & DESIGNATED CONTACT**

#### **A. *Key Dates***

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

- RFP issued: February 1, 2019
- Pre-proposal meeting: February 7, 2019 at 10:00 AM at 200 Liberty Street, 24<sup>th</sup> Floor, NY, NY
- Deadline to submit questions to BPCA: February 19, 2019 by 4:00 p.m. (by email only)

All questions regarding this RFP should be submitted in writing via email to the “Designated Contact”: Michael LaMancusa, Battery Park City Authority, at michael.lamancusa@bpca.ny.gov.

- BPCA’s response to substantive questions: February 26, 2019 (by posting on BPCA website)
- PROPOSAL DUE DATE March 7, 2019 by 5:00 p.m. (the “Due Date”)
- Contract start date: Approximately April, 2019

#### **B. *Anticipated Contract Term***

It is anticipated that the term of the contract awarded pursuant to this RFP (the “Contract”) will be fifteen (15) months. BPCA reserves the right to terminate the Contract or Contracts at any time, with or without cause, in accordance with the terms of the Contract. BPCA’s sample form of contract is attached as Exhibit C.

### **IV. GENERAL REQUIREMENTS**

#### **A. *Minimum Qualification Requirements***

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

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

- 2) The proposer must be duly authorized to do business in the State of New York.
- 3) Proposer (or one or more of its principals or partners) must have at least five (5) years of experience providing general contracting services.

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

Contractor requirements and procedures for business participation opportunities for New York State certified MBEs/WBEs/SDVOBs and equal employment opportunity requirements relating to minority group members and women are attached as Exhibit B. For questions relating to MBE/WBE/SDVOB participation, joint ventures and sub-contracting goals *only*, please contact the “MBE/WBE/SDVOB Designated Contact” Mr. Anthony Peterson at [Anthony.peterson@bpca.ny.gov](mailto:Anthony.peterson@bpca.ny.gov) or 212-417-2337.

***C. Restricted Period***

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

***D. Submission of Proposals***

**Proposals must be received by BPCA no later than 5:00 p.m. on March 7, 2019.**

Each Proposer must submit six (6) paper copies and a PDF version (via CD-ROM or flash drive) in a sealed package clearly marked “Proposal Enclosed – BPCA Site 23/24 Community Center Leak Remediation/Waterproofing Contractor Services” to the Designated Contact by messenger, overnight courier or certified mail to the following address:

Michael LaMancusa  
Battery Park City Authority  
200 Liberty Street, 24<sup>th</sup> Floor  
New York, NY 10281

BPCA is not responsible for late Proposals, no matter the cause. Proposals *must* arrive at the time and place specified herein and be time stamped by BPCA by the Due Date. Please leave ample time for building security. Late Proposals will NOT be accepted. Proposals submitted by fax or electronic transmission will NOT be accepted. A Proposer may, after submitting a Proposal, amend its Proposal by submitting an amended Proposal, clearly labeled “Amended Proposal – BPCA Site 23/24 Community Center Leak Remediation/Waterproofing Contractor Services,” as long as the amended Proposal is submitted by the Due Date.

## **V. PROPOSAL FORMAT AND CONTENTS**

### ***A. Proposal Format***

The Proposal must:

- Be printed on 8½” x 11” paper;
- Have numbered pages; and
- Be no longer than ten (10) single-sided pages, exclusive of the Cover Letter, Cost Proposal, and Required Attachments.

### ***B. Proposal Content***

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

- 1) Cover Letter, signed by a person within the firm who is authorized to bind the Proposer, which includes representations that:
  - (a) Except as disclosed in the Proposal, no officer or employee of the Proposer is directly or indirectly a party to or in any other manner interested financially or otherwise in this RFP;
  - (b) Proposer satisfies all of the minimum qualification requirements in Section IV.A; and
  - (c) Proposer has reviewed BPCA’s form of contract, attached as Exhibit I to this RFP, and either has no objections or has detailed their objections in an appendix to their Proposal.
- 2) Executive Summary.
- 3) Responses to the Questions as well as all of the Information Required (Sections VI.A. and B.).
- 4) Required Attachments (Section VI. C.).

BPCA reserves the right to reject any Proposals that fail to include any required item described in this Section V. b., including Cover Letters that are unsigned or that fail to include each of the above representations (including the required appendix if there are objections to BPCA’s form of contract).

## **VI. INFORMATION REQUIRED**

### ***A. Questions and Information Sought Relating to the Work***

- 1) Describe your firm’s background, services, size, and history as these factors are relevant to the Work, with an emphasis on your firm’s performance of leak remediation and/or waterproofing projects in occupied buildings, especially in New York City.
- 2) Describe your experience providing contractor services for leak remediation and/or waterproofing projects involving public spaces, terraces and/or plazas.
- 3) Describe your experience providing contractor services for exterior restoration and masonry projects.

- 4) Describe your proposed approach and methodology for the Project, including scheduling, sequencing, phasing, staffing, and sub-contracting. Please specify any reasonable suggested means for expediting the performance of the Project and/or compressing the construction schedule.
- 5) Describe your approach to minimizing adverse access, use, noise, odor and safety impacts to the adjacent residential buildings, users of the Community Center, users of the adjacent ball fields and the general public during the Project.
- 6) Describe your approach to sequencing the Work in a manner that will allow periodic opportunities for engineers' analysis of exposed conditions to determine and document the ultimate cause(s) of water infiltration.
- 7) Describe your approach to coordinating with the design and construction teams for the BPCA Ball Field and Community Center Resiliency Project, including, at BPCA's direction, any necessary access and site coordination, periodic opportunities for inspection of exposed conditions, and sharing of drawings, reports and other information.
- 8) Please describe any relevant special services your firm provides, particularly those that may not be offered by other firms.
- 9) List each key member of the team you intend to assign to this engagement and include for each listed individual: (a) area(s) of special training, knowledge or experience; (b) title and/or position within your firm; (c) the services to be performed.
- 10) Identify the person who will be the lead project manager (the "Lead PM") and primary contact in providing services to BPCA, and any other persons who will be listed as a "key person" in any contract with BPCA.
- 11) Identify any subcontractors you intend to use for this engagement, and describe the services to be performed by each subcontractor.
- 12) Describe your proposed team's experience with similar work for other public entities, with an emphasis on New York State public entities.
- 13) Clearly identify any information in your Proposal that you believe to be confidential and exempt from FOIL, and state the reasons. Please note that this question is for informational purposes only, and BPCA will determine FOIL applicability in its sole discretion.
- 14) Identify any and all exceptions taken to BPCA's standard form of contract, attached as Exhibit I, explaining the reasons for such exceptions. Such exceptions must be detailed in an appendix to your Proposal labeled, "Appendix: Objections to BPCA Form of Contract." No exceptions to the Contract will be considered by BPCA after submission of the Proposals. BPCA maintains the right to reject Proposals based on non-conformance with the standard form of Contract.
- 15) Provide at least three (3) client references for whom your firm has performed similar work to that requested in this RFP. For each client, describe the project, the project's date, and services performed, and provide the name, address, and telephone number for a person at client's firm familiar with such work.

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

- 1) Within the past three (3) years, have there been any significant developments in your firm such as changes in ownership or restructuring? Do you anticipate any significant changes in the near future? If so, please describe.
- 2) How does your firm identify and manage conflicts of interest?
- 3) Are there any potential conflict of interest issues posed by your firm's performance of the Work on behalf of BPCA?
- 4) Has your firm or have any of the firm's partners/employees been disciplined or censured by any regulatory body within the last five (5) years? If so, please describe the relevant facts.
- 5) Within the last five (5) years, has your firm, or a partner or employee in your firm, been involved in litigation or other legal proceedings relating to the provision of professional services? If so, please provide an explanation and the current status or disposition of the matter.
- 6) List any professional or personal relationships any of your firm's employees may have with BPCA's Board Members and/or employees. List attached as Exhibit H.
- 7) If selected, will your firm assign any person to this engagement who was previously an employee of BPCA or BPCPC? If so, please: i) identify when (month and year) that person's employment at BPCA/BPCPC terminated, and ii) describe that person's involvement, if any, with matters related to this RFP during his/her employment at BPCA/BPCPC.
- 8) In the past five (5) years, have any public sector clients terminated their working relationship with your firm? If so, please provide a brief statement of the reasons. Provide the name of the client and provide a contract person, address and telephone number.

***C. Required Attachments***

- 1) Mandatory Forms:

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

- a) NYS Standard Vendor Responsibility Questionnaire, notarized and signed by the individual(s) authorized to contractually bind the Proposer, indicating the signer's title/position within the firm.\*
- b) State Finance Law § 139 Form 1, signed by the individual(s) authorized to contractually bind the Proposer.\*
- c) W-9 form.
- d) Statement of Non-Collusion.
- e) MBE/WBE/SDVOB Utilization Plans. Please note that all such plans must be submitted even if Proposer is a MBE/WBE/SDVOB.

\*In addition to the copy required to be included in each bound Proposal, Proposers must additionally provide one (1) unbound, completed original, with ink signatures, of the NYS Standard Vendor Responsibility Questionnaire and SFL 139 Form 1.

- 2) Response to the question regarding the use of New York State businesses set forth in Section IX.
- 3) Completed MBE/WBE and EEO Policy Statement and Diversity Practices Questionnaire (attached as part of Exhibit B).
- 4) Financial Statements:

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

- 5) Acknowledgement of Addenda:

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

- 6) Appendices:

- a) Attach professional biographies for all employees identified in your Proposal.
- b) Attach a project schedule bar chart schedule showing completion dates for key tasks, milestones, etc. and final completion of all Work.

## **VII. INSURANCE AND BONDING REQUIREMENTS**

### ***A. General Requirements***

The selected Proposer will be required to obtain and provide proof of the types and amounts of insurance listed below: (i) as a condition precedent to the award of the contract for the work, and (ii) continuing throughout the entire term of the Contract. The insurance policies listed below must also conform to the applicable term of the Contract, as show in BPCA's sample form of contract attached as Exhibit (I).

The total cost of the required insurance listed in paragraphs 2) and 3) below, must be incorporated into the Cost Proposal. The additional insured protection afforded BPCA, BPCPC, and the State of New York must be on a primary and non-contributory basis. All policies must include a waiver of subrogation in favor of BPCA, BPCPC, and the State of New York, no policies may contain any limitations / exclusions for New York Labor Law claims.

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

### ***B. Insurance Requirements for the Selected Proposer***

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

BPCA, BPCPC, and the State of New York must be protected as additional insureds on ISO Form CG 2010 (11/85) or its equivalent on policies held by the selected Proposer and any of its subcontractors. Should the Proposer's work include construction activities of any kind then the Proposer must maintain Products / Completed Operations coverage for no less than three years after the construction work is completed, and continue to include Additional Insured protection for BPCA, BPCPC & The State of New York for the prescribed timeframe. When providing evidence of insurance the Proposer must include a completed Acord 855 NY form.

- **Automobile Liability Insurance** with a combined single limit of not less than \$1,000,000. Coverage must apply to the Proposer's owned, hired, and non-owned vehicles and protect BPCA, BPCPC, and the State of New York as additional insured.
- **Workers' Compensation, Employer's Liability, and Disability Benefits** shall not be less than statutory limits, including United States Longshore and Harbor Workers Act coverage as applicable to the operations of the Proposer.
- **Umbrella Liability Insurance** at a limit not less than \$2,000,000 per occurrence and in the aggregate. BPCA, BPCPC, and the State of New York must be protected as additional insureds on policies held by the selected Proposer and any of its subcontractors.
- **Builder's Risk / Installation Floater Insurance** in an amount not less than \$50,000. Coverage must be written on ISO Special Form CP 10 30 04 02 or its equivalent on a completed value non-reporting basis and provide coverage for the Proposer, all subcontractors, BPCA, BPCPC, and the State of New York. Coverage must apply to property while on site, off site, and in transit, include an agreed amount provision which eliminates any coinsurance provision, and include BPCA as a loss payee. Coverage must include the insurable interests of all subcontractors retained by the Proposer.

### ***C. Insurance Requirements for all Subcontractors***

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

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

- \$2,000,000 products/completed operations aggregate

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

- **Automobile Liability Insurance** with a combined single limit of not less than \$1,000,000. Coverage must apply to the subcontractor's owned, hired, and non-owned vehicles and protect BPCA, BPCPC, and the State of New York as additional insureds.
- **Workers' Compensation, Employer's Liability, and Disability Benefits** shall not be less than statutory limits, including United States Longshore and Harbor Workers Act coverage as applicable to the operations of the subcontractor.
- **Subcontractors will also be required to obtain all other insurances listed in Section VII(B) unless otherwise approved in writing by BPCA prior to commencement of any Subcontractor's work.**

**D. Provide a letter from your surety(ies) stating that you are able to provide payment and performance bonds as required in the standard form of contract [Exhibit C.]**

## **VIII. COST PROPOSAL; FORMAT AND REQUIRED INCLUSIONS**

Each Cost Proposal must state a lump sum cost for the performance of all Work and include each of the following:

- 1) Proposer must submit with its Cost Proposal an itemized cost for the Work, according to the Bid Breakdown attached to this RFP as Exhibit F. The total sum of these items will be equivalent to the Base Proposal.
- 2) Proposer must submit with its Cost proposal a completed Form of Unit Pricing according to the attached Unit Pricing Form attached to this RFP as Exhibit G.
- 3) Proposer must submit with its Cost Proposal a completed Form of Technical Salaries, showing labor rates for all trades, including all costs except overhead and profit. Prices shown should include base hourly rates, overtime rates, insurance and benefits. The Labor Rates Form is attached to this RFP as Exhibit H.

**The Cost Proposal must be submitted in its own separate, sealed envelope within the sealed package containing all other Proposal documents. Please provide six (6) copies of the Cost Proposal.**



## **IX. SELECTION PROCESS**

### ***A. Evaluation***

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

### ***B. Interviews***

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

### ***C. Evaluation Criteria for Selection***

Selection will be based upon the following criteria:

#### 1) Technical Evaluation:

- |  |     |
|--|-----|
| A) Contractor experience with leak remediation and/or waterproofing projects in occupied buildings, especially in New York City:                                 | 25% |
| B) Contractor experience with leak remediation and/or waterproofing projects in public spaces, terraces and/or plazas:   | 15% |
| C) Contractor experience with exterior restoration and masonry projects:   | 15% |
| D) Approach to Work, including scheduling, phasing, staffing, sub-contracting and coordination with oversight engineers and adjacent ball field resiliency work: | 35% |
| E) Response to Diversity Practices Questionnaire:  | 10% |

#### 2) Cost Proposal evaluation.

### ***D. Basis for Contract Award***

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

## **X. NON-COLLUSION**

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

## **XI. IRAN DIVESTMENT ACT**

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

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

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

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

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

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

Utilizing New York State businesses in State contracts will help create more private sector jobs, rebuild New York’s infrastructure, and maximize economic activity to the mutual benefit of the contractor and its New York State business partners. New York State businesses will promote the contractor’s optimal performance

under the Contract, thereby fully benefiting the public sector programs that are supported by associated procurements.

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

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

Will New York State businesses be used in the performance of this contract?      ☐ Yes      ☐ No

## **EXHIBIT A**

(Scope of Work)

### **Background and Context**

In order to accommodate needed recreational resources and facilities and related public spaces for the Battery Park City community and in conjunction with adjacent private development, BPCA, from 2008 to 2013 constructed a community center, public ball fields and a public terrace on the parcels known as Sites 23 and 24 in Battery Park City. BPCA performed development of these facilities in concert and cooperation with the private development of the residential buildings located at 200 and 300 North End Avenue. The Battery Park City Ball Fields (the “Ball Fields”) were completed in 2011; the Ball Field Terrace (the “Terrace”), located to the west of the Ball Fields and between 200 and 300 North End Avenue, was completed in 2012; and the Community Center (the “CC Facility”), whose address is 212 North End Avenue and which is located within the first floor, cellar and sub-cellar levels of 200 North End Avenue, within the cellar and sub-cellar levels of 300 North End Avenue and in the cellar and sub-cellar levels between the buildings and beneath the Terrace, was completed and turned over to its operator Asphalt Green in 2013. A site plan reflecting the locations and configurations of the CC Facility, the Ball Fields and the Terrace is attached hereto as Exhibit F.

The envelope of the CC Facility was constructed by the Milstein Corporation, which is the developer and owner of the residential towers located at 200 and 300 North End Avenue. BPCA performed the construction of the Terrace, the construction of the Ball Fields and the fit-out construction of the CC Facility.

Since 2011, the cellar-level facade of the CC Facility has experienced leaking and water infiltration. Following the opening of the CC Facility by Asphalt Green in 2013, additional points of water infiltration have been discovered within the building. BPCA subsequently retained WJE Engineers & Architects, PC to investigate the cause of the infiltration and to recommend means of remediating the leak issues. In early 2018, following the discovery of an additional, previously unknown source of water infiltration into the CC Facility, WJE recommended a complete re-waterproofing of the Terrace, along with remediation at the vertical storefront on the cellar (Ball Field) level of the CC Facility. BPCA has retained Architectural Preservation Studio (“APS”) as its design architect/engineer to prepare drawings and specifications for the performance of the remedial excavation/demolition, waterproofing and restoration work necessary to remediate the leaks within the CC Facility.

Portions of the Project will be performed in accordance with the terms of a License and Access Agreement between BPCA and MP Freedom LLC and MP Liberty LLC (the “MP Properties”), the developers of the adjacent resident towers known as 200 and 300 North End Avenue (the “Access Agreement”), and on-site construction work will be restricted to the hours of 8:00 am to 5:00 pm. Moreover, both BPCA and the Milstein Corporation will have their respective forensic engineers providing periodic oversight, inspection and documentation of site conditions as they become exposed in order to gain a better understanding of the cause(s) of the water infiltration into the CC Facility.

BPCA is currently engaged in a separate BPCA Ball Field and Community Center Resiliency Project (the “Resiliency Project”) -- now in the design and engineering phase -- that is intended to protect the Ball Fields and the CC Facility from flooding due to future storm events. While the scopes of the Leak Remediation/Waterproofing Project and the Resiliency Project are distinct, BPCA expects there will be opportunities for reciprocal benefits to each project resulting from periodic coordination and sharing of information between the two project teams.

## **Work Description**

### **I. Work Elements.**

The successful Proposer will be required to perform all work at the site of the Terrace and eastern façade of the CC Facility (the “Work Site”) in accordance with the drawings and specifications (the “Construction Documents”) generated by APS (the “Design Engineer”) and provided in Exhibit G (the “Work”). In summary, in its performance of the Work, the selected Proposer shall:

- Mobilize equipment, and materials to Site and provide temporary protection to surrounding areas and buildings; provide construction fencing to cordon off work areas, all as described in the Construction Documents.
- Perform demolition as indicated in the Construction Documents and remove asphalt pavers and granite bricks in a manner that will leave them in a condition to be reinstalled and reused following completion of the waterproofing work.
- Safely, and as unobtrusively as possible, protect any materials stored on the Work Site, including all masonry removed as part of the demolition.
- Remove the overburden of the entire Terrace horizontal surface to expose existing waterproofing per the Construction Documents.
- Remove green granite brick at lower level courtyard wall around windows and doors, and at parapet walls, to expose structural wall and waterproofing as per Construction Documents.
- Remove granite cladding, concrete curb wall, and rebar down to the structural slab, at circular planting bed on the south side of the terrace and waterproof over.
- Install new waterproofing at the expansion joint area on the terrace level, the entire horizontal surface of the upper terrace, and around windows, doors etc. on the lower courtyard level as indicated in the Construction Documents.
- Water test all affected areas as indicated in the Construction Documents and as directed by the Design Engineer and prepare areas for design team inspection and witnessing of water testing.
- Replace plaza drains, planter drains, scupper drains, and trench drains as per Construction Documents.
- Repair and/or remediate any and all areas that fail a leak test, as directed by the Design Engineer.
- Once all areas are confirmed watertight by the Design Engineer and any assigned construction manager, restore all overburden, including all drainage mat, filter fabric, foam insulation board, concrete slab, concrete planter walls, asphalt pavers, granite brick, capstones, mortar netting, tie backs, weeps, etc., as per Construction Documents.
- Furnish new pavers (upper terrace) and granite brick (lower courtyard and parapet walls) adequate to compensate for amounts lost during the demolition and restoration phases.
- Provide appropriate warranties for all materials including all manufacturers’ warranties and warranties per contract on installation.
- Provide as-built drawings documenting completed Project Work.
- Clean all efflorescence from stone surfaces. Upon satisfactory completion of the restoration, clean entire Work Site and demobilize all materials, equipment and debris.

### **II. General Considerations:**

- Time shall be of the essence in the performance and completion of the Work.
- The CC Facility, the Ball Fields and the Terrace are heavily used by community residents and visitors, with certain seasonal variations, and will remain in operation through the duration of the Project. It will be necessary for the selected Proposer to coordinate with BPCA and sequence the Work in order to minimize to the extent possible any impacts on the usage of these facilities.

- The selected Proposer must also protect Base Building elements and accommodate Base Building operations for the duration of the Project.
- Materials storage and laydown area will be extremely limited given the activity in the immediate area.
- The selected Proposer must anticipate and allow time and opportunity for the periodic oversight and inspection of site conditions by BPCA's and the Milstein Corporation's forensic engineers.
- The selected Proposer must allow time and opportunity for periodic consultation and coordination between the Project team and the design team for the Resiliency Project.

## **EXHIBIT B**

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

#### **NEW YORK STATE LAW**

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

#### **Business Participation Opportunities for MWBEs**

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

Overall goal for total MWBE participation: **30%**

NYS-Certified Minority-Owned Business (“MBE”) Participation: **15%**

NYS-Certified Women-Owned Business (“WBE”) Participation: **15%**

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

The Proposer understands that only sums paid to MWBEs for the performance of a commercially useful function, as that term is defined in 5 NYCRR § 140.1, may be applied towards the achievement of the applicable MWBE participation goal. The portion of a contract with an MWBE serving as a supplier that shall be deemed to represent the commercially useful function performed by the MWBE shall be 30 percent of the total value of the contract. The portion of a contract with an MWBE serving as a broker that shall be deemed to represent the commercially useful function performed by the MWBE shall be the monetary value for fees, or the markup percentage, charged by the MWBE.

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

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

By submitting a bid or proposal, a Proposer agrees to demonstrate its good faith efforts to achieve the applicable MWBE participation goals by submitting evidence thereof through the New York State Contract System (“NYSCS”), which can be viewed at <https://ny.newnycontracts.com>, provided, however, that a Proposer may arrange to provide such evidence via a non-electronic method by contacting Mr. Anthony Peterson at [Anthony.peterson@bpca.ny.gov](mailto:Anthony.peterson@bpca.ny.gov)

or 212-417-2337. Please note that the NYSCS is a one-stop solution for all of your MBE/WBE and Article 15-A contract requirements. For additional information on the use of the NYSCS to meet the Proposer's MBE/WBE requirements, please see the attached MBE/WBE guidance from the New York State Division of Minority and Women's Business Development, "Your MWBE Utilization and Reporting Responsibilities Under Article 15-A."

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

- A. An MWBE Utilization Plan with their bid or proposal. Any modifications or changes to an accepted MWBE Utilization Plan after the Contract award and during the term of the Contract must be reported on a revised MWBE Utilization Plan and submitted to BPCA for review and approval.
- B. BPCA will review the submitted MWBE Utilization Plan and advise the Proposer of BPCA acceptance or issue a notice of deficiency within 30 days of receipt.
- C. If a notice of deficiency is issued, the Proposer will be required to respond to the notice of deficiency within seven (7) business days of receipt by submitting to Mr. Anthony Peterson at BPCA, by email at [Anthony.peterson@bpcanyc.gov](mailto:Anthony.peterson@bpcanyc.gov), a written remedy in response to the notice of deficiency. If the written remedy that is submitted is not timely or is found by BPCA to be inadequate, BPCA shall notify the Proposer and direct the Proposer to submit, within five (5) business days, a request for a partial or total waiver of MWBE participation goals. Failure to file the waiver form in a timely manner may be grounds for disqualification of the bid or proposal.
- D. BPCA may disqualify a Proposer as being non-responsive under the following circumstances:
  - 1) If a Proposer fails to submit an MWBE Utilization Plan;
  - 2) If a Proposer fails to submit a written remedy to a notice of deficiency;
  - 3) If a Proposer fails to submit a request for waiver; or
  - 4) If BPCA determines that the Proposer has failed to document good faith efforts.

The successful Proposer will be required to attempt to utilize, in good faith, any MBE or WBE identified within its MWBE Utilization Plan, during the performance of the Contract. Requests for a partial or total waiver of established goal requirements made subsequent to Contract Award may be made at any time during the term of the Contract to BPCA, but must be made no later than prior to the submission of a request for final payment on the Contract.

The successful Proposer will be required to submit a quarterly M/WBE Contractor Compliance & Payment Report to BPCA, by the 10<sup>th</sup> day following each end of quarter over the term of the Contract documenting the progress made toward achievement of the MWBE goals of the Contract.

#### **Business Participation Opportunities for SDVOBs**

For purposes of this solicitation, BPCA hereby establishes an overall goal of **6%** for SDVOB participation. A Proposer must document good faith efforts to provide meaningful participation by SDVOBs as subcontractors or suppliers in the performance of the Contract and Proposer agrees that BPCA may withhold payment pending receipt of the required SDVOB documentation. The directory of New York State Certified SDVOBs can be viewed at: [http://www.ogs.ny.gov/Core/docs/CertifiedNYS\\_SDVOB.pdf](http://www.ogs.ny.gov/Core/docs/CertifiedNYS_SDVOB.pdf). For guidance on how BPCA will determine a Contractor's "good faith efforts," refer to 9 NYCRR §252.2(f)(2).



In accordance with 9 NYCRR §252.2(s), the Proposer acknowledges that if it is found to have willfully and intentionally failed to comply with the SDVOB participation goals set forth in the Contract, such finding constitutes a breach of Contract and Contractor shall be liable for damages as specified in the Contract.

Such damages shall be calculated based on the actual cost incurred by BPCA related to BPCA's expenses for personnel, supplies and overhead related to establishing, monitoring and reviewing certified SDVOB programmatic goals.

- A. Additionally, a Proposer agrees to submit a Utilization Plan with their bid or Proposal as evidence of compliance with the foregoing. Any modifications or changes to the Utilization Plan after the Contract award and during the term of the Contract must be reported on a revised Utilization Plan and submitted to BPCA.
- B. BPCA will review the submitted Utilization Plan and advise the Proposer of BPCA's acceptance or issue a notice of deficiency within 30 days of receipt.
- C. If a notice of deficiency is issued, Proposer agrees that it shall respond to the notice of deficiency within seven (7) business days of receipt by submitting to Mr. Anthony Peterson at BPCA, by email at [Anthony.peterson@bpca.ny.gov](mailto:Anthony.peterson@bpca.ny.gov), a written remedy in response to the notice of deficiency. If the written remedy that is submitted is not timely or is found by BPCA to be inadequate, BPCA shall notify the Proposer and direct the Proposer to submit, within five (5) business days, a request for a partial or total waiver of SDVOB participation goals. Failure to file the waiver form in a timely manner may be grounds for disqualification of the bid or Proposal.
- D. BPCA may disqualify a Proposer as being non-responsive under the following circumstances:
  - 1) If a Proposer fails to submit a Utilization Plan;
  - 2) If a Proposer fails to submit a written remedy to a notice of deficiency;
  - 3) If a Proposer fails to submit a request for waiver; or
  - 4) If BPCA determines that the Proposer has failed to document good faith efforts.

The successful Proposer shall attempt to utilize, in good faith, any SDVOB identified within its Utilization Plan, during the performance of the Contract. Requests for a partial or total waiver of established goal requirements made subsequent to the Contract award may be made at any time during the term of the Contract to BPCA, but must be made no later than prior to the submission of a request for final payment on the Contract.

The successful Proposer is required to submit a Contractor's SDVOB Contractor Compliance & Payment Report to BPCA on a monthly basis over the term of the Contract documenting the progress made toward achievement of the SDVOB goals of the Contract.

### **Equal Employment Opportunity Requirements**

By submission of a bid or proposal in response to this solicitation, the Proposer agrees with all of the terms and conditions of the attached MWBE Equal Employment Opportunity Policy Statement. The Proposer is required to ensure that it and any subcontractors awarded a subcontract for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work"), except where the Work is for the beneficial use of the Proposer, undertake or continue programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status. For these purposes, equal opportunity shall apply in the areas of recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, termination, and rates of pay or other forms of compensation. This requirement does not apply to: (i) work, goods, or services unrelated to the Contract; or (ii) employment outside New York State.

The Proposer will be required to submit a Minority and Women-owned Business Enterprise and Equal Employment Opportunity Policy Statement, Form # 4, to BPCA with its bid or proposal.

If awarded a Contract, Proposer shall submit a Workforce Utilization Report and shall require each of its Subcontractors to submit a Workforce Utilization Report, in such format as shall be required by BPCA on a monthly basis during the term of the Contract.

Pursuant to Executive Order #162, contractors and subcontractors will also be required to report the gross wages paid to each of their employees for the work performed by such employees on the contract utilizing the Workforce Utilization Report on a quarterly basis.

Further, pursuant to Article 15 of the Executive Law (the "Human Rights Law"), all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor and sub-contractors will not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

**Please Note: Failure to comply with the foregoing requirements may result in a finding of non-responsiveness, non-responsibility and/or a breach of the Contract, leading to the withholding of funds, suspension or termination of the Contract or such other actions or enforcement proceedings as allowed by the Contract.**



## **Your MBE/WBE Utilization and Reporting Responsibilities Under Article 15-A**

The New York State Contract System (“NYSCS”) is your one stop tool compliance with New York State’s MBE/WBE Program. It is also the platform New York State uses to monitor state contracts and MBE/WBE participation.

### **GETTING STARTED**

To access the system, please login or create a user name and password at <https://ny.newnycontracts.com/FrontEnd/VendorSearchPublic.asp?TN=ny&XID=7562>. If you are uncertain whether you already have an account set up or still need to register, please send an email to the customer service contact listed on the Contact Us & Support page, or reach out to Mr. Anthony Peterson at [Anthony.Peterson@bpca.ny.gov](mailto:Anthony.Peterson@bpca.ny.gov) or 212 417-2337. For verification, in the email, include your business name and contact information.

### **VENDOR RESPONSIBILITIES**

As a vendor conducting business with New York State, you have a responsibility to utilize minority- and/or women-owned businesses in the execution of your contracts, per the MBE/WBE percentage goals stated in your solicitation, incentive proposal or contract documents. NYSCS is the tool that New York State uses to monitor MBE/WBE participation in state contracting. Through the NYSCS you will submit utilization plans, request subcontractors, record payments to subcontractors, and communicate with your project manager throughout the life of your awarded contracts.

There are several reference materials available to assist you in this process, but to access them, you need to first be registered within the NYSCS. Once you log onto the website, click on the **Help & Support** >> link on the lower left hand corner of the Menu Bar to find recorded trainings and manuals on all features of the NYSCS. You may also click on the **Help & Tools** icon at the top right of your screen to find videos tailored to primes and subcontractors. There are also opportunities available to join live trainings, read up on the “Knowledge Base” through the Forum link, and submit feedback to help improve future enhancements to the system. Technical assistance is always available through the **Contact Us & Support** link on the NYSCS website (<https://ny.newnycontracts.com/FrontEnd/VendorSearchPublic.asp?TN=ny&XID=7562>).

For more information, contact Mr. Anthony Peterson at [Anthony.Peterson@bpca.ny.gov](mailto:Anthony.Peterson@bpca.ny.gov) or 212 417-2337.

## MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISES

### EQUAL EMPLOYMENT OPPORTUNITY POLICY STATEMENT

#### MBE/WBE AND EEO POLICY STATEMENT

I, \_\_\_\_\_ (the "Contractor"), agree to adopt the following policies with respect to the project being developed at, or services rendered to, the Battery Park City Authority ("BPCA").

##### **MBE/WBE**

This organization will and will cause its contractors and subcontractors to take good faith actions to achieve the MBE/WBE contract participations goals set by the State for that area in which the State-funded project is located, by taking the following steps:

- (1) Actively and affirmatively soliciting bids for contracts and subcontracts from qualified State certified MBEs or WBEs, including solicitations to MBE/WBE contractor associations.
- (2) Requesting a list of State-certified MBEs/WBEs from BPCA and soliciting bids from these MBEs/WBEs directly.
- (3) Ensuring that plans, specifications, request for proposals and other documents used to secure bids will be made available in sufficient time for review by prospective MBEs/WBEs.
- (4) Where feasible, dividing the work into smaller portions to enhance participations by MBEs/WBEs and encourage the formation of joint venture and other partnerships among MBE/WBE contractors to enhance their participation.
- (5) Documenting and maintaining records of bid solicitation, including those to MBEs/WBEs and the results thereof. The Contractor will also maintain records of actions that its subcontractors have taken toward meeting MBE/WBE contract participation goals.
- (6) Ensuring that progress payments to MBEs/WBEs are made on a timely basis so that undue financial hardship is avoided, and that bonding and other credit requirements are waived or appropriate alternatives are developed to encourage MBE/WBE participation.

##### **EEO**

(a) This organization will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability or marital status, will undertake or continue existing diversity programs to ensure that minority group members are afforded equal employment opportunities without discrimination, and shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on State contracts.

- (b) This organization shall state in all solicitation or advertisements for employees that in the performance of the State contract all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex disability or marital status.
- (c) At the request of BPCA, this organization shall request that each employment agency, labor union, or authorized representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of this organization's obligations herein.
- (d) The Contractor shall comply with the provisions of the Human Rights Law, all other State and Federal statutory and constitutional non-discrimination provisions. The Contractor and subcontractors shall not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.
- (e) This organization will include the provisions of sections (a) through (d) of this agreement in every subcontract in such a manner that the requirements of the subdivisions will be binding upon each subcontractor as to work in connection with the State contract.

Battery Park City Authority Request For Proposals

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Agreed to this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_

By \_\_\_\_\_

Print: \_\_\_\_\_ Title: \_\_\_\_\_

\_\_\_\_\_ is designated as the Consultant's Minority Business Enterprise Liaison responsible for administering the Minority and Women-Owned Business Enterprises - Equal Employment Opportunity (MBE/WBE - EEO) program.

**MBE/WBE Contract Goals**

**30% Minority and Women's Business Enterprise Participation**

\_\_\_\_% Minority Business Enterprise Participation

\_\_\_\_% Women's Business Enterprise Participation

**EEO Contract Goals** (if applicable)

\_\_\_\_% Minority Labor Force Participation

\_\_\_\_% Female Labor Force Participation

\_\_\_\_\_  
(Authorized Representative)

Title: \_\_\_\_\_

Date: \_\_\_\_\_

### **Diversity Practices Questionnaire**

I, \_\_\_\_\_, as \_\_\_\_\_ (title) of \_\_\_\_\_ company (the "Company"), swear and/or affirm under penalty of perjury that the answers submitted to the following questions are complete and accurate to the best of my knowledge:

1. Does your Company have a Chief Diversity Officer or other individual who is tasked with supplier diversity initiatives? Yes or No

If Yes, provide the name, title, description of duties, and evidence of initiatives performed by this individual or individuals.

2. What percentage of your Company's gross revenues (from your prior fiscal year) was paid to New York State certified MBEs/WBEs as subcontractors, suppliers, joint-ventures, partners or other similar arrangement for the provision of goods or services to your Company's clients or customers?

3. What percentage of your Company's overhead (i.e. those expenditures that are not directly related to the provision of goods or services to your Company's clients or customers) or non-contract-related expenses (from your prior fiscal year) was paid to New York State certified MBEs/WBEs as suppliers/contractors?<sup>1</sup>

4. Does your Company provide technical training<sup>2</sup> to MBEs/WBEs? Yes or No

If Yes, provide a description of such training which should include, but not be limited to, the date the program was initiated, the names and the number of MBEs/WBEs participating in such training, the number of years such training has been offered and the number of hours per year for which such training occurs.

5. Is your Company participating in a government approved M/WBE mentor-protégé program?

If Yes, identify the governmental mentoring program in which your Company participates and provide evidence demonstrating the extent of your Company's commitment to the governmental mentoring program.

6. Does your Company include specific quantitative goals for the utilization of MBEs/WBEs in its non-government procurements? Yes or No

If Yes, provide a description of such non-government procurements (including time period, goal, scope and dollar amount) and indicate the percentage of the goals that were attained.

7. Does your Company have a formal M/WBE supplier diversity program? Yes or No

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

8. Does your Company plan to enter into partnering or subcontracting agreements with New York State certified MBEs/WBEs if selected as the successful Proposer? Yes or No

If Yes, complete the attached Utilization Plan

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<sup>1</sup> Do not include onsite project overhead.

<sup>2</sup> Technical training is the process of teaching employees how to more accurately and thoroughly perform the technical components of their jobs. Training can include technology applications, products, sales and service tactics, and more. Technical skills are job-specific as opposed to soft skills, which are transferable.

Battery Park City Authority Request For Proposals

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All information provided in connection with the Diversity Practices Questionnaire is subject to audit and any fraudulent statements are subject to criminal prosecution and debarment.

Signature of  
Owner/Official  
Printed Name of  
Signatory  
Title

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Name of Business

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Address

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City, State, Zip

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STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_ ) ss:

On the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the undersigned, a Notary Public in and for the State of \_\_\_\_\_, personally appeared \_\_\_\_\_, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to this certification and said person executed this instrument.

\_\_\_\_\_  
Notary Public

**EXHIBIT C**

**Cost Proposal**

**COST PROPOSAL**

(Proposer to submit executed Cost Proposal on its letterhead)

Date:

Battery Park City Authority  
200 Liberty Street - 24th Floor  
New York, New York 10281

Attention: Michael LaMancusa  
Contract Administrator

Dear Mr. LaMancusa:

The undersigned (the "Proposer") hereby proposes to provide all specified work necessary to perform the work for the **Battery Park City Site 23/24 Community Center Leak Remediation/Waterproofing General Contracting Project**. The Proposer agrees to commence the Work immediately upon receipt of the executed Contract in accordance with the terms stipulated in the following pages, for the sum written below.

**A. Project Cost**

A lump sum amount to perform all Project Work as described in the RFP \$\_\_\_\_\_

**B. Itemized Proposal, Unit Pricing, and Labor Rates**

1. The Proposer has submitted with its proposal an itemized cost breakdown (Schedule of Values) Exhibit D, for the Scope of Work described in Exhibit A and all associated Construction Documents (Drawings and Specifications), Exhibit H. These items comprise the total bid amount.
2. The Proposer has submitted with its Cost Proposal, unit pricing as listed in Exhibit E.
3. The Proposer has submitted with its Cost Proposal, labor rates, Exhibit F for all trades, including all costs except overhead and profit. Prices shown include base hourly rate, insurance and benefits, and overtime rates shall be specified.

Name of Proposer:

\_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_



## **EXHIBIT D**

### **Bid Breakdown**

#### **PROJECT COPE OF WORK**

Battery Park City Authority, 200 - 300 North End Avenue, New York, NY 10282

<b><u>DESCRIPTION</u></b>		<b><u>UNIT</u></b>	<b><u>UNIT PRICE</u></b>	<b><u>QTY</u></b>
<b>A. <u>GENERAL CONDITIONS, MOBILIZATION, AND ADMINISTRATIVE SERVICES:</u></b>				
1	Mobilization and general administrative requirements	LS		-
2	Remove and reinstall railings handrails, trellises, etc: Remove site fixtures as required to accomplish the removal and reinstallation work, including but not limited to railings/handrails, trellises, benches, irrigation systems, and associated components.	LS		-
3	Removal and reinstallation of existing electrical junction boxes, and conduit as required in order to accomplish the work.	LS		-
4	Coordination with BPCA's Landscaping team to carefully remove mature trees and bushes to be temporarily planted in wood containers constructed by the contractor to be located per BPCA's instruction.	LS		-
<b>SUB-TOTAL</b>				
<b>B. <u>PLAZA WATERPROOFING@ UPPER PLAZA</u></b>				
1	Carefully remove and salvage metal and granite base panels for reinstallation along buildings perimeters.	LF		
2	Pavers: Carefully remove and salvage existing asphalt pavers (plaza, ramps, landings, etc.). Reinstall in running bond pattern (as existing) over ¾" min. pourable asphalt setting bed. Assume 20% of paver replacement.	SF		
3	Remove existing plaza/planter waterproofing	SF		
4	Plaza/planter deck waterproofing: Prepare and prime concrete plaza and planter decks and install temp membrane/base ply.	SF		
5	Plaza/planter deck waterproofing: Install intermediate and final ply of waterproofing system	SF		
6	Remove and dispose of existing granite bricks. Replace granite bricks at planters and parapets to match existing.	SF		

Battery Park City Authority Request For Proposals

7	Planter #1 - granite panels: Remove, salvage and reinstall stone panels, to be waterproofed.	LF		
8	Reinforced Liquid Membrane: Flashing: Prepare and prime backup and install reinforced liquid membrane flashing at all vertical to horizontal transitions. Planter Curb Waterproofing: At planters #1, #3, #4, #5, #6, and #7, continue membrane up inboard planter wall and over curb.	LF		
9	Parapet waterproofing (east central stair): Remove granite bricks down to lintel. Waterproof lintel and continue waterproofing up and over concrete backup. Terminate min. of 4" over fluid applied flashing (plaza). Install mortar net, insulation and staggered weeps above lintel. (Install granite bricks to match.)	SF		
10	Reset granite coping stones: Remove and salvage all granite coping stones at existing planter and parapet walls and re-install on thru-wall metal flashing. Secure with threaded eyebolt rods and dowels set in epoxy.	LF		
11	Existing overburden removal (plaza): Remove existing asphalt setting bed, concrete topping slab, insulation, drainage mat and waterproofing down to structural concrete deck.	SF		
12	Soil removal at planters: Remove existing soil, overburden, deck at all planters. Replace soil and gravel bed. Coordinate work with BPCA landscaping team.	LS		-
13	Reset granite step stones and landing stones at N. End Ave.: Carefully remove and salvage granite step stones for re-setting. Maintain concrete substructure, waterproof and secure stones as per drawings.	EA		
14	Reset granite steps stones at Warren Street: Carefully remove and salvage granite step stones for re-setting. Maintain concrete substructure, waterproof and secure stones as per drawings.	EA		
15	Reset granite step stones at Murray Street: Carefully remove and salvage granite step stones for re-setting. Maintain concrete substructure, waterproof and secure stones as per drawings.	EA		
	Concrete repairs at deck, and planter walls: Repair concrete with modified repair mortar as per drawings (assume 15%).	SF		

Battery Park City Authority Request For Proposals

16	Install drainage mat, insulation and filter fabric	SF		
17	Topping slab: Form and pour porous/pervious concrete (slope to drains) over gravel bed.	SF		
18	Remove and replace plaza and planter drains: Remove all existing plaza and planter drain bodies at upper plaza at locations indicated on drawings, replace, connect to piping and waterproof. Snake back piping to 20'.	EA		
19	Replace scupper drains: Remove all existing scupper drain bodies at upper plaza at locations indicated on drawings, replace, connect to piping and waterproof. Snake back piping to 20'.	EA		
20	Relocate plaza drain.	EA		
21	Permanently remove and cap plaza drain.	EA		
22	Trench drain: Replace trench drain and waterproof. Grating to be slip resistant and ADA complaint. Snake back piping to 20'.	LF		
23	Expansion joint (Type 1) – Install split slab expansion system	LF		
24	Expansion joint (Type 2): Install 1 1/4" minimum pre-compressed expansion joint system with factory applied silicone (between metal cover - plaza edge and pavers).	LF		
25	Expansion joint (Type 3): Compressible filler and sealant at soft control joints and paver to masonry interface as indicated on drawings.	LF		
26	Masonry expansion joints (Type 4): Replace cracked granite bricks Install stabilizers every 6 courses. Install compressible filler and sealant.	LF		
27	Backer rod and sealant: Install backer rod and sealant at window and door frame perimeters at storefront (east central courtyard), transverse coping joints, and as noted on drawings.	LF		
28	<u>Planter #2</u> : Permanently remove planter #2.	LS		
29	Protection at planters (to remain): Provide temporary plywood to seal and protect planter openings until refilled with soil.	EA		
30	Install galvanized steel plate at steel stair landing to parapet connection plate (assume 1/2" x 1'-0")	LF		
31	Install/replace galvanized steel angle (assume 3/8" x 3" x 4")	LF		
32	Railing Posts: Weld 4" x 4" base plates to existing handrail posts and epoxy adhere anchor bolts into topping slab.	EA		
<b>SUB-TOTAL</b>				

**C. LOWER PLAZA**

Battery Park City Authority Request For Proposals

1	<u>Lower plaza waterproofing (area of metal stair/courtyard):</u> Remove metal base panels along facade walls at lower plaza. Remove 3'-0" of hexagonal pavers, slab on grade, and dirt down to footing/structural slab. Remove existing waterproofing as required to adhere new fluid-applied waterproofing membrane onto existing adhered waterproofing membrane. Terminate over window and door sills as per drawings. Reinstall Panels	SF		
2	Install liquid applied flashing	LF		
3	Replace hexagonal pavers	SF		
4	<u>Drains:</u> Replace drain bodies and waterproof, as indicated on drawings. Snake associated drain piping back 20'.	EA		
5	<u>Exterior back-up wall waterproofing (location of central courtyard w/metal stair):</u> Install vapor barrier up at back-up wall/columns at north, south, and west elevations, lap vapor barrier a min. of 4" over new fluid-applied membrane. Replace granite bricks to match existing.	LF		
6	Temporarily remove aluminum door and salvage for reinstallation. Install temporary enclosure or infill.	LS		-
<b>SUB-TOTAL</b>				
<b>D. INTERIOR:</b>				
1	<u>Grout Injection and Crack Repair at Interior Stair and Foundation Wall:</u> Injection grouting at interior stair landing and foundation wall. Area to be treated with crystalline waterproofing.	SF		
2	<u>Tiled pier and finishes:</u> Remove existing tile panels. Patch and waterproofing and rebuild. Repair finishes damaged by water. Repair, prime and paint interior plaster. Replace removed interior finishes to match existing.	LS		-
<b>SUB-TOTAL</b>				
<b>E. SIDEWALK:</b>				
1	Murray Street and Warren St: Replace concrete sidewalk as indicated on drawings. Waterproof, install control joints and expansion joints as required.	SF		
2	North End Ave: Remove bluestone paving and reset as required to allow for waterproofing of trench drain.	LF		
<b>SUB-TOTAL</b>				

Battery Park City Authority Request For Proposals

	<b><u>TOTAL</u></b>
	<b><u>PROJECT</u></b>
	<b><u>COST</u></b>

## **EXHIBIT E**

### **Unit Prices**

#### **Unit Prices**

Provide unit pricing for each item below

	<b><u>Item</u></b>		<b>Price/UOM</b>	<b>Unit of measure</b>
1	New asphalt unit block pavers			SF
2	New hexagonal asphalt pavers			SF
3	Granite brick masonry replacement			SF
4	Lintel Replacement			LF
5	Backer rod and sealant			LF
6	Expansion joint #3- soft control joint			LF
7	Concrete grout injection			LF
8	Concrete Crack Repair			LF
9	Door saddle replacement			LF
10	Stone repair - pinning			LF
11	Planter #1 - cast in place concrete planter curb.			LF
12	New granite coping stones. Secure with threaded eyebolt rod and dowels in epoxy.			LF

**EXHIBIT F**

**Labor Rates**

The following labor rates are to include base wages, benefits, taxes, insurance and payroll costs complete. Overhead and profit are not to be included:

5.01	Project Manager - per hour	\$_____	O/T \$_____
5.02	Superintendent - per hour	\$_____	O/T \$_____
5.03	Roofer - per hour	\$_____	O/T \$_____
5.04	Mason - per hour	\$_____	O/T \$_____
5.05	Welder - per hour	\$_____	O/T \$_____
5.06	Carpenter - per hour	\$_____	O/T \$_____
5.07	Laborer - per hour	\$_____	O/T \$_____
5.08	Plumber - per hour	\$_____	O/T \$_____
5.09	Electrician - per hour	\$_____	O/T \$_____
5.10	Sheet Metal Mechanic	\$_____	O/T \$_____
5.11	Painter	\$_____	O/T \$_____

**EXHIBIT G**

**(Acknowledgement of Addenda)**

**RFP TITLE:** \_\_\_\_\_

<b>Complete Part I <u>or</u> Part II, whichever is applicable, and sign your name in Part III.</b>
--

**Part I**

Listed below are the dates of issue for each Addendum received in connection with this RFP:

Addendum # 1, Dated \_\_\_\_\_, \_\_\_\_\_

Addendum # 2, Dated \_\_\_\_\_, \_\_\_\_\_

Addendum # 3, Dated \_\_\_\_\_, \_\_\_\_\_

Addendum # 4, Dated \_\_\_\_\_, \_\_\_\_\_

Addendum # 5, Dated \_\_\_\_\_, \_\_\_\_\_

Addendum # 6, Dated \_\_\_\_\_, \_\_\_\_\_

**Part II Acknowledgement of No Receipt**

\_\_\_\_\_ No Addendum was received in connection with this RFP

**Part III**

Proposer's Name: \_\_\_\_\_

Proposer's Authorized Representative:

Name: \_\_\_\_\_

Title: \_\_\_\_\_

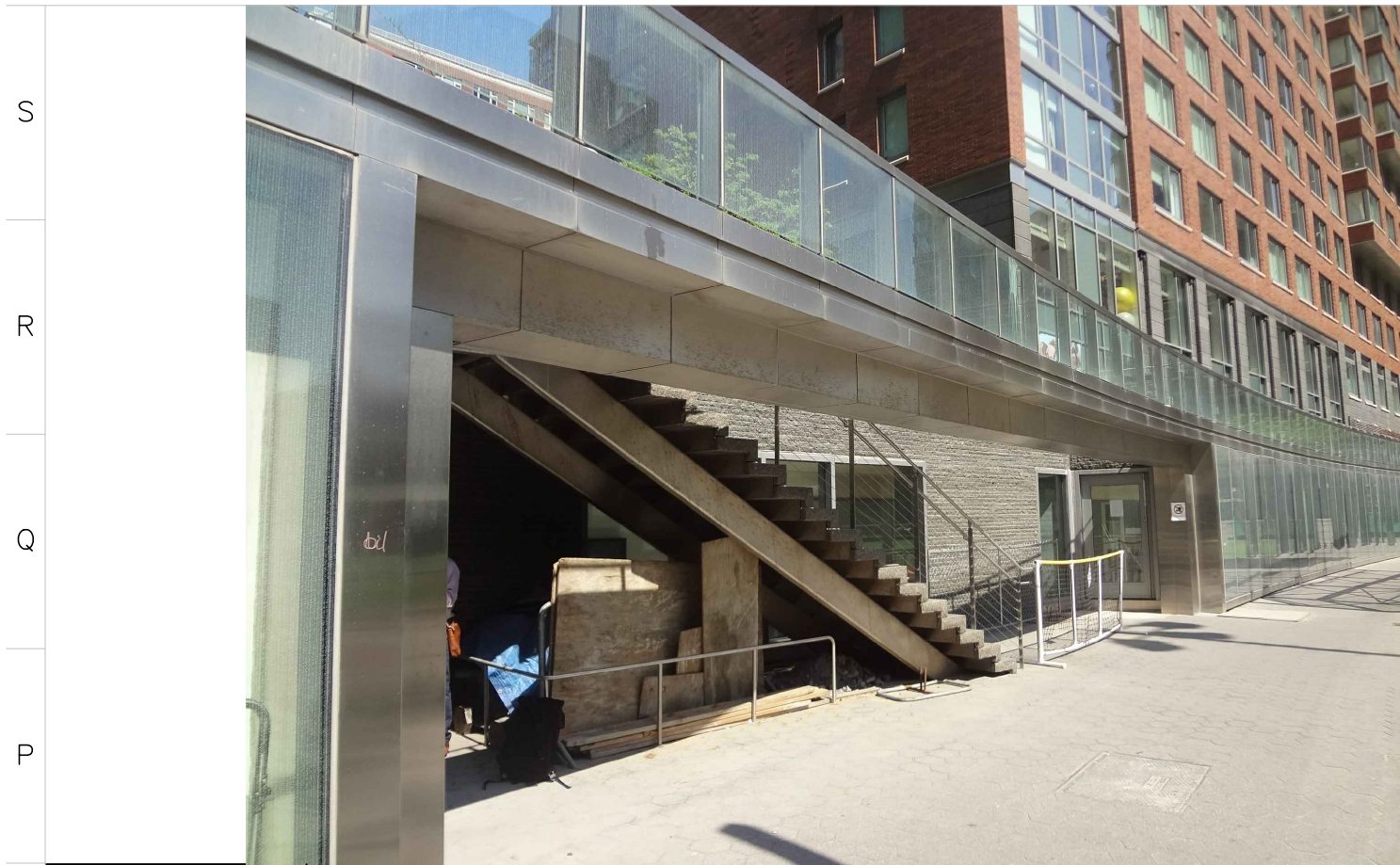
Signature: \_\_\_\_\_ Date: \_\_\_\_\_



**EXHIBIT H**

**(Drawings and Specifications, the “Construction Documents”)**

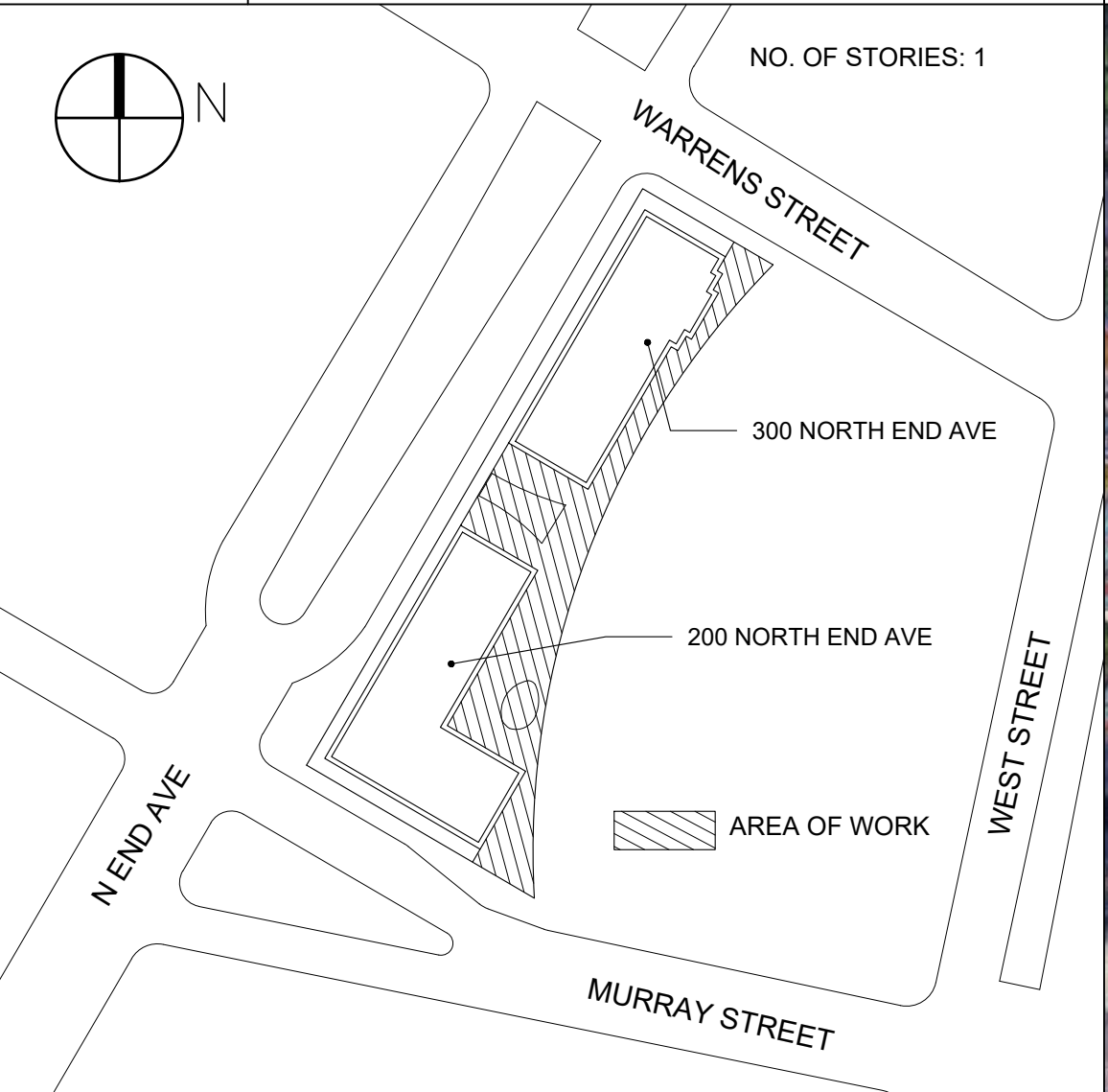
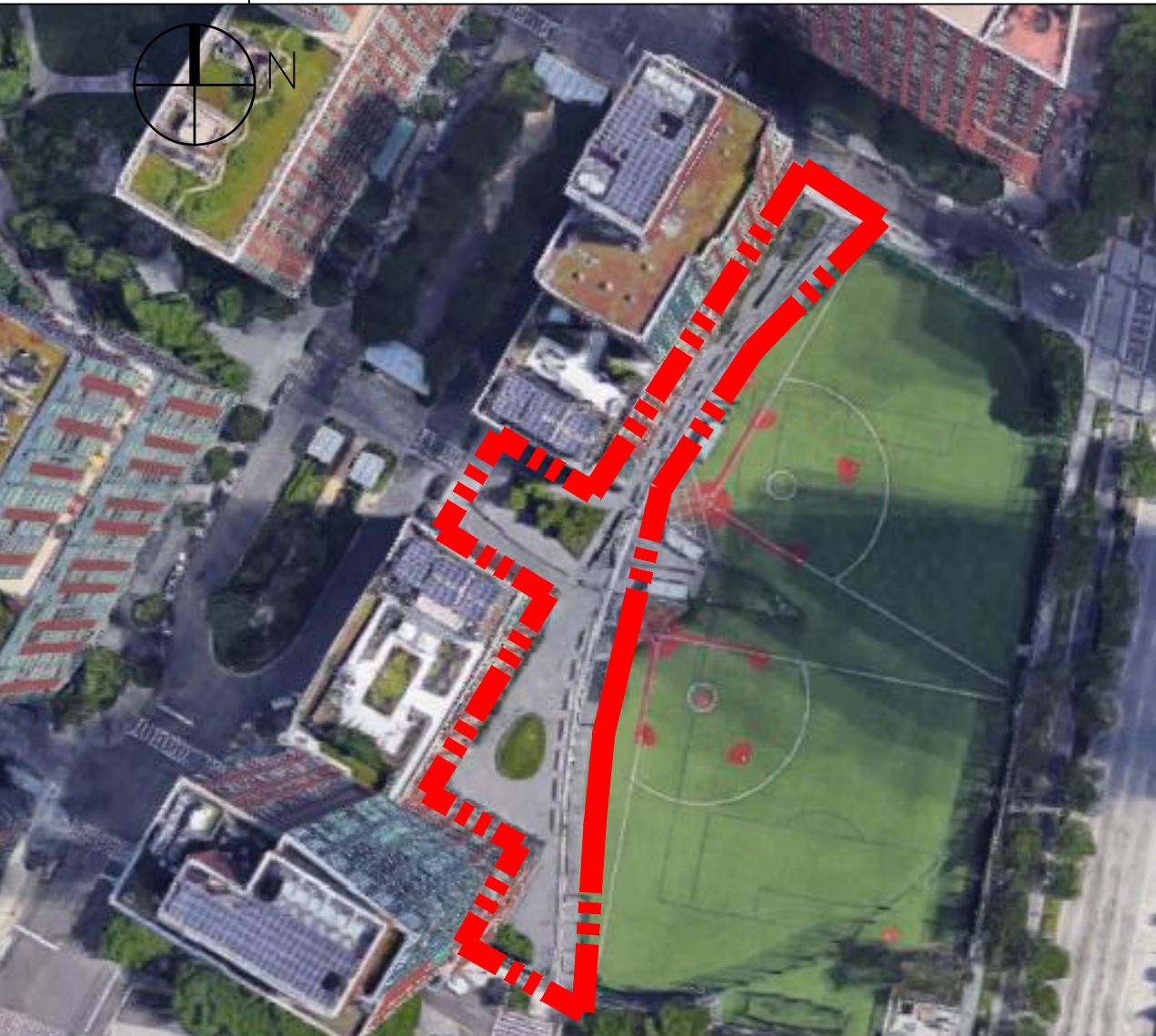
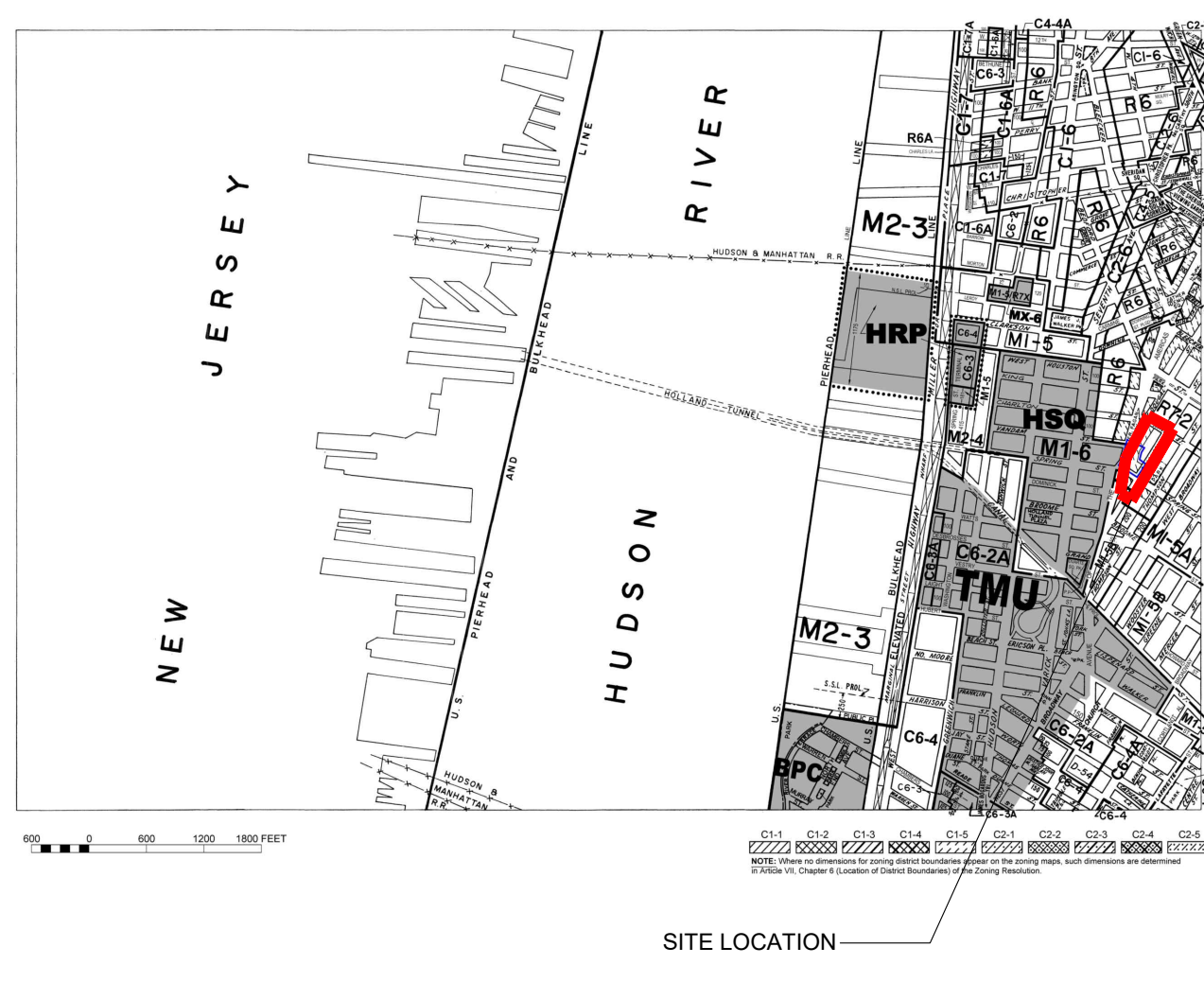




# 200-300 NORTH END AVE

## LEAK REMEDIATION DESIGN

### 200-300 NORTH END AVE, NEW YORK, NY 10282

	1	GENERAL NOTES				2	TENANT SAFETY NOTES				3	BUILDING DEPARTMENT NOTES				4	DRAWING LIST						
							TENANT PROTECTION PLAN [BC 28-104.8.4]																
N		THE FOLLOWING NOTES SHALL APPLY THROUGHOUT. EXCEPTIONS ARE SPECIFICALLY NOTED ON EACH DRAWING.					ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NEW YORK CITY BUILDING CODE AND WITH ALL REGULATIONS OF ANY OTHER AGENCY HAVING JURISDICTION.					1. ALL WORK SHALL COMPLY WITH THE 1968 BUILDING CODE OF THE CITY OF NEW YORK, 2014 FIRE CODE AND 2016 ENERGY CODE.					1. T-001.00 NOTES, LOCATION/ZONING MAP, ENERGY ANALYSIS, DWG. LIST 2. T-002.00 SCOPE OF WORK, ALLOWANCES & NOTES 3. T-003.00 FEMA NOTES & 2013 FEMA FLOOD ZONE MAP 4. T-004.00 2013 FLOOD ZONE MAP 5. A-101.00 EXISTING SITE PLAN 6. A-102.00 PARTIAL PLANS @ UPPER LEVEL 7. A-103.00 PARTIAL PLAN @ UPPER LEVEL 8. A-104.00 PARTIAL PLAN @ UPPER LEVEL 9. A-105.00 PARTIAL PLANS @ UPPER & CELLAR LEVEL 10. A-201.00 COURTYARD ELEVATIONS 11. A-301.00 BASE FLASHING DETAILS 12. A-302.00 DETAILS 13. A-303.00 DETAILS 14. A-304.00 DETAILS 15. A-305.00 PARAPET DETAILS 16. A-306.00 STEEL STAIRS DETAILS 17. A-307.00 DETAILS 18. A-401.00 DETAILS 19. A-402.00 DETAILS 20. A-501.00 DRAIN DETAILS 21. A-901.00 CELLAR PARTIAL PLAN & NORTH ELEV. 22. A-902.00 DOOR & SILL DETAILS 23. P-001.00 PLUMBING SYMBOLS, ABBREVIATIONS, NOTES & SPECIFICATIONS 24. P-002.00 PLUMBING SPECIFICATIONS & DETAILS 25. P-101.00 PLUMBING DEMOLITION PLAN 26. P-201.00 PLUMBING NEW WORK PLAN 27. P-701.00 PLUMBING DETAILS						
M		1. THE OWNER OF THE PROJECT SHALL MEAN THE BATTERY PARK CITY AUTHORITY.					11. THE TERM 'TO REMAIN' IS USED TO INDICATE THAT AN ITEM IS EXISTING AND NO MAJOR WORK IS REQUIRED. HOWEVER, THE TERM DOES NOT PRECLUDE PATCHING, RESTORING, REFINISHING, ETC.					2. SPECIAL PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO ENSURE THAT THE WORK, INCLUDING ALL MATERIALS AND INSTALLATION, SHALL NOT AFFECT THE FOLLOWING: <ul style="list-style-type: none"><li>TENANT EGRESS TO AND FROM THE BUILDING.</li><li>FIRE SAFETY, OR THE CREATION OF A FIRE HAZARD.</li><li>STRUCTURAL SAFETY OF THE BUILDINGS.</li><li>THE CONTRACTOR SHALL LEAVE THE WORK SITE BROOM CLEAN EACH DAY TO PREVENT THE ACCUMULATION OF DUST AND DEBRIS.</li><li>THERE SHALL BE NO NOISY WORK OUTSIDE THE NORMAL HOURS OF 8:00 AM TO 5:00 PM.</li><li>ELECTRICITY, GAS, WATER AND ANY OTHER UTILITIES WILL NOT BE INTERRUPTED DURING CONSTRUCTION.</li></ul>											
L		2. THE CONTRACTOR SHALL VISIT THE PROJECT SITE TO FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND TO VERIFY ALL DIMENSIONS AND CONDITIONS OF EXISTING BUILDING AND SITE. IN CASE OF DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS AND ACTUAL FIELD CONDITIONS, THEY SHALL BE REPORTED TO THE ARCHITECT. IN WRITING, FOR CORRECTION. WORK PERFORMED AFTER THE DISCOVERY OF A DISCREPANCY AND PRIOR TO RECEIPT OF WRITTEN APPROVAL FOR CORRECTION SHALL BE AT THE CONTRACTOR'S RISK. NO ADDITIONAL COST WILL BE ADDED TO THE PROJECT DUE TO CONTRACTOR'S OVERSIGHT IN VERIFICATION OF EXISTING CONDITIONS.					12. WHEN PATCHING AND RESTORING ARE CALLED FOR BY THE DOCUMENTS, IT IS NOT TO BE CONSTRUED THAT THESE ARE THE ONLY LOCATIONS WHERE SUCH WORK IS REQUIRED.					3. ALL MATERIALS, ASSEMBLIES, FORMS, AND METHODS OF CONSTRUCTION, SHALL COME UNDER THE PROVISIONS OF THE NYC BUILDING CODE.											
K		3. THE CONTRACTOR SHALL COOPERATE WITH ANY OTHER CONTRACTORS AND SHALL PERFORM HIS WORK AT SUCH A TIME AND IN SUCH A MANNER AS NOT TO DELAY OR INTERFERE WITH THE CARRYING FORWARD OF THE WORK OF OTHER CONTRACTORS.					13. ALL PATCHING AND RESTORING OF SURFACES IS TO BE DONE WITH MATERIAL AND WORKMANSHIP TO MATCH ADJACENT INTACT SURFACES. REMOVE AND PATCH EXISTING WORK AS REQUIRED TO ACCOMMODATE NEW WORK, ANY EQUIPMENT AND ASSOCIATED CONDUIT, PIPING, DUCTWORK, ETC. SCHEDULED TO REMAIN SHALL BE REMOVED, TEMPORARILY RELOCATED AND REINSTALLED AS REQUIRED TO PERFORM THE WORK.					4. ALL SERVICE EQUIPMENT AND MACHINERY AND DEVICES USED IN CONNECTION WITH THE WORK OF THIS CONTRACT, WHICH IN THEIR USE, COME UNDER THE PROVISIONS OF THE CODE, SHALL COMPLY WITH APPLICABLE SECTION(S). CONTRACTOR SHALL SECURE ALL INSPECTIONS FOR THE EQUIPMENT OPERATED ON THE JOB SITE IN CONNECTION WITH THIS CONTRACT.											
J		4. THE CONTRACTOR AND SUBCONTRACTORS SHALL CONSULT AND STUDY THE CONTRACT DOCUMENTS TO DETERMINE HOW THEIR WORK IS AFFECTED UNDER THIS CONTRACT.					14. ANY EXISTING SERVICES UNCOVERED BY CUTTING OR REMOVAL OPERATIONS WHICH INTERFERE WITH THE NEW CONSTRUCTION AND WHICH ARE REQUIRED TO BE MAINTAINED AS AN INTEGRAL FUNCTION OF THE BUILDING SHALL BE RELOCATED TO CLEAR THE NEW CONSTRUCTION ALL RELOCATIONS SUBJECT TO APPROVAL.					5. THE BUILDING AND THE WORK UNDER THIS CONTRACT AND ANY SERVICE EQUIPMENT THAT IS PART OF THE CARRYING OUT OF THE WORK OF THIS CONTRACT SHALL BE OPEN AND AVAILABLE FOR INSPECTION BY THE COMMISSIONER OR ITS REPRESENTATIVES AT ALL TIMES.					5						
I		5. THE CONTRACTOR SHALL PERFORM THE WORK SO THAT A MINIMUM OF DISRUPTION IS CAUSED TO THOSE PORTIONS OF THE BUILDING WHERE THERE IS NO WORK.					15. ALL CONSTRUCTION DEBRIS AND REFUSE SHALL BE REMOVED FROM THE BUILDING AT THE END OF EACH WORK DAY AND LEGALLY DISPOSED OF OFF THE PROPERTY. NO BURNING OF DEBRIS OR REFUSE IS PERMITTED.					6. ALL MATERIAL HANDLING AND HOISTING EQUIPMENT SHALL CONFORM WITH APPLICABLE SECTION OF THE NYC BUILDING CODE. AND SHALL BE OPERATED AND MAINTAINED SO AS TO PREVENT HARM TO THE PUBLIC OR PROPERTY.					SPECIAL INSPECTIONS						
H		6. ACCESS TO ALL AREAS OF THE BUILDING SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE. TWO WEEKS PRIOR NOTICE SHALL BE REQUIRED BEFORE ALTERATION OF ACCESS TO ANY AREAS.					16. WHERE CONFLICTS OCCUR BETWEEN CONTRACT DRAWINGS, SPECIFICATIONS, AND APPLICABLE CODES, THE MOST STRINGENT REQUIREMENTS SHALL APPLY.					7. ALL TEMPORARY FACILITIES NEEDED IN THE CARRYING OUT OF THE WORK SHALL CONFORM TO THE NYC BUILDING CODE.											
G		7. CONSTRUCTION OPERATIONS SHALL BE COORDINATED AT ALL TIMES WITH THE OWNER.					17. ON DRAWINGS, DIMENSIONS HAVE PREFERENCE OVER SCALE. ALL DRAWINGS TO BE FIELD VERIFIED.					8. ALL EXITS FROM THE BUILDINGS SHALL BE KEPT READILY ACCESSIBLE AND UNOBSTRUCTED AT ALL TIMES. NO LOOSE OBJECTS SHALL BE LEFT ON SCAFFOLDING. THE BUILDINGS ARE OCCUPIED 24 HOURS A DAY.					SPECIAL AND PROGRESS INSPECTIONS REQUIRED IN ACCORDANCE WITH CHAPTER 17 AND THE APPLICABLE SECTIONS OF THE NYC CONSTRUCTION CODE ARE LISTED IN THE FOLLOWING TABLES.						
F		8. ALL BUILDING EXITS SHALL BE KEPT READILY ACCESSIBLE AND UNOBSTRUCTED AT ALL TIMES.					18. ALL WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE BEST ACCEPTED TRADE PRACTICES AND AS PER MANUFACTURER'S RECOMMENDATIONS.					9. NO CHANGE TO EGRESS, OCCUPANCY, ZONING OR USE UNDER THIS APPLICATION.					THE CONTRACTOR MUST NOTIFY THE ARCHITECT OR ENGINEER FOR SPECIAL AND PROGRESS INSPECTIONS AT LEAST 72 HOURS BEFORE THE SPECIFIC WORK COMMENCES.						
E		9. THE CONTRACTOR SHALL COORDINATE, SCHEDULE, AND EFFECT ANY REQUIRED UTILITY SHUTDOWNS IN COORDINATION WITH THE OWNER. TWO WEEKS PRIOR NOTICE SHALL BE REQUIRED.					19. SUBMIT SHOP DRAWINGS AND SAMPLES FOR ALL ITEMS AS SPECIFIED IN THE CONTRACT DOCUMENTS. NO MATERIAL OF ANY MANUFACTURER OR PRODUCER SHALL BE ACCEPTED FOR THE USE INTENDED, UNLESS AND UNTIL THE MATERIAL HAS BEEN TESTED FOR COMPLIANCE WITH CODE REQUIREMENTS UNDER TEST METHODS PRESCRIBED BY THE BUILDING CODE.					10. FIRE PROTECTION - INSTALLATION OF ALL REQUIRED FIRE STOPPING SHALL COMPLY WITH SECTION C26-504.7.G (IF APPLICABLE).					THE OWNER SHALL BE RESPONSIBLE FOR THE FOLLOWING SPECIAL OR PROGRESS INSPECTIONS: ENERGY CODE COMPLIANCE INSPECTIONS BC 110.3.5 MASONRY BC 1704.5 FINAL BC 109.5 AND 28.116.2.4.2						
D		10. FIRE PREVENTION APPLICATIONS WILL BE FILED IF REQUIRED FOR ALL INSTALLATIONS.					20. FINISH FACE OF NEW WORK SHALL ALIGN WITH FINISH FACE OF EXISTING WORK.					11. SPECIAL AND PROGRESS INSPECTIONS AS REQUIRED BY THE NEW YORK CITY BUILDING CODE SHALL BE PERFORMED BY THE ARCHITECT FOR THE FOLLOWING ITEMS: - FINAL INSPECTION AC 28-116.2.4.2, BC 109.5, DIRECTIVE 14 OF 1975, AND 1RCNY §101-10					REQUIRED INSPECTIONS AND TESTS OF MATERIALS DESIGNATED FOR "SPECIAL INSPECTION" BY THE CONTRACTOR SHALL BE MADE UNDER THE DIRECT SUPERVISION OF A LICENSED ARCHITECT OR ENGINEER RETAINED BY OR ON THE BEHALF OF THE OWNER WHO SHALL BE ACCEPTABLE TO THE ARCHITECT OR ENGINEER WHO SUPERVISED THE PREPARATION OF THE PLANS.						
C							21. COMPLY WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS FOR HAZMAT REMOVAL AND DISPOSAL IF REQUIRED.					12. ENERGY CODE COMPLIANCE PROGRESS INSPECTIONS AS REQUIRED BY THE NYCECC AND MANDATED BY SECTION BC 109.3.5 AND 1RCNY §5000-01 SHALL BE PERFORMED BY THE ARCHITECT FOR THE FOLLOWING ITEMS: - AIR SEALING AND INSULATION - VISUAL (IAG)					6						
B												NO OTHER ENERGY CODE COMPLIANCE PROGRESS INSPECTIONS ARE REQUIRED FOR THIS CONTRACT'S SCOPE OF WORK.					FEMA FLOOD INFORMATION						
A																	THIS SITE IS WITHIN A "SPECIAL FLOOD ZONE AREA."						
	7	GENERAL CONDITIONS					8	ZONING MAP					9	PLOT PLAN					10	LOCATION MAP			
														BLOCK NO. 16 LOT NO. 7519 & 7520									
		1. SEQUENCE OF CONSTRUCTION: THE SCOPE OF WORK SHOWN IN REFERENCE DRAWINGS AND RELATED CONTRACT DOCUMENTS SHALL BE EXECUTED IN ACCORDANCE TO THE FOLLOWING SEQUENCE OF CONSTRUCTION: <ul style="list-style-type: none"><li>ALL WORK RELATED TO REMOVAL.</li></ul>						ZONING DISTRICT: R7-2 ZONING MAP: 12A															
		2. CONTRACTOR SHALL PROVIDE A FINAL SITE LOGISTIC PLAN WITHIN 15 DAYS OF CONTRACT AWARD. PLAN SHALL INCLUDE THE FOLLOWING: <ul style="list-style-type: none"><li>METHOD FOR SELECTIVE REMOVAL.</li><li>ACCESS AREA AND HOISTING PLAN AND LOCATIONS.</li><li>MATERIAL STORAGE PLAN.</li></ul>																					
	10	ENERGY ANALYSIS																					
		ALT - 2																					
		NYC ECC TABULAR ANALYSIS:																					
		2011 NYCECC (NYSECC-2010) COMMERCIAL: CLIMATE ZONE 4A																					
		ALT - 2																					
		ITEM DESCRIPTION	PROPOSED DESIGN VALUE	CODE-PRESCRIPTIVE VALUE AND CITATION	SUPPORTING DOCUMENTATION	PROGRESS INSPECTION																	
		TYPICAL BACKER ROD AND SEALANT INSTALLATION	SEALING ALL OPENINGS AND PENETRATIONS AS PRESCRIBED IN ECC §402.4.1 (BUILDING THERMAL ENVELOPE), ECC §402.4.2 (AIR SEALING AND INSULATION), AND ECC TABLE 402.4.2 (AIR BARRIER AND INSULATION INSPECTION COMPONENT CRITERIA).	ALL OPENINGS AND PENETRATIONS SHALL BE SEALED WITH CAULKING, GASKETING, WEATHERSTRIPPING OR OTHER MATERIALS IN ACCORDANCE WITH REQUIREMENTS OF ECC SECTION 402.4.1 (BUILDING THERMAL ENVELOPE).	1/A-402.00 DRAWING, SEALANT INSTALLATION DETAILS AND NOTES	IAG: AIR SEALING - VISUAL INSPECTION OF OPENINGS AND PENETRATIONS IN THE BUILDING ENVELOPE TO VERIFY THAT THEY ARE PROPERLY SEALED, IN ACCORDANCE WITH ECC SECTIONS 402.4.1, 402.4.2.2, AND APPROVED DRAWINGS.		TO THE BEST OF MY KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THIS APPLICATION IS IN COMPLIANCE WITH THE ECC NYC 2014.															
						THIS APPLICATION IS AN EXCEPTION, THE SCOPE OF WORK DOES NOT AFFECT THE ENERGY USE OF THE BUILDING																	

ARCHITECT

**ARCHITECTURAL PRESERVATION STUDIO, DPC**  
Architecture, Historic Preservation, & Building Envelope Consulting  
594 Broadway, Suite 919, New York, NY 10012  
212.477.7976 / info@preservationstudio.com

OWNER

**BATTERY PARK CITY AUTHORITY**

200 LIBERTY STREET  
NEW YORK, NY 10281

ENVIRONMENTAL SUB-CONSULTANTS

**OLA CONSULTING ENGINEERS**

50 BROADWAY SUITE 2  
HAWTHORNE, NY 10532  
TEL: (914) 747-2800

ENVIRONMENTAL SUB-CONSULTANTS

**JLC ENVIRONMENTAL CONSULTANTS, INC.**

30 WEST 26TH STREET, 4TH FLOOR  
NEW YORK, NY 10010  
TEL: (212) 420-8119

LOCATION PLAN

2	BID SET	12.13.2018
1	OWNER'S REVIEW	90% 5.16.2018
NO.	SUBMISSIONS/ REVISIONS	DATE

PROJECT NORTH

REFERENCE BAR  
SEE DRAWINGS FOR  
SCALE DESIGNATION

PROJECT

**200-300 NORTH END AVE  
LEAK REMEDIATION  
DESIGN**

200-300 NORTH END AVE  
NEW YORK, NY 10282

DRAWING NAME

**TITLE SHEET  
GENERAL NOTES  
LOCATION MAP**

SEAL & SIGNATURE	DATE: 05.11.2018
	PROJECT No: P15-036
	SCALE: AS NOTED
	DRAWING BY: WB
	CHECKED BY: PJ/JVF
	DWG No: T-001.00
	DWG COUNT: 1 OF 27

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S

1

SCOPE OF WORK

THE SCOPE OF WORK INCLUDES ALL LABOR MATERIALS, EQUIPMENT, TRANSPORTATION, AND SUPERVISION NECESSARY FOR THE SUCCESSFUL COMPLETION OF THE PROJECT. THE WORK INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:

R

ALL NOISE-GENERATING WORK SHALL BE COORDINATED WITH THE OWNER.

THE CONTRACTOR SHALL PROVIDE ALL REQUIRED PROTECTION TO THE EXISTING ROOFING MEMBRANE. PROTECTION MEASURES SHALL BE APPROVED BY THE ARCHITECT.

THE CONTRACTOR SHALL SECURE AND MAINTAIN ALL REQUIRED PERMITS TO UNDERTAKE THE WORK. IF THE SIDEWALK SHED INTERFACES WITH EXISTING STREET TREES, THE CONTRACTOR WILL NEED TO SECURE ALL REQUIRED PERMITS FROM THE NYC DEPARTMENT OF PARKS AND RECREATION.

Q

THE CONTRACTOR SHALL COORDINATE ALL REQUIRED INSPECTIONS WITH THE OWNER-RETAINED SPECIAL INSPECTION AGENCY.

THE CONTRACTOR SHALL PROVIDE ALL REQUIRED LADDERS, HOISTS, SIDEWALK SHEDS, FIXED PIPE SCAFFOLDING, AND OTHER SUPPORT DEVICES TO UNDERTAKE THE WORK OF THIS PROJECT. ALL INSTALLATIONS SHALL BE CODE COMPLIANT. THE CONTRACTOR SHALL RETAIN THEIR OWN LICENSED STRUCTURAL ENGINEER TO DESIGN HOISTS, SHEDS, FIXED AND SUSPENDED SCAFFOLDING.

P

THE CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY UTILITIES INCLUDING POWER, WATER, HEAT, AND BATHROOMS. IF THE OWNER ALLOWS THE CONTRACTOR TO USE EXISTING UTILITIES, THE CONTRACTOR SHALL MAKE ALL REQUIRED CONNECTIONS AND UNDERTAKE REMOVALS AT THE END OF THE PROJECT.

O

THE SELECTED CONTRACTOR MAY CHOOSE TO STORE CONSTRUCTION MATERIALS AND CONSTRUCTION DEBRIS (DUMPSTERS) ON THE STREET. IF SO, A STREET-CLOSURE PERMIT SHALL BE SECURED BY THE CONTRACTOR FROM THE NYC DEPARTMENT OF TRANSPORTATION. TEMPORARY FENCING/BARRICADES WILL BE REQUIRED TO SECURE THIS AREA IN THE STREET. THE CONTRACTOR SHALL VERIFY IF THE STREETS AROUND THE SITE ARE CONSIDERED A RESTRICTED ACCESS ROAD BY THE DEPARTMENT OF TRANSPORTATION BETWEEN THE HOURS OF 4:00 PM AND 7:00 PM.

PROVIDE ALL REQUIRED MOCK-UPS, TEST PANELS, ETC REQUIRED BY THE TECHNICAL SPECIFICATIONS AND THE PROPER EXECUTION OF THE WORK. ALL SHALL BE APPROVED BY THE ARCHITECT AND OWNER PRIOR TO EXECUTING THAT SECTION OF WORK. IF REJECTED, PROVIDE NEW MOCK-UPS, TEST PANELS, ETC UNTIL APPROVED.

A. GENERAL CONDITIONS:

1. MOBILIZATION AND GENERAL ADMINISTRATIVE REQUIREMENTS

2. REMOVE AND REINSTALL RAILINGS HANDRAILS, TRELLISES, ETC; REMOVE SITE FIXTURES AS REQUIRED TO ACCOMPLISH THE WORK, INCLUDING BUT NOT LIMITED TO RAILINGS/HANDRAILS, TRELLISES, BENCHES, IRRIGATION SYSTEMS, AND ASSOCIATED COMPONENTS.

3. REMOVAL AND REINSTALLATION OF EXISTING ELECTRICAL JUNCTION BOXES, AND CONDUIT AS REQUIRED IN ORDER TO ACCOMPLISH THE WORK.

4. COORDINATION WITH OWNER'S LANDSCAPING TEAM TO CAREFULLY REMOVE MATURE TREES AND SHRUBS TO BE TEMPORARILY PLANTED IN WOOD CONTAINERS CONSTRUCTED BY THE CONTRACTOR TO BE LOCATED PER OWNER'S INSTRUCTION.

B. PLAZA WATERPROOFING @ UPPER PLAZA

1. CAREFULLY REMOVE AND SALVAGE METAL AND GRANITE BASE PANELS FOR REINSTALLATION ALONG BUILDINGS PERIMETERS.

2. PAVERS: CAREFULLY REMOVE AND SALVAGE EXISTING ASPHALT PAVERS (PLAZA, RAMPS, LANDINGS, ETC.), REINSTALL IN RUNNING BOND PATTERN (AS EXISTING) OVER ¾" MIN. POURABLE ASPHALT SETTING BED. ASSUME 20% OF PAVES REPLACEMENT.

3. PLAZA/PLANTER DECK WATERPROOFING: REMOVE EXISTING WATERPROOFING, PREPARE AND PRIME CONCRETE DECKS AND PLANTER DECKS AND INSTALL NEW WATERPROOFING SYSTEM.

4. REMOVE AND DISPOSE OF EXISTING GRANITE BRICKS. REPLACE GRANITE BRICKS AT PLANTERS AND PARAPETS TO MATCH EXISTING.

5. PLANTER #1 - GRANITE PANELS: REMOVE, SALVAGE AND REINSTALL STONE PANELS, TO BE WATERPROOFED.

6. REINFORCED LIQUID MEMBRANE: A. FLASHING: PREPARE AND PRIME BACKUP AND INSTALL REINFORCED LIQUID MEMBRANE FLASHING AT ALL VERTICAL TO HORIZONTAL TRANSITIONS. B. PLANTER CURB WATERPROOFING: AT PLANTERS #1, #3, #4, #5, #6, AND #7, CONTINUE MEMBRANE UP INBOARD PLANTER WALL AND OVER CURB.

7. PARAPET WATERPROOFING (EAST CENTRAL STAIR): REMOVE GRANITE BRICKS DOWN TO LINTEL, WATERPROOF LINTEL AND CONTINUE WATERPROOFING UP AND OVER CONCRETE BACKUP. TERMINATE MIN. OF 4" OVER FLUID APPLIED FLASHING (PLAZA). INSTALL MORTAR NET, INSULATION AND STAGGERED WEEPS ABOVE LINTEL. INSTALL GRANITE BRICKS TO MATCH EXISTING.

8. RESET GRANITE COPING STONES: REMOVE AND SALVAGE ALL GRANITE COPING STONES AT EXISTING PLANTER AND PARAPET WALLS AND RE-INSTALL ON THRU-WALL METAL FLASHING. SECURE WITH THREADED EYEBOLT RODS AND DOWELS SET IN EPOXY.

9. EXISTING OVERBURDEN REMOVAL (PLAZA): REMOVE EXISTING ASPHALT SETTING BED, CONCRETE TOPPING SLAB, INSULATION, DRAINAGE MAT AND WATERPROOFING DOWN TO STRUCTURAL CONCRETE DECK.

10. SOIL REMOVAL AT PLANTERS: REMOVE EXISTING SOIL, OVERBURDEN, DECK AT ALL PLANTERS, REPLACE SOIL AND GRAVEL BED. COORDINATE WORK WITH BPCA LANDSCAPING TEAM.

11. RESET GRANITE STEP STONES AND LANDING STONES AT N, END AVE.: CAREFULLY REMOVE AND SALVAGE GRANITE STEP STONES FOR RE-SETTING. MAINTAIN CONCRETE SUBSTRUCTURE, WATERPROOF AND SECURE STONES AS PER DRAWINGS.

12. RESET GRANITE STEPS STONES AT WARREN STREET: CAREFULLY REMOVE AND SALVAGE GRANITE STEP STONES FOR RE-SETTING. MAINTAIN CONCRETE SUBSTRUCTURE, WATERPROOF AND SECURE STONES AS PER DRAWINGS.

13. RESET GRANITE STEP STONES AT MURRAY STREET: CAREFULLY REMOVE AND SALVAGE GRANITE STEP STONES FOR RE-SETTING. MAINTAIN CONCRETE SUBSTRUCTURE, WATERPROOF AND SECURE STONES AS PER DRAWINGS.

14. CONCRETE REPAIRS AT DECK, AND PLANTER WALLS: REPAIR CONCRETE WITH MODIFIED REPAIR MORTAR AS PER DRAWINGS (ASSUME 15%).

15. INSTALL DRAINAGE MAT, INSULATION AND FILTER FABRIC

16. TOPPING SLAB: FORM AND POUR POROUS/PERVIOUS CONCRETE (SLOPE TO DRAINS) OVER GRAVEL BED.

C. LOWER PLAZA

1. LOWER PLAZA WATERPROOFING (AREA OF METAL STAIR/COURTYARD): REMOVE METAL PANELS, 3'-0" WIDTH OF TOPPING PAVERS, SLAB ON GRADE, AND DIRT DOWN TO FOOTING/STRUCTURAL SLAB. REMOVE EXISTING WATERPROOFING AS REQUIRED TO ADHERE NEW FLUID-APPLIED WATERPROOFING MEMBRANE ONTO EXISTING ADHERED WATERPROOFING MEMBRANE. TERMINATE OVER WINDOW AND DOOR SILLS AS PER DRAWINGS.

2. DRAINS: REPLACE DRAIN BODIES AND WATERPROOF, AS INDICATED ON DRAWINGS. SNAKE ASSOCIATED DRAIN PIPING BACK 20'.

3. EXTERIOR BACK-UP WALL WATERPROOFING (LOCATION OF CENTRAL COURTYARD W/METAL STAIR): INSTALL VAPOR BARRIER UP AT BACK-UP WALL/COLUMNS AT NORTH, SOUTH, AND WEST ELEVATIONS, LAP VAPOR BARRIER A MIN. OF 4" OVER NEW FLUID-APPLIED MEMBRANE. REPLACE GRANITE BRICKS TO MATCH EXISTING 4. TEMPORARILY REMOVE ALUMINUM DOOR AND SALVAGE FOR REINSTALLATION. INSTALL TEMPORARY ENCLOSURE OR INFILL.

D. INTERIOR:

1. GROUT INJECTION AND CRACK REPAIR AT INTERIOR STAIR AND FOUNDATION WALL: INJECTION GROUTING AT INTERIOR STAIR LANDING AND FOUNDATION WALL AREA TO BE TREATED WITH CRYSTALLINE WATERPROOFING.

2. TILED PIER AND FINISHES: REMOVE EXISTING TILE PANELS, PATCH AND WATERPROOFING AND REBUILD. REPAIR FINISHES DAMAGED BY WATER. REPAIR, PRIME AND PAINT INTERIOR PLASTER. REPLACE REMOVED INTERIOR FINISHES TO MATCH EXISTING.

E. SIDEWALK:

1. MURRAY STREET AND WARREN ST: REPLACE CONCRETE SIDEWALK AS INDICATED ON DRAWINGS

2. NORTH END AVE: REMOVE BLUESTONE PAVING FOR WATERPROOFING OF TRENCH DRAIN AND RESET.

17. REMOVE AND REPLACE PLAZA AND PLANTER DRAINS: REMOVE ALL EXISTING PLAZA AND PLANTER DRAIN BODIES AT UPPER PLAZA AT LOCATIONS INDICATED ON DRAWINGS, REPLACE, CONNECT TO PIPING AND WATERPROOF. SNAKE BACK PIPING TO 20'.

18. REPLACE SCUPPER DRAINS: REMOVE ALL EXISTING SCUPPER DRAIN BODIES AT UPPER PLAZA AT LOCATIONS INDICATED ON DRAWINGS, REPLACE, CONNECT TO PIPING AND WATERPROOF. SNAKE BACK PIPING TO 20'.

19. TRENCH DRAIN: REPLACE TRENCH DRAIN AND WATERPROOF, GRATING TO BE SLIP RESISTANT AND ADA COMPLIANT. SNAKE BACK PIPING TO 20'.

20. EXPANSION JOINT (TYPE 1): INSTALL SPLIT SLAB EXPANSION SYSTEM

21. EXPANSION JOINT (TYPE 2): INSTALL 1 1/4" MINIMUM PRE-COMPRESSED EXPANSION JOINT SYSTEM WITH FACTORY APPLIED SILICONE (BETWEEN METAL COVER - PLAZA EDGE AND PAVERS).

22. EXPANSION JOINT (TYPE 3): COMPRESSIBLE FILLER AND SEALANT AT SOFT CONTROL JOINTS AND PAVES TO MASONRY INTERFACE AS INDICATED ON DRAWINGS.

23. MASONRY EXPANSION JOINTS (TYPE 4): REPLACE CRACKED GRANITE BRICKS INSTALL STABILIZERS EVERY 6 COURSES. INSTALL COMPRESSIBLE FILLER AND SEALANT.

24. BACKER ROD AND SEALANT: INSTALL BACKER ROD AND SEALANT AT WINDOW AND DOOR FRAME PERIMETERS AT STOREFRONT (EAST CENTRAL COURTYARD), TRANSVERSE COPING JOINTS, AND AS NOTED ON DRAWINGS.

25. PLANTER #2: PERMANENTLY REMOVE PLANTER #2.

26. PROTECTION AT PLANTERS (TO REMAIN): PROVIDE TEMPORARY PLYWOOD TO SEAL AND PROTECT PLANTER OPENINGS UNTIL REFILLED WITH SOIL.

27. INSTALL GALVANIZED STEEL PLATE AT STEEL STAIR LANDING TO PARAPET CONNECTION PLATE (ASSUME 1/2" X 1'-0")

28. INSTALL/REPLACE GALVANIZED STEEL ANGLE (ASSUME 3/8" X 3" X 4")

29. RAILING POSTS: WELD 4" X 4" BASE PLATES TO EXISTING HANDRAIL POSTS AND EPOXY ADHERE ANCHOR BOLTS INTO TOPPING SLAB.

4

LIST OF ABBREVIATIONS / LEGEND

A.F.F. ABOVE FINISHED FLOOR

ARCH. ARCHITECTURAL

@ AT

B.L. BUILDING LINE

BLDG. BUILDING

BL'K BLOCK

B.O. BOTTOM OF

CEM. CEMENT

C.B. CATCH BASIN

℄ CENTER LINE

COL. COLUMN

CONC. CONCRETE

COND. CONDUIT

CONT. CONTINUOUS

DET. DETAIL

DOB. DEPARTMENT OF BUILDINGS

DIM. DIMENSION

DN DOWN

DWG. DRAWING

EA. EACH

EQ. EQUAL

EQUIP. EQUIPMENT

EXIST. EXISTING

EJ. EXPANSION JOINT

FL. FLOOR

G.F. GROUND FLOOR

GL. GLASS

HORIZ. HORIZONTAL

HR. HOUR

JS. JOINT SEALANT

JT. JOINT

LOCS. LOCATIONS

MAX. MAXIMUM

MTL. METAL

N.I.C NOT IN CONTRACT

O.C ON CENTER

P.C.S PRE COMPRESSED FOAM SEALANT

ST.ST. STAINLESS STEEL

V.I.F. VERIFY IN FIELD

W/ WITH

WP WATERPROOFING

SECTION TAG

DETAIL TAG

ELEVATION TAG

ELEVATION LEVEL

REVISION NUMBER

1

2

3

4

5

6

7

2	ALLOWANCES						
THE FOLLOWING ITEMS ARE TO BE INCLUDED IN THE BID. THE QUANTITIES PROVIDED ARE IN ADDITION TO THOSE INDICATED ELSEWHERE IN THE DOCUMENTS. INCLUDE THE COST OF ALL MEANS (SCAFFOLDING, LIFTS, ETC.) TO INSTALL THE WORK AT VARIOUS LOCATIONS THROUGHOUT THE BUILDING.							
ANY QUANTITY MORE OR LESS WILL BE AN EXTRA/CREDIT TO THE OWNER. PROVIDE SHOP DRAWINGS FOR APPROVAL OF INTENDED AREA OF WORK AFTER INSPECTION FROM THE SCAFFOLDING OR AS DIRECTED BY THE ENGINEER/ARCHITECT PRIOR TO PROCEEDING WITH WORK.							
NO	ITEM					UNITS	QTY./AMOUNT
1	100% NEW ASPHALT UNIT BLOCK PAVERS					SF	15000
2	NEW HEXAGONAL ASPHALT PAVERS					SF	500
3	GRANITE BRICK MASONRY REPLACEMENT					SF	150
4	LINTEL REPLACEMENT					LF	50
5	BACKER ROD AND SEALANT					LF	200
6	EXPANSION JOINT #3- SOFT CONTROL JOINT					LF	1000
7	CONCRETE GROUT INJECTION					SF	300
8	CONCRETE CRACK REPAIR					LF	400
9	DOOR SADDLE REPLACEMENT					LF	25
10	STONE REPAIR - PINNING					EA	10
11	PLANTER #1 - CAST IN PLACE CONCRETE PLANTER CURB.					LF	70
12	NEW GRANITE COPING STONES. SECURE WITH THREADED EYEBOLT ROD AND DOWELS IN EPOXY.					LF	70
13	RAT MITIGATION					LS	TBD
5	UPPER PLAZA WATERPROOFING NOTES						
	<p>1. PLAZA WATERPROOFING SYSTEM SHALL COMPLY WITH UL CLASS 'A' EXTERNAL FIRE RESISTANCE RATING.</p> <p>2. FLOOD TEST ALL PLAZA AFTER INSTALLATION OF NEW WATERPROOFING SYSTEM AT UPPER PLAZA.</p> <p>3. INSULATION FOR THIS PROJECT SHALL HAVE A MINIMUM AGED R-VALUE OF R=19, TO MATCH EXISTING.</p> <p>4. PLAZA WATERPROOFING WORK SPECIFIED IN THIS CONTRACT SHALL NOT BE STARTED UNTIL ASBESTOS (IF FOUND) ABATEMENT IS COMPLETED.</p> <p>5. PLAZA WATERPROOFING WORK SPECIFIED IN THIS CONTRACT SHALL NOT BE STARTED UNTIL ASBESTOS (IF FOUND) ABATEMENT WORK SPECIFIED IN THIS CONTRACT SHALL NOT BE STARTED UNTIL ASBESTOS ABATEMENT IS COMPLETED.</p>						
6	REMOVAL NOTES						
	<p>THE FOLLOWING NOTES SHALL APPLY THROUGHOUT:</p> <p>1. THE SCOPE OF WORK HAS GENERALLY BEEN INDICATED ON THE DRAWING FOR CONTRACTOR'S INFORMATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE FULL SCOPE, EXTENT, NATURE, &amp; MANNER OF REMOVAL REQUIRED.</p> <p>2. ONLY WORKMEN SKILLED &amp; KNOWLEDGEABLE IN THEIR RESPECTIVE TRADES SHALL BE EMPLOYED IN THE REMOVAL OF ANY WORK.</p> <p>3. CONTRACTORS SHALL TAKE SPECIAL CARE TO DEMOLISH ONLY THAT WORK WHICH IS REQUIRED TO BE REMOVED &amp; NOT TO DISTURB ANY WORK WHICH IS TO REMAIN. IF IN THE COURSE OF REMOVAL, CONTRACTOR DESTROYS OR DISTURBS ANY WORK WHICH IS TO REMAIN, THEN THEY SHALL, AT THEIR OWN EXPENSE, REPAIR OR REPLACE SUCH WORK AS NECESSARY.</p> <p>4. ANY CUTS AND PENETRATIONS IN EXISTING WORK REQUIRED TO ACCOMPLISH NEW WORK SHALL BE KEPT TO AN ABSOLUTE MINIMUM.</p> <p>5. ALL REMOVAL WORK TO BE DONE DURING THOSE HOURS DESIGNATED BY OWNER. REMOVED ITEMS, DEBRIS OR LOOSE MATERIAL SHALL NOT BE STORED ON THE ROOF OVERNIGHT. DISCARD ALL REMOVED ITEMS IN A MANNER FULLY APPROVED BY NYC &amp; ANY OTHER GOVERNMENT AGENCY.</p> <p>6. SALVAGE AND STORE GRANITE BLOCKS FROM THE PARAPET.</p> <p>7. SALVAGE AND STORE GRANITE COPINGS &amp; STONES, ALL RAILINGS, WOOD LATTICE.</p>						
7	PARAPET / MASONRY NOTES						
	<p>1. ALL CELLS IN THE HOLLOW MASONRY WALLS AND ALL JOINTS IN SOLID, CAVITY OR MASONRY BONDED HOLLOW WALL CONSTRUCTION SHALL BE FILLED SOLID WITH MORTAR.</p> <p>2. FACE GRANITE BLOCKS SHALL COMPLY WITH REQUIREMENTS OF ASTM C615. MORTAR SHALL COMPLY WITH ASTM C270 AND BIA M1-88. THE USE OF MASONRY CEMENT IS PROHIBITED.</p> <p>3. PROTECT OPEN MASONRY AT PARAPETS AND OTHER AREAS OF MASONRY REMOVAL FROM WATER PENETRATION.</p> <p>4. DO NOT REMOVE PARAPET MASONRY OR OTHER MASONRY UNTIL SALVAGED AND NEW GRANITE BLOCKS ARE ON SITE.</p> <p>5. SUBMIT SHOP DRAWINGS FOR APPROVAL AT EACH AREA OF COPING REPLACEMENT, RAILING REMOVAL AND REINSTALLATION WORK LOCATIONS AND EXTENT OF WORK PRIOR TO START OF WORK.</p> <p>6. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF RECORD 48 HOURS PRIOR TO INSPECT MASONRY.</p>						
8	9	10	11	12			

3

SPECIAL & PROGRESS INSPECTIONS

TAKEN FROM NYC BUILDINGS TR1 AUGUST 2016

THE OWNER SHALL BE RESPONSIBLE FOR THE FOLLOWING SPECIAL OR PROGRESS INSPECTIONS:

SPECIAL INSPECTION CATEGORIES ■ INDICATES REPORT REQUIRED

Y	N	SPECIAL INSPECTIONS	CODE/SECTION
<input type="checkbox"/>	<input checked="" type="checkbox"/>	STRUCTURAL STEEL - WELDING	BC 1704.3.1
<input type="checkbox"/>	<input checked="" type="checkbox"/>	STRUCTURAL STEEL - DETAILS	BC 1704.3.2
<input type="checkbox"/>	<input checked="" type="checkbox"/>	STRUCTURAL STEEL - HIGH STRENGTH BOLTING	BC 1704.3.3
<input type="checkbox"/>	<input checked="" type="checkbox"/>	STRUCTURAL COLD-FORMED STEEL	BC 1704.3.4
<input type="checkbox"/>	<input checked="" type="checkbox"/>	CONCRETE - CAST-IN-PLACE	BC 1704.4
<input type="checkbox"/>	<input checked="" type="checkbox"/>	CONCRETE - PRECAST	BC 1704.4
<input type="checkbox"/>	<input checked="" type="checkbox"/>	CONCRETE - PRESTRESSED	BC 1704.4
<input checked="" type="checkbox"/>	<input type="checkbox"/>	MASONRY	BC 1704.5
<input type="checkbox"/>	<input checked="" type="checkbox"/>	WOOD - INSTALLATION OF HIGH-LOAD-DIAPHRAMS	BC 1704.6.1
<input type="checkbox"/>	<input checked="" type="checkbox"/>	WOOD - INSTALLATION OF METAL-PALTE-CONNECTED-TRUSSES	BC 1704.6.2
<input type="checkbox"/>	<input checked="" type="checkbox"/>	WOOD - INSTALLATION OF PREFABRICATED I-JOISTS	BC 1704.6.3
<input type="checkbox"/>	<input checked="" type="checkbox"/>	SUBGRADE INSPECTION	BC 1704.7.1
<input type="checkbox"/>	<input checked="" type="checkbox"/>	SUBSURFACE CONDITIONS - FILL PLACEMENT & IN-PLACE DENSITY	BC 1704.7.2 BC 1704.7.3
<input type="checkbox"/>	<input checked="" type="checkbox"/>	SUBSURFACE INVESTIGATION (BORINGS/TEST PITS)	■ TR4 BC 1704.7.4
<input type="checkbox"/>	<input checked="" type="checkbox"/>	DEEP FOUNDATION ELEMENTS	■ TR5 BC 1704.8
<input type="checkbox"/>	<input checked="" type="checkbox"/>	HELICAL PILES (BB # 2014-020)	■ TR5H BC 1704.8.5
<input type="checkbox"/>	<input checked="" type="checkbox"/>	VERTICAL MASONRY FOUNDATION ELEMENTS	BC 1704.9
<input type="checkbox"/>	<input checked="" type="checkbox"/>	WALL PANELS, CURTAIN WALLS, AND VENEERS	■ BC 1704.10
<input type="checkbox"/>	<input checked="" type="checkbox"/>	SPRAYED FIRE-RESISTANT MATERIALS	BC 1704.11
<input type="checkbox"/>	<input checked="" type="checkbox"/>	MASTIC AND INTUMESCENT FIRE-RESISTANT COATINGS	BC 1704.12
<input type="checkbox"/>	<input checked="" type="checkbox"/>	EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS)	BC 1704.13
<input type="checkbox"/>	<input checked="" type="checkbox"/>	ALTERNATIVE MATERIALS - OTCR BUILDINGS BULLETIN # _____	BC 1704.14
<input type="checkbox"/>	<input checked="" type="checkbox"/>	SMOKE CONTROL SYSTEMS	BC 1704.15
<input type="checkbox"/>	<input checked="" type="checkbox"/>	MECHANICAL SYSTEMS	BC 1704.16
<input type="checkbox"/>	<input checked="" type="checkbox"/>	FUEL-OIL STORAGE AND FUEL-OIL PIPING SYSTEMS	BC 1704.17
<input type="checkbox"/>	<input checked="" type="checkbox"/>	HIGH-PRESSURE STEAM PIPING (WELDING)	BC 1704.18
<input type="checkbox"/>	<input checked="" type="checkbox"/>	HIGH TEMPERATURE HOT WATER PIPING (WELDING)	BC 1704.18
<input type="checkbox"/>	<input checked="" type="checkbox"/>	HIGH-PRESSURE FUEL-GAS PIPING (WELDING)	BC 1704.19
<input type="checkbox"/>	<input checked="" type="checkbox"/>	STRUCTURAL STABILITY - EXISTING BUILDING	BC 1704.20.1
<input type="checkbox"/>	<input checked="" type="checkbox"/>	EXCAVATIONS - SHEETING, SHORING, AND BRACING	BC 1704.20.2
<input type="checkbox"/>	<input checked="" type="checkbox"/>	UNDERPINNING	BC 1704.20.3 BC 1814
<input type="checkbox"/>	<input checked="" type="checkbox"/>	MECHANICAL DEMOLITION	BC 1704.20.4
<input type="checkbox"/>	<input checked="" type="checkbox"/>	RAISING AND MOVING OF A BUILDING	BC 1704.20.5
<input type="checkbox"/>	<input checked="" type="checkbox"/>	SOIL PERCOLATION TEST - PROVATE ON-SITE STORM WATER DRAINAGE DISPOSAL SYSTEMS, AND DETENTION FACILITIES	■ BC 1704.21.1,2
<input type="checkbox"/>	<input checked="" type="checkbox"/>	PRIVATE ON-SITE STORM WATER DRAINAGE DISPOSAL SYSTEMS, AND DETENTION FACILITIES INSTALLATION	BC 1704.21.2
<input type="checkbox"/>	<input checked="" type="checkbox"/>	INDIVIDUAL ON-SITE PRIVATE SEWAGE DISPOSAL SYSTEMS INSTALLATION	BC 1704.22
<input type="checkbox"/>	<input checked="" type="checkbox"/>	SOIL PERCOLATION TEST - INDIVIDUAL ON-SITE PRIVATE SEWAGE DISPOSAL SYSTEMS	■ BC 1704.22
<input type="checkbox"/>	<input checked="" type="checkbox"/>	SPRINKLER SYSTEMS	BC 1704.23
<input type="checkbox"/>	<input checked="" type="checkbox"/>	STANDPIPE SYSTEMS	BC 1704.24
<input type="checkbox"/>	<input checked="" type="checkbox"/>	HEATING SYSTEMS	BC 1704.25
<input type="checkbox"/>	<input checked="" type="checkbox"/>	CHIMNEYS	BC 1704.26
<input type="checkbox"/>	<input checked="" type="checkbox"/>	FIRE-RESISTANT PENETRATIONS AND JOINTS	BC 1704.27
<input type="checkbox"/>	<input checked="" type="checkbox"/>	ALUMINUM WELDING	BC 1704.28
<input type="checkbox"/>	<input checked="" type="checkbox"/>	FLOOD ZONE COMPLIANCE (ATTACH FEMA ELEVATION/DRY FLOODPROOFING CERTIFICATE WHERE APPLICABLE)	BC 1704.29 BC G105
<input type="checkbox"/>	<input checked="" type="checkbox"/>	LUMINOUS EGRESS PATH MARKINGS	■ TR7 BC 1704.30 BC 1024.8
<input type="checkbox"/>	<input checked="" type="checkbox"/>	EMERGENCY AND STANDBY POWER SYSTEMS (GENERATORS)	BC 1704.31
<input type="checkbox"/>	<input checked="" type="checkbox"/>	POST-INSTALLED ANCHORS (BB# 2014-018, 2014-019)	BC 1704.32
<input type="checkbox"/>	<input checked="" type="checkbox"/>	SEISMIC ISOLATION SYSTEMS	BC 1707.8
<input type="checkbox"/>	<input checked="" type="checkbox"/>	CONCRETE DESIGN MIX	■ TR3 BC 1905.3 BC 1913.5
<input type="checkbox"/>	<input checked="" type="checkbox"/>	CONCRETE SAMPLING AND TESTING	■ TR2 BC 1905.6 BC 1913.10

PROGRESS INSPECTION CATEGORIES ■ INDICATES REPORT REQUIRED

Y	N	PROGRESS INSPECTIONS	CODE/SECTION
<input type="checkbox"/>	<input checked="" type="checkbox"/>	PRELIMINARY	28-116.2.1, BC 110.2
<input type="checkbox"/>	<input checked="" type="checkbox"/>	FOOTING AND FOUNDATION	BC 110.3.1
<input type="checkbox"/>	<input checked="" type="checkbox"/>	LOWEST FLOOR ELEVATION	BC 110.3.2
<input type="checkbox"/>	<input checked="" type="checkbox"/>	STRUCTURAL WOOD FRAME	BC 110.3.3
<input checked="" type="checkbox"/>	<input type="checkbox"/>	ENERGY CODE COMPLIANCE INSPECTIONS	■ TR8 BC 110.3.5
<input type="checkbox"/>	<input checked="" type="checkbox"/>	FIRE-RESISTANCE RATED CONSTRUCTION	BC 110.3.4
<input type="checkbox"/>	<input checked="" type="checkbox"/>	PUBLIC ASSEMBLY EMERGENCY LIGHTING	BC 116.2.2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	FINAL*	28-116.2.4.2, BC 110.5 DIRECTIVE 14 OF 1975, AND 1-RCNY§101-10

SPECIAL AND PROGRESS INSPECTIONS REQUIRED IN ACCORDANCE WITH CHAPTER 17 AND THE APPLICABLE SECTIONS OF THE NYC CONSTRUCTION CODE ARE LISTED IN THE ABOVE TABLES.

THE CONTRACTOR MUST NOTIFY THE ARCHITECT OR ENGINEER FOR SPECIAL AND PROGRESS INSPECTIONS AT LEAST 72 HOURS BEFORE THE SPECIFIC WORK COMMENCES.

REQUIRED INSPECTIONS AND TESTS OF MATERIALS DESIGNATED FOR "SPECIAL INSPECTION" BY THE CONTRACTOR SHALL BE MADE UNDER THE DIRECT SUPERVISION OF A LICENSED ARCHITECT OR ENGINEER RETAINED BY OR ON THE BEHALF OF THE OWNER WHO SHALL BE ACCEPTABLE TO THE ARCHITECT OR ENGINEER WHO SUPERVISED THE PREPARATION OF THE PLANS.

8

STOREFRONT REPLACEMENT AND DOOR REINSTALLATION NOTES

1. PROVIDE SHOP DRAWINGS FOR REMOVAL AND REINSTALLATION OF ALUMINUM EXIT DOOR AND ASSOCIATED HARDWARE. ALSO INCLUDE SHOP DRAWING FOR REMOVAL AND REPLACEMENT OF DOOR FRAME AND FIXED GLAZING. FOR ARCHITECT TO REVIEW PRIOR TO MANUFACTURER AND INSTALLATION. INCLUDE ALL POSSIBLE NEW ANCHORAGE AND WATERPROOFING REQUIRED PER SITE CONDITIONS FOR ITS INSTALLATION AND MAKING IT WATERTIGHT.

13

14

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16

17

18

ARCHITECTURAL  
PRESERVATION  
STUDIO, DPC

Architecture, Historic Preservation, & Building Envelope Consulting

594 Broadway, Suite 919, New York, NY 10012  
212.477.7976 / info@preservationstudio.com

OWNER

BATTERY PARK CITY AUTHORITY

200 LIBERTY STREET  
NEW YORK, NY 10281

ENVIRONMENTAL SUB-CONSULTANTS

OLA CONSULTING ENGINEERS

50 BROADWAY SUITE 2  
HAWTHORNE, NY 10532  
TEL: (914) 747-2800

ENVIRONMENTAL SUB-CONSULTANTS

JLC ENVIRONMENTAL  
CONSULTANTS, INC.

30 WEST 26TH STREET, 4TH FLOOR  
NEW YORK, NY 10010  
TEL: (212) 420-8119

LOCATION PLAN

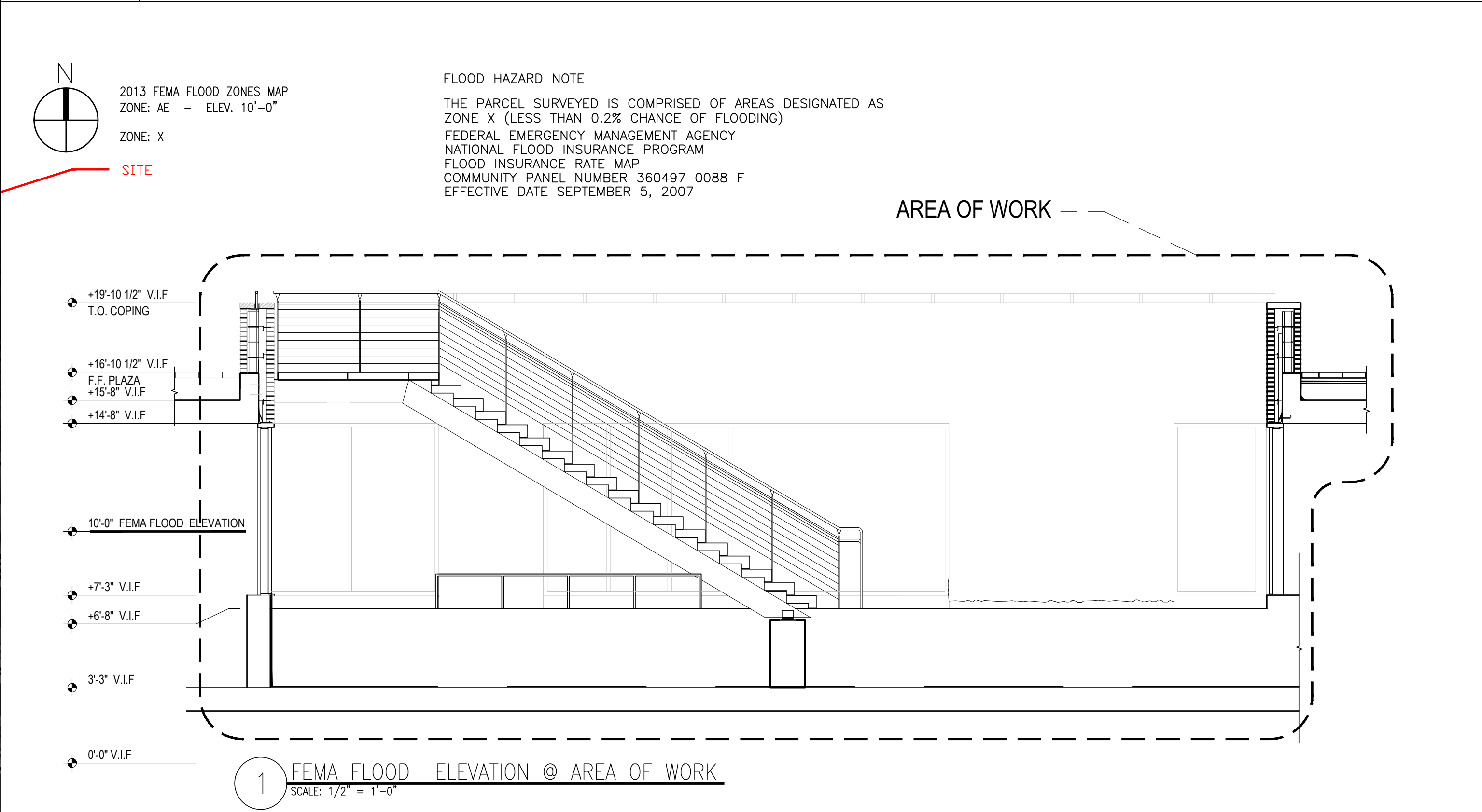
BLOCK NO. 16LOT NO. 7519 & 7520

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ARCHITECT

ARCHITECTURAL PRESERVATION STUDIO, DPC

Architecture, Historic Preservation, & Building Envelope Consulting

594 Broadway, Suite 919, New York, NY 10012

212.477.7976 / info@preservationstudio.com

OWNER

BATTERY PARK CITY AUTHORITY

200 LIBERTY STREET

NEW YORK, NY 10281

ENVIRONMENTAL SUB-CONSULTANTS

OLA CONSULTING ENGINEERS

50 BROADWAY SUITE 2

HAWTHORNE, NY 10532

TEL: (914) 747-2800

ENVIRONMENTAL SUB-CONSULTANTS

JLC ENVIRONMENTAL CONSULTANTS, INC.

30 WEST 26TH STREET, 4TH FLOOR

NEW YORK, NY 10010

TEL: (212) 420-8119

LOCATION PLAN

NEW AREA OF WORK

WARREN STREET

N END AVE

MURRAY STREET

WEST STREET

WEST SIDE HWY

BLOCK NO. 16

LOT NO. 7519 & 7520

2	BID SET	12.13.2018
1	OWNER'S REVIEW 90%	5.16.2018
NO.	SUBMISSIONS/ REVISIONS	DATE

PROJECT NORTH

TRUE NORTH

REFERENCE BAR

SEE DRAWINGS FOR SCALE DESIGNATION

PROJECT

200-300 NORTH END AVE LEAK REMEDIATION DESIGN

200-300 NORTH END AVE

NEW YORK, NY 10282

DRAWING NAME

2013 FEMA FLOOD MAP ZONES

SEAL & SIGNATURE

DATE: 05.11.2018

PROJECT No: P15-036

SCALE: AS NOTED

DRAWING BY: WB

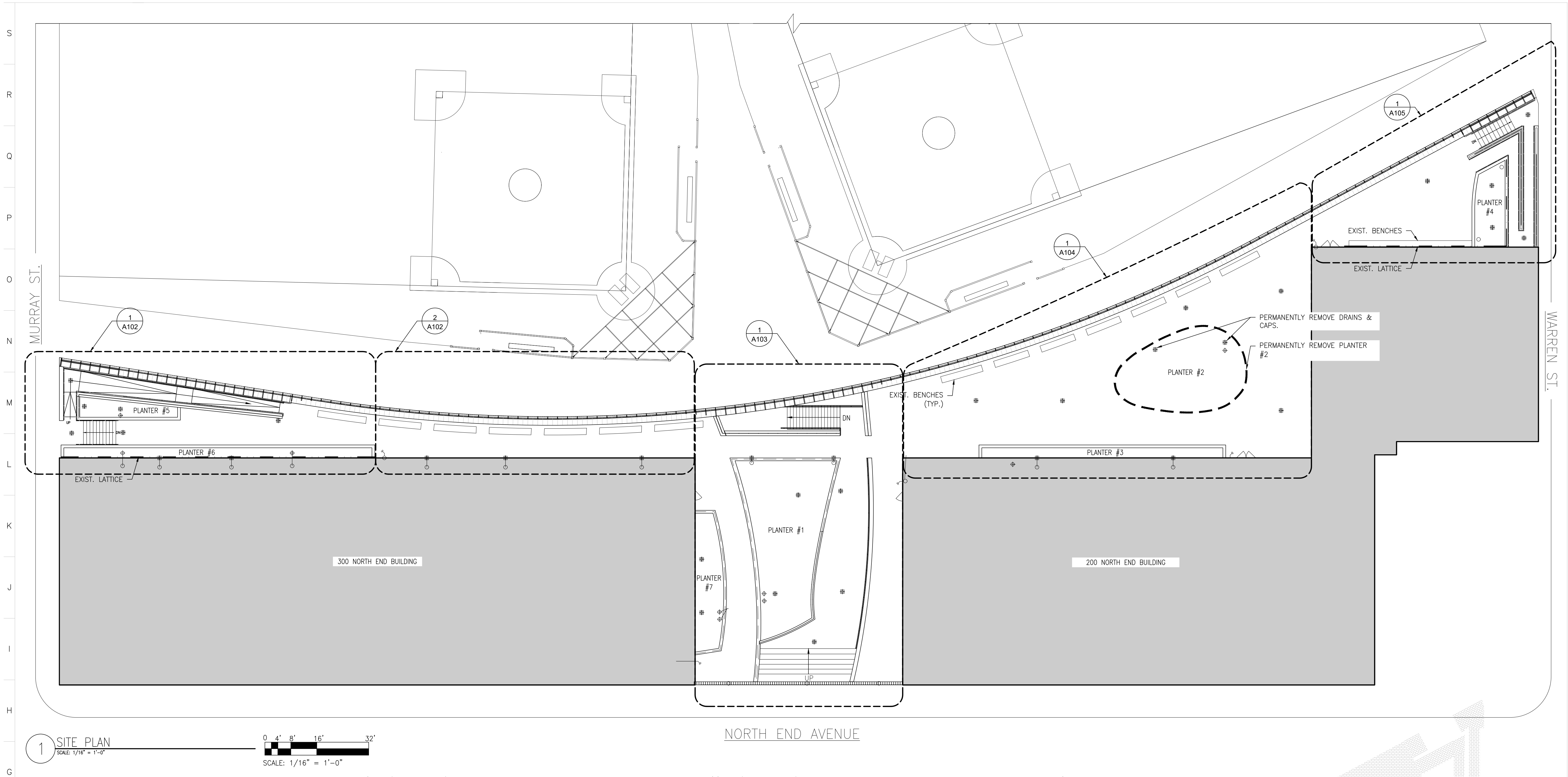
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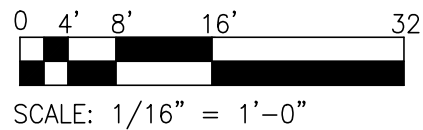
DWG COUNT: 4 OF 27

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1 SITE PLAN  
SCALE: 1/16" = 1'-0"



LEGEND	
PAV01	FLASHING AT UPPER PLAZA: CAREFULLY REMOVE AND SALVAGE EXISTING PAVERS, GRANITE PANELS AND METAL PANELS ALONG BUILDINGS' PERIMETER FOR REINSTALLATION. REMOVE SUBSTRATE MATERIALS DOWN TO DECK. PREPARE AND PRIME CONCRETE DECK AS REQUIRED TO RECEIVE REINFORCED LIQUID FLASHING ALONG ENTIRE PERIMETER OF HORIZONTAL TO VERTICAL BACKUP SURFACES, TERMINATE 8" MIN. ABOVE DECK (TYP.) AND TIE INTO EXISTING MEMBRANE. INSTALL SUBSTRATE MATERIALS TO MATCH EXISTING. REINSTALL EXISTING PAVERS IN RUNNING BOND PATTERN. INSTALL 1" MIN. CLOSED CELL COMPRESSIBLE BACKER ROD AND SEALANT AT PERIMETER BETWEEN PLANTER/PARAPET GRANITE AND PAVERS. ASSUME 20% OF PAVERS REQUIRE REPLACEMENT. SEE DET. 2/A301.
PAV02	PARTIAL LOWER PLAZA WATERPROOFING/ASSEMBLY: REMOVE 3'-0" OF EXISTING PAVERS AND SUBSTRATE MATERIALS TO STRUCTURAL DECK. MAINTAIN EXISTING WATERPROOFING ON STRUCTURAL DECK WHERE SOUNDLY ADHERED. PREPARE HORIZONTAL AND VERTICAL SURFACES AS REQUIRED FOR INSTALLATION OF REINFORCED LIQUID FLASHING. LIQUID FLASHING TO OVERLAP EXISTING SOUND WATERPROOFING SYSTEM AND EXTEND UP FOUNDATION WALL AND TURN IN AT SILL AND JAMBS. REMOVE AND REINSTALL METAL WALL PANELS. REPLACE DIRT AND POUR NEW CONCRETE SLAB ON GRADE. INSTALL HEXAGONAL PAVERS. REPLACE DRAINS AS NOTED ON DRAWINGS. SEE DET. 2/A301 & 4-5/A307.
PAR01	PARAPET/LINTEL AND WINDOW WATERPROOFING: REMOVE AND DISPOSE GRANITE BRICKS. REBUILD WITH NEW GRANITE BRICKS TO MATCH EXISTING. REMOVE AND SALVAGE GRANITE AND COPING STONES FOR RE-INSTALLATION, AS NOTED ON DRAWINGS. TYPICAL. INSTALL VAPOR BARRIER UP BACK UP WALL, TURNED IN AT SILL AND JAMBS, EXTEND BEYOND THE LINTEL (FORM END DAMS) AND TERMINATE MEMBRANE BY OVERLAPPING THE LIQUID BASE FLASHING, AS PER DETAILS. PROVIDE STAINLESS STEEL BRICK TIES EVERY 2 SQ. FT., WEEPS EVERY 16" O.C., INSULATION AND MORTAR NET. REMOVE EXISTING WINDOW FRAMES AS REQUIRED TO ACCOMPLISH WORK. SEE DET. 1-2/A305.
PAR02	PARAPET COPING RESETTING @ PLANTER: REMOVE AND RESET EXIST. GRANITE COPING OVER THROUGH-WALL METAL FLASHING. REMOVE AND REPLACE TWO COURSES OF BRICKWORK BELOW COPING. NEW MASONRY TO MATCH EXIST. SEE DET. 4/A303.
PAR03	PARAPET COPING RESETTING W/ PARTIAL BRICK WORK: REMOVE AND RESET EXIST. GRANITE COPING OVER THROUGH-WALL METAL FLASHING. REMOVE AND REPLACE GRANITE FACEBRICK COURSES AS SHOWN IN THE DWGS. NEW MASONRY TO MATCH EXIST. SEE DET. 3/A303.

PLA01	PLANTER WATERPROOFING: AT PLANTERS #1, #3, #4, #5, #6, AND #7, REMOVE AND DISPOSE GRANITE BRICKS. REMOVE AND SALVAGE GRANITE COPING STONES FOR REINSTALLATION, AS NOTED ON DRAWINGS (TYP.). REMOVE EXISTING WATERPROOFING AND SUBSTRATE MATERIALS TO STRUCTURAL DECK. REPAIR DECK WITH MODIFIED REPAIR MORTAR (ASSUME 15%). PREPARE AND PRIME DECK TO RECEIVE 3-PLY TORCH DOWN BITUMINOUS WATERPROOFING MEMBRANE. INSTALL REINFORCED LIQUID FLASHING UP INBOARD PLANTER WALL TO TERMINATE TOP OF PLANTER CURB, TYPICAL. INSTALL PEEL AND STICK WATERPROOFING MEMBRANE TO OVERLAP LIQUID MEMBRANE 4" MIN. AT TOP OF CURB AND BASE FLASHING. PREPARE LIQUID FLASHING AT ARE OVERLAP AS PER THE REQUIREMENTS THE MANUFACTURER. REBUILD BRICKWORK TO MATCH EXISTING. SEE DET. 3/A301.
PLA02	PLANTER FILL AND PLANTINGS REMOVAL: REMOVE AND DISCARD SOIL AND SMALL PLANTINGS; SALVAGE AND RELOCATE TREES AND LARGER PLANTINGS TO BE REPLANTED AS PER THE REQUEST AT BPCA. PROVIDE PLYWOOD COVERS TO TEMPORARILY SEAL AND PROTECT PLANTER OPENINGS. COORDINATE W/ BPCA LANDSCAPE TEAM FOR REMOVAL; INCLUDING FURNISHING TEMPORARY WOOD PLANTERS & REINSTALLATION.
PZR01	PLAZA DRAIN REPLACEMENT/REMOVAL: REMOVE EXISTING CONCRETE CATCH BASINS AND PLAZA DRAINS. INSTALL PLAZA DRAIN AND BODY AS SPECIFIED. PROVIDE NEW PIPED CONNECTIONS TO EXISTING PLUMBING LINES. SEE PLUMBING DRAWINGS. GRATES TO BE SLIP RESISTANT AND ADA COMPLAINT. RE-INSTALL EXISTING FRAME AND GRATES. SEE DET. 2/A501.
PZR02	NEW PLAZA DRAIN INSTALLATION: PROVIDE NEW PLAZA DRAIN PIPED CONNECTIONS TO EXISTING PLUMBING LINES. SEE PLUMBING DRAWINGS. GRATES TO BE SLIP RESISTANT AND ADA COMPLAINT. RE-INSTALL EXISTING FRAME AND GRATES. SEE DET. 2/A501. (SIM.)
PTR01	PLANTER DRAIN REPLACEMENT: REMOVE EXISTING CATCH BASINS AND PLANTER DRAINS. INSTALL PLANTER DRAIN AND BODY AS SPECIFIED. SEE DET. 1/A501. PROVIDE NEW PIPED CONNECTIONS TO EXISTING PLUMBING LINES. SEE PLUMBING DRAWINGS.
SCR01	SCUPPER DRAIN REPLACEMENT: REMOVE EXISTING SCUPPERS AND CONCRETE CATCH BASINS AT SIDEWALL. INSTALL NEW SIDEWALL SCUPPER DRAINS AND BODY AS SPECIFIED. SEE DET. 4/A501. PROVIDE NEW PIPED CONNECTIONS TO EXISTING PLUMBING LINES. WATERPROOFING BELOW DRAIN BODY. SEE PLUMBING DRAWINGS.
TDR01	TRENCH DRAINS REPLACEMENT: REPLACE EXISTING TRENCH DRAIN AND GRATING AS SPECIFIED. WATERPROOF CONCRETE TROUGH WITH COLD LIQUID APPLIED WATERPROOFING. SEE DET. 3/A501. GRATING TO BE SLIP RESISTANT AND ADA COMPLAINT. SEE PLUMBING DRAWINGS.
EXP01	EXPANSION JOINT (TYPE 1): INSTALL EXPANSION JOINT AT LOT LINE, AS SPECIFIED. SEE DET. 4-6/A301.

EXP02	EXPANSION JOINT (TYPE 2): INSTALL 1 1/4" MINIMUM PRE-COMPRESSED EXPANSION JOINT SYSTEM, AS SPECIFIED, AT HORIZONTAL JOINTS BETWEEN METAL SKIRT AND PLAZA PAVERS (UPPER PLAZA). SEE DET. 3/A402.
EXP03	EXPANSION JOINT (TYPE 3): INSTALL 1/2" MINIMUM COMPRESSIBLE EXPANSION JOINT SYSTEM, AS SPECIFIED AND SHOWN ON DRAWINGS TO CREATE SOFT-CONTROL JOINTS (UPPER PLAZA). SEALANT TO MATCH COLOR OF PAVERS. SEE DET. 1/A403.
EXP04	MASONRY EXPANSION JOINT (TYPE 4): SAW CUT EXISTING CRACK, REPLACE BROKEN GRANITE BRICKS AS NEEDED. INSTALL JOINT STABILIZERS EVERY SIX COURSES. INSTALL BACKER ROD AND SEALANT. SEE DET. 2/A402.
GSR01	GRANITE STEPS AND RAMPS AT NORTH END AVE., WARREN AND MURRAY STREET: CAREFULLY REMOVE AND SALVAGE GRANITE STEP STONES FOR RE-SETTING. SECURE STONES AS PER DRAWINGS. CAREFULLY REMOVE AND SALVAGE EXISTING PAVERS, ASSOCIATED RAILINGS ETC. FOR REINSTALLATION; REMOVE EXISTING SUBSTRATE MATERIALS AND WATERPROOFING DOWN TO CONCRETE FOR REPAIR. WATERPROOFING AND FLASHING, TYPICAL. PREPARE AND PRIME DECK TO RECEIVE NEW WATERPROOFING SYSTEM. TERMINATE MEMBRANE AT PLANTER/PARAPET/BUILDING WALLS AND SIDEWALK INTERFACE. SEE DET. 8/A301.
INJ01	GROUT INJECTION AND CRACK REPAIR AT INTERIOR STAIR AND FOUNDATION WALL: INJECTION GROUTING AT INTERIOR SILL STAIR LANDING AND FOUNDATION WALL. AREA TO BE TREATED WITH CRYSTALLINE WATERPROOFING. SEE DET. 2/A401.
SEA01	SEALANT REPLACEMENT: SEALANT JOINT: REMOVE EXISTING JOINT SEALER(S). PREPARE JOINT CAVITY AND PROVIDE NEW BACKER ROD AND SEALANT (OR FLEXIBLE MASONRY JOINT). SEE DET. 1/A402.
RPA01	RAILING POST ANCHORAGE AT GRANITE STONE: RAILING POSTS AND ANCHOR BOLT PENETRATIONS: POST PENETRATIONS AND ANCHOR BOLT PENETRATIONS TO MATCH EXISTING LOCATIONS. PREPARE CONCRETE AND EMBED POST AND/OR ANCHORS IN EPOXY AS INDICATED ON DRAWINGS. AT LOCATIONS, TO BE DETERMINED, WELD BASE PLATES TO EXISTING RAILINGS. SEE DET. 4/A304.
RPA02	RAILING POST ANCHORAGE AT PLAZA: WELD 4" X 4" BASE PLATES TO EXISTING RAILING POST (TBD). EPOXY ANCHOR BOLTS INTO CONC. TOPPING. SEE DET. 3/A304.
SFR01	SIDEWALK FLAGS REPLACEMENT: REPLACE CONCRETE SIDEWALK FLAGS ON WARREN AND MURRAY ST, AS INDICATED ON DRAWINGS. SEE DET. 9/A301.
SFR02	SIDEWALK FLAGS RESET: REMOVE, SALVAGE AND RESET BLUESTONE FLAGS AT NORTH END AVE. SEE DET. 9/A301.

#### NOTES:

- THE CONTRACTOR SHALL PROTECT THE PROPERTY AT ALL TIMES OF CONTRACT. PROTECT ALL EXISTING PLAZA-MOUNTED RAILINGS AND PLAZA ROOF PENETRATIONS TO REMAIN; SUPPORT AND PROTECT DURING CONSTRUCTION WORK AS NEEDED. ALL EXISTING PIPING, AND RELATED ITEMS TO REMAIN UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND MAINTAINING ALL EXISTING AND NEW WORK, FACILITIES, AND IMPROVEMENTS WITHIN THE AREA OF THE WORK. ALL EXISTING AREAS TO REMAIN AFFECTED BY REMOVAL OR NEW CONSTRUCTION WORK THAT ARE DAMAGED SHALL BE PATCHED AS REQUIRED TO MATCH IMMEDIATE EXISTING ADJACENT AREAS IN MATERIALS, FIRE RATING, FINISH AND COLOR, UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE DECK REPAIR PER DETAIL 1/A401.00.
- THE CONTRACTOR IS TO SUBMIT PAVING LAYOUT SHOP DRAWINGS, INCLUDING EXISTING SLAB ELEVATIONS, SLOPE AND LOCATION OF DRAINS. PROVIDE SURVEY OF EXISTING CONDITIONS AND ELEVATIONS OF EXISTING DECK. CONTRACTOR TO VERIFY AND SURVEY EXISTING DECK AND SLOPES FOR SURVEY SHOP DRAWINGS. PROVIDE SURVEY TO ARCHITECT FOR REVIEW PRIOR TO THE PREPARATION OF DRAWINGS. SUBMIT TAPERED PERVIOUS CONCRETE TOPPING SLAB LAYOUT DRAWINGS SHOWING EXISTING AND PROPOSED PITCH & SLOPE.
- TEST AND CLEAN PLAZA AND COURTYARD DRAINS AND PIPES, BEFORE AND AFTER INSTALLATION OF THE DRAIN & SNAKE OUT FOR 20'-0".
- FLOOD-TEST PLAZA AND COURTYARD DRAINS BEFORE & AFTER INSTALLATION.
- THE CONTRACTOR SHALL PERFORM ALL REMOVAL AND RELATED WORK SHOWN ON THE DRAWINGS, DESCRIBED IN THESE NOTES, AND REASONABLY INFERRED AS NECESSARY TO COMPLETE SCOPE OF WORK.
- THE CONTRACTOR SHALL DISPOSE OF REMOVED NON-SALVAGED MATERIAL AND DEBRIS DAILY.
- PROVIDE TEMPORARY COVERS FOR PROTECTION AS NEEDED. PROTECT ALL THE EQUIPMENT AND COORDINATE WITH BUILDING MANAGEMENT.
- TEMPORARILY REMOVE ELECTRICAL CONDUIT AND LIGHT FIXTURES AFFECTED DUE TO PLAZA REPAIR. REINSTALL THE CONDUIT AND FIXTURES AFTER REPAIRS. THE CONTRACTOR IS REQ'D TO REPLACE INTERIOR PLASTER, PAINT, AND ANY OTHER FINISHES DAMAGED DURING WORK.
- THE CONTRACTOR IS TO VERIFY IN FIELD THE HEIGHT OF ALL THE EXISTING PARAPETS TO BE REPAIRED AND MAINTAIN 42-INCH HEIGHT FOR NEW YORK CITY BUILDING CODE.
- THE CONTRACTOR IS TO PERFORM MISCELLANEOUS ELECTRICAL WORK ASSOCIATED WITH THE SCOPE OF WORK INCLUDING BUT NOT LIMITED TO DISCONNECT/ RECONNECTION OF EXISTING CONDUIT AND FIXTURES AND PROVISION OF TEMPORARY POWER TO FIXTURES INCLUDING SECURITY AND PARAPET RAILING LIGHTING DURING CONSTRUCTION.
- CONTRACTOR TO SURVEY THE AREA OF WORK AFTER REMOVAL OF PARSE COAT AND PROVIDE SHOP DRAWINGS INDICATING THE EXACT LOCATION OF THE INJECTION PORTS AS PER THE FIELD CONDITIONS.
- REPAIR DAMAGED INTERIOR FINISHES AT LOWER LEVEL. AREA OF WORK TO MATCH EXIST.
- TEMPORARILY REMOVE & REINSTALL EX. IRRIGATION SYSTEM AS REQUIRED TO ACCOMPLISH THE WORK.
- LEVEL OF FINISH WORK TO MEET EXIST. STAIR & RAMP LANDING LEVELS.

#### SCOPE OF WORK:

- REMOVE & RESET PAVERS AT UPPER PLAZA. INSTALL SAND SETTING BED WITH POLYMERIC LIQUID STABILIZER AT JOINTS OF PAVERS. ASSUME 20% REPLACEMENT.
- REMOVE AND REINSTALL IRRIGATION SYSTEM AND RECONNECT TO MAIN SUPPLY IN KIND AFTER COMPLETION OF WATERPROOFING OF THE PLANTER. SEE PLUMBING DRAWINGS.

ARCHITECT  
**ARCHITECTURAL  
PRESERVATION  
STUDIO, DPC**  
Architecture, Historic Preservation, & Building Envelope Consulting  
594 Broadway, Suite 919, New York, NY 10012  
212.477.7976 / info@preservationstudio.com

OWNER  
**BATTERY PARK CITY AUTHORITY**  
  
200 LIBERTY STREET  
NEW YORK, NY 10281

ENVIRONMENTAL SUB-CONSULTANTS  
**OLA CONSULTING ENGINEERS**  
  
50 BROADWAY SUITE 2  
HAWTHORNE, NY 10532  
TEL: (914) 747-2800

ENVIRONMENTAL SUB-CONSULTANTS  
**JLC ENVIRONMENTAL  
CONSULTANTS, INC.**  
  
30 WEST 26TH STREET, 4TH FLOOR  
NEW YORK, NY 10010  
TEL: (212) 420-8119

LOCATION PLAN  
  
BLOCK NO. 16 LOT NO. 7519 & 7520

2	BID SET	12.13.2018
1	OWNER'S REVIEW	90% 5.16.2018
NO.	SUBMISSIONS/ REVISIONS	DATE

PROJECT NORTH

PROJECT

**200-300 NORTH END AVE  
LEAK REMEDIATION  
DESIGN**

200-300 NORTH END AVE  
NEW YORK, NY 10282

DRAWING NAME

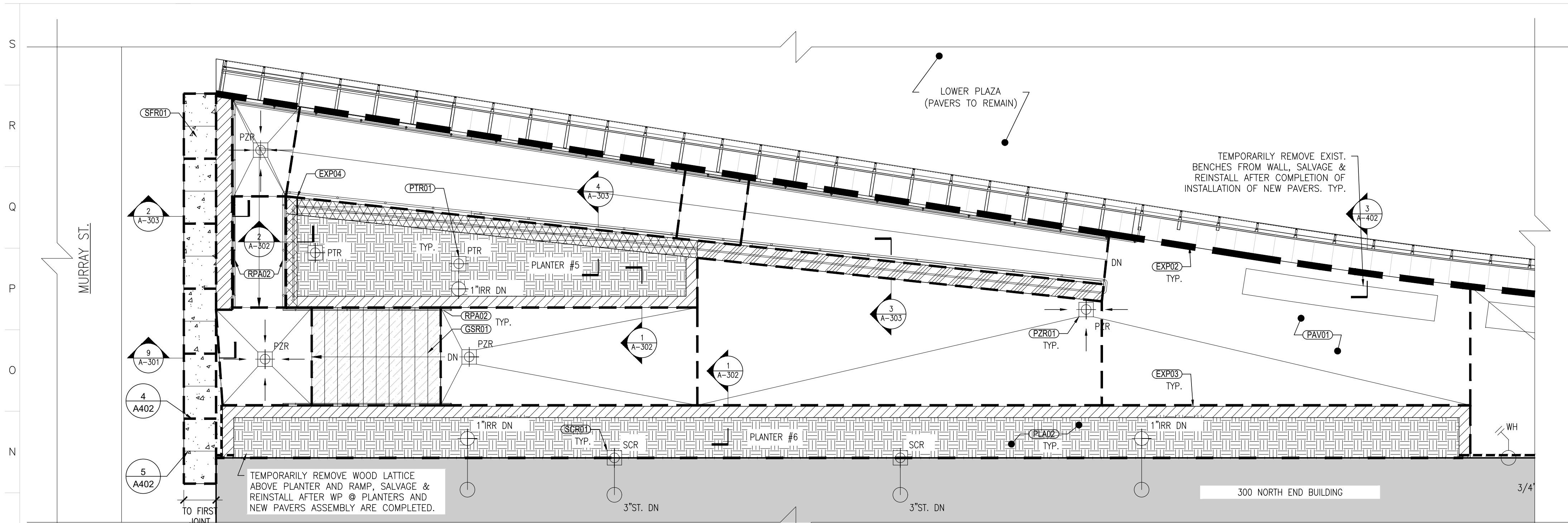
**EXISTING SITE PLAN**

SEAL & SIGNATURE

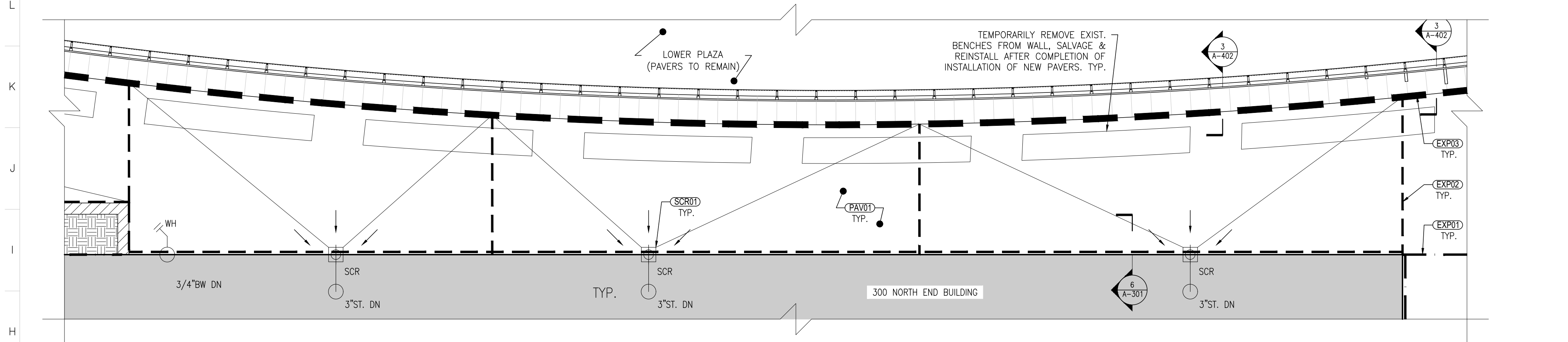
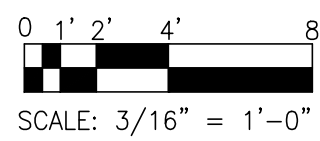
DATE: 05.11.2018  
PROJECT No: P15-036  
SCALE: AS NOTED  
DRAWING BY: WB  
CHECKED BY: PJ/JVF  
DWG No: **A-101.00**  
DWG COUNT: 5 OF 27

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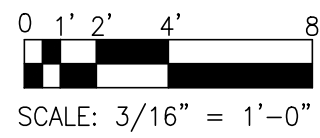




1 PARTIAL PLAN @ UPPER PLAZA  
SCALE: 3/16" = 1'-0"



2 PARTIAL PLAN @ UPPER PLAZA  
SCALE: 3/16" = 1'-0"



NOTES:

- THE CONTRACTOR SHALL PROTECT THE PROPERTY AT ALL TIMES OF CONTRACT. PROTECT ALL EXISTING PLAZA-MOUNTED RAILINGS AND PLAZA ROOF PENETRATIONS TO REMAIN; SUPPORT AND PROTECT DURING CONSTRUCTION WORK AS NEEDED. ALL EXISTING PIPING, AND RELATED ITEMS TO REMAIN UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND MAINTAINING ALL EXISTING AND NEW WORK, FACILITIES, AND IMPROVEMENTS WITHIN THE AREA OF THE WORK. ALL EXISTING AREAS TO REMAIN AFFECTED BY REMOVAL OR NEW CONSTRUCTION WORK THAT ARE DAMAGED SHALL BE PATCHED AS REQUIRED TO MATCH IMMEDIATE EXISTING ADJACENT AREAS IN MATERIALS, FIRE RATING, FINISH AND COLOR, UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE DECK REPAIR PER DETAIL 1/A401.00.
- THE CONTRACTOR IS TO SUBMIT PAVING LAYOUT SHOP DRAWINGS, INCLUDING EXISTING SLAB ELEVATIONS, SLOPE AND LOCATION OF DRAINS. PROVIDE SURVEY OF EXISTING CONDITIONS AND ELEVATIONS OF EXISTING DECK. CONTRACTOR TO VERIFY AND SURVEY EXISTING DECK AND SLOPES FOR SURVEY SHOP DRAWINGS. PROVIDE SURVEY TO ARCHITECT FOR REVIEW PRIOR TO THE PREPARATION OF DRAWINGS. SUBMIT TAPERED PERVIOUS CONCRETE TOPPING SLAB LAYOUT DRAWINGS SHOWING EXISTING AND PROPOSED PITCH & SLOPE.
- TEST AND CLEAN PLAZA AND COURTYARD DRAINS AND PIPES, BEFORE AND AFTER INSTALLATION OF THE DRAIN & SNAKE OUT FOR 20'-0".
- FLOOD-TEST PLAZA AND COURTYARD DRAINS BEFORE & AFTER INSTALLATION.
- THE CONTRACTOR SHALL PERFORM ALL REMOVAL AND RELATED WORK SHOWN ON THE DRAWINGS, DESCRIBED IN THESE NOTES, AND REASONABLY INFERRED AS NECESSARY TO COMPLETE SCOPE OF WORK.
- THE CONTRACTOR SHALL DISPOSE OF REMOVED NON-SALVAGED MATERIAL AND DEBRIS DAILY.
- PROVIDE TEMPORARY COVERS FOR PROTECTION AS NEEDED. PROTECT ALL THE EQUIPMENT AND COORDINATE WITH BUILDING MANAGEMENT.
- TEMPORARILY REMOVE ELECTRICAL CONDUIT AND LIGHT FIXTURES AFFECTED DUE TO PLAZA REPAIR. REINSTALL THE CONDUIT AND FIXTURES AFTER REPAIRS. THE CONTRACTOR IS REQ'D TO REPLACE INTERIOR PLASTER, PAINT, AND ANY OTHER FINISHES DAMAGED DURING WORK.
- THE CONTRACTOR IS TO VERIFY IN FIELD THE HEIGHT OF ALL THE EXISTING PARAPETS TO BE REPAIRED AND MAINTAIN 42-INCH HEIGHT FOR NEW YORK CITY BUILDING CODE.

- THE CONTRACTOR IS TO PERFORM MISCELLANEOUS ELECTRICAL WORK ASSOCIATED WITH THE SCOPE OF WORK INCLUDING BUT NOT LIMITED TO DISCONNECT/ RECONNECTION OF EXISTING CONDUIT AND FIXTURES AND PROVISION OF TEMPORARY POWER TO FIXTURES INCLUDING SECURITY AND PARAPET RAILING LIGHTING DURING CONSTRUCTION.
- CONTRACTOR TO SURVEY THE AREA OF WORK AFTER REMOVAL OF PARGE COAT AND PROVIDE SHOP DRAWINGS INDICATING THE EXACT LOCATION OF THE INJECTION PORTS AS PER THE FIELD CONDITIONS.
- REPAIR DAMAGED INTERIOR FINISHES AT LOWER LEVEL. AREA OF WORK TO MATCH EXIST.
- TEMPORARILY REMOVE & REINSTALL EX. IRRIGATION SYSTEM AS REQUIRED TO ACCOMPLISH THE WORK.
- LEVEL OF FINISH WORK TO MEET EXIST. STAIR & RAMP LANDING LEVELS.

SCOPE OF WORK:

- REMOVE & RESET PAVERS AT UPPER PLAZA. INSTALL SAND SETTING BED WITH POLYMERIC LIQUID STABILIZER AT JOINTS OF PAVERS. ASSUME 20% REPLACEMENT.

LEGEND		
PAV01		FLASHING AT UPPER PLAZA: CAREFULLY REMOVE AND SALVAGE EXISTING PAVERS, GRANITE PANELS AND METAL PANELS ALONG BUILDINGS' PERIMETER FOR REINSTALLATION. REMOVE SUBSTRATE MATERIALS DOWN TO DECK. PREPARE AND PRIME CONCRETE DECK AS REQUIRED TO RECEIVE REINFORCED LIQUID FLASHING ALONG ENTIRE PERIMETER OF HORIZONTAL TO VERTICAL BACKUP SURFACES. TERMINATE 8" MIN. ABOVE DECK (TYP.) AND TIE INTO EXISTING MEMBRANE. INSTALL SUBSTRATE MATERIALS TO MATCH EXISTING. REINSTALL EXISTING PAVERS IN RUNNING BOND PATTERN. INSTALL 1" MIN. CLOSED CELL COMPRESSIBLE BACKER ROD AND SEALANT AT PERIMETER BETWEEN PLANTER/PARAPET GRANITE AND PAVERS. ASSUME 20% OF PAVERS REQUIRE REPLACEMENT. SEE DET. 2/A301.
PAV02		PARTIAL LOWER PLAZA WATERPROOFING/ASSEMBLY: REMOVE 3'-0" OF EXISTING PAVERS AND SUBSTRATE MATERIALS TO STRUCTURAL DECK. MAINTAIN EXISTING WATERPROOFING ON STRUCTURAL DECK WHERE SOUNDLY ADHERED. PREPARE HORIZONTAL AND VERTICAL SURFACES AS REQUIRED FOR INSTALLATION OF REINFORCED LIQUID FLASHING. LIQUID FLASHING TO OVERLAP EXISTING SOUND WATERPROOFING SYSTEM AND EXTEND UP FOUNDATION WALL AND TURN IN AT SILL AND JAMBS. REMOVE AND REINSTALL METAL WALL PANELS. REPLACE DIRT AND POUR NEW CONCRETE SLAB ON GRADE. INSTALL HEXAGONAL PAVERS. REPLACE DRAINS AS NOTED ON DRAWINGS. SEE DET. 2/A301 & 4-5/A307.
PAR01		PARAPET/LINTEL AND WINDOW WATERPROOFING: REMOVE AND DISPOSE GRANITE BRICKS. REBUILD WITH NEW GRANITE BRICKS TO MATCH EXISTING. REMOVE AND SALVAGE GRANITE AND COPING STONES FOR RE-INSTALLATION, AS NOTED ON DRAWINGS. TYPICAL. INSTALL VAPOR BARRIER UP BACK UP WALL, TURNED IN AT SILL AND JAMBS, EXTEND BEYOND THE LINTEL (FORM END DAMS) AND TERMINATE MEMBRANE BY OVERLAPPING THE LIQUID BASE FLASHING, AS PER DETAILS. PROVIDE STAINLESS STEEL BRICK TIES EVERY 2 SQ. FT., WEEPS EVERY 16" O.C., INSULATION AND MORTAR NET. REMOVE EXISTING WINDOW FRAMES AS REQUIRED TO ACCOMPLISH WORK. SEE DET. 1-2/A305.
PAR02		PARAPET COPING RESETTING @ PLANTER: REMOVE AND RESET EXIST. GRANITE COPING OVER THROUGH-WALL METAL FLASHING. REMOVE AND REPLACE TWO COURSES OF BRICKWORK BELOW COPING. NEW MASONRY TO MATCH EXIST. SEE DET. 4/A303.
PAR03		PARAPET COPING RESETTING W/ PARTIAL BRICK WORK: REMOVE AND RESET EXIST. GRANITE COPING OVER THROUGH-WALL METAL FLASHING. REMOVE AND REPLACE GRANITE FACEBRICK COURSES AS SHOWN IN THE DWGS. NEW MASONRY TO MATCH EXIST. SEE DET. 3/A303.
PLA01		PLANTER WATERPROOFING: AT PLANTERS #1, #3, #4, #5, #6, AND #7, REMOVE AND DISPOSE GRANITE BRICKS. REMOVE AND SALVAGE GRANITE COPING STONES FOR REINSTALLATION, AS NOTED ON DRAWINGS (TYP). REMOVE EXISTING WATERPROOFING AND SUBSTRATE MATERIALS TO STRUCTURAL DECK. REPAIR DECK WITH MODIFIED REPAIR MORTAR (ASSUME 15%). PREPARE AND PRIME DECK TO RECEIVE 3-PLY TORCH DOWN BITUMINOUS WATERPROOFING MEMBRANE. INSTALL REINFORCED LIQUID FLASHING UP INBOARD PLANTER WALL TO TERMINATE TOP OF PLANTER CURB, TYPICAL. INSTALL PEEL AND STICK WATERPROOFING MEMBRANE TO OVERLAP LIQUID MEMBRANE 4" MIN. AT TOP OF CURB AND BASE FLASHING. PREPARE LIQUID FLASHING AT ARE OVERLAP AS PER THE REQUIREMENTS THE MANUFACTURER. REBUILD BRICKWORK TO MATCH EXISTING. SEE DET. 3/A301.
PLA02		PLANTER FILL AND PLANTINGS REMOVAL: REMOVE AND DISCARD SOIL AND SMALL PLANTINGS; SALVAGE AND RELOCATE TREES AND LARGER PLANTINGS TO BE REPLANTED AS PER THE REQUEST AT BPCA. PROVIDE PLYWOOD COVERS TO TEMPORARILY SEAL AND PROTECT PLANTER OPENINGS. COORDINATE W/ BPCA LANDSCAPE TEAM FOR REMOVAL, INCLUDING FURNISHING TEMPORARY WOOD PLANTERS & REINSTALLATION.
PZR01		PLAZA DRAIN REPLACEMENT/REMOVAL: REMOVE EXISTING CONCRETE CATCH BASINS AND PLAZA DRAINS. INSTALL PLAZA DRAIN AND BODY AS SPECIFIED. PROVIDE NEW PIPED CONNECTIONS TO EXISTING PLUMBING LINES. SEE PLUMBING DRAWINGS. GRATES TO BE SLIP RESISTANT AND ADA COMPLAINT. RE-INSTALL EXISTING FRAME AND GRATES. SEE DET. 2/A501.
PZR02		NEW PLAZA DRAIN INSTALLATION: PROVIDE NEW PLAZA DRAIN PIPED CONNECTIONS TO EXISTING PLUMBING LINES. SEE PLUMBING DRAWINGS. GRATES TO BE SLIP RESISTANT AND ADA COMPLAINT. RE-INSTALL EXISTING FRAME AND GRATES. SEE DET. 2/A501. (SIM.)
PTR01		PLANTER DRAIN REPLACEMENT: REMOVE EXISTING CATCH BASINS AND PLANTER DRAINS. INSTALL PLANTER DRAIN AND BODY AS SPECIFIED. SEE DET. 1/A501. PROVIDE NEW PIPED CONNECTIONS TO EXISTING PLUMBING LINES. SEE PLUMBING DRAWINGS.
SCR01		SCUPPER DRAIN REPLACEMENT: REMOVE EXISTING SCUPPERS AND CONCRETE CATCH BASINS AT SIDEWALL. INSTALL NEW SIDEWALL SCUPPER DRAINS AND BODY AS SPECIFIED. SEE DET. 4/A501. PROVIDE NEW PIPED CONNECTIONS TO EXISTING PLUMBING LINES. WATERPROOFING BELOW DRAIN BODY. SEE PLUMBING DRAWINGS.
TDR01		TRENCH DRAINS REPLACEMENT: REPLACE EXISTING TRENCH DRAIN AND GRATING AS SPECIFIED. WATERPROOF CONCRETE TROUGH WITH COLD LIQUID APPLIED WATERPROOFING. SEE DET. 3/A501. GRATING TO BE SLIP RESISTANT AND ADA COMPLAINT. SEE PLUMBING DRAWINGS.
EXP01		EXPANSION JOINT (TYPE 1): INSTALL EXPANSION JOINT AT LOT LINE, AS SPECIFIED. SEE DET. 4-6/A301.
EXP02		EXPANSION JOINT (TYPE 2): INSTALL 1 1/4" MINIMUM PRE-COMPRESSED EXPANSION JOINT SYSTEM, AS SPECIFIED, AT HORIZONTAL JOINTS BETWEEN METAL SKIRT AND PLAZA PAVERS (UPPER PLAZA). SEE DET. 3/A402.
EXP03		EXPANSION JOINT (TYPE 3): INSTALL 1/2" MINIMUM COMPRESSIBLE EXPANSION JOINT SYSTEM, AS SPECIFIED AND SHOWN ON DRAWINGS TO CREATE SOFT-CONTROL JOINTS (UPPER PLAZA). SEALANT TO MATCH COLOR OF PAVERS. SEE DET. 1/A403.
EXP04		MASONRY EXPANSION JOINT (TYPE 4): SAW CUT EXISTING CRACK. REPLACE BROKEN GRANITE BRICKS AS NEEDED. INSTALL JOINT STABILIZERS EVERY SIX COURSES. INSTALL BACKER ROD AND SEALANT. SEE DET. 2/A402.
GSR01		GRANITE STEPS AND RAMPS AT NORTH END AVE., WARREN AND MURRAY STREET: CAREFULLY REMOVE AND SALVAGE GRANITE STEP STONES FOR RE-SETTING. SECURE STONES AS PER DRAWINGS. CAREFULLY REMOVE AND SALVAGE EXISTING PAVERS, ASSOCIATED RAILINGS ETC. FOR REINSTALLATION; REMOVE EXISTING SUBSTRATE MATERIALS AND WATERPROOFING DOWN TO CONCRETE FOR REPAIR, WATERPROOFING AND FLASHING, TYPICAL. PREPARE AND PRIME DECK TO RECEIVE NEW WATERPROOFING SYSTEM. TERMINATE MEMBRANE AT PLANTER/PARAPET/BUILDING WALLS AND SIDEWALK INTERFACE. SEE DET. 8/A301.
INJ01		GROUT INJECTION AND CRACK REPAIR AT INTERIOR STAIR AND FOUNDATION WALL: INJECTION GROUTING AT INTERIOR SILL STAIR LANDING AND FOUNDATION WALL. AREA TO BE TREATED WITH CRYSTALLINE WATERPROOFING. SEE DET. 2/A401.
SEA01		SEALANT REPLACEMENT: SEALANT JOINT: REMOVE EXISTING JOINT SEALER(S). PREPARE JOINT CAVITY AND PROVIDE NEW BACKER ROD AND SEALANT (OR FLEXIBLE MASONRY JOINT). SEE DET. 1/A402.
RPA01		RAILING POST ANCHORAGE AT GRANITE STONE: RAILING POSTS AND ANCHOR BOLT PENETRATIONS: POST PENETRATIONS AND ANCHOR BOLT PENETRATIONS TO MATCH EXISTING LOCATIONS. PREPARE CONCRETE AND EMBED POST AND/OR ANCHORS IN EPOXY AS INDICATED ON DRAWINGS. AT LOCATIONS, TO BE DETERMINED, WELD BASE PLATES TO EXISTING RAILINGS. SEE DET. 4/A304.
RPA02		RAILING POST ANCHORAGE AT PLAZA: WELD 4" X 4" BASE PLATES TO EXISTING RAILING POST (TBD). EPOXY ANCHOR BOLTS INTO CONC. TOPPING. SEE DET. 3/A304.
SFR01		SIDEWALK FLAGS REPLACEMENT: REPLACE CONCRETE SIDEWALK FLAGS ON WARREN AND MURRAY ST, AS INDICATED ON DRAWINGS. SEE DET. 9/A301.
SFR02		SIDEWALK FLAGS RESET: REMOVE, SALVAGE AND RESET BLUESTONE FLAGS AT NORTH END AVE. SEE DET. 9/A301.

ARCHITECT

ARCHITECTURAL  
PRESERVATION  
STUDIO, DPC

Architecture, Historic Preservation, & Building Envelope Consulting  
594 Broadway, Suite 919, New York, NY 10012  
212.477.7976 / info@preservationstudio.com

OWNER

BATTERY PARK CITY AUTHORITY

200 LIBERTY STREET  
NEW YORK, NY 10281

ENVIRONMENTAL SUB-CONSULTANTS

OLA CONSULTING ENGINEERS

50 BROADWAY SUITE 2  
HAWTHORNE, NY 10532  
TEL: (914) 747-2800

ENVIRONMENTAL SUB-CONSULTANTS

J.L.C ENVIRONMENTAL  
CONSULTANTS, INC.

30 WEST 26TH STREET, 4TH FLOOR  
NEW YORK, NY 10010  
TEL: (212) 420-8119

LOCATION PLAN

2	BID SET	12.13.2018
1	OWNER'S REVIEW	90% 5.16.2018
NO.	SUBMISSIONS/ REVISIONS	DATE

PROJECT NORTH

PROJECT

200-300 NORTH END AVE  
LEAK REMEDIATION  
DESIGN

200-300 NORTH END AVE  
NEW YORK, NY 10282

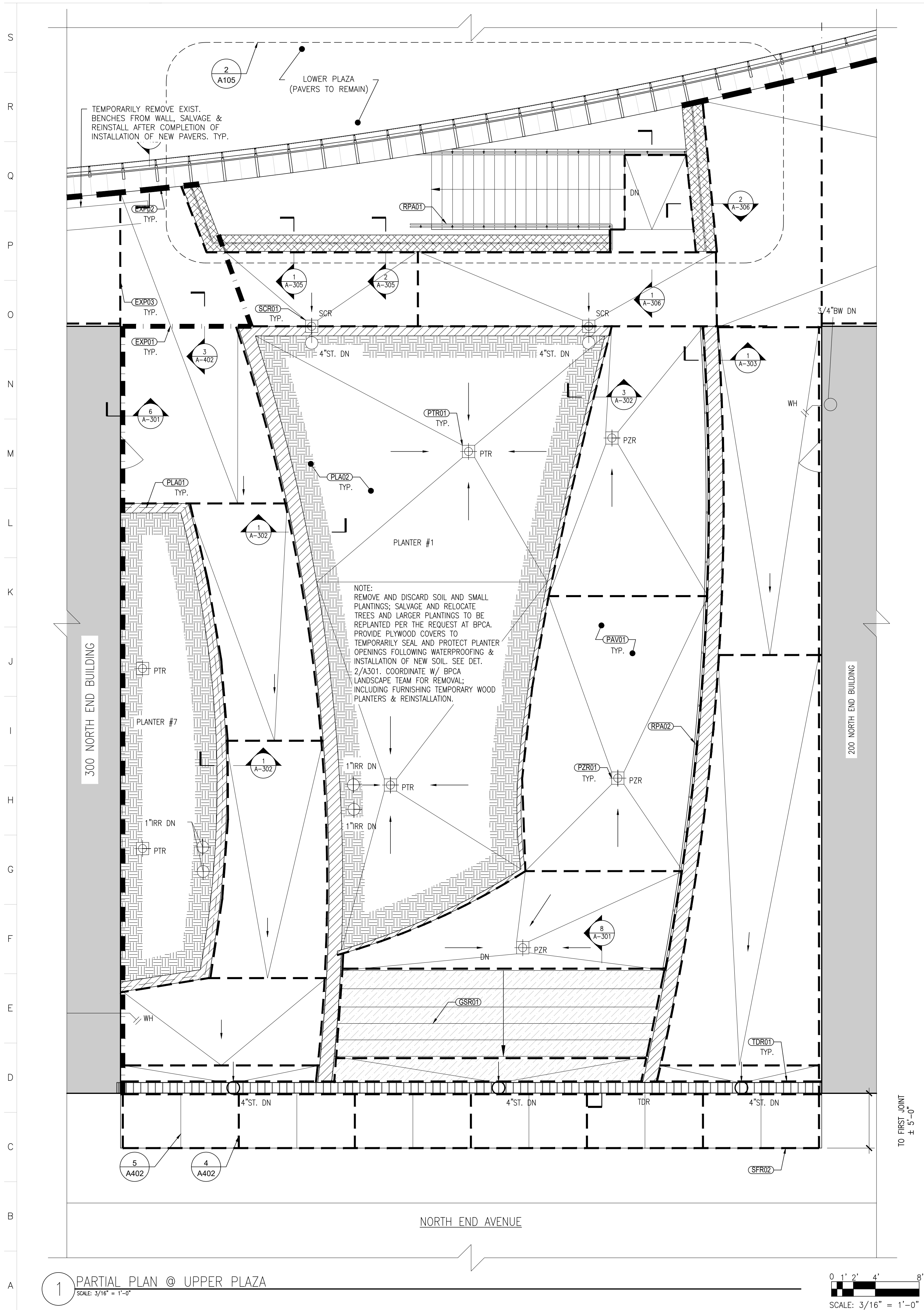
DRAWING NAME

PARTIAL PLANS @ UPPER  
LEVEL

REAL & SIGNATURE

DATE: 05.11.2018  
PROJECT No: P15-036  
SCALE: AS NOTED  
DRAWING BY: WB  
CHECKED BY: PJ/JVF  
DWG No: A-102.00  
DWG COUNT: 6 OF 27





LEGEND		
PAV01		FLASHING AT UPPER PLAZA: CAREFULLY REMOVE AND SALVAGE EXISTING PAVERS, GRANITE PANELS AND METAL PANELS ALONG BUILDINGS' PERIMETER FOR REINSTALLATION. REMOVE SUBSTRATE MATERIALS DOWN TO DECK. PREPARE AND PRIME CONCRETE DECK AS REQUIRED TO RECEIVE REINFORCED LIQUID FLASHING ALONG ENTIRE PERIMETER OF HORIZONTAL TO VERTICAL BACKUP SURFACES, TERMINATE 8" MIN. ABOVE DECK (TYP.) AND THE INTO EXISTING MEMBRANE. INSTALL SUBSTRATE MATERIALS TO MATCH EXISTING. REINSTALL FLASHING AS PER DETAILING. PROVIDE STAINLESS STEEL BRICK TIES EVERY 2 SQ. FT., WEEPS EVERY 16" O.C., INSULATION AND MORTAR NET. REMOVE EXISTING WINDOW FRAMES AS REQUIRED TO ACCOMPLISH WORK. SEE DET. 2/A301.
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PZR01		PLAZA DRAIN REPLACEMENT/REMOVAL: REMOVE EXISTING CONCRETE CATCH BASINS AND PLAZA DRAINS. INSTALL PLAZA DRAIN AND BODY AS SPECIFIED. PROVIDE NEW PIPED CONNECTIONS TO EXISTING PLUMBING LINES. SEE PLUMBING DRAWINGS. GRATES TO BE SLIP RESISTANT AND ADA COMPLAINT. RE-INSTALL EXISTING FRAME AND GRATES. SEE DET. 2/A501.
PZR02		NEW PLAZA DRAIN INSTALLATION: PROVIDE NEW PLAZA DRAIN PIPED CONNECTIONS TO EXISTING PLUMBING LINES. SEE PLUMBING DRAWINGS. GRATES TO BE SLIP RESISTANT AND ADA COMPLAINT. RE-INSTALL EXISTING FRAME AND GRATES. SEE DET. 2/A501. (SIM.)
PTR01		PLANTER DRAIN REPLACEMENT: REMOVE EXISTING CATCH BASINS AND PLANTER DRAINS. INSTALL PLANTER DRAIN AND BODY AS SPECIFIED. SEE DET. 1/A501. PROVIDE NEW PIPED CONNECTIONS TO EXISTING PLUMBING LINES. SEE PLUMBING DRAWINGS.
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EXP04		MASONRY EXPANSION JOINT (TYPE 4): SAW OUT EXISTING CRACK, REPLACE BROKEN GRANITE BRICKS AS NEEDED. INSTALL JOINT STABILIZERS EVERY SIX COURSES. INSTALL BACKER ROD AND SEALANT. SEE DET. 2/A402.
GSR01		GRANITE STEPS AND RAMPS AT NORTH END AVE., WARREN AND MURRAY STREET: CAREFULLY REMOVE AND SALVAGE GRANITE STEP STONES FOR RE-SETTING. SECURE STONES AS PER DRAWINGS. CAREFULLY REMOVE AND SALVAGE EXISTING PAVERS, ASSOCIATED RAILINGS ETC. FOR REINSTALLATION. REMOVE EXISTING SUBSTRATE MATERIALS AND WATERPROOFING DOWN TO CONCRETE FOR REPAIR. WATERPROOFING AND FLASHING, TYPICAL. PREPARE AND PRIME DECK TO RECEIVE NEW WATERPROOFING SYSTEM. TERMINATE MEMBRANE AT PLANTER/PARAPET/BUILDING WALLS AND SIDEWALK INTERFACE. SEE DET. 8/A301.
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SEA01		SEALANT REPLACEMENT: SEALANT JOINT: REMOVE EXISTING JOINT SEALER(S). PREPARE JOINT CAVITY AND PROVIDE NEW BACKER ROD AND SEALANT (OR FLEXIBLE MASONRY JOINT). SEE DET. 1/A402.
RPA01		RAILING POST ANCHORAGE AT GRANITE STONE: RAILING POSTS AND ANCHOR BOLT PENETRATIONS: POST PENETRATIONS AND ANCHOR BOLT PENETRATIONS TO MATCH EXISTING LOCATIONS. PREPARE CONCRETE AND EMBED POST AND/OR ANCHORS IN EPOXY AS INDICATED ON DRAWINGS. AT LOCATIONS, TO BE DETERMINED, WELD BASE PLATES TO EXISTING RAILINGS. SEE DET. 8/A304.
RPA02		RAILING POST ANCHORAGE AT PLAZA: WELD 4" x 4" BASE PLATES TO EXISTING RAILING POST (TBD). EPOXY ANCHOR BOLTS INTO CONC. TOPPING. SEE DET. 3/A304.
SFR01		SIDEWALK FLAGS REPLACEMENT: REPLACE CONCRETE SIDEWALK FLAGS ON WARREN AND MURRAY ST. AS INDICATED ON DRAWINGS. SEE DET. 9/A301.
SFR02		SIDEWALK FLAGS RESET: REMOVE, SALVAGE AND RESET BLUESTONE FLAGS AT NORTH END AVE. SEE DET. 9/A301.

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  - TEST AND CLEAN PLAZA AND COURTYARD DRAINS AND PIPES, BEFORE AND AFTER INSTALLATION OF THE DRAIN & SNAKE OUT FOR 20'-0".
  - FLOOD-TEST PLAZA AND COURTYARD DRAINS BEFORE & AFTER INSTALLATION.
  - THE CONTRACTOR SHALL PERFORM ALL REMOVAL AND RELATED WORK SHOWN ON THE DRAWINGS, DESCRIBED IN THESE NOTES, AND REASONABLY INFERRED AS NECESSARY TO COMPLETE SCOPE OF WORK.
  - THE CONTRACTOR SHALL DISPOSE OF REMOVED NON-SALVAGED MATERIAL AND DEBRIS DAILY.
  - PROVIDE TEMPORARY COVERS FOR PROTECTION AS NEEDED. PROTECT ALL THE EQUIPMENT AND COORDINATE WITH BUILDING MANAGEMENT.
  - TEMPORARILY REMOVE ELECTRICAL CONDUIT AND LIGHT FIXTURES AFFECTED DUE TO PLAZA REPAIR. REINSTALL THE CONDUIT AND FIXTURES AFTER REPAIRS. THE CONTRACTOR IS REQ'D TO REPLACE INTERIOR PLASTER, PAINT, AND ANY OTHER FINISHES DAMAGED DURING WORK.
  - THE CONTRACTOR IS TO VERIFY IN FIELD THE HEIGHT OF ALL THE EXISTING PARAPETS TO BE REPAIRED AND MAINTAIN 42-INCH HEIGHT FOR NEW YORK CITY BUILDING CODE.
  - THE CONTRACTOR IS TO PERFORM MISCELLANEOUS ELECTRICAL WORK ASSOCIATED WITH THE SCOPE OF WORK INCLUDING BUT NOT LIMITED TO DISCONNECT/ RECONNECTION OF EXISTING CONDUIT AND FIXTURES AND PROVISION OF TEMPORARY POWER TO FIXTURES INCLUDING SECURITY AND PARAPET RAILING LIGHTING DURING CONSTRUCTION.
  - CONTRACTOR TO SURVEY THE AREA OF WORK AFTER REMOVAL OF PARGE COAT AND PROVIDE SHOP DRAWINGS INDICATING THE EXACT LOCATION OF THE INJECTION PORTS AS PER THE FIELD CONDITIONS.
  - REPAIR DAMAGED INTERIOR FINISHES AT LOWER LEVEL. AREA OF WORK TO MATCH EXIST.
  - TEMPORARILY REMOVE & REINSTALL EX. IRRIGATION SYSTEM AS REQUIRED TO ACCOMPLISH THE WORK.
  - LEVEL OF FINISH WORK TO MEET EXIST. STAIR & RAMP LANDING LEVELS.

- SCOPE OF WORK:
- REMOVE & RESET PAVERS AT UPPER PLAZA. INSTALL SAND SETTING BED WITH POLYMERIC LIQUID STABILIZER AT JOINTS OF PAVERS. ASSUME 20% REPLACEMENT.
  - REMOVE AND REINSTALL IRRIGATION SYSTEM AND RECONNECT TO MAIN SUPPLY IN KIND AFTER

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HAWTHORNE, NY 10532  
TEL: (914) 747-2800

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JLC ENVIRONMENTAL  
CONSULTANTS, INC.

30 WEST 26TH STREET, 4TH FLOOR  
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TEL: (212) 420-8119

LOCATION PLAN

2	BID SET	12.13.2018
1	OWNER'S REVIEW	90% 5.16.2018
NO.	SUBMISSIONS/ REVISIONS	DATE

PROJECT NORTH

REFERENCE BAR  
SEE DRAWINGS FOR  
SCALE DESIGNATION

PROJECT

200-300 NORTH END AVE  
LEAK REMEDIATION  
DESIGN

200-300 NORTH END AVE  
NEW YORK, NY 10282

DRAWING NAME

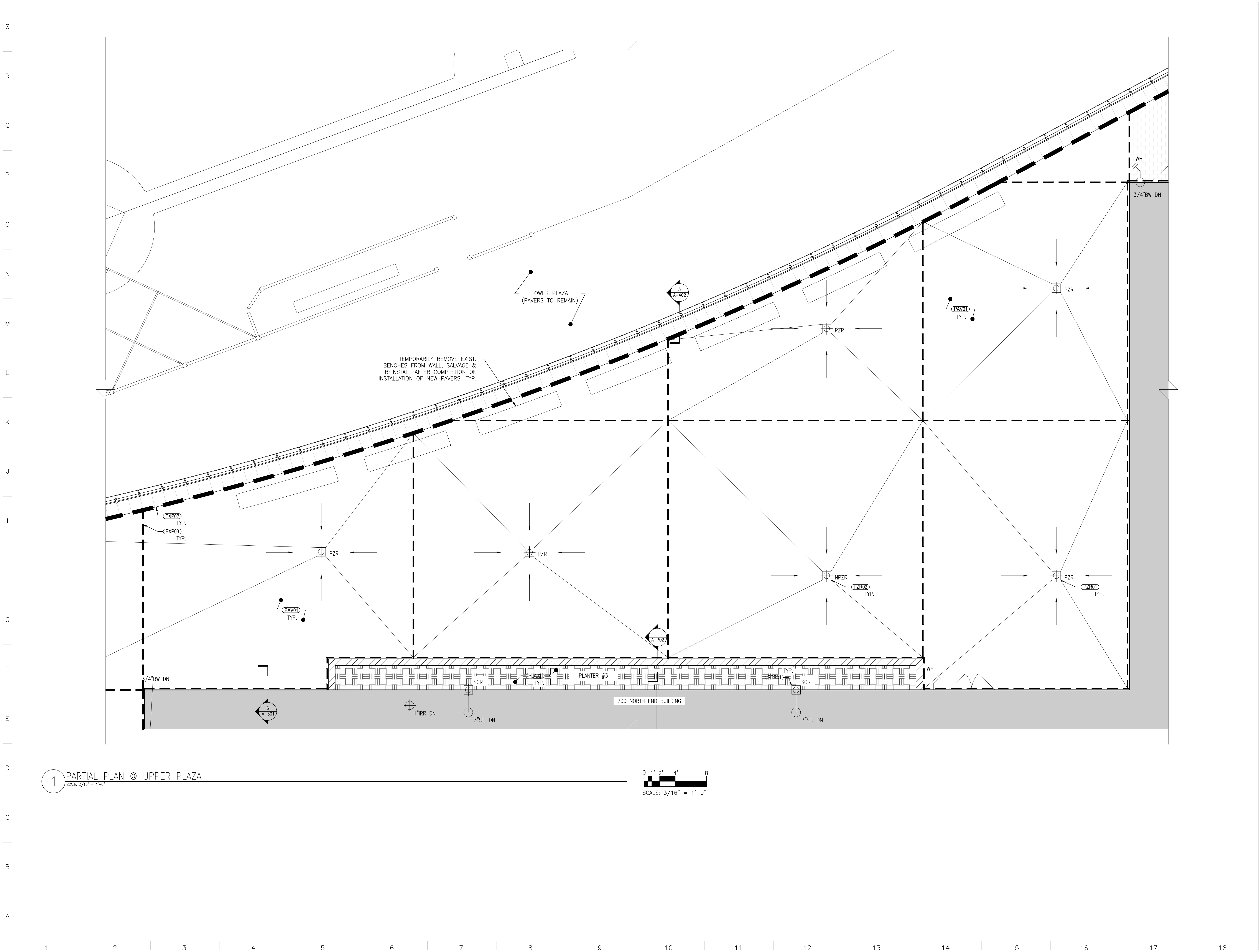
PARTIAL PLAN @ UPPER  
LEVEL

SEAL & SIGNATURE

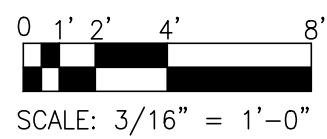
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PROJECT No: P15-036  
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CHECKED BY: PJ/JVF  
DWG No: A-103.00  
DWG COUNT: 7 OF 27

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1 PARTIAL PLAN @ UPPER PLAZA  
SCALE: 3/16" = 1'-0"



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LOCATION PLAN

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1	OWNER'S REVIEW 90%	5.16.2018
NO.	SUBMISSIONS/ REVISIONS	DATE

REFERENCE BAR  
SEE DRAWINGS FOR  
SCALE DESIGNATION

PROJECT

200-300 NORTH END AVE  
LEAK REMEDIATION  
DESIGN  
200-300 NORTH END AVE  
NEW YORK, NY 10282

DRAWING NAME

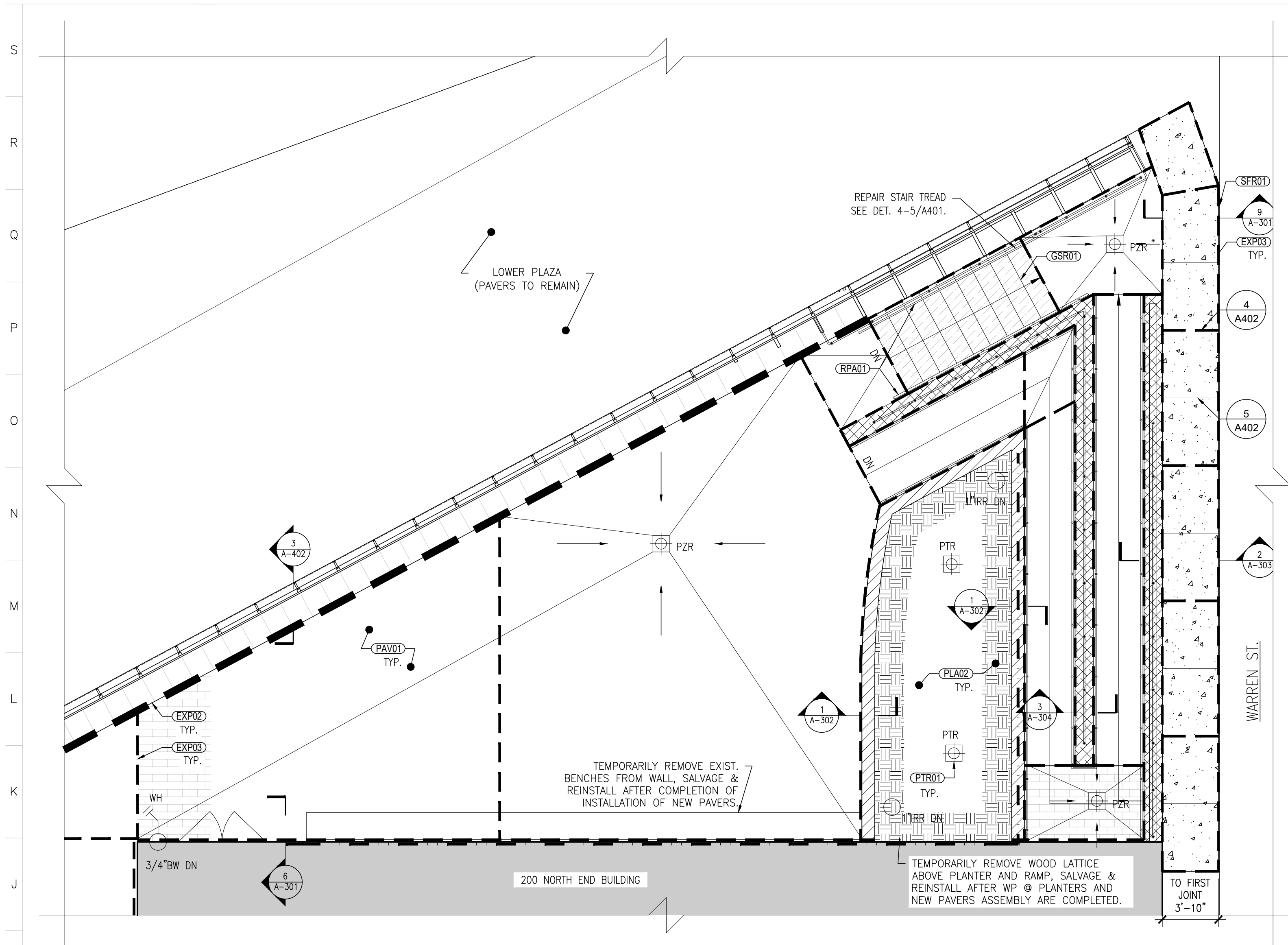
PARTIAL PLAN @ UPPER  
LEVEL

SEAL & SIGNATURE

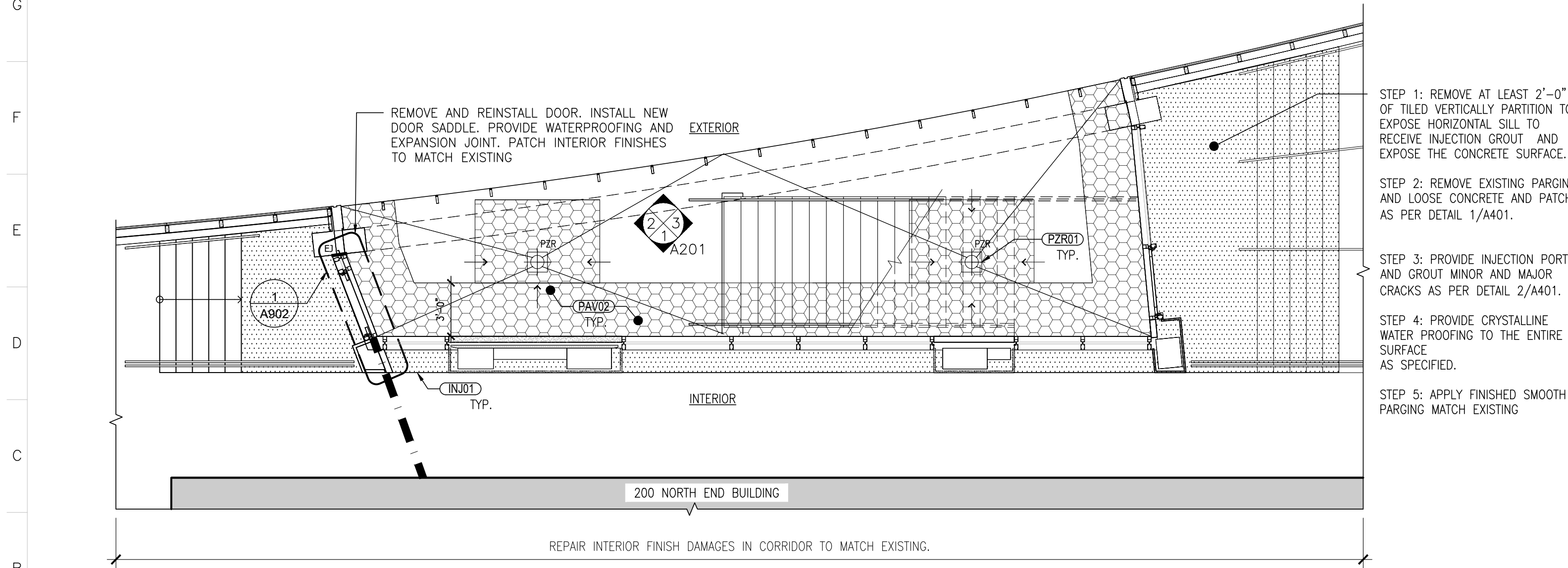
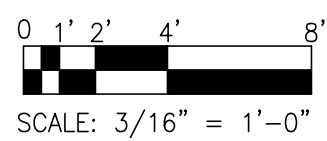
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DWG COUNT: 8 OF 27

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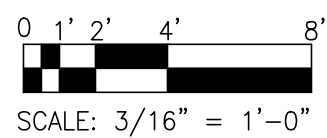




1 PARTIAL PLAN @ UPPER PLAZA  
SCALE: 3/16" = 1'-0"



2 PARTIAL PLAN @ LOWER PLAZA  
SCALE: 3/16" = 1'-0"



LEGEND		
PAV01		FLASHING AT UPPER PLAZA: CAREFULLY REMOVE AND SALVAGE EXISTING PAVERS, GRANITE PANELS AND METAL PANELS ALONG BUILDINGS' PERIMETER FOR REINSTALLATION. REMOVE SUBSTRATE MATERIALS DOWN TO DECK. PREPARE AND PRIME CONCRETE DECK AS REQUIRED TO RECEIVE REINFORCED LIQUID FLASHING ALONG ENTIRE PERIMETER OF HORIZONTAL TO VERTICAL BACKUP SURFACES, TERMINATE 8" MIN. ABOVE DECK (TYP.) AND THE INTO EXISTING MEMBRANE. INSTALL SUBSTRATE MATERIALS TO MATCH EXISTING. REINSTALL EXISTING PAVERS IN RUNNING BOND PATTERN. INSTALL 1" MIN. CLOSED CELL COMPRESSIBLE BACKER ROD AND SEALANT AT PERIMETER BETWEEN PLANTER/PARAPET GRANITE AND PAVERS. ASSUME 20% OF PAVERS REQUIRE REPLACEMENT. SEE DET. 2/A301.
PAV02		PARTIAL LOWER PLAZA WATERPROOFING/ASSEMBLY: REMOVE 3'-0" OF EXISTING PAVERS AND SUBSTRATE MATERIALS TO STRUCTURAL DECK. MAINTAIN EXISTING WATERPROOFING ON STRUCTURAL DECK WHERE SOUNDLY ADHERED. PREPARE HORIZONTAL AND VERTICAL SURFACES AS REQUIRED FOR INSTALLATION OF REINFORCED LIQUID FLASHING. LIQUID FLASHING TO OVERLAP EXISTING SOUND WATERPROOFING SYSTEM AND EXTEND UP FOUNDATION WALL AND TURN IN AT SILL AND JAMBS. REMOVE AND REINSTALL METAL WALL PANELS. REPLACE DIRT AND FOUR NEW CONCRETE SLAB ON GRADE. INSTALL HEXAGONAL PAVERS. REPLACE DRAINS AS NOTED ON DRAWINGS. SEE DET. 2/A301 & 4-5/A307.
PAR01		PARAPET/LINTEL AND WINDOW WATERPROOFING: REMOVE AND DISPOSE GRANITE BRICKS. REBUILD WITH NEW GRANITE BRICKS TO MATCH EXISTING. REMOVE AND SALVAGE GRANITE AND COPING STONES FOR RE-INSTALLATION, AS NOTED ON DRAWINGS, TYPICAL. INSTALL VAPOR BARRIER UP BACK UP WALL, TURNED IN AT SILL AND JAMBS, EXTEND BEYOND THE LINTEL (FORM END DAMS) AND TERMINATE MEMBRANE BY OVERLAPPING THE LIQUID BASE FLASHING, AS PER DETAILS. PROVIDE STAINLESS STEEL BRICK TIES EVERY 2 SQ. FT., WEEPS EVERY 16" O.C., INSULATION AND MORTAR NET. REMOVE EXISTING WINDOW FRAMES AS REQUIRED TO ACCOMPLISH WORK. SEE DET. 1-2/A305.
PAR02		PARAPET COPING RESETTING @ PLANTER: REMOVE AND RESET EXIST. GRANITE COPING OVER THROUGH-WALL METAL FLASHING. REMOVE AND REPLACE TWO COURSES OF BRICKWORK BELOW COPING. NEW MASONRY TO MATCH EXIST. SEE DET. 4/A303.
PAR03		PARAPET COPING RESETTING W/ PARTIAL BRICK WORK: REMOVE AND RESET EXIST. GRANITE COPING OVER THROUGH-WALL METAL FLASHING. REMOVE AND REPLACE GRANITE FACEBRICK COURSES AS SHOWN IN THE DWGS. NEW MASONRY TO MATCH EXIST. SEE DET. 3/A303.
PLA01		PLANTER WATERPROOFING: AT PLANTERS #1, #3, #4, #5, #6, AND #7, REMOVE AND DISPOSE GRANITE BRICKS. REMOVE AND SALVAGE GRANITE COPING STONES FOR REINSTALLATION, AS NOTED ON DRAWINGS (TYP). REMOVE EXISTING WATERPROOFING AND SUBSTRATE MATERIALS TO STRUCTURAL DECK. REPAIR DECK WITH MODIFIED REPAIR MORTAR (ASSUME 15%). PREPARE AND PRIME DECK TO RECEIVE 3-PLY TORCH DOWN BITUMINOUS WATERPROOFING MEMBRANE. INSTALL REINFORCED LIQUID FLASHING UP INBOARD PLANTER WALL TO TERMINATE TOP OF PLANTER CURB, TYPICAL. INSTALL PEEL AND STICK WATERPROOFING MEMBRANE TO OVERLAP LIQUID MEMBRANE 4" MIN. AT TOP OF CURB AND BASE FLASHING. PREPARE LIQUID FLASHING AT ARE OVERLAP AS PER THE REQUIREMENTS THE MANUFACTURER. REBUILD BRICKWORK TO MATCH EXISTING. SEE DET. 3/A301.
PLA02		PLANTER FILL AND PLANTINGS REMOVAL: REMOVE AND DISCARD SOIL AND SMALL PLANTINGS; SALVAGE AND RELOCATE TREES AND LARGER PLANTINGS TO BE REPLANTED AS PER THE REQUEST AT BPCA. PROVIDE PLYWOOD COVERS TO TEMPORARILY SEAL AND PROTECT PLANTER OPENINGS. COORDINATE W/ BPCA LANDSCAPE TEAM FOR REMOVAL; INCLUDING FURNISHING TEMPORARY WOOD PLANTERS & REINSTALLATION.
PZR01		PLAZA DRAIN REPLACEMENT/REMOVAL: REMOVE EXISTING CONCRETE CATCH BASINS AND PLAZA DRAINS. INSTALL PLAZA DRAIN AND BODY AS SPECIFIED. PROVIDE NEW PIPED CONNECTIONS TO EXISTING PLUMBING LINES. SEE PLUMBING DRAWINGS. GRATES TO BE SLIP RESISTANT AND ADA COMPLAINT. RE-INSTALL EXISTING FRAME AND GRATES. SEE DET. 2/A501.
PZR02		NEW PLAZA DRAIN INSTALLATION: PROVIDE NEW PLAZA DRAIN PIPED CONNECTIONS TO EXISTING PLUMBING LINES. SEE PLUMBING DRAWINGS. GRATES TO BE SLIP RESISTANT AND ADA COMPLAINT. RE-INSTALL EXISTING FRAME AND GRATES. SEE DET. 2/A501. (SIM.)
PTR01		PLANTER DRAIN REPLACEMENT: REMOVE EXISTING CATCH BASINS AND PLANTER DRAINS. INSTALL PLANTER DRAIN AND BODY AS SPECIFIED. SEE DET. 1/A501. PROVIDE NEW PIPED CONNECTIONS TO EXISTING PLUMBING LINES. SEE PLUMBING DRAWINGS.
SCR01		SCUPPER DRAIN REPLACEMENT: REMOVE EXISTING SCUPPERS AND CONCRETE CATCH BASINS AT SIDEWALL. INSTALL NEW SIDEWALL SCUPPER DRAINS AND BODY AS SPECIFIED. SEE DET. 4/A501. PROVIDE NEW PIPED CONNECTIONS TO EXISTING PLUMBING LINES. WATERPROOFING BELOW DRAIN BODY. SEE PLUMBING DRAWINGS.
TDR01		TRENCH DRAINS REPLACEMENT: REPLACE EXISTING TRENCH DRAIN AND GRATING AS SPECIFIED. WATERPROOF CONCRETE TROUGH WITH COLD LIQUID APPLIED WATERPROOFING. SEE DET. 3/A501. GRATING TO BE SLIP RESISTANT AND ADA COMPLAINT. SEE PLUMBING DRAWINGS.
EXP01		EXPANSION JOINT (TYPE 1): INSTALL EXPANSION JOINT AT LOT LINE, AS SPECIFIED. SEE DET. 4-6/A301.
EXP02		EXPANSION JOINT (TYPE 2): INSTALL 1 1/4" MINIMUM PRE-COMPRESSED EXPANSION JOINT SYSTEM, AS SPECIFIED, AT HORIZONTAL JOINTS BETWEEN METAL SKIRT AND PLAZA PAVERS (UPPER PLAZA). SEE DET. 3/A402.
EXP03		EXPANSION JOINT (TYPE 3): INSTALL 1/2" MINIMUM COMPRESSIBLE EXPANSION JOINT SYSTEM, AS SPECIFIED AND SHOWN ON DRAWINGS TO CREATE SOFT-CONTROL JOINTS (UPPER PLAZA). SEALANT TO MATCH COLOR OF PAVERS. SEE DET. 1/A403.
EXP04		MASONRY EXPANSION JOINT (TYPE 4): SAW OUT EXISTING CRACK, REPLACE BROKEN GRANITE BRICKS AS NEEDED. INSTALL JOINT STABILIZERS EVERY SIX COURSES. INSTALL BACKER ROD AND SEALANT. SEE DET. 2/A402.
GSR01		GRANITE STEPS AND RAMPS AT NORTH END AVE., WARREN AND MURRAY STREET: CAREFULLY REMOVE AND SALVAGE GRANITE STEP STONES FOR RE-SETTING. SECURE STONES AS PER DRAWINGS. CAREFULLY REMOVE AND SALVAGE EXISTING PAVERS, ASSOCIATED RAILINGS ETC. FOR REINSTALLATION. REMOVE EXISTING SUBSTRATE MATERIALS AND WATERPROOFING DOWN TO CONCRETE FOR REPAIR, WATERPROOFING AND FLASHING, TYPICAL. PREPARE AND PRIME DECK TO RECEIVE NEW WATERPROOFING SYSTEM. TERMINATE MEMBRANE AT PLANTER/PARAPET/BUILDING WALLS AND SIDEWALK INTERFACE. SEE DET. 8/A301.
INJ01		GROUT INJECTION AND CRACK REPAIR AT INTERIOR STAIR AND FOUNDATION WALL: INJECTION GROUTING AT INTERIOR SILL STAIR LANDING AND FOUNDATION WALL. AREA TO BE TREATED WITH CRYSTALLINE WATERPROOFING. SEE DET. 2/A401.
SEA01		SEALANT REPLACEMENT: SEALANT JOINT: REMOVE EXISTING JOINT SEALER(S). PREPARE JOINT CAVITY AND PROVIDE NEW BACKER ROD AND SEALANT (OR FLEXIBLE MASONRY JOINT). SEE DET. 1/A402.
RPA01		RAILING POST ANCHORAGE AT GRANITE STONE: RAILING POSTS AND ANCHOR BOLT PENETRATIONS; POST PENETRATIONS AND ANCHOR BOLT PENETRATIONS TO MATCH EXISTING LOCATIONS. PREPARE CONCRETE AND EMBED POST AND/OR ANCHORS IN EPOXY AS INDICATED ON DRAWINGS. AT LOCATIONS, TO BE DETERMINED, WELD BASE PLATES TO EXISTING RAILINGS. SEE DET. 4/A304.
RPA02		RAILING POST ANCHORAGE AT PLAZA: WELD 4" x 4" BASE PLATES TO EXISTING RAILING POST (TBD). EPOXY ANCHOR BOLTS INTO CONC. TOPPING. SEE DET. 3/A304.
SFR01		SIDEWALK FLAGS REPLACEMENT: REPLACE CONCRETE SIDEWALK FLAGS ON WARREN AND MURRAY ST. AS INDICATED ON DRAWINGS. SEE DET. 9/A301.
SFR02		SIDEWALK FLAGS RESET: REMOVE, SALVAGE AND RESET BLUESTONE FLAGS AT NORTH END AVE. SEE DET. 9/A301.

- NOTES:
- THE CONTRACTOR SHALL PROTECT THE PROPERTY AT ALL TIMES OF CONTRACT. PROTECT ALL EXISTING PLAZA-MOUNTED RAILINGS AND PLAZA ROOF PENETRATIONS TO REMAIN; SUPPORT AND PROTECT DURING CONSTRUCTION WORK AS NEEDED. ALL EXISTING PIPING, AND RELATED ITEMS TO REMAIN UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND MAINTAINING ALL EXISTING AND NEW WORK, FACILITIES, AND IMPROVEMENTS WITHIN THE AREA OF THE WORK. ALL EXISTING AREAS TO REMAIN AFFECTED BY REMOVAL OR NEW CONSTRUCTION WORK THAT ARE DAMAGED SHALL BE PATCHED AS REQUIRED TO MATCH IMMEDIATE EXISTING ADJACENT AREAS IN MATERIALS, FIRE RATING, FINISH AND COLOR, UNLESS OTHERWISE NOTED.
  - THE CONTRACTOR SHALL PROVIDE DECK REPAIR PER DETAIL 1/A401.00.
  - THE CONTRACTOR IS TO SUBMIT PAVING LAYOUT SHOP DRAWINGS, INCLUDING EXISTING SLAB ELEVATIONS, SLOPE AND LOCATION OF DRAINS. PROVIDE SURVEY OF EXISTING CONDITIONS AND ELEVATIONS OF EXISTING DECK. CONTRACTOR TO VERIFY AND SURVEY EXISTING DECK AND SLOPES FOR SURVEY SHOP DRAWINGS. PROVIDE SURVEY TO ARCHITECT FOR REVIEW PRIOR TO THE PREPARATION OF DRAWINGS. SUBMIT TAPERED PERVIOUS CONCRETE TOPPING SLAB LAYOUT DRAWINGS SHOWING EXISTING AND PROPOSED PITCH & SLOPE.
  - TEST AND CLEAN PLAZA AND COURTYARD DRAINS AND PIPES, BEFORE AND AFTER INSTALLATION OF THE DRAIN & SNAKE OUT FOR 20'-0".
  - FLOOD-TEST PLAZA AND COURTYARD DRAINS BEFORE & AFTER INSTALLATION.
  - THE CONTRACTOR SHALL PERFORM ALL REMOVAL AND RELATED WORK SHOWN ON THE DRAWINGS, DESCRIBED IN THESE NOTES, AND REASONABLY INFERRED AS NECESSARY TO COMPLETE SCOPE OF WORK.
  - THE CONTRACTOR SHALL DISPOSE OF REMOVED NON-SALVAGED MATERIAL AND DEBRIS DAILY.
  - PROVIDE TEMPORARY COVERS FOR PROTECTION AS NEEDED. PROTECT ALL THE EQUIPMENT AND COORDINATE WITH BUILDING MANAGEMENT.
  - TEMPORARILY REMOVE ELECTRICAL CONDUIT AND LIGHT FIXTURES AFFECTED DUE TO PLAZA REPAIR. REINSTALL THE CONDUIT AND FIXTURES AFTER REPAIRS. THE CONTRACTOR IS REQ'D TO REPLACE INTERIOR PLASTER, PAINT, AND ANY OTHER FINISHES DAMAGED DURING WORK.
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  - THE CONTRACTOR IS TO PERFORM MISCELLANEOUS ELECTRICAL WORK ASSOCIATED WITH THE SCOPE OF WORK INCLUDING BUT NOT LIMITED TO DISCONNECT/ RECONNECTION OF EXISTING CONDUIT AND FIXTURES AND PROVISION OF TEMPORARY POWER TO FIXTURES INCLUDING SECURITY AND PARAPET RAILING LIGHTING DURING CONSTRUCTION.
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  - REPAIR DAMAGED INTERIOR FINISHES AT LOWER LEVEL. AREA OF WORK TO MATCH EXIST.
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  - LEVEL OF FINISH WORK TO MEET EXIST. STAIR & RAMP LANDING LEVELS.

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- REMOVE & RESET PAVERS AT UPPER PLAZA. INSTALL SAND SETTING BED WITH POLYMERIC LIQUID STABILIZER AT JOINTS OF PAVERS. ASSUME 20% REPLACEMENT.
  - REMOVE AND REINSTALL IRRIGATION SYSTEM AND RECONNECT TO MAIN SUPPLY IN KIND AFTER

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LOCATION PLAN

2	BID SET	12.13.2018
1	OWNER'S REVIEW	90% 5.16.2018
NO.	SUBMISSIONS/ REVISIONS	DATE

PROJECT NORTH

REFERENCE BAR  
SEE DRAWINGS FOR  
SCALE DESIGNATION

PROJECT

200-300 NORTH END AVE  
LEAK REMEDIATION  
DESIGN

200-300 NORTH END AVE  
NEW YORK, NY 10282

DRAWING NAME

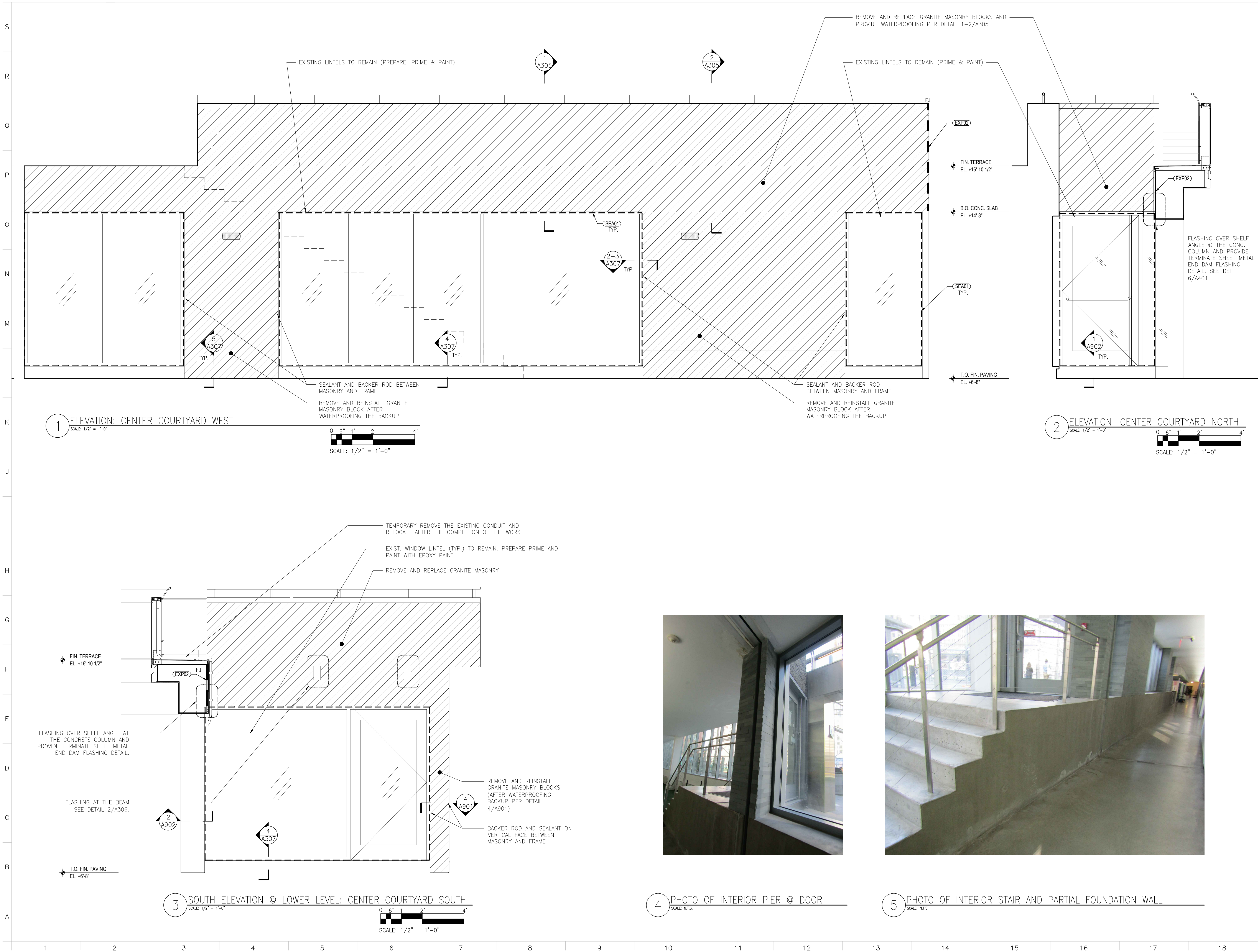
PARTIAL PLANS @ UPPER &  
CELLAR LEVEL

SEAL & SIGNATURE

DATE: 05.11.2018  
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SCALE: AS NOTED  
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CHECKED BY: PJ/JVF  
DWG No: A-105.00  
DWG COUNT: 100F 27

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LOCATION PLAN

WARRENS STREET  
NEW AREA OF WORK  
WEST STREET  
WEST SIDE HWY  
MURRAY STREET  
BLOCK NO. 16  
LOT NO. 7519 & 7520

2	BID SET		12.13.2018
1	OWNER'S REVIEW	90%	5.16.2018
NO.	SUBMISSIONS/	REVISIONS	DATE

TRUE NORTH  
PROJECT NORTH

REFERENCE BAR  
SEE DRAWINGS FOR  
SCALE DESIGNATION

PROJECT

**200-300 NORTH END AVE  
LEAK REMEDIATION  
DESIGN**  
200-300 NORTH END AVE  
NEW YORK, NY 10282

DRAWING NAME

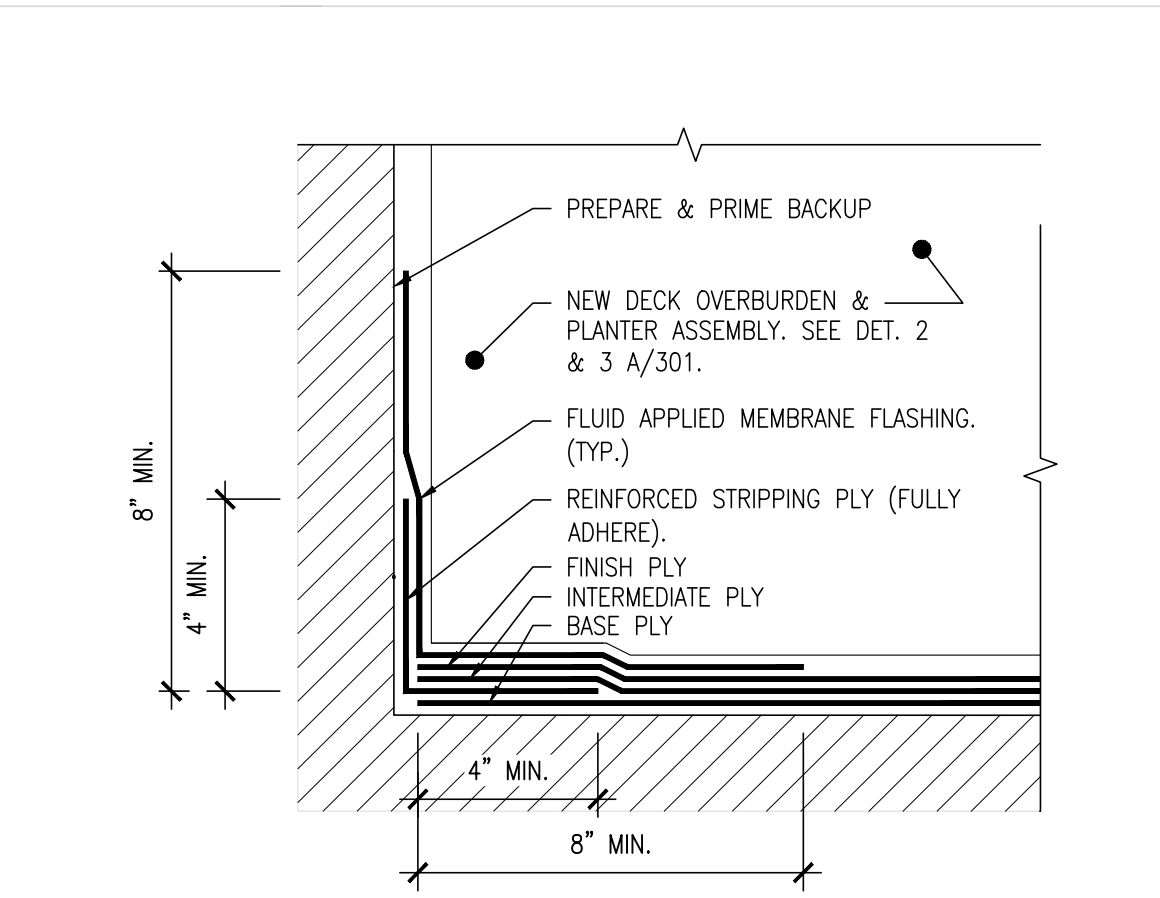
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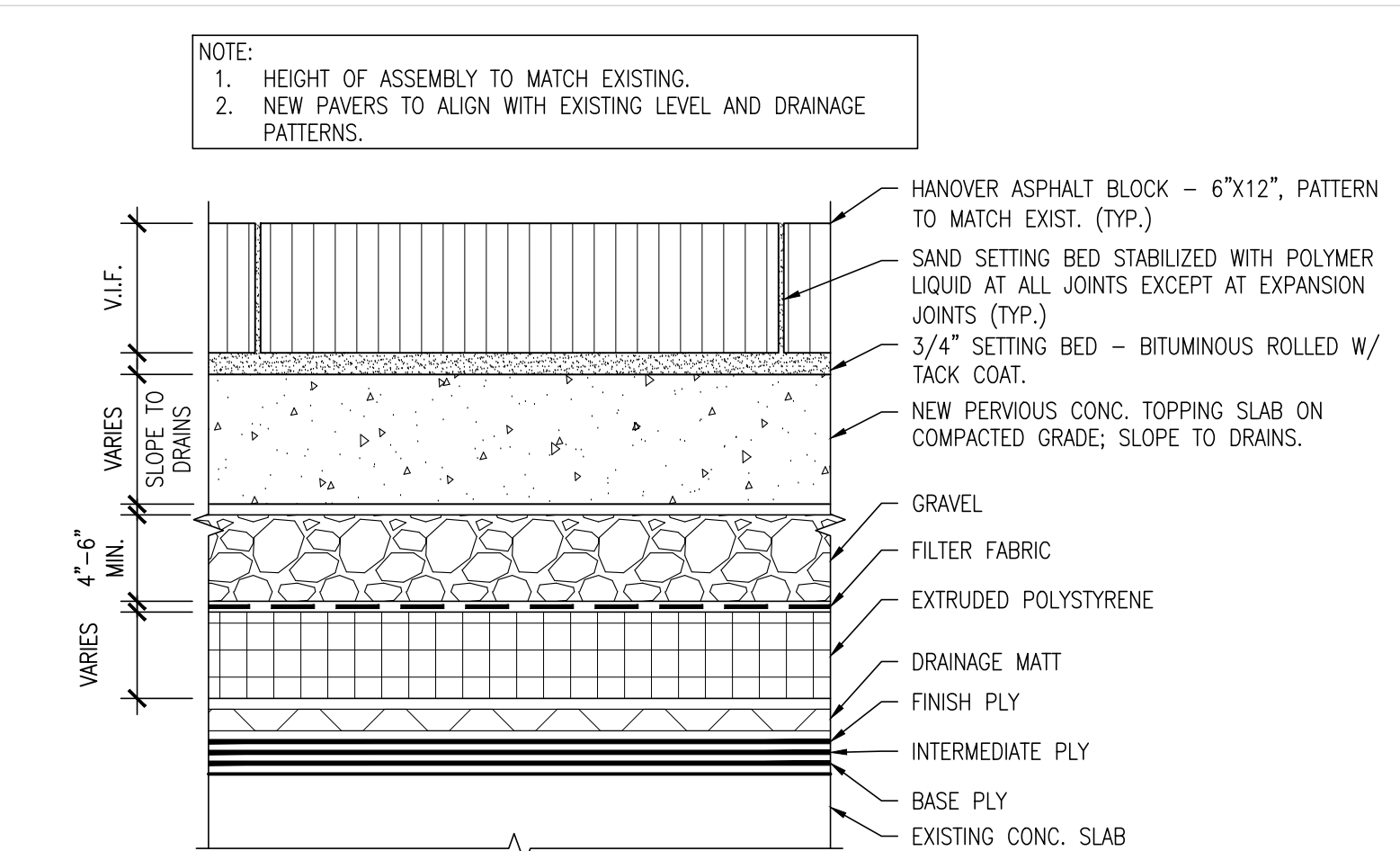
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DWG COUNT: 10 OF 27



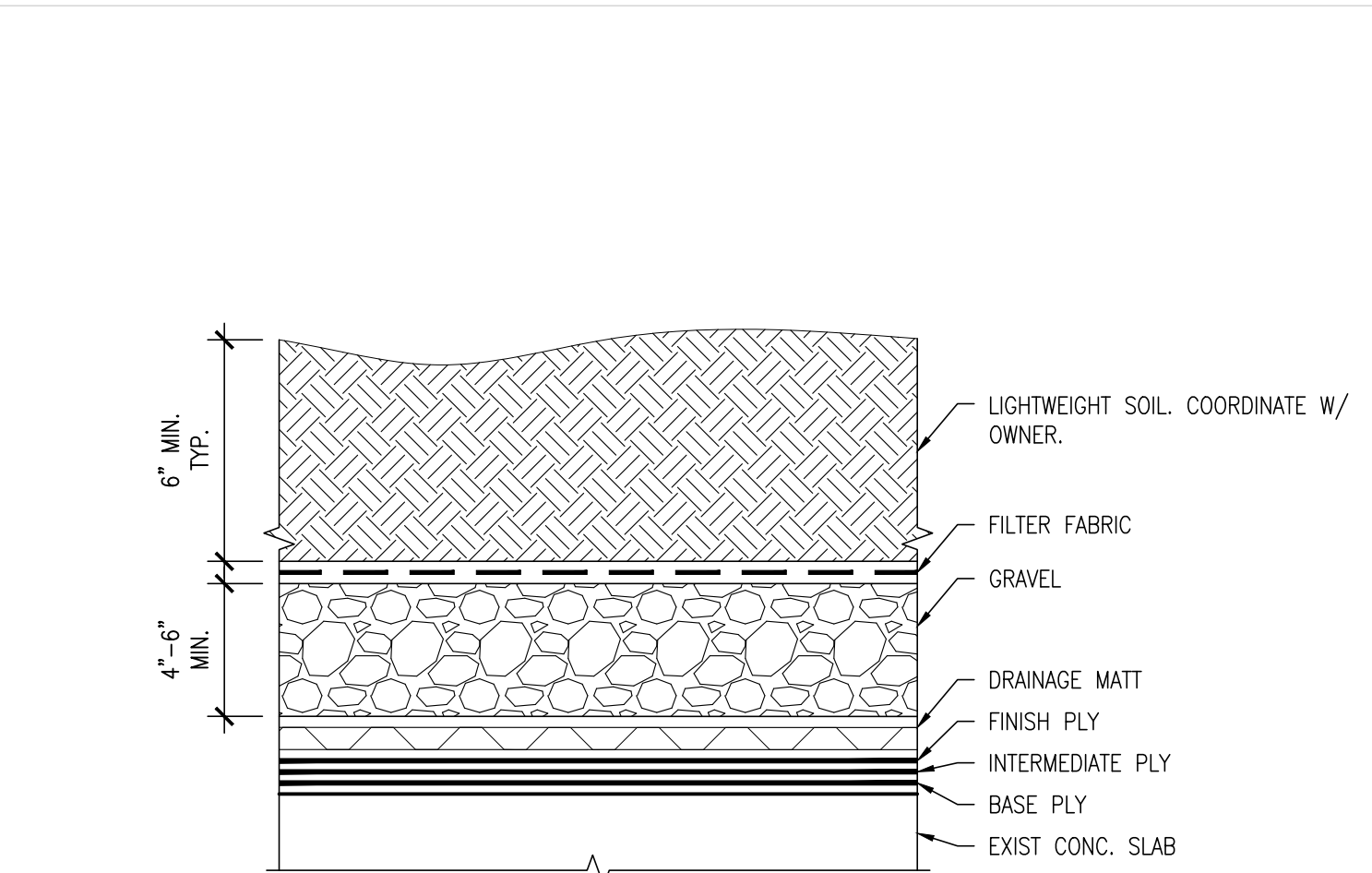
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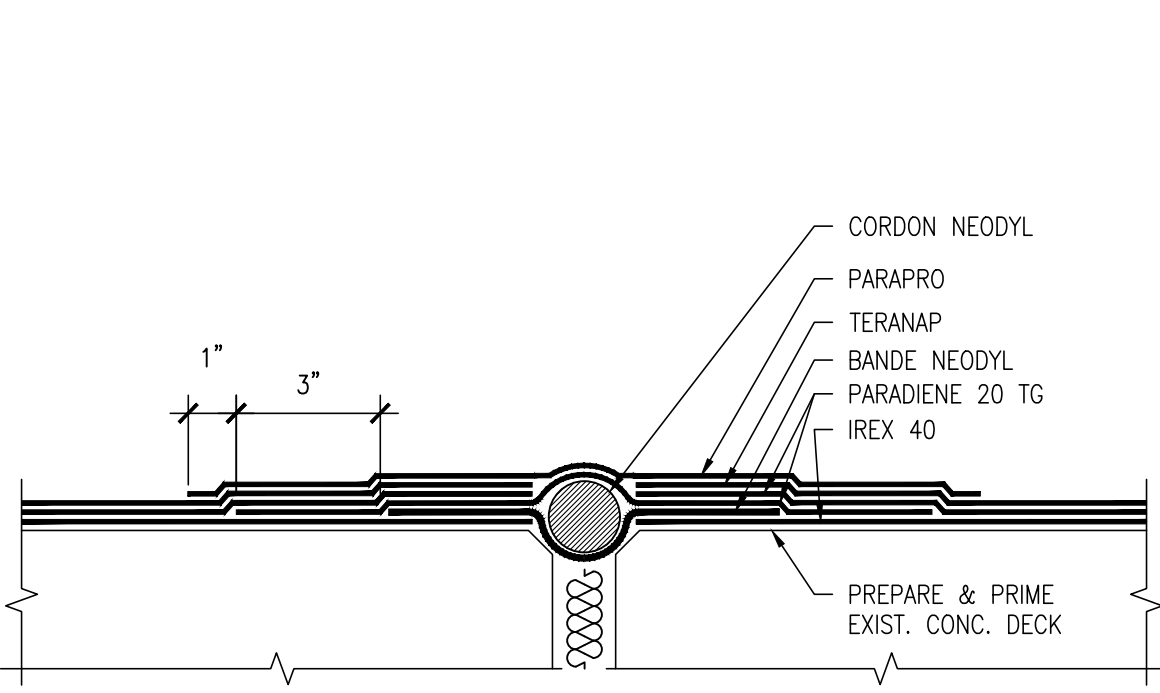
1 BASE FLASHING DETAIL (TYP.)  
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2 NEW PLAZA WATERPROOFING ASSEMBLY (TYP.)  
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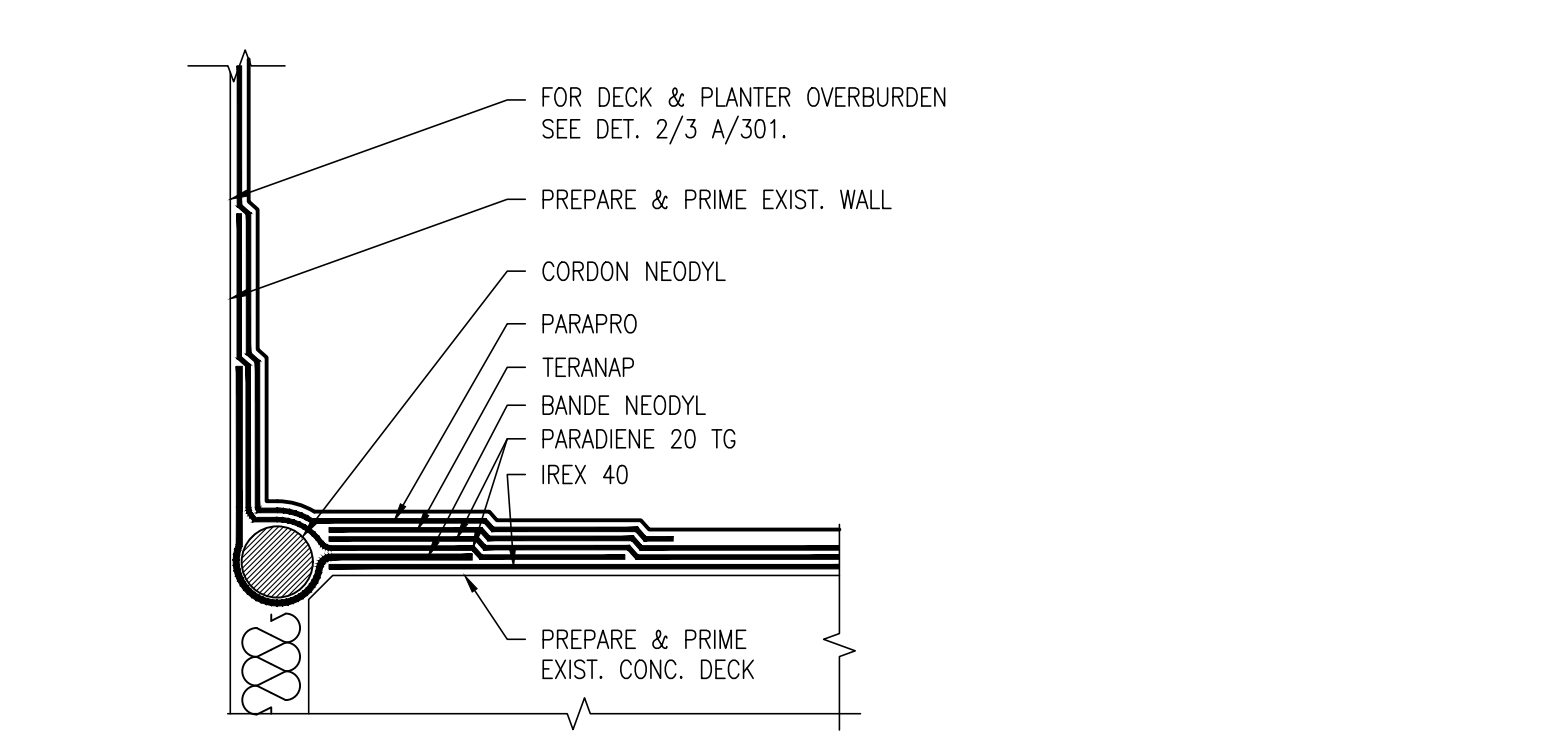


3 NEW PLANTER WATERPROOFING DETAIL (TYP.)  
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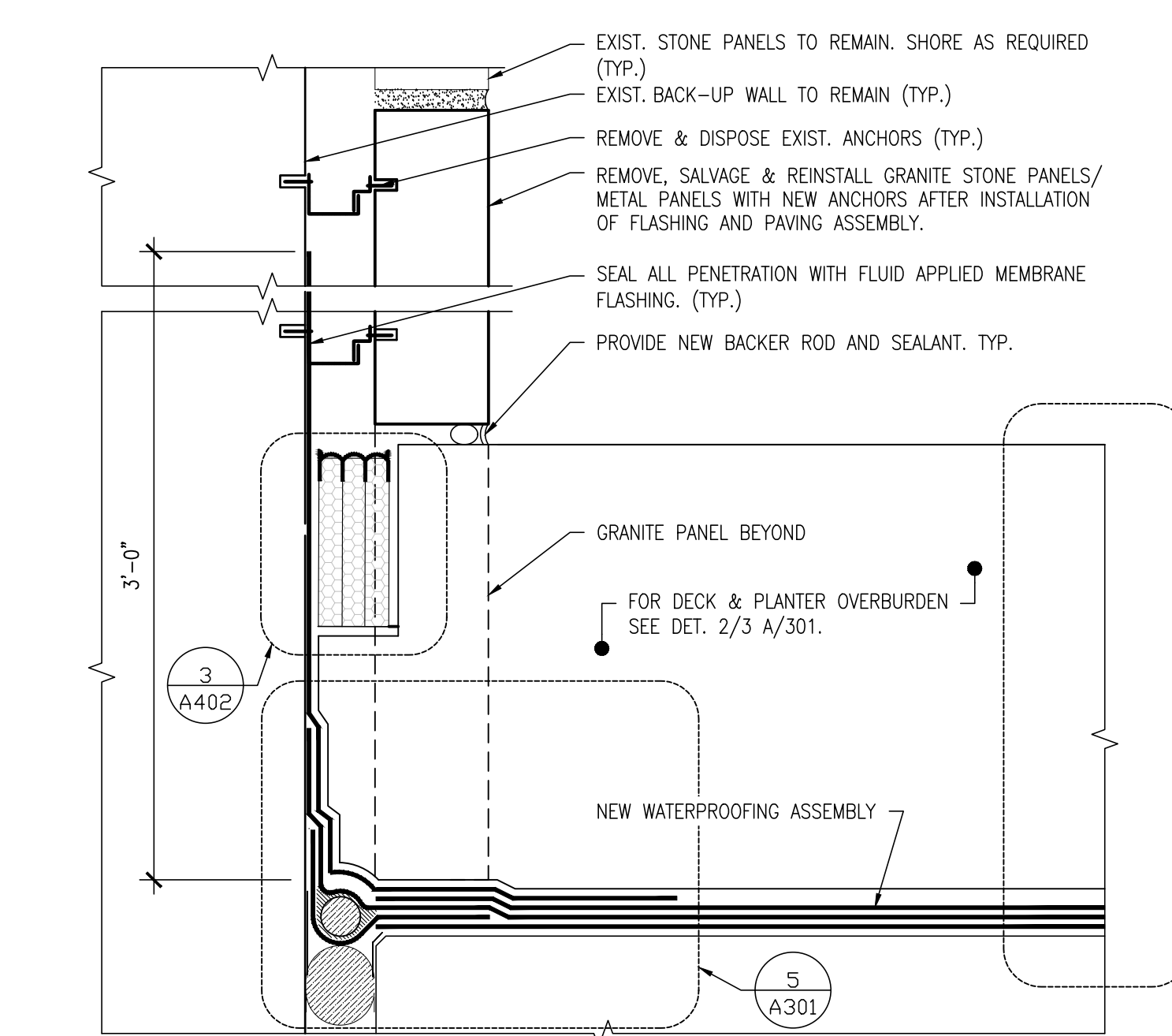


4 DECK TO DECK - JOINT SYSTEM  
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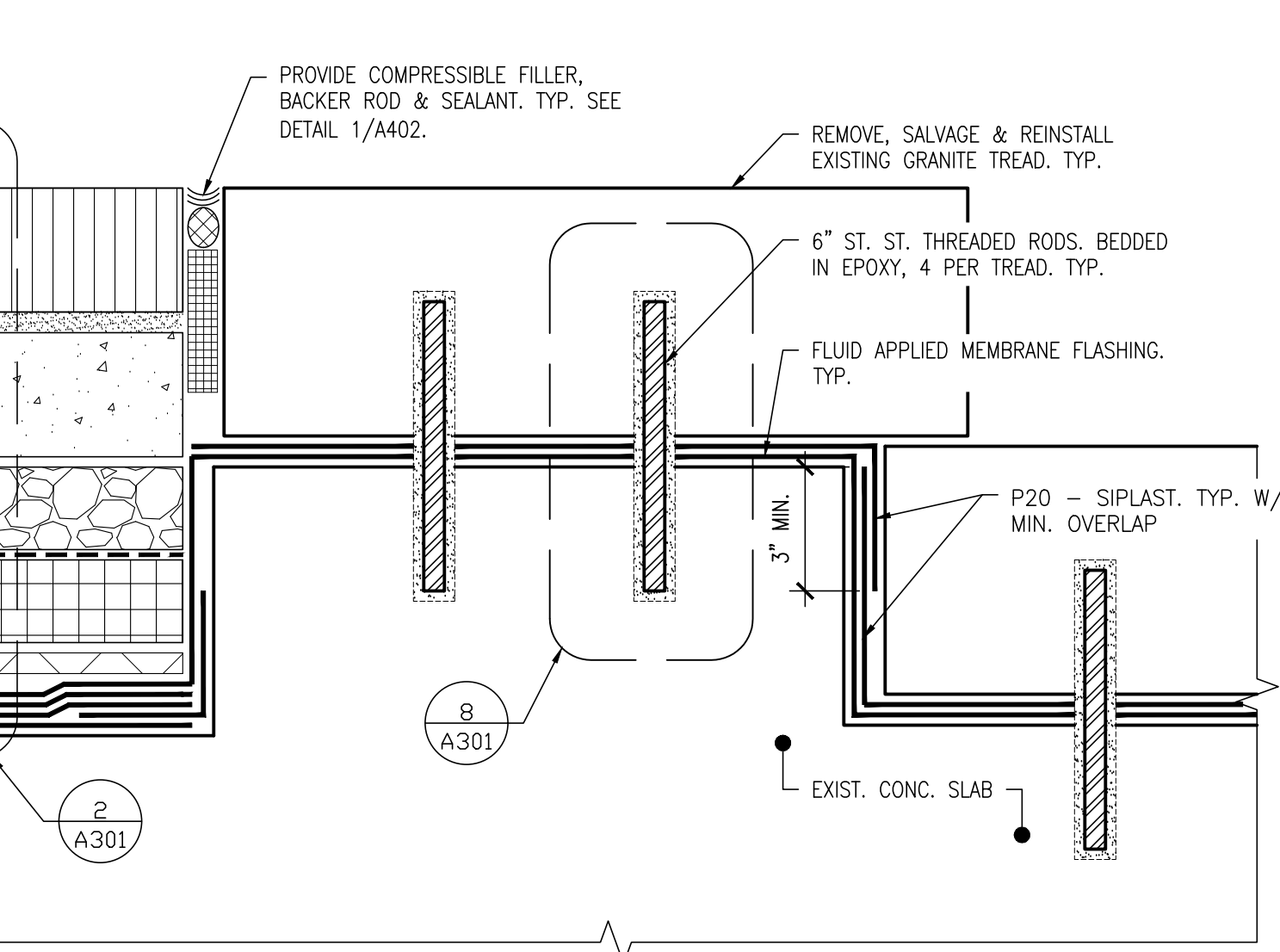
NOTES:  
1. TORCH APPLY BANDE NEOXYL OVER PARADIENE 20 TO SURFACE.  
2. LOOSE-LAY CORDON NEOXYL OVER BANDE NEOXYL. TORCH APPLY PARADIENE 20 TO REINFORCING SHEET TO UNDERLYING PLY SHEETS. LOOSE LAY OVER CORDON NEOXYL. TORCH LAPS OF PARADIENE 20 TO OVER CORDON NEOXYL.  
3. APPROVED CLOSED CELL POLYETHYLENE BACKER ROD MAY BE USED IN LIEU OF CORDON NEOXYL FOR GAPS LARGER THAN 1.2 INCHES (3 cm).  
4. ONE OF THE FOLLOWING PRIMERS: PA-1125, PA-917LS, TA-119, OR TA-325 IS REQUIRED WHERE PRIMER IS INDICATED. CONTACT SIPLAST FOR SPECIFIC REQUIREMENTS



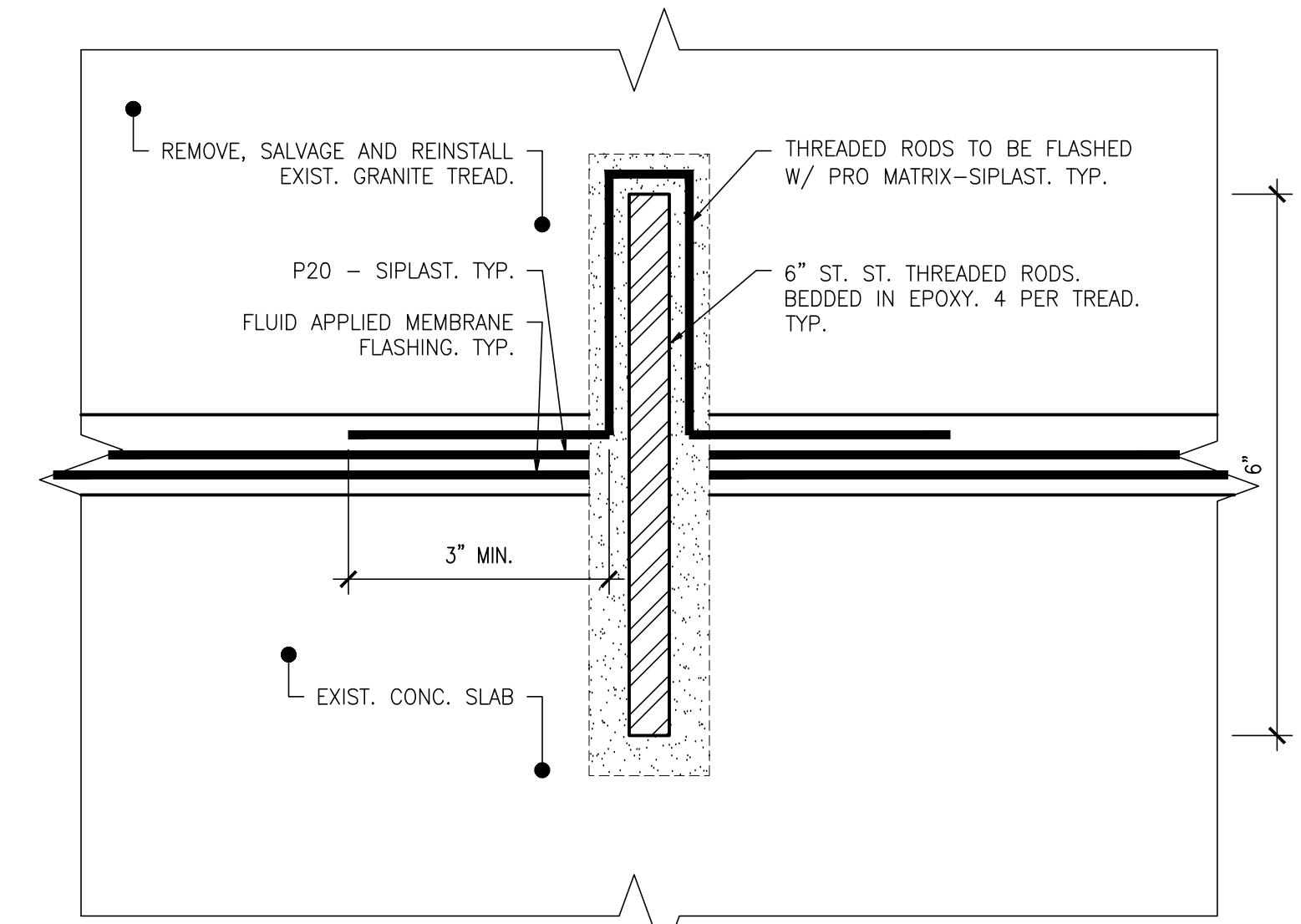
5 DECK TO WALL - JOINT SYSTEM  
SCALE: 3" = 1'-0"



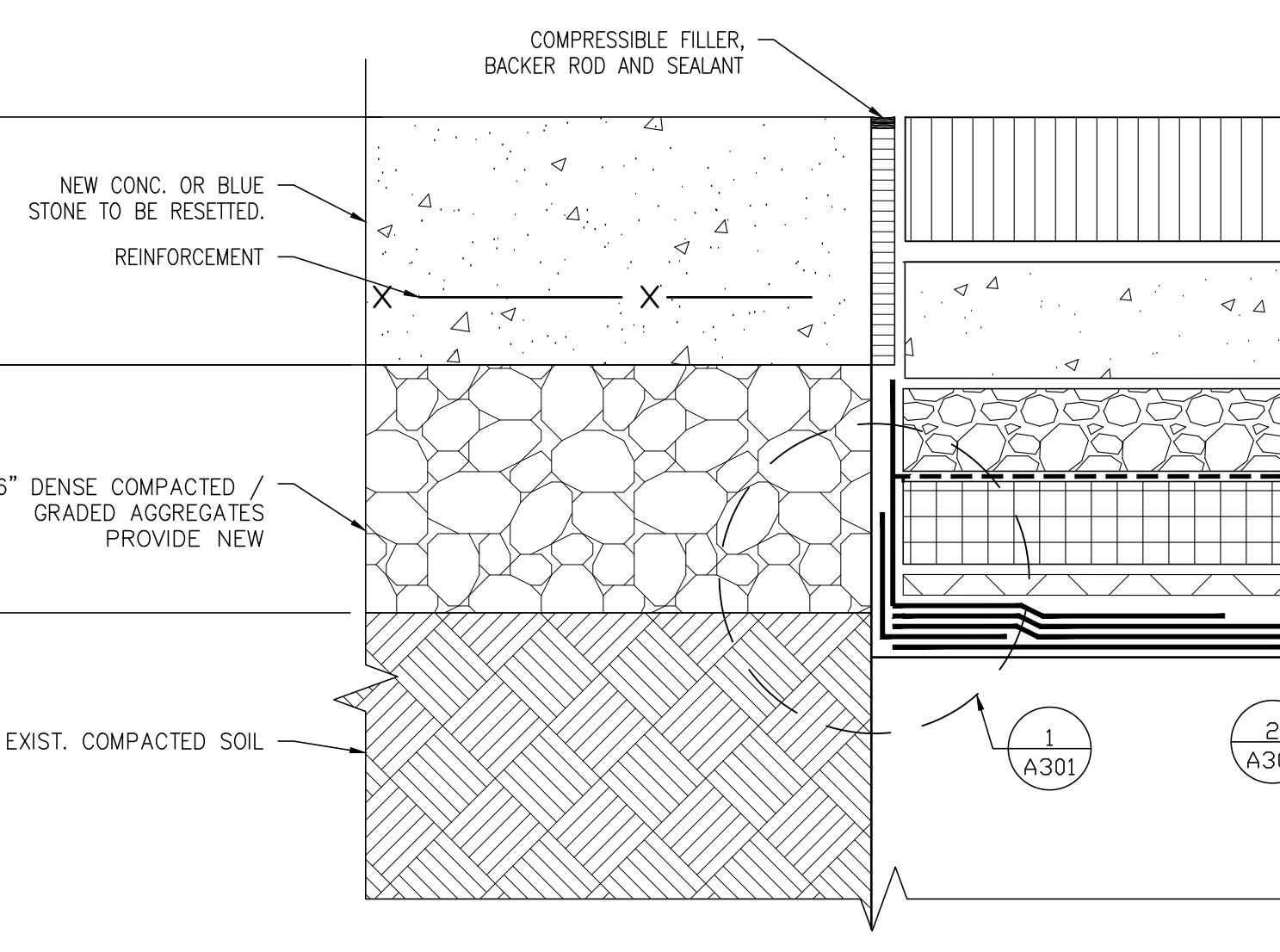
6 BASE FLASHING @ BUILDING PERIMETER (TYP.)  
SCALE: 3" = 1'-0"



8 BASE FLASHING @ GRANITE STAIRS DETAIL  
SCALE: 3" = 1'-0"



7 GRANITE STEP ANCHOR DETAIL (TYP.)  
SCALE: 6" = 1'-0"



9 SIDEWALK REPLACEMENT  
SCALE: 3" = 1'-0"

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OWNER

**BATTERY PARK CITY AUTHORITY**  
  
200 LIBERTY STREET  
NEW YORK, NY 10281

ENVIRONMENTAL SUB-CONSULTANTS

**OLA CONSULTING ENGINEERS**  
  
50 BROADWAY SUITE 2  
HAWTHORNE, NY 10532  
TEL: (814) 747-2800

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**JLC ENVIRONMENTAL  
CONSULTANTS, INC.**  
  
30 WEST 26TH STREET, 4TH FLOOR  
NEW YORK, NY 10010  
TEL: (212) 420-8119

LOCATION PLAN

BLOCK NO. 16 LOT NO. 7519 & 7520

2	BID SET	12.13.2018
1	OWNER'S REVIEW	90% 5.16.2018
NO.	SUBMISSIONS/ REVISIONS	DATE

PROJECT NORTH

REFERENCE BAR  
SEE DRAWINGS FOR  
SCALE DESIGNATION

PROJECT

**200-300 NORTH END AVE  
LEAK REMEDIATION  
DESIGN**  
200-300 NORTH END AVE  
NEW YORK, NY 10282

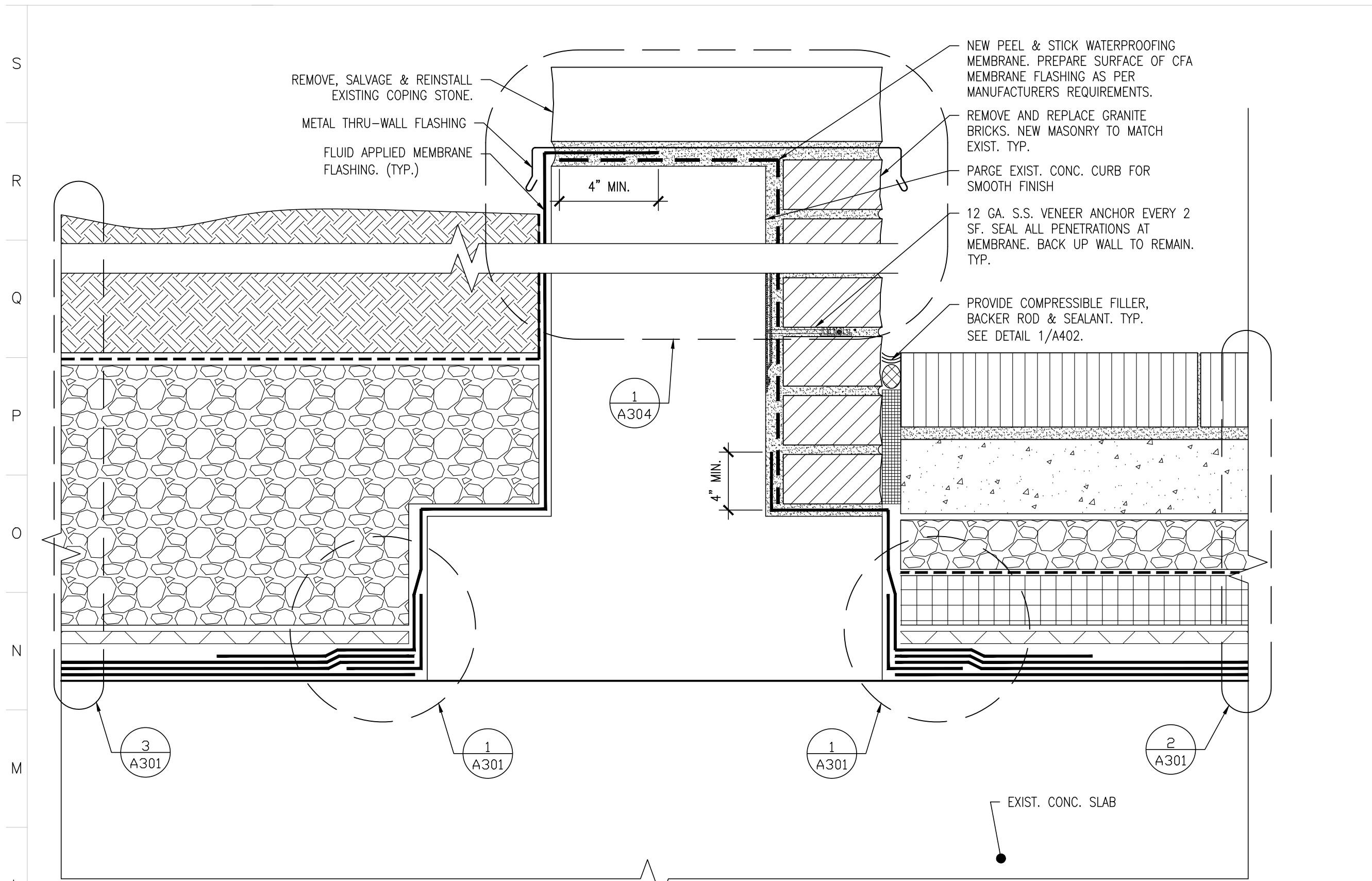
DRAWING NAME

**BASE FLASHING DETAILS**

SCALE & SIGNATURE

DATE: 05.11.2018  
PROJECT NO: P15-036  
SCALE: AS NOTED  
DRAWING BY: WB  
CHECKED BY: PJ/VF  
DWG NO: **A-301.00**  
DWG COUNT: 11 OF 27

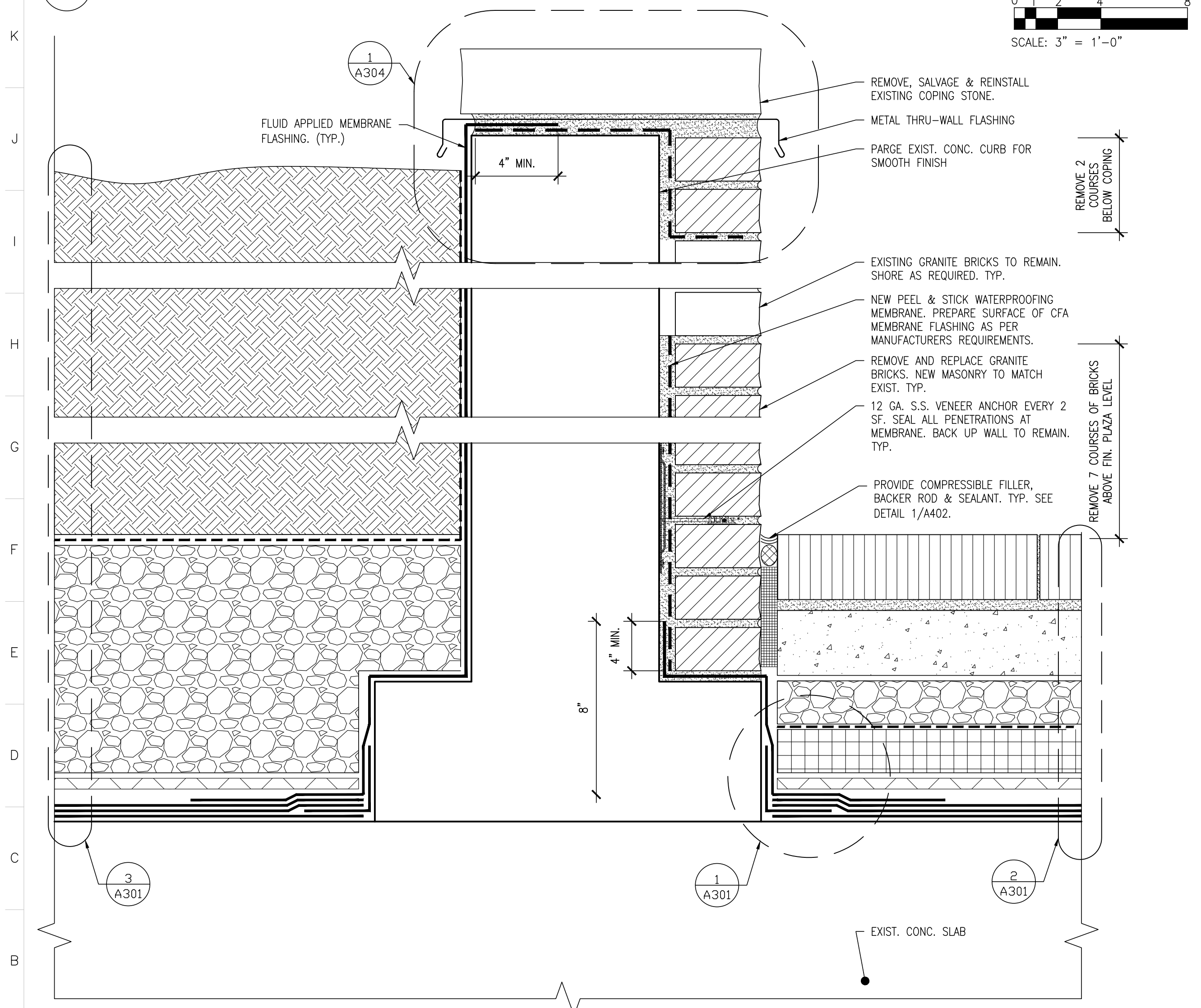
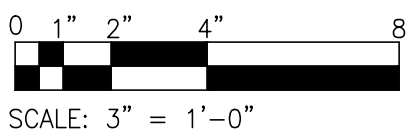




1 BASE FLASHING @ PLANTER (TYP.)

SCALE: 3" = 1'-0"

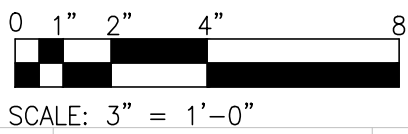
Detail Top #



2 PLANTER WATERPROOFING DETAIL

SCALE: 3" = 1'-0"

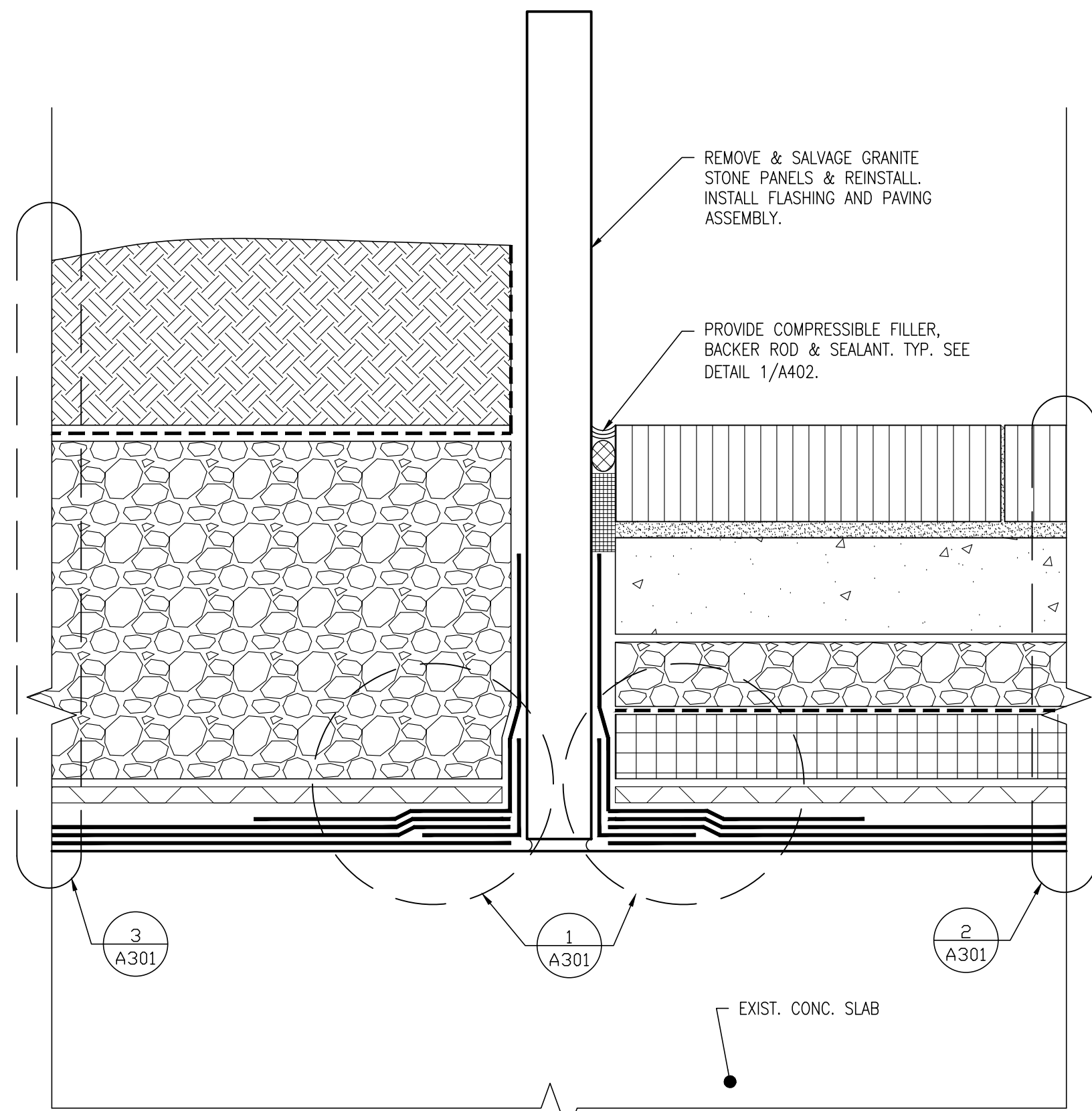
Detail Top #



EL. +16'-10 1/2"  
T.O. FIN. PLAZA  
AT UPPER LEVEL

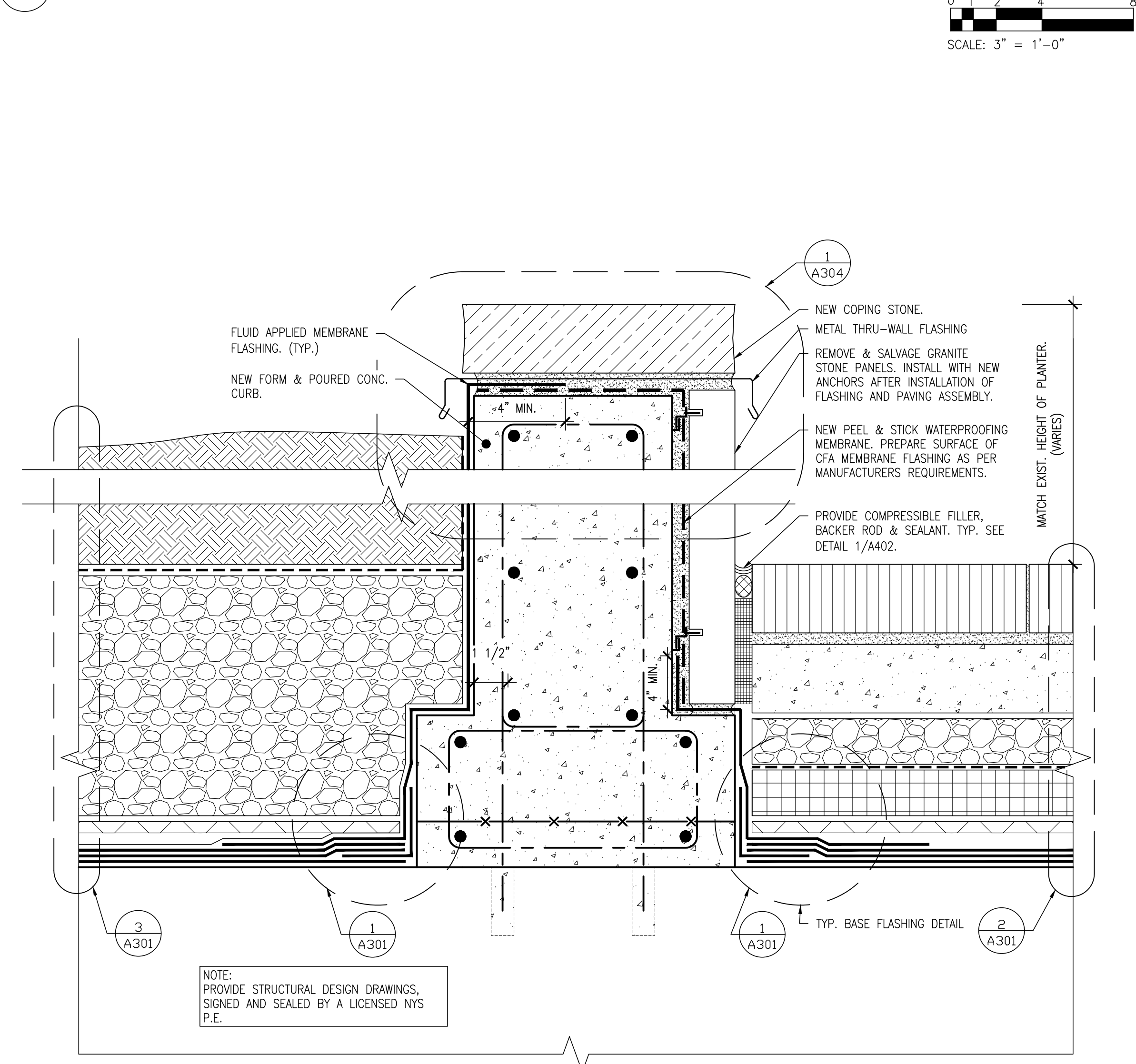
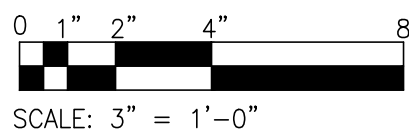
EL. +15'-10"  
T.O. CONC. SLAB

EL. +14'-8"  
B.O. CONC. SLAB



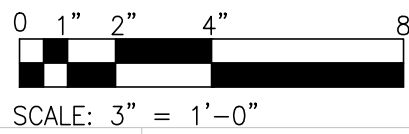
3 PLANTER WATERPROOFING DETAIL (PLANTER #1)

SCALE: 3" = 1'-0"



4 NEW PLANTER CURB - PLANTER #1

SCALE: 3" = 1'-0"



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OWNER

**BATTERY PARK CITY AUTHORITY**

200 LIBERTY STREET  
NEW YORK, NY 10281

ENVIRONMENTAL SUB-CONSULTANTS

**OLA CONSULTING ENGINEERS**

50 BROADWAY SUITE 2  
HAWTHORNE, NY 10532  
TEL: (814) 747-2880

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30 WEST 26TH STREET, 4TH FLOOR  
NEW YORK, NY 10010  
TEL: (212) 420-8119

LOCATION PLAN

NEW AREA OF WORK

WARREN'S STREET

WEST STREET

WEST SIDE HWY

MURRAY STREET

N END AVE

BLOCK NO. 16

LOT NO. 7519 & 7520

2	BID SET	12.13.2018
1	OWNER'S REVIEW	90% 5.16.2018
NO.	SUBMISSIONS/ REVISIONS	DATE

TRUE NORTH

REFERENCE BAR  
SEE DRAWINGS FOR  
SCALE DESIGNATION

PROJECT

**200-300 NORTH END AVE  
LEAK REMEDIATION  
DESIGN**

200-300 NORTH END AVE  
NEW YORK, NY 10282

DRAWING NAME

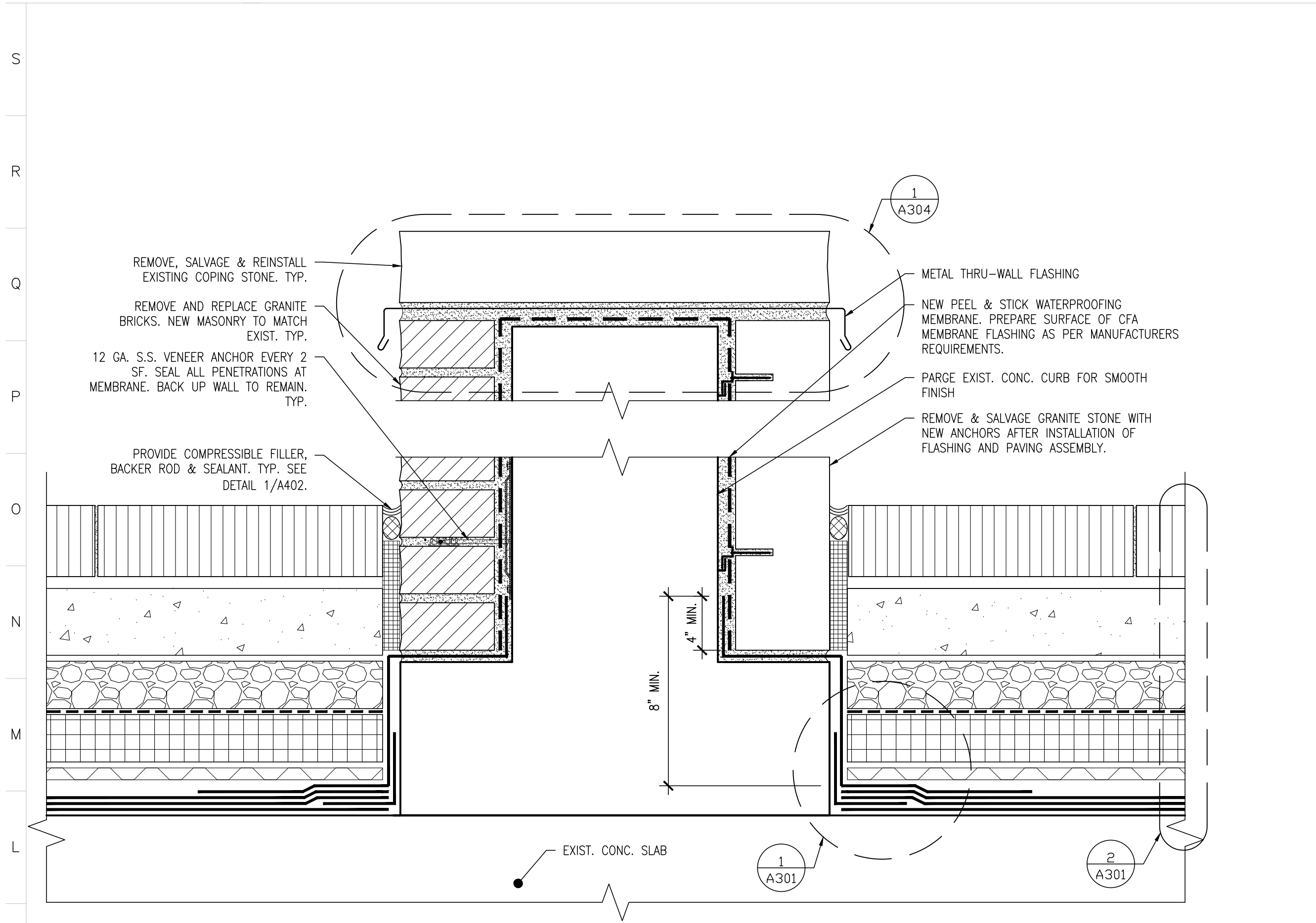
**DETAILS**

SCALE & SIGNATURE

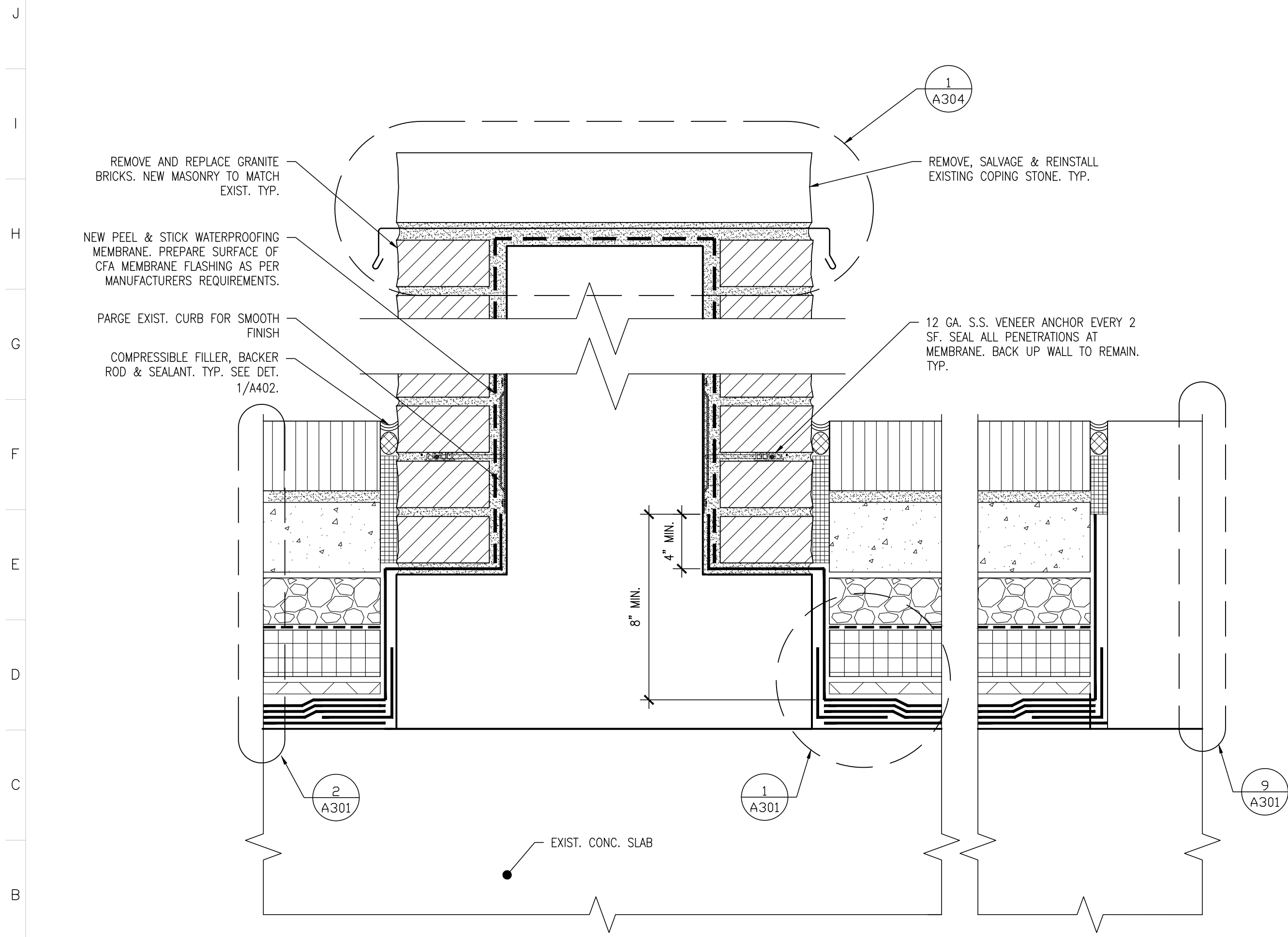
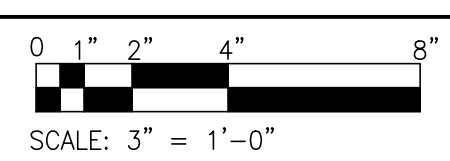
DATE: 05.11.2018  
PROJECT No: P15-036  
SCALE: AS NOTED  
DRAWING BY: WB  
CHECKED BY: PJ/VF  
DWG No: **A-302.00**  
DWG COUNT: 12 OF 27

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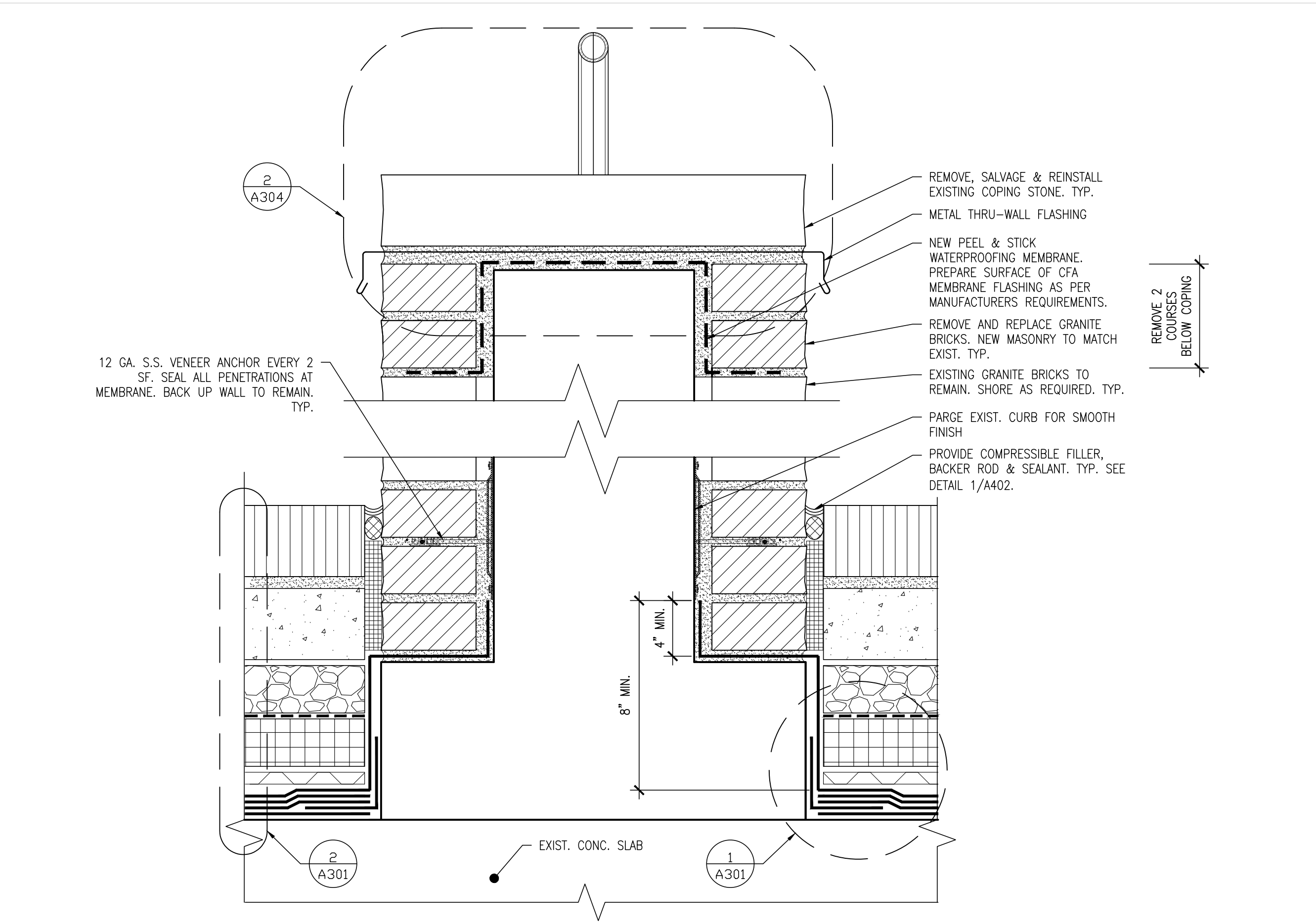
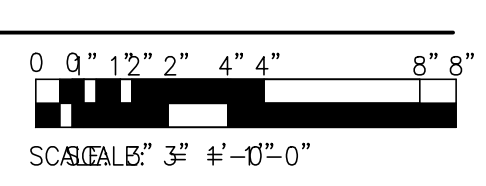




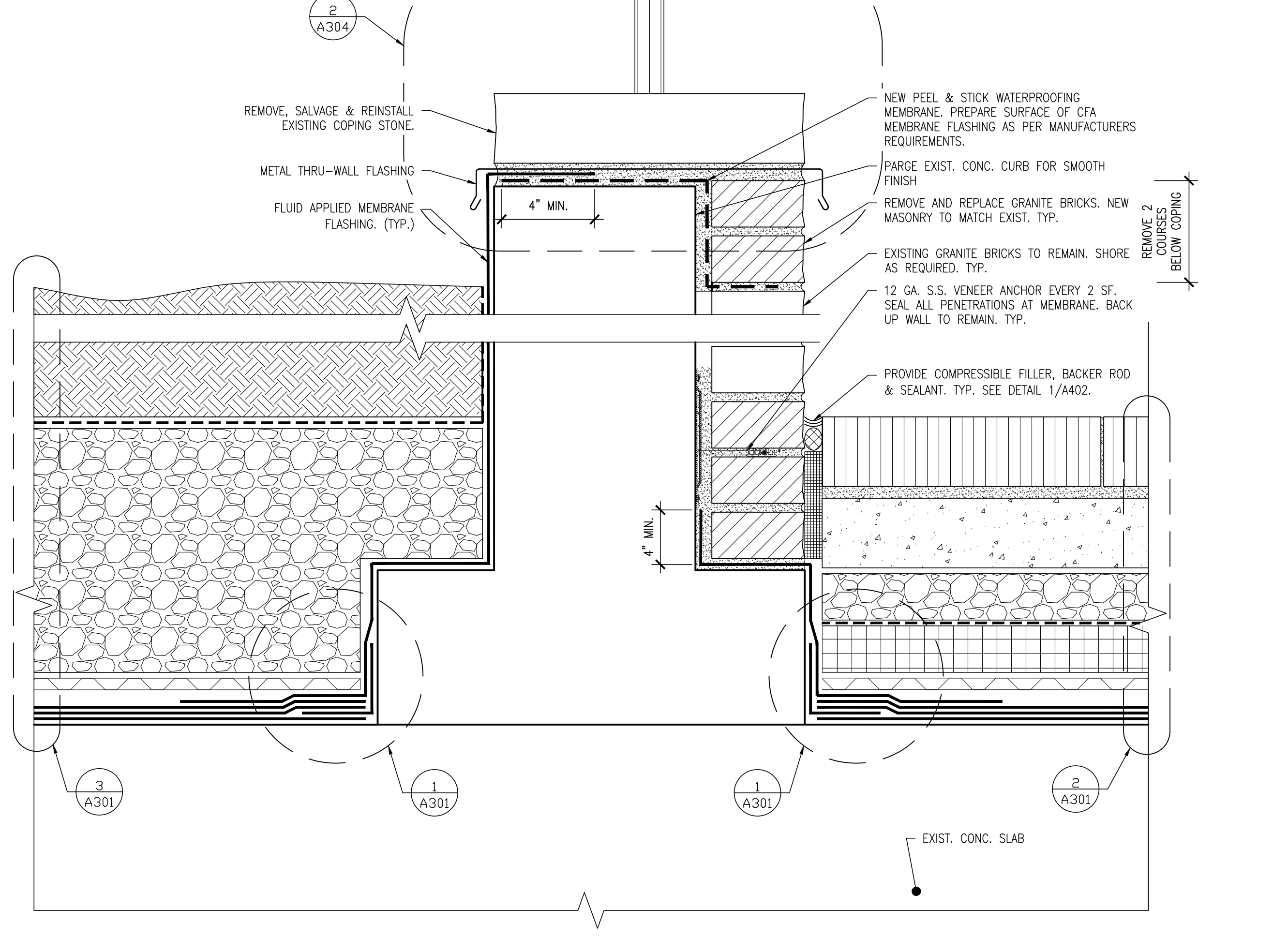
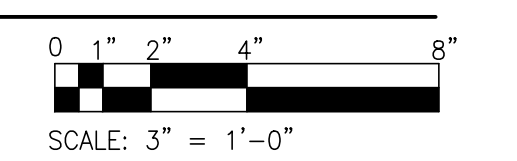
1 GRANITE/BRICK STUB WALL DETAIL  
SCALE: 3" = 1'-0"



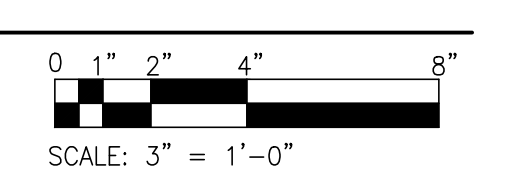
2 GRANITE/BRICK/BRICK STUB WALL  
SCALE: 3" = 1'-0"



3 COPING RESETTING @ PLAZA - TYP.  
SCALE: 3" = 1'-0"



4 COPING RESETTING @ PLANTER - TYP.  
SCALE: 3" = 1'-0"



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OWNER

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200 LIBERTY STREET  
NEW YORK, NY 10281

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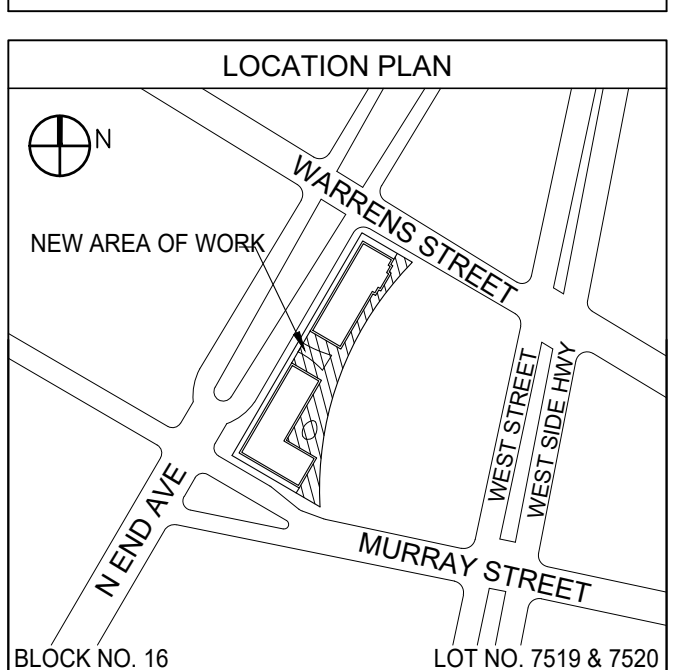
**OLA CONSULTING ENGINEERS**

50 BROADWAY SUITE 2  
HAWTHORNE, NY 10532  
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ENVIRONMENTAL SUB-CONSULTANTS

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2	BID SET	12.13.2018
1	OWNER'S REVIEW	90% 5.16.2018
NO.	SUBMISSIONS/ REVISIONS	DATE

TRUE NORTH

PROJECT NORTH

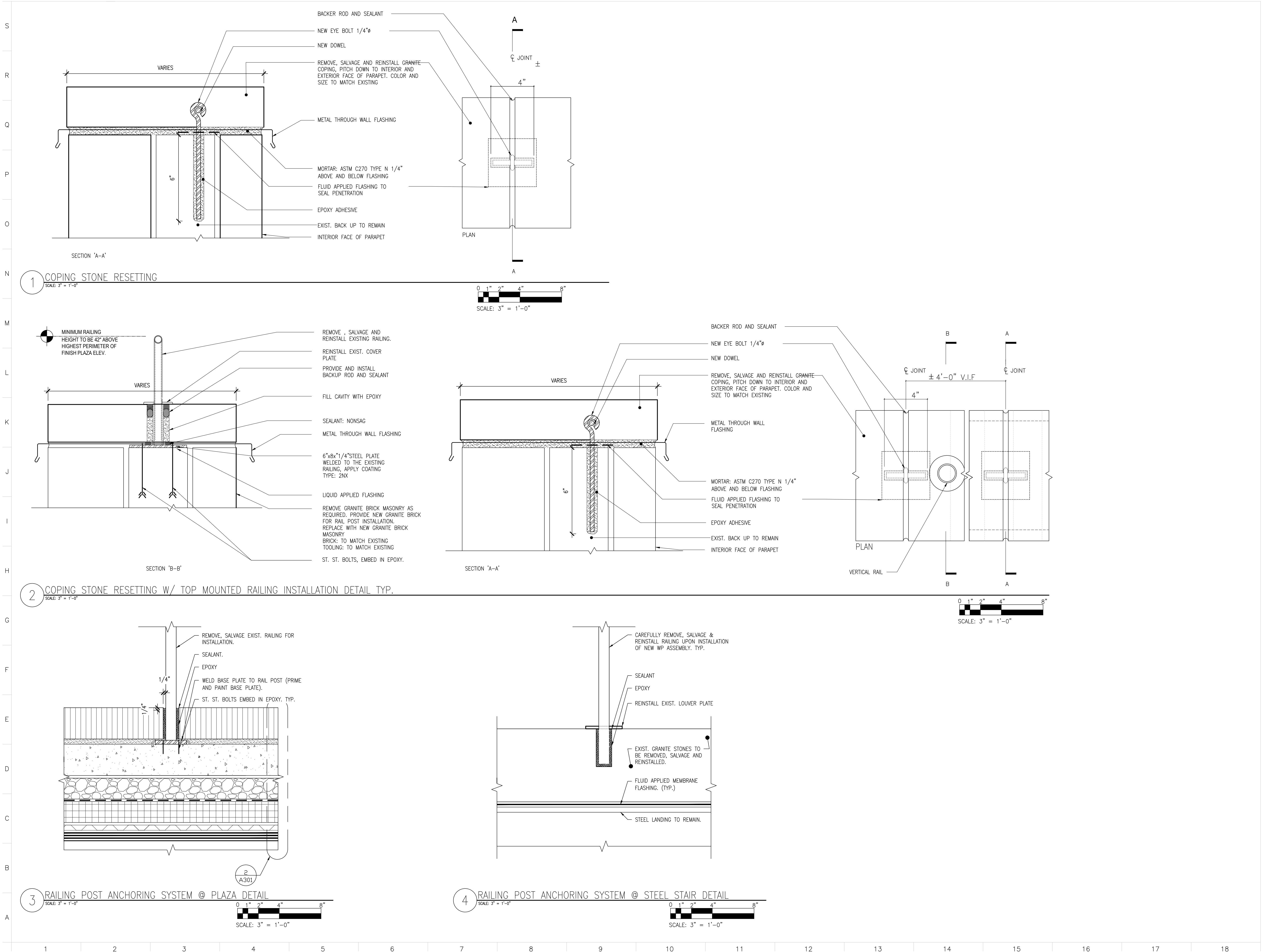
REFERENCE BAR  
SEE DRAWINGS FOR  
SCALE DESIGNATION

PROJECT  
**200-300 NORTH END AVE  
LEAK REMEDIATION  
DESIGN**  
200-300 NORTH END AVE  
NEW YORK, NY 10022

DRAWING NAME  
**DETAILS**

DATE: 05.11.2018  
PROJECT No: P15-036  
SCALE: AS NOTED  
DRAWING BY: WB  
CHECKED BY: PJ/VF  
DWG No: **A-303.00**  
DWG COUNT: 13 OF 27





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HAWTHORNE, NY 10532  
TEL: (814) 747-2800

ENVIRONMENTAL SUB-CONSULTANTS

**JLC ENVIRONMENTAL  
CONSULTANTS, INC.**

30 WEST 26TH STREET, 4TH FLOOR  
NEW YORK, NY 10010  
TEL: (212) 420-8119

LOCATION PLAN

NEW AREA OF WORK

WARREN'S STREET

WEST STREET

WEST SIDE HWY

MURRAY STREET

NORTH END AVE

BLOCK NO. 16

LOT NO. 7519 & 7520

2	BID SET	12.13.2018
1	OWNER'S REVIEW	90% 5.16.2018
NO.	SUBMISSIONS/ REVISIONS	DATE

PROJECT NORTH

REFERENCE BAR  
SEE DRAWINGS FOR  
SCALE DESIGNATION

PROJECT

**200-300 NORTH END AVE  
LEAK REMEDIATION  
DESIGN**

200-300 NORTH END AVE  
NEW YORK, NY 10282

DRAWING NAME

**COPING STONES & RAILING  
POST ANCHOR DETAILS**

SCALE & SIGNATURE

DATE: 05.11.2018

PROJECT No: P15-036

SCALE: AS NOTED

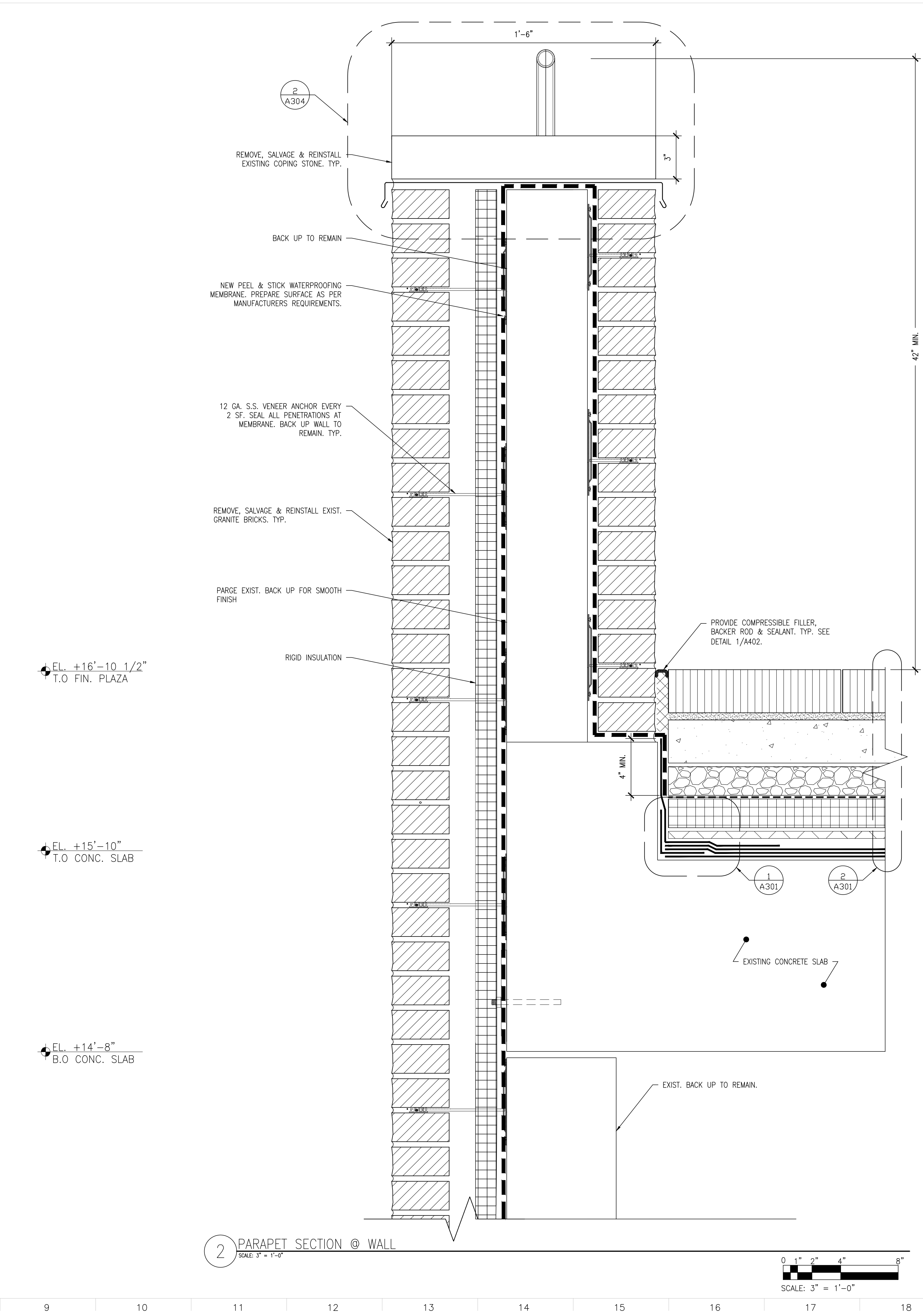
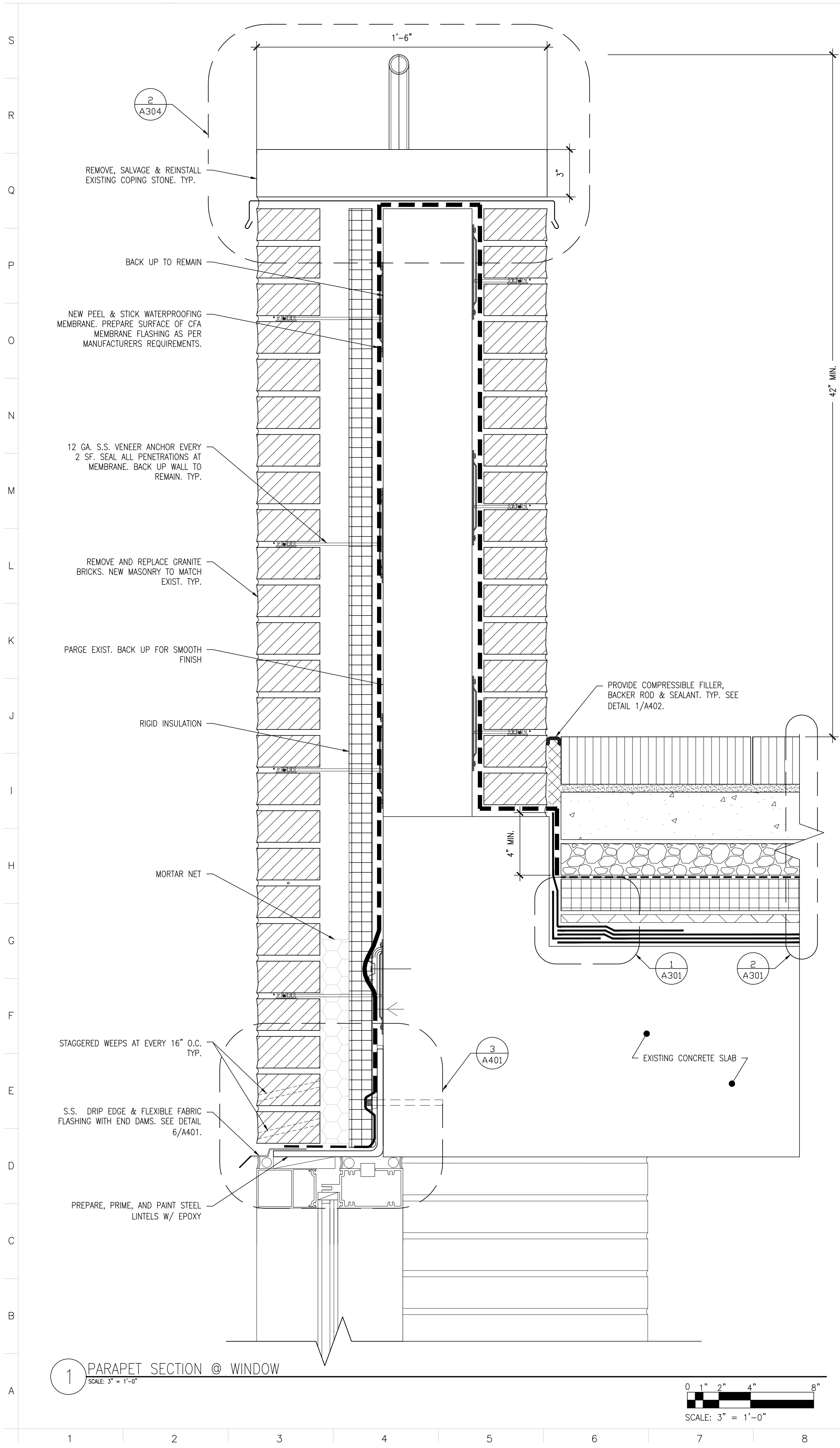
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CHECKED BY: PJ/VF

DWG No: **A-304.00**

DWG COUNT: 14 OF 27

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HAWTHORNE, NY 10532  
TEL: (914) 747-2800

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30 WEST 26TH STREET, 4TH FLOOR  
NEW YORK, NY 10010  
TEL: (212) 420-8119

LOCATION PLAN

NEW AREA OF WORK

WARRENS STREET  
WEST STREET  
MURRAY STREET  
N END AVE  
LOT NO. 7519 & 7520  
BLOCK NO. 16

2	BID SET	12.13.2018
1	OWNER'S REVIEW 90%	5.16.2018
NO.	SUBMISSIONS/ REVISIONS	DATE

PROJECT NORTH

REFERENCE BAR  
SEE DRAWINGS FOR SCALE DESIGNATION

PROJECT

**200-300 NORTH END AVE  
LEAK REMEDIATION  
DESIGN**  
200-300 NORTH END AVE  
NEW YORK, NY 10282

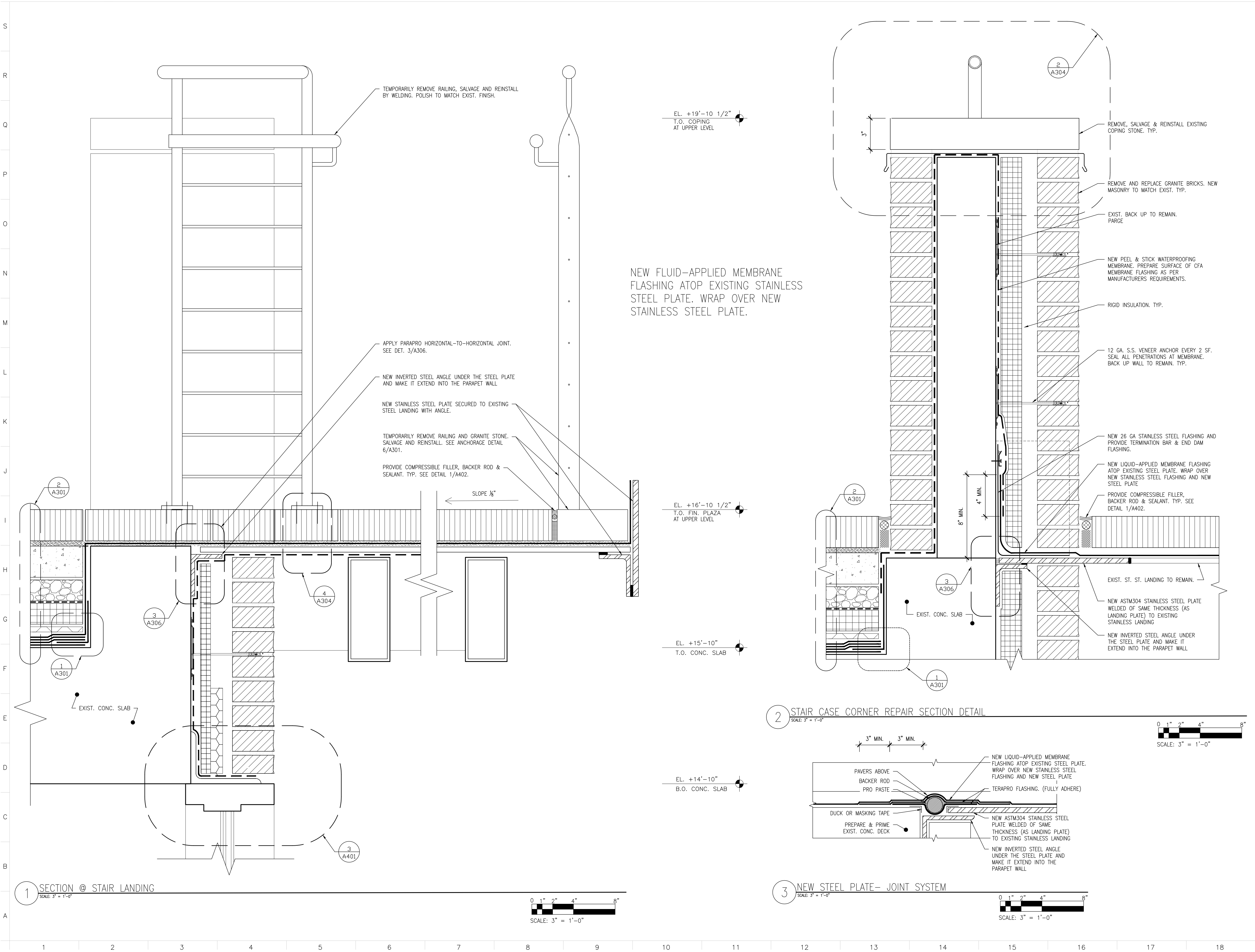
DRAWING NAME

**PARAPET DETAILS**

SEAL & SIGNATURE	DATE: 05.11.2018
	PROJECT No: P15-036
	SCALE: AS NOTED
	DRAWING BY: WB
	CHECKED BY: PJ/JVF
	DWG No: <b>A-305.00</b>
	DWG COUNT: 15 OF 27

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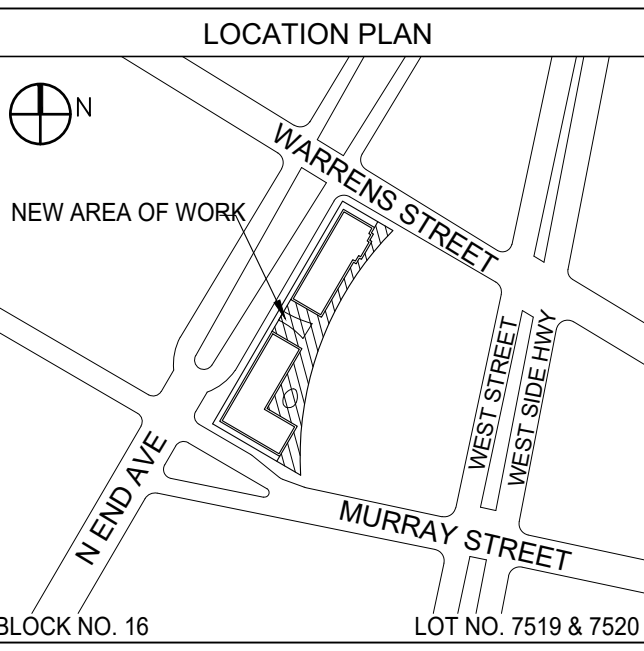
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TEL: (212) 420-8119



2	BID SET	12.13.2018
1	OWNER'S REVIEW 90%	5.16.2018
NO.	SUBMISSIONS/ REVISIONS	DATE

PROJECT NORTH



REFERENCE BAR  
SEE DRAWINGS FOR  
SCALE DESIGNATION

PROJECT  
**200-300 NORTH END AVE  
LEAK REMEDIATION  
DESIGN**  
200-300 NORTH END AVE  
NEW YORK, NY 10282

DRAWING NAME  
**STEEL STAIRS DETAILS**

SEAL & SIGNATURE	DATE: 05.11.2018
	PROJECT No: P15-036
	SCALE: AS NOTED
	DRAWING BY: WB
	CHECKED BY: PJ/VF
	DWG No: <b>A-306.00</b>
	DWG COUNT: 16 OF 27



 <p>PROJECT NORTH</p>	 <p>REFERENCE BAR SEE DRAWINGS FOR SCALE DESIGNATION</p>
<p>PROJECT</p> <p><b>200-300 NORTH END AVE LEAK REMEDIATION DESIGN</b></p> <p>200-300 NORTH END AVE NEW YORK, NY 10282</p>	
<p>DRAWING NAME</p> <p><b>DETAILS</b></p>	
<p>DATE: 05.11.2018</p> <p>PROJECT No: P15-036</p> <p>SCALE: AS NOTED</p> <p>DRAWING BY: WB</p> <p>CHECKED BY: PJJVF</p> <p>DWG No:</p>	<p style="font-size: 2em; font-weight: bold;">A-307.00</p>
<p>DWG COUNT: 17 OF 27</p>	

5 DETAIL @ LOWER PLAZA BLDG. WALL  
SCALE: 1-1/2" = 1'-0"

0 2" 4" 8" 16"  
SCALE: 1-1/2" = 1'-0"

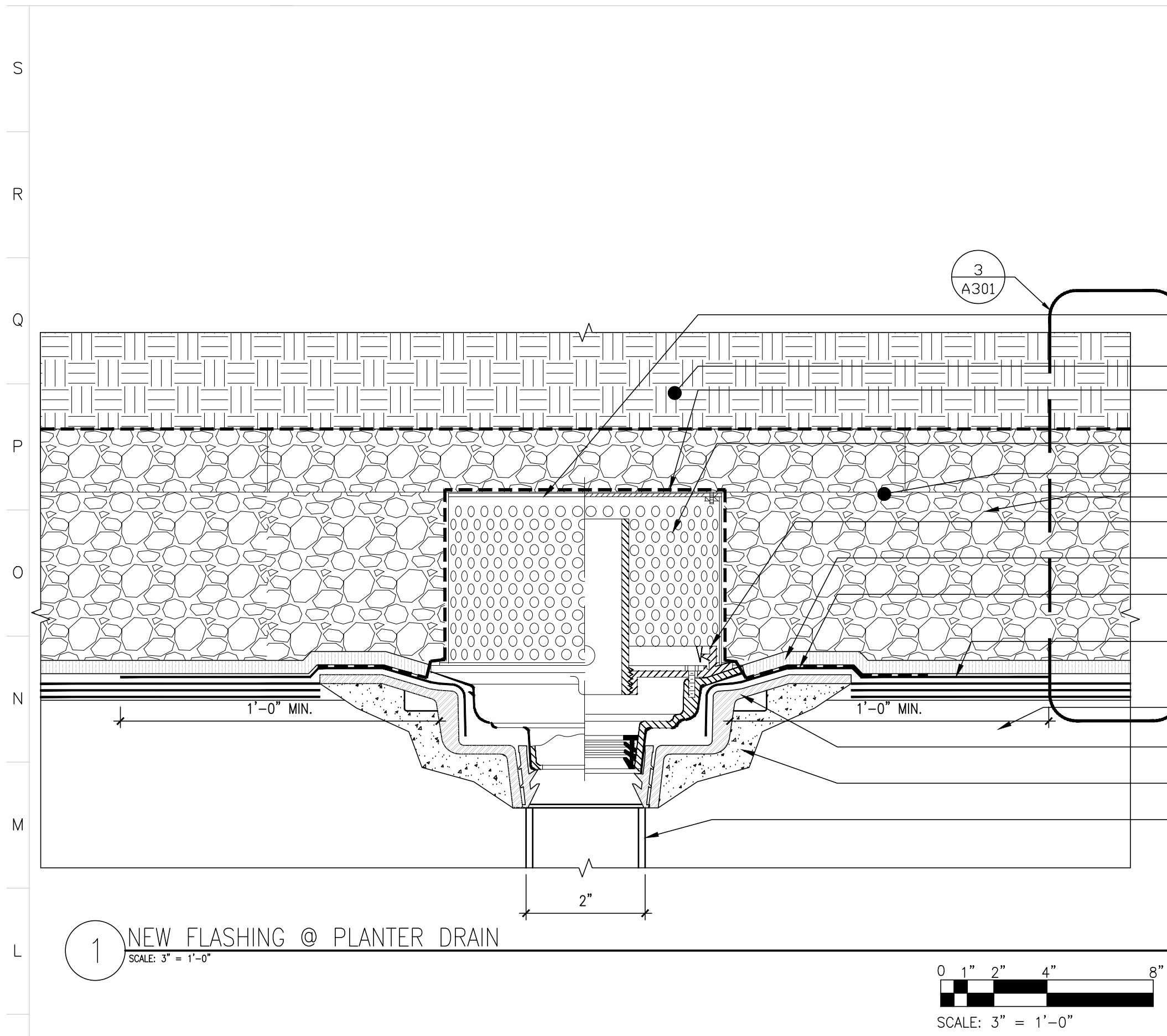




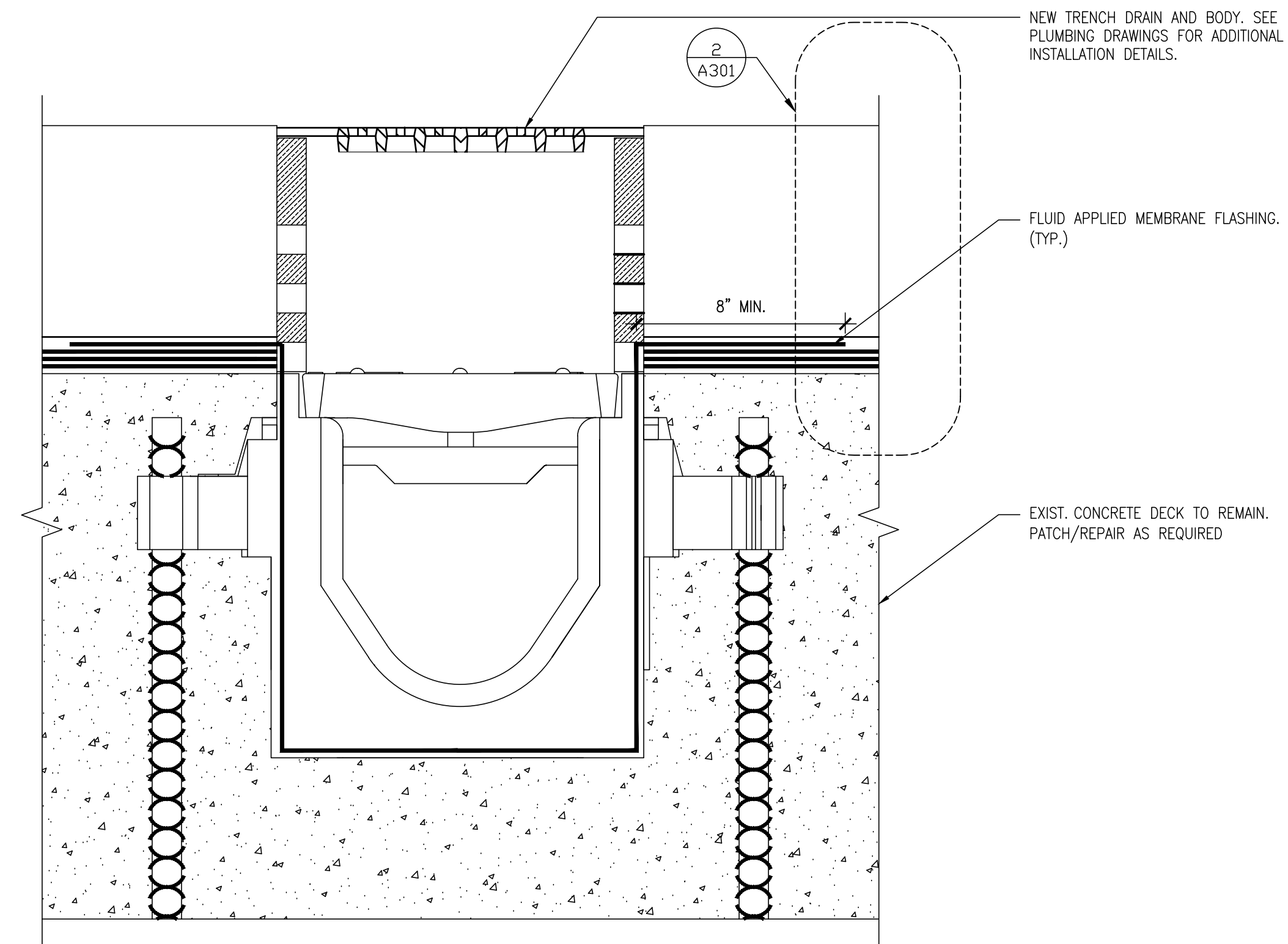


 <p style="text-align: center; margin-top: 10px;">PROJECT NORTH</p>	 <p style="text-align: center; margin-top: 10px;">REFERENCE BAR SEE DRAWINGS FOR SCALE DESIGNATION</p>																
<p>PROJECT</p> <h1 style="text-align: center; margin: 0;">200-300 NORTH END AVE LEAK REMEDIATION DESIGN</h1> <p style="text-align: center;">200-300 NORTH END AVE NEW YORK, NY 10282</p>																	
<p>DRAWING NAME</p> <h1 style="text-align: center; margin: 0;">DETAILS</h1>																	
<p>TITLE &amp; SIGNATURE</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">DATE:</td> <td style="width: 50%;">05.11.2018</td> </tr> <tr> <td>PROJECT No:</td> <td>P15-036</td> </tr> <tr> <td>SCALE:</td> <td>AS NOTED</td> </tr> <tr> <td>DRAWING BY:</td> <td>WB</td> </tr> <tr> <td>CHECKED BY:</td> <td>PJ/VF</td> </tr> <tr> <td>DWG No:</td> <td></td> </tr> <tr> <td colspan="2" style="text-align: center; padding: 20px;"> <h1 style="margin: 0;">A-402.00</h1> </td> </tr> <tr> <td>DWG COUNT:</td> <td></td> </tr> </table>	DATE:	05.11.2018	PROJECT No:	P15-036	SCALE:	AS NOTED	DRAWING BY:	WB	CHECKED BY:	PJ/VF	DWG No:		<h1 style="margin: 0;">A-402.00</h1>		DWG COUNT:	
DATE:	05.11.2018																
PROJECT No:	P15-036																
SCALE:	AS NOTED																
DRAWING BY:	WB																
CHECKED BY:	PJ/VF																
DWG No:																	
<h1 style="margin: 0;">A-402.00</h1>																	
DWG COUNT:																	
<p>19 OF 27</p>																	

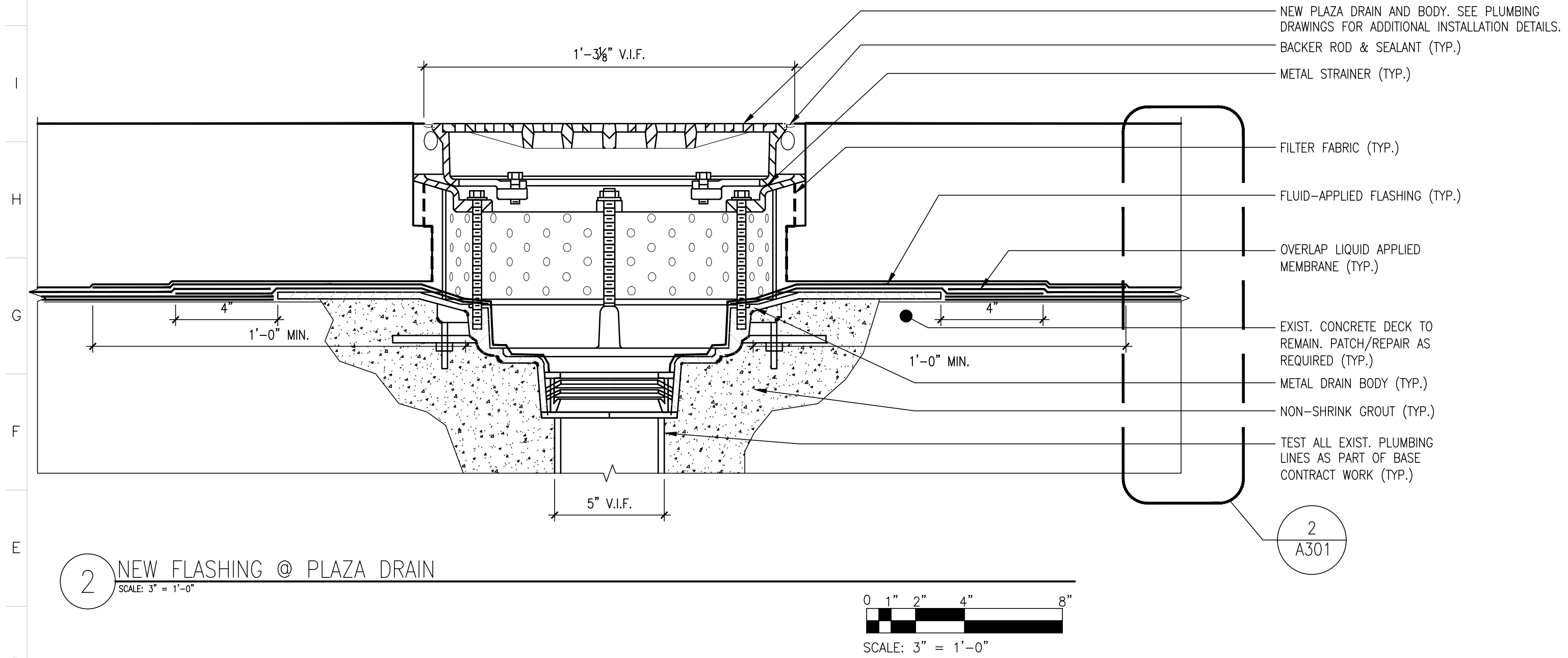




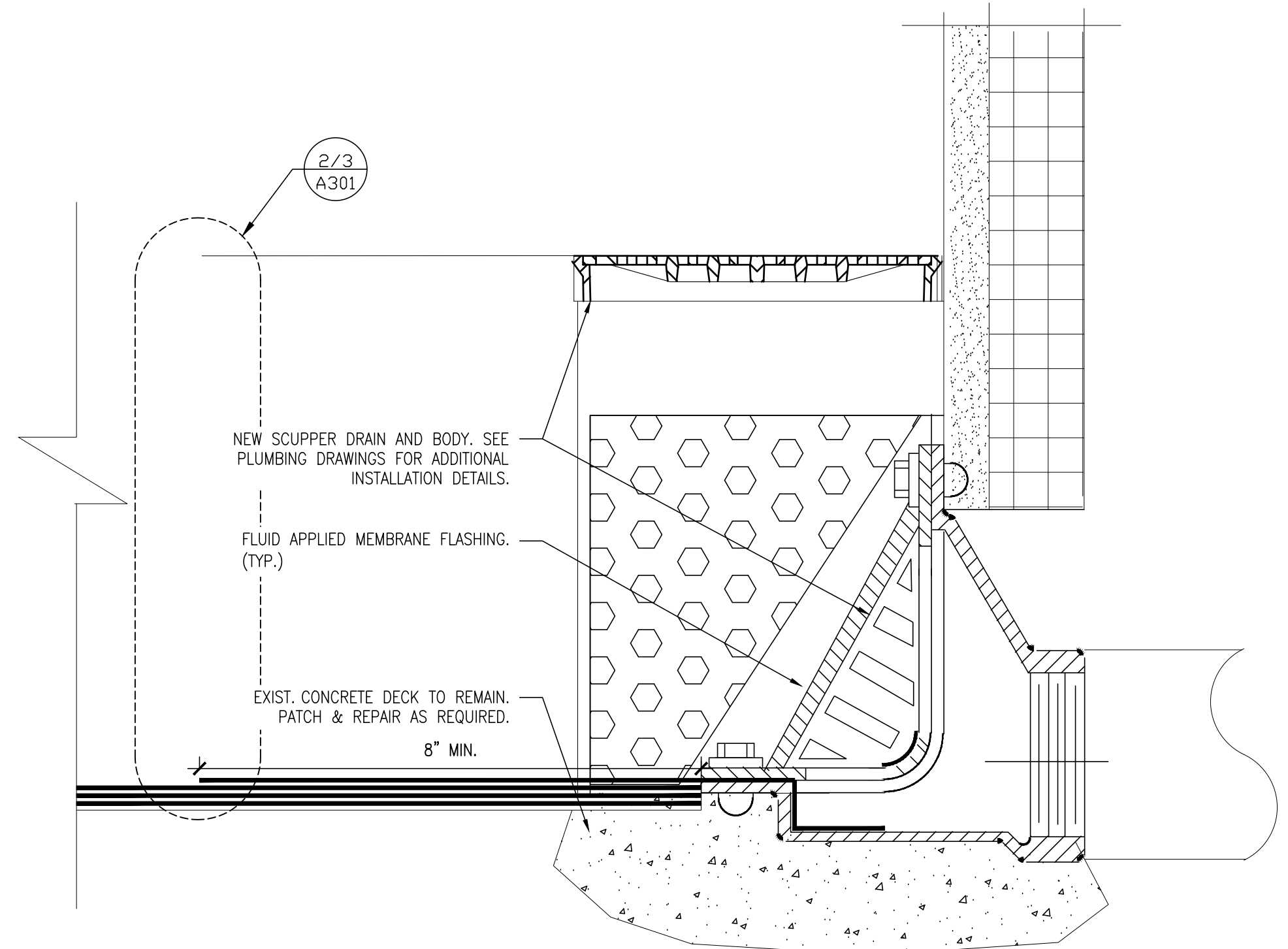
- NEW PLANTER DRAIN AND BODY. SEE PLUMBING DRAWINGS FOR ADDITIONAL INSTALLATION DETAILS.
- INSTALL NEW SOLID TOP (TYP.)
- INSTALL NEW FILTER FABRIC (TYP.)
- STAINLESS STEEL PERFORATED GRAVEL STOP (TYP.)
- INSTALL NEW GRAVEL (TYP.)
- INSTALL NEW SOIL (TYP.)
- METAL CLAMPING RING (TYP.) COMBINATION FLASHING CLAMP AND GRAVEL STOP
- FILTER FABRIC & DRAINAGE MAT (TYP.)
- FLUID-APPLIED FLASHING, EXTEND TILL B.O. DRAIN BODY (TYP.)
- FLUID-APPLIED WATERPROOFING AT PLANTER, EXTEND TILL B.O. DRAIN BODY (TYP.)
- EXIST. CONCRETE DECK TO REMAIN. PATCH/REPAIR AS REQUIRED (TYP.)
- EXIST. METAL DRAIN BODY TO REMAIN (TYP.)
- NON-SHRINK GROUT (TYP.)
- TEST ALL EXIST. PLUMBING LINES AS PART OF BASE CONTRACT WORK (TYP.)



- NEW TRENCH DRAIN AND BODY. SEE PLUMBING DRAWINGS FOR ADDITIONAL INSTALLATION DETAILS.
- FLUID APPLIED MEMBRANE FLASHING. (TYP.)
- EXIST. CONCRETE DECK TO REMAIN. PATCH/REPAIR AS REQUIRED



- NEW PLAZA DRAIN AND BODY. SEE PLUMBING DRAWINGS FOR ADDITIONAL INSTALLATION DETAILS.
- BACKER ROD & SEALANT (TYP.)
- METAL STRAINER (TYP.)
- FILTER FABRIC (TYP.)
- FLUID-APPLIED FLASHING (TYP.)
- OVERLAP LIQUID APPLIED MEMBRANE (TYP.)
- EXIST. CONCRETE DECK TO REMAIN. PATCH/REPAIR AS REQUIRED (TYP.)
- METAL DRAIN BODY (TYP.)
- NON-SHRINK GROUT (TYP.)
- TEST ALL EXIST. PLUMBING LINES AS PART OF BASE CONTRACT WORK (TYP.)



- NEW SCUPPER DRAIN AND BODY. SEE PLUMBING DRAWINGS FOR ADDITIONAL INSTALLATION DETAILS.
- FLUID APPLIED MEMBRANE FLASHING. (TYP.)
- EXIST. CONCRETE DECK TO REMAIN. PATCH & REPAIR AS REQUIRED.

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OWNER

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NEW YORK, NY 10281

ENVIRONMENTAL SUB-CONSULTANTS

**OLA CONSULTING ENGINEERS**

50 BROADWAY SUITE 2  
HAWTHORNE, NY 10532  
TEL: (814) 747-2800

ENVIRONMENTAL SUB-CONSULTANTS

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CONSULTANTS, INC.**

30 WEST 26TH STREET, 4TH FLOOR  
NEW YORK, NY 10010  
TEL: (212) 420-8119

LOCATION PLAN

NEW AREA OF WORK

WARREN'S STREET

WEST STREET

WEST SIDE HWY

MURRAY STREET

BLOCK NO. 16

LOT NO. 7519 & 7520

2	BID SET	12.13.2018
1	OWNER'S REVIEW	90% 5.16.2018
NO.	SUBMISSIONS/ REVISIONS	DATE

TRUE NORTH

REFERENCE BAR  
SEE DRAWINGS FOR  
SCALE DESIGNATION

PROJECT

**200-300 NORTH END AVE  
LEAK REMEDIATION  
DESIGN**

200-300 NORTH END AVE  
NEW YORK, NY 10282

DRAWING NAME

**DRAIN DETAILS**

SCALE & SIGNATURE

DATE: 05.11.2018

PROJECT No: P15-036

SCALE: AS NOTED

DRAWING BY: WB

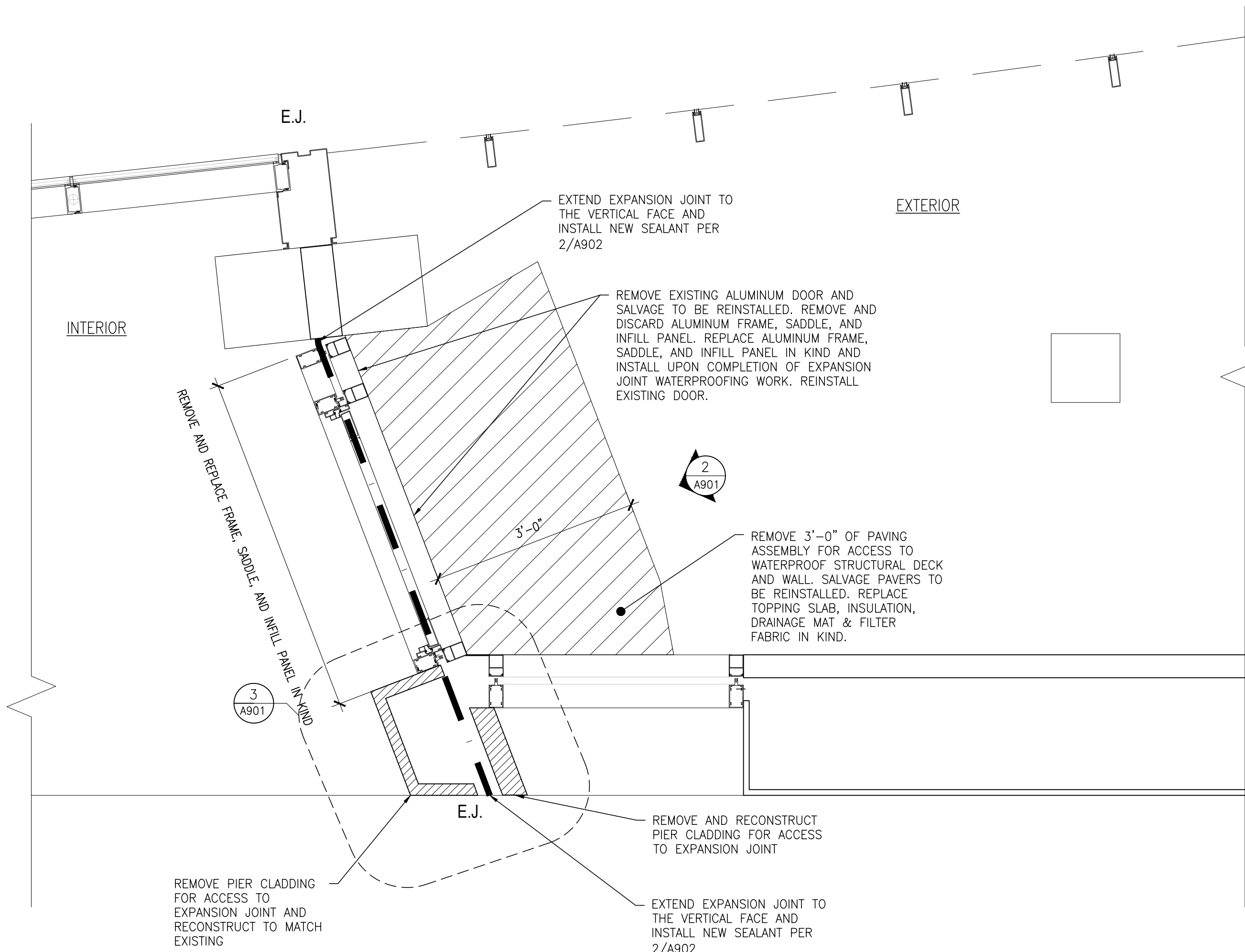
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DWG No: **A-501.00**

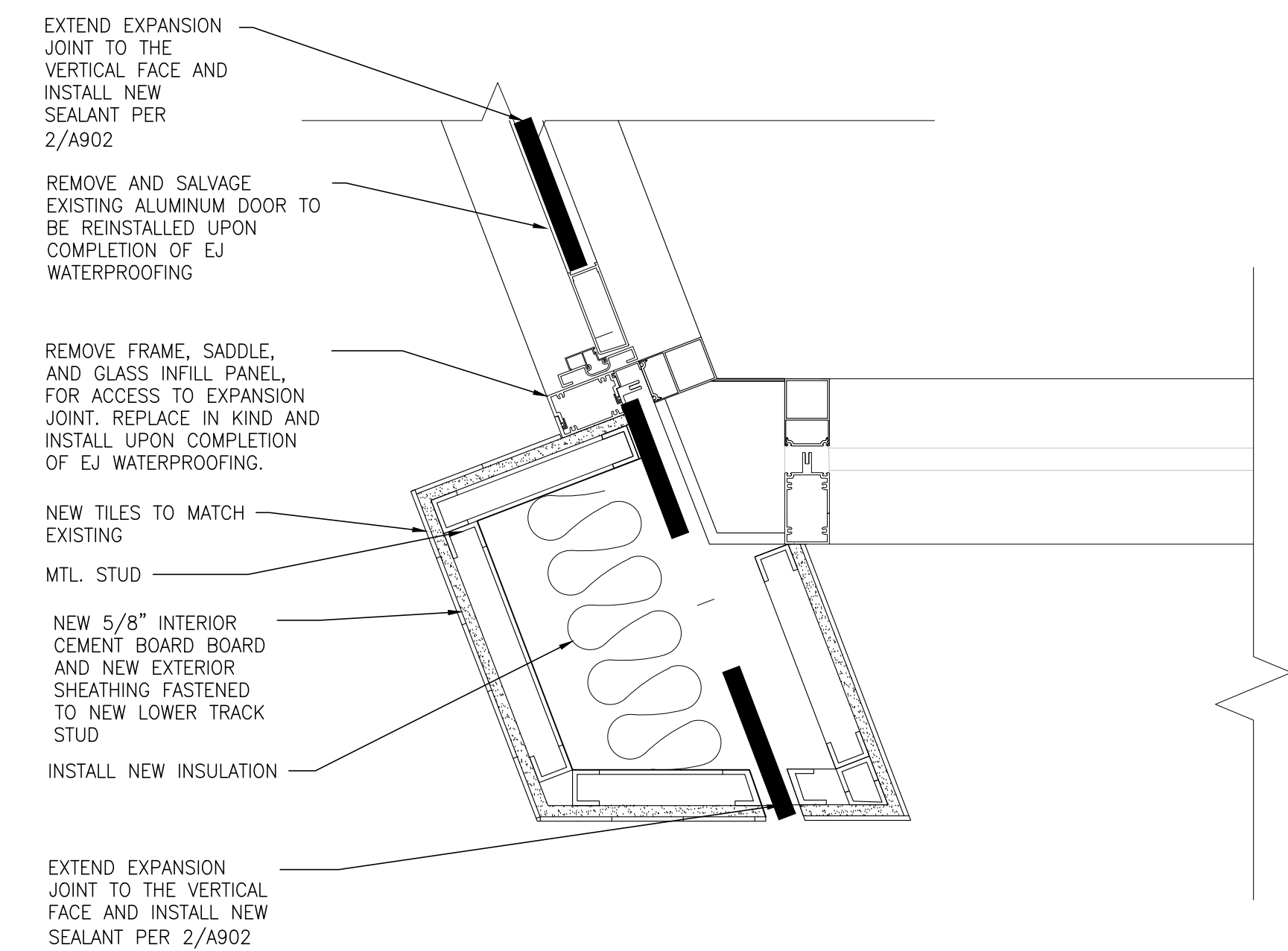
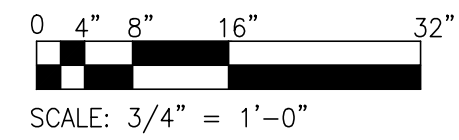
DWG COUNT: 20 OF 27

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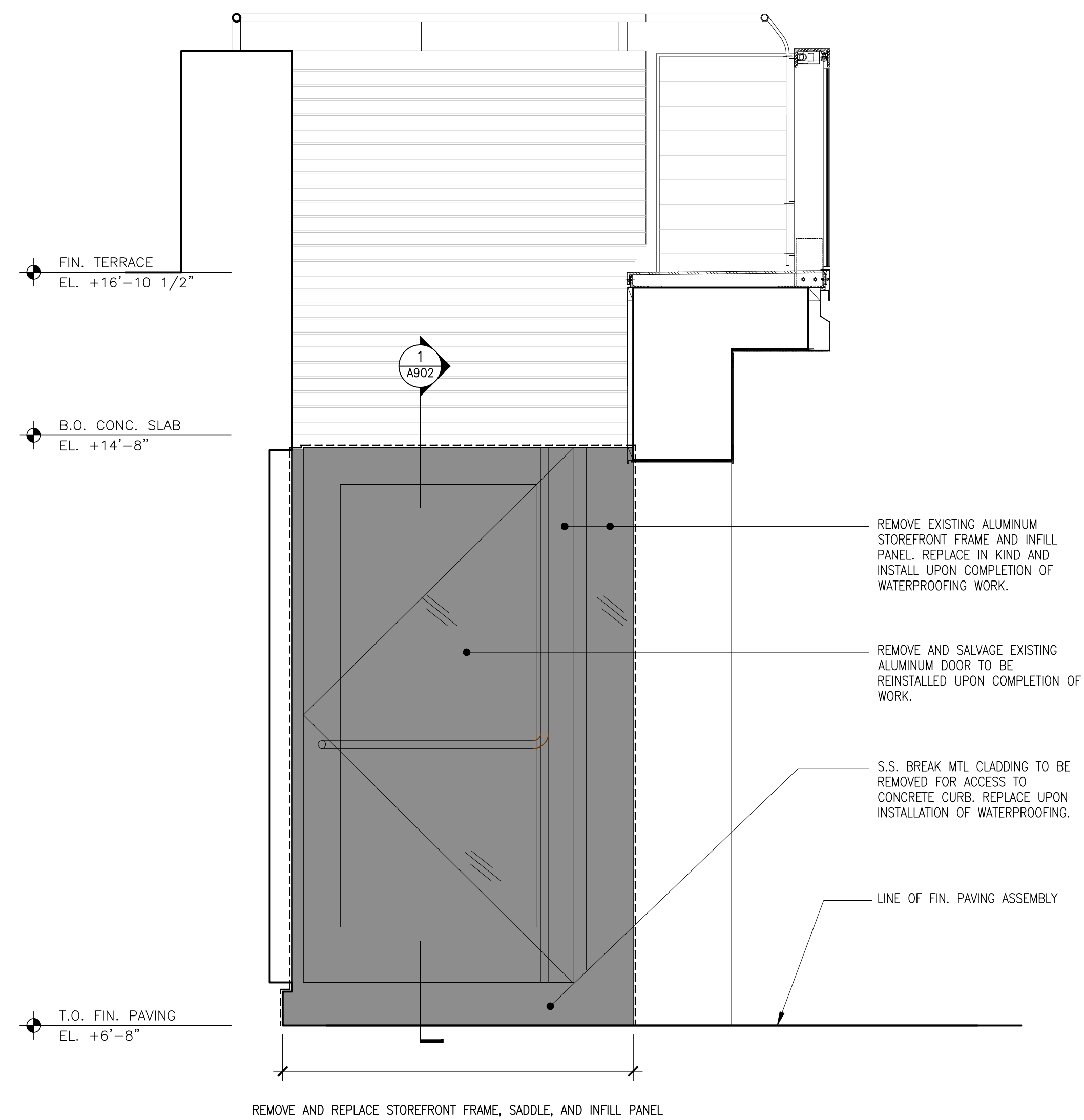
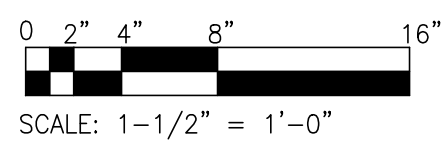




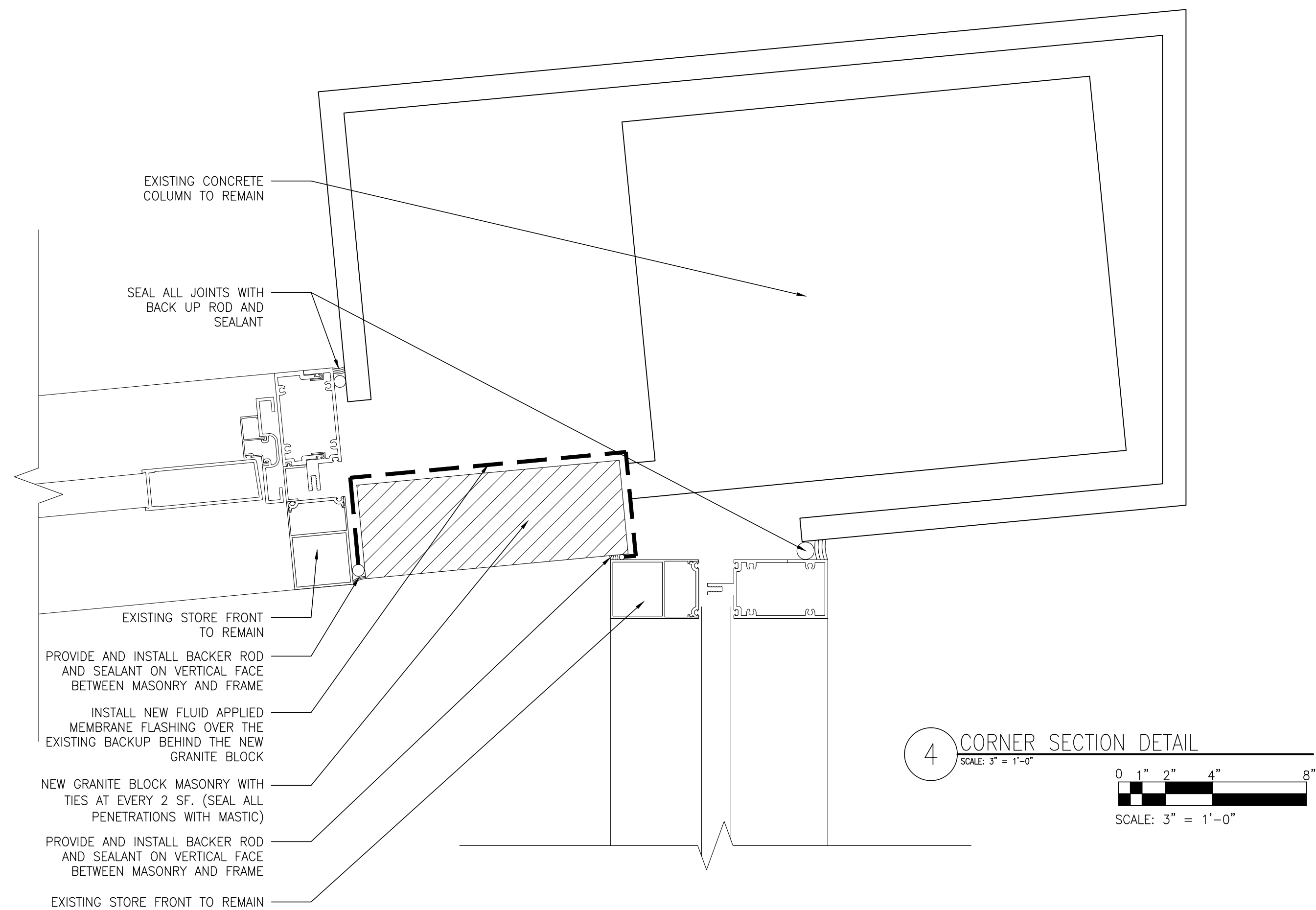
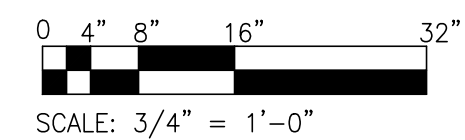
1 PART PLAN AT CENTER COURTYARD  
3/4"=1'-0"



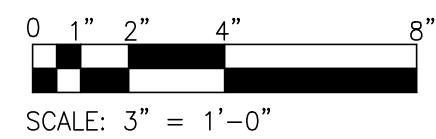
3 COLUMN CLADDING DETAIL  
SCALE: 1-1/2" = 1'-0"



2 NORTH ELEVATION, CENTER COURTYARD  
3/4"=1'-0"



4 CORNER SECTION DETAIL  
SCALE: 3" = 1'-0"



ARCHITECT

ARCHITECTURAL  
PRESERVATION  
STUDIO, DPC

Architecture, Historic Preservation, & Building Envelope Consulting  
594 Broadway, Suite 919, New York, NY 10012  
212.477.7976 / info@preservationstudio.com

OWNER

**BATTERY PARK CITY AUTHORITY**  
  
200 LIBERTY STREET  
NEW YORK, NY 10281

ENVIRONMENTAL SUB-CONSULTANTS

**OLA CONSULTING ENGINEERS**  
  
60 BROADWAY SUITE 2  
HAWTHORNE, NY 10532  
TEL: (814) 747-2800

ENVIRONMENTAL SUB-CONSULTANTS

**JLC ENVIRONMENTAL  
CONSULTANTS, INC.**  
  
30 WEST 26TH STREET, 4TH FLOOR  
NEW YORK, NY 10010  
TEL: (212) 420-8119

LOCATION PLAN

NEW AREA OF WORK  
WARREN'S STREET  
WEST STREET  
WEST SIDE HWY  
MURRAY STREET  
BLOCK NO. 16  
LOT NO. 7519 & 7520

2	BID SET	12.13.2018
1	OWNER'S REVIEW	90% 5.16.2018
NO.	SUBMISSIONS/ REVISIONS	DATE

TRUE NORTH  
PROJECT NORTH

REFERENCE BAR  
SEE DRAWINGS FOR  
SCALE DESIGNATION

PROJECT

**200-300 NORTH END AVE  
LEAK REMEDIATION  
DESIGN**  
200-300 NORTH END AVE  
NEW YORK, NY 10282

DRAWING NAME

**CELLAR PARTIAL PLAN &  
NORTH ELEVATION**

SEAL & SIGNATURE

DATE: 05.11.2018  
PROJECT No: P15-036  
SCALE: AS NOTED  
DRAWING BY: WB  
CHECKED BY: PJ/VF  
DWG No: **A-901.00**  
DWG COUNT: 21 OF 27







SYMBOL & ABBREVIATIONS				GENERAL NOTES				SPECIFICATIONS																																																															
S	SYMBOL		ABBREVIATION	DESCRIPTION	5.) PROVIDE ALL PLUMBING FIXTURES, PIPING, VALVES AND ACCESSORY ITEMS AS SPECIFIED AND AS REQUIRED FOR A COMPLETE INSTALLATION.				P-2 <u>WORK NOT INCLUDED</u>				B.) THE PLUMBING CONTRACTOR SHALL OBTAIN DETAILED INFORMATION FROM THE MANUFACTURERS OF APPARATUS, WHICH HE IS TO PROVIDE, FOR THE PROPER METHODS OF INSTALLATION. HE SHALL ALSO OBTAIN ANY INFORMATION FROM OTHER SUBCONTRACTORS TO ENSURE FULL COMPREHENSION OF THE WORK TO BE DONE AND TO ENSURE COORDINATION BETWEEN WORK UNDER THIS SECTION AND ALL OTHER WORK UNDER THIS CONTRACT.																																																										
			NEW	NEW WORK					A.) THE FOLLOWING ITEMS OF WORK ARE TO BE DONE BY OTHERS AND SHALL NOT BE INCLUDED IN THE WORK OF THIS SECTION. HOWEVER, IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO SUPPLY THE OTHER CONTRACTORS WITH THE NECESSARY INFORMATION, DRAWINGS, AND SUPERVISION SO THAT THEY CAN PROPERLY COMPLETE THEIR PHASE OF THE INSTALLATION.																																																														
			CW	COLD WATER	6.) PROVIDE ALL PIPE OPENINGS THROUGH PARTITIONS WITH PIPE SLEEVES. FOR PIPES PENETRATING FIRE RATED PARTITIONS, THE SPACE BETWEEN THE PIPE AND THE SLEEVE SHALL BE SEALED WITH FIRE STOPPING MATERIAL.				1.) ELECTRICAL WIRING AND MOUNTING OF STARTING AND CONTROL EQUIPMENT FOR ELECTRICALLY OPERATED PLUMBING EQUIPMENT.																																																														
R			HW	HOT WATER	7.) MINIMUM FALL ON ALL SANITARY AND STORM DRAINS SHALL BE 1/8" PER FOOT FOR PIPING 3" AND LARGER. 2½" AND SMALLER SHALL BE INSTALLED AT 1/4" PER FOOT.				2.) ALL ELECTRIC POWER WIRING EXCEPT WHERE FURNISHED AS AN INTEGRAL PART OF FACTORY ASSEMBLED EQUIPMENT OR AS OTHERWISE REQUIRED FOR AUTOMATIC CONTROLS.																																																														
			HWC	HOT WATER RECIRCULATION					B.) WORK FOR THIS CONTRACTOR SHALL BE LIMITED TO WITHIN FIVE FEET OF THE BUILDING EXTERIOR. ALL WORK TO BE PERFORMED OUTSIDE FIVE FEET OF THE BUILDING EXTERIOR SHALL BE DONE BY OTHERS UNLESS OTHERWISE NOTED.				P-10 <u>OPERATING AND MAINTENANCE MANUALS</u>																																																										
Q			V	VENT	8.) A CLEANOUT SHALL BE LOCATED AT THE BASE OF EACH STACK AND LEADER.				C.) ALL EXTERIOR STORM-DRAINAGE AND GUTTERS, LEADERS, AND DOWNSPOUTS ARE BY OTHERS.				A.) OPERATING INSTRUCTIONS: PROVIDE OPERATING INSTRUCTIONS TO THE OWNER WITH RESPECT TO OPERATION FUNCTIONS AND MAINTENANCE PROCEDURES FOR ALL EQUIPMENT AND SYSTEMS INSTALLED.																																																										
			W	WASTE LINE					P-3 <u>VISITING THE PREMISES</u>				B.) MAINTENANCE MANUALS: AT THE COMPLETION OF THE PROJECT, FOUR COMPLETE MANUALS CONTAINING THE FOLLOWING SHALL BE TURNED OVER TO THE OWNER:																																																										
P			LDR	LEADER	NYC BUILDING DEPARTMENT NOTES								1.) COMPLETE SHOP DRAWINGS OF ALL EQUIPMENT.																																																										
			-	2-WAY VALVE	ALL PLUMBING WORK SHALL MEET THE REQUIREMENTS OF THE 2014 NEW YORK CITY PLUMBING CODE.				A.) THE PLUMBING CONTRACTOR, BEFORE SUBMITTING A BID ON THE WORK, MUST VISIT THE SITE AND FAMILIARIZE HIMSELF WITH ALL VISIBLE EXISTING CONDITIONS.				2.) OPERATION DESCRIPTION OF ALL SYSTEMS.																																																										
			-	PLUG VALVE	1.) PROTECTION OF PIPING AS OUTLINED IN PC 305 OF THE 2014 NYC PLUMBING CODE SHALL BE AS REQUIRED.				B.) THE SUBMISSION OF A BID WILL BE CONSIDERED AN ACKNOWLEDGMENT ON THE PART OF THE BIDDER OF HIS VISITATION TO THE SITE. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE WORK AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.				3.) NAMES, ADDRESSES, AND TELEPHONE NUMBERS OF ALL SUPPLIERS OF THE SYSTEMS AND SERVICE AGENTS.																																																										
O			-	SOLENOID VALVE	2.) ALL PIPING AND MATERIALS SHALL BE AS DIRECTED IN THE 2014 NYC PLUMBING CODE AS REQUIRED.				C.) INSPECT AND VERIFY ALL CONDITIONS WHICH MAY AFFECT COST OF INSTALLATION. VERIFY EXACT LOCATION OF ALL EXISTING PIPES, DUCTS, BEAMS, ETC., WHETHER SHOWN ON THE DRAWINGS OR NOT, SO FAR AS THESE LOCATIONS RELATE TO THE NEW WORK. PROVIDE ANY OFFSETS IN NEW PIPING OR AS MAY BE REQUIRED FOR PROPER CLEARANCES TO AVOID EXISTING DUCTS, CABLES OR OTHER OBSTRUCTION.				4.) PREVENTIVE MAINTENANCE INSTRUCTIONS AND SCHEDULE FOR ALL SYSTEMS.																																																										
			-	GATE VALVE	3.) PIPING JOINTS AND CONNECTIONS SHALL BE AS APPROVED IN PC 308 OF THE 2014 NYC PLUMBING CODE.				P-4 <u>QUALITY ASSURANCE</u>				5.) SPARE PARTS LIST OF ALL SYSTEM COMPONENTS.																																																										
			-	GLOBE VALVE	4.) CONSTRUCTION, QUANTITIES, DEVICES, FIXTURES, FAUCETS, VALVES, AND FACILITIES FOR DISABLED SHALL BE AS OUTLINED IN CHAPTER 4 OF THE 2014 NYC PLUMBING CODE.				A.) THE WORKMANSHIP SHALL BE EXECUTED IN STRICT ACCORDANCE WITH THE N.Y. STATE PLUMBING CODES. IN CASE OF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND A GOVERNING CODE OR ORDINANCE, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.				P-11 <u>REMOVALS</u>																																																										
N			-	CHECK VALVE	5.) TRAPS AND CLEANOUTS SHALL BE AS PER CHAPTERS 7 & 10 OF THE 2014 NYC PLUMBING CODE.				B.) UNLESS OTHERWISE SPECIFIED OR INDICATED, MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE LATEST EDITION OF THE FOLLOWING CODES AND STANDARDS: AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), UNDERWRITERS' LABORATORIES, INC. (UL), AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM), NATIONAL FIRE PROTECTION ASSOCIATION (NFFA), AND NATIONAL ELECTRIC CODE.				A.) REMOVE AND DISPOSE OF ALL PIPING, AND ACCESSORIES WITHIN THE PROJECT AREA AS SHOWN ON THE DRAWINGS OR AS REQUIRED FOR THE INSTALLATION OF THE WORK OF THIS PROJECT.																																																										
			-	OS&Y GATE VALVE	6.) CONSTRUCTION AND SPACING OF HANGERS AND SUPPORTS SHALL BE AS DIRECTED IN PC 308 OF THE 2014 NYC PLUMBING CODE.				C.) IF ANY WORK IS PERFORMED AND SUBSEQUENT CHANGES ARE NECESSARY TO CONFORM TO THE ORDINANCES, THE CHANGES SHALL BE MADE AT THE PLUMBING CONTRACTOR'S EXPENSE.				B.) THIS WORK SHALL BE EXECUTED IN AN ORDERLY AND CAREFUL MANNER, WITH DUE CONSIDERATION FOR THE PROTECTION OF ADJACENT ACTIVITIES. DUST PRODUCING DEMOLITION SHALL BE ISOLATED WITH PROPER PRECAUTIONS.																																																										
			-	BALL VALVE	7.) SANITARY DRAINAGE PIPING, SIZING, GRADING, AND OFFSETS SHALL BE AS OUTLINED IN CHAPTER 7 OF THE 2014 NYC PLUMBING CODE.				P-6 <u>WORKMANSHIP AND MATERIALS</u>				C.) THE CONTRACTOR SHALL ASK THE OWNER FOR INSTRUCTIONS IF HE ENCOUNTERS ANY WORK, THE DEMOLITION OF WHICH MIGHT RESULT IN A HAZARDOUS CONDITION.																																																										
M			-	CIRCUIT SETTER	8.) VENT SIZING, GRADING, CONNECTIONS, LOCATIONS AND OFFSETS SHALL BE AS DIRECTED IN CHAPTER 9 OF THE 2014 NYC PLUMBING CODE.				A.) WORKMANSHIP SHALL BE OF THE BEST QUALITY AND NONE BUT COMPETENT MECHANICS SKILLED IN THEIR TRADES SHALL BE EMPLOYED. THE PLUMBING CONTRACTOR SHALL FURNISH THE SERVICES OF AN EXPERIENCED SUPERINTENDENT, WHO WILL BE CONSTANTLY IN CHARGE OF THE ERECTION OF THE WORK, UNTIL COMPLETED AND ACCEPTED.				P-12 <u>DUST PROTECTION</u>																																																										
			-	MANUAL AIR VENT	9.) STORM DRAINAGE PIPING AND SIZING SHALL BE IN ACCORDANCE WITH CHAPTER 11 OF THE 2014 NYC PLUMBING CODE.				B.) UNLESS OTHERWISE SPECIFIED, ALL MATERIALS AND EQUIPMENT UNDER THIS SECTION OF THE SPECIFICATIONS SHALL BE NEW, OF BEST GRADE, AND AS LISTED IN PRINTED CATALOGS OF THE MANUFACTURER. EACH ARTICLE OF ITS KIND SHALL BE THE STANDARD PRODUCT OF A SINGLE MANUFACTURER.				A.) IT IS IMPERATIVE THAT DURING DEMOLITION AND ALSO DURING NORMAL CONSTRUCTION WHERE THERE IS ANY POSSIBILITY OF DUST DUE TO CONSTRUCTION WORK CONTAMINATING THE OWNER'S EQUIPMENT OR CAUSING A NUISANCE TO PERSONNEL, THIS CONTRACTOR SHALL FURNISH AND INSTALL SUITABLE PROTECTION AS REQUIRED.																																																										
			-	PRESSURE REDUCING VALVE	10.) SPECIAL AND MISCELLANEOUS PIPING SHALL BE AS DIRECTED IN CHAPTER 12 OF THE 2014 NYC PLUMBING CODE.				C.) THE ENGINEER SHALL HAVE THE RIGHT TO ACCEPT OR REJECT MATERIAL, EQUIPMENT, AND/OR WORKMANSHIP AND DETERMINE WHEN THE PLUMBING CONTRACTOR HAS COMPLIED WITH THE REQUIREMENTS HEREIN SPECIFIED.				B.) PRIOR TO THE BEGINNING OF WORK THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF WORK TO THE OWNER BASED ON THE DATES GIVEN IN THE PRE-BID MEETING. ANY SHUTDOWNS OF EXISTING SYSTEMS MUST BE VERIFIED IN WRITING WITH THE OWNER'S REPRESENTATIVE.																																																										
L			-	TEE DOWN	11.) WATER SUPPLY SYSTEM OF THE SUBJECT BUILDING SHALL BE INSTALLED AND MAINTAINED AS DIRECTED IN PC 502 OF THE 2014 NYC PLUMBING CODE.				P-7 <u>EQUIPMENT SUBMITTALS</u>				C.) ANY SHUT-DOWN OF EXISTING SYSTEMS WHERE SUCH SHUT-DOWN IS REQUIRED FOR THE PERFORMANCE OF THE WORK UNDER THE CONTRACT SHALL BE AT SUCH TIMES AS DESIGNATED BY OWNER'S REPRESENTATIVE. RESTORE SYSTEMS TO ORIGINAL CONDITION AFTER PERFORMANCE WORK. THE INTENT IS TO INSURE MINIMUM INTERFERENCE WITH OPERATION OF EXISTING FACILITIES. REPAIR ANY DAMAGE DONE TO BUILDING RESULTING FROM INSTALLATION OF NEW WORK.																																																										
			-	ELBOW DOWN	12.) INDIRECT AND SPECIAL WASTE SHALL BE IN ACCORDANCE WITH CHAPTER 8 OF THE 2014 NYC PLUMBING CODE.				P-8 <u>INTERRUPTION OF SERVICES</u>				P-14 <u>PIPE</u>																																																										
			-	TEE UP					A.) THE PLUMBING CONTRACTOR SHALL PREPARE A COMPLETE SUBMITTAL OF PLUMBING FIXTURES, PIPING, AND EQUIPMENT INCLUDED UNDER THIS SECTION.				A.) REFER TO "PLUMBING PIPE MATERIAL SCHEDULE" ON DRAWING P-002.00.																																																										
K			-	ELBOW UP					B.) SHOP DRAWINGS: SHOP DRAWINGS SHALL INCLUDE DRAWINGS WITH DIMENSIONS OF ALL EQUIPMENT, SCHEDULES, PERFORMANCE CHARTS, INSTRUCTIONS, BROCHURES, DIAGRAMS, AND OTHER INFORMATION TO ILLUSTRATE THE REQUIREMENTS AND OPERATION OF THE SYSTEM.				P-15 <u>PIPING INSTALLATION - GENERAL REQUIREMENTS</u>																																																										
			-	PIPE CAP					P-9 <u>INFORMATION</u>				A.) REFER TO DRAWINGS FOR REQUIRED PIPING LAYOUTS. CONNECTION DETAILS INDICATE REQUIRED PIPING AT VARIOUS PIECES OF EQUIPMENT. FLOOR PLANS INDICATE GENERAL ROUTING OF PIPING. SPECIFICATIONS DEFINE MATERIALS, INSTALLATION REQUIREMENTS AND SUPPLEMENTARY REQUIREMENTS TO THOSE SHOWN ON DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING A COMPLETE SYSTEM BASED ON ALL DOCUMENTATION PROVIDED. TO EQUIPMENT SCHEDULES FOR NOMINAL FLOW RATES. FINAL SIZING SHALL BE BASED ON FLOW RATE OF CONTRACTOR PURCHASED EQUIPMENT.																																																										
			CODP	CLEAN OUT DECK PLATE					A.) WHILE WORK IS IN PROGRESS, EXCEPT FOR DESIGNATED SHORT INTERVALS DURING WHICH CONNECTIONS ARE TO BE MADE, CONTINUITY OF SERVICE SHALL BE MAINTAINED TO ALL EXISTING SYSTEMS. INTERRUPTIONS SHALL BE COORDINATED WITH THE OWNERS AS TO TIME AND DURATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY INTERRUPTIONS TO SERVICE AND SHALL REPAIR ANY DAMAGES TO EXISTING SYSTEMS CAUSED BY HIS OPERATIONS. ANY SHUT DOWNS MUST BE APPROVED IN WRITING BY THE BUILDING MANAGEMENT PRIOR TO SHUTDOWN.				B.) PROPER PROVISION SHALL BE MADE FOR EXPANSION AND CONTRACTION IN ALL PORTIONS OF PIPE-WORK, TO PREVENT UNDUE STRAINS ON PIPING OR EQUIPMENT. ALL PIPE SHALL BE SUITABLY REINFORCED AT ALL ANCHOR POINTS.																																																										
J			WCO	WALL CLEAN OUT					P-9 <u>INFORMATION</u>				C.) RUN-OUTS, AND CONNECTIONS TO EQUIPMENT, SHALL BE PROVIDED WITH A FLEXIBLE CONNECTION TO WITHSTAND EXPANSION AND CONTRACTION.																																																										
			FCO	FLOOR CLEAN OUT					A.) THE PLUMBING CONTRACTOR SHALL KEEP HIMSELF FULLY INFORMED AS TO THE SHAPE, SIZE, AND POSITION OF ALL OPENINGS AND FOUNDATIONS REQUIRED FOR HIS APPARATUS AND SHALL GIVE FULL INFORMATION TO THE GENERAL CONTRACTOR SUFFICIENTLY IN ADVANCE OF THE WORK, SO THAT ALL SUCH OPENINGS AND FOUNDATION MAY BE BUILT IN ADVANCE. HE SHALL ALSO FURNISH ALL SLEEVES AND SUPPORTS HEREIN SPECIFIED OR REQUIRED, SO THE GENERAL CONTRACTOR MAY BUILD SAME IN PLACE.				D.) ALL CHANGES IN SIZE AND DIRECTION OF PIPING SHALL BE MADE WITH FITTINGS. DO NOT USE MITER FITTINGS, CLOSE NIPPLES OR STREET ELBOWS.																																																										
			-	CONCENTRIC REDUCER					B.) SHOP DRAWINGS: SHOP DRAWINGS SHALL INCLUDE DRAWINGS WITH DIMENSIONS OF ALL EQUIPMENT, SCHEDULES, PERFORMANCE CHARTS, INSTRUCTIONS, BROCHURES, DIAGRAMS, AND OTHER INFORMATION TO ILLUSTRATE THE REQUIREMENTS AND OPERATION OF THE SYSTEM.				E.) ALL BRANCH CONNECTIONS SHALL BE MADE WITH TEES, EXCEPT THAT ON STEEL PIPING FORGED STEEL "WELDOLETS" AND "LATROLETS" AS MANUFACTURED BY BONNEY FORGE MAY BE USED WHERE THE BRANCH PIPE IS AT LEAST TWO NOMINAL PIPE SIZES LESS THAN THE MAIN PIPE.																																																										
H			-	ECCENTRIC REDUCER					P-9 <u>INFORMATION</u>				F.) ECCENTRIC REDUCING FITTINGS OR ECCENTRIC REDUCING COUPLINGS SHALL BE USED WHERE REQUIRED BY THE CONTRACT DOCUMENTS OR WHERE REQUIRED TO PREVENT POCKETING OF LIQUID OR NON-CONDENSIBLES.																																																										
			-	STRAINER					A.) THE PLUMBING CONTRACTOR SHALL KEEP HIMSELF FULLY INFORMED AS TO THE SHAPE, SIZE, AND POSITION OF ALL OPENINGS AND FOUNDATIONS REQUIRED FOR HIS APPARATUS AND SHALL GIVE FULL INFORMATION TO THE GENERAL CONTRACTOR SUFFICIENTLY IN ADVANCE OF THE WORK, SO THAT ALL SUCH OPENINGS AND FOUNDATION MAY BE BUILT IN ADVANCE. HE SHALL ALSO FURNISH ALL SLEEVES AND SUPPORTS HEREIN SPECIFIED OR REQUIRED, SO THE GENERAL CONTRACTOR MAY BUILD SAME IN PLACE.																																																														
			-	FLEXIBLE CONNECTION					B.) SHOP DRAWINGS: SHOP DRAWINGS SHALL INCLUDE DRAWINGS WITH DIMENSIONS OF ALL EQUIPMENT, SCHEDULES, PERFORMANCE CHARTS, INSTRUCTIONS, BROCHURES, DIAGRAMS, AND OTHER INFORMATION TO ILLUSTRATE THE REQUIREMENTS AND OPERATION OF THE SYSTEM.																																																														
I			-	FLOW ARROW					P-9 <u>INFORMATION</u>																																																														
			-	UNION					A.) THE PLUMBING CONTRACTOR SHALL KEEP HIMSELF FULLY INFORMED AS TO THE SHAPE, SIZE, AND POSITION OF ALL OPENINGS AND FOUNDATIONS REQUIRED FOR HIS APPARATUS AND SHALL GIVE FULL INFORMATION TO THE GENERAL CONTRACTOR SUFFICIENTLY IN ADVANCE OF THE WORK, SO THAT ALL SUCH OPENINGS AND FOUNDATION MAY BE BUILT IN ADVANCE. HE SHALL ALSO FURNISH ALL SLEEVES AND SUPPORTS HEREIN SPECIFIED OR REQUIRED, SO THE GENERAL CONTRACTOR MAY BUILD SAME IN PLACE.																																																														
			AFF	ABOVE FINISHED FLOOR					B.) SHOP DRAWINGS: SHOP DRAWINGS SHALL INCLUDE DRAWINGS WITH DIMENSIONS OF ALL EQUIPMENT, SCHEDULES, PERFORMANCE CHARTS, INSTRUCTIONS, BROCHURES, DIAGRAMS, AND OTHER INFORMATION TO ILLUSTRATE THE REQUIREMENTS AND OPERATION OF THE SYSTEM.																																																														
G			AHC	ABOVE HUNG CEILING					P-9 <u>INFORMATION</u>																																																														
			BFP	BACKFLOW PREVENTER					A.) THE PLUMBING CONTRACTOR SHALL KEEP HIMSELF FULLY INFORMED AS TO THE SHAPE, SIZE, AND POSITION OF ALL OPENINGS AND FOUNDATIONS REQUIRED FOR HIS APPARATUS AND SHALL GIVE FULL INFORMATION TO THE GENERAL CONTRACTOR SUFFICIENTLY IN ADVANCE OF THE WORK, SO THAT ALL SUCH OPENINGS AND FOUNDATION MAY BE BUILT IN ADVANCE. HE SHALL ALSO FURNISH ALL SLEEVES AND SUPPORTS HEREIN SPECIFIED OR REQUIRED, SO THE GENERAL CONTRACTOR MAY BUILD SAME IN PLACE.																																																														
			TYP	TYPICAL					B.) SHOP DRAWINGS: SHOP DRAWINGS SHALL INCLUDE DRAWINGS WITH DIMENSIONS OF ALL EQUIPMENT, SCHEDULES, PERFORMANCE CHARTS, INSTRUCTIONS, BROCHURES, DIAGRAMS, AND OTHER INFORMATION TO ILLUSTRATE THE REQUIREMENTS AND OPERATION OF THE SYSTEM.																																																														
GENERAL NOTES																																																																							
F	1.) PRIOR TO FABRICATION THIS CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AND CONDITIONS ON JOB SITE AND COORDINATE THIS WORK WITH THE WORK OF ALL OTHER TRADES.				2.) THE CONTRACTOR SHALL OBTAIN AND FAMILIARIZE HIMSELF WITH THE BUILDING DESIGN CRITERIA AND CONSTRUCTION REQUIREMENTS. THE PLUMBING WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL LOCAL PLUMBING AND BUILDING CODES, AS WELL AS THOSE OF THE STATE OF NEW YORK. IN CASE OF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND A GOVERNING CODE OR ORDINANCE THE MORE STRINGENT STANDARD SHALL APPLY.				3.) THIS CONTRACTOR IS RESPONSIBLE FOR ALL PLUMBING FIXTURE AND DISTRIBUTION SYSTEMS INCLUDING ALL ROUGH-INS AND FINAL CONNECTIONS FOR SAME; INSULATED HOT AND COLD WATER LINES, DRAINS AND VENTS, AND COMPLETE INSTALLATION OF AND FINAL CONNECTIONS TO OWNERS SPECIALTY EQUIPMENT.				4.) FIXTURE (GENERAL):																																																										
	A) FIXTURE SHALL BE COMPLETE WITH REQUIRED TRIM, INCLUDING BUT NOT LIMITED TO: SUPPORTS, FAUCETS, SUPPLIES, STOP VALVES, 1/2" GAUGE WASTE TAILPIECES, TRAPS, SEATS, FLUSHOMETER, VACUUM BREAKER, BOLTS, GASKETS CHROME PLATED ESCUTCHEON, CAST BRASS FLOOR FLANGE AND BOLT CAPS.				B) EXPOSED METAL TRIM AND ROUGHING SHALL BE CHROME PLATED NICKEL BRASS. CHROME PLATED CAST BRASS "P" TRAPS WITH SCREW PLUG CLEANOUT, SLIP-JOINT INLET AND FEMALE CAST SWIVEL THREADED ELBOW OUTLET. CHROME PLATED BRASS NIPPLE AT WALL WITH CHROME PLATED ESCUTCHEON. SWING SPOUTS SHALL HAVE 140° SWING LIMIT STOPS.				C) SUPPORT WALL FIXTURES SECURELY ON APPROVED COMMERCIAL GRADE CARRIERS AS MANUFACTURED BY JAY R. SMITH, JOSAM, OR ZURN.																																																														
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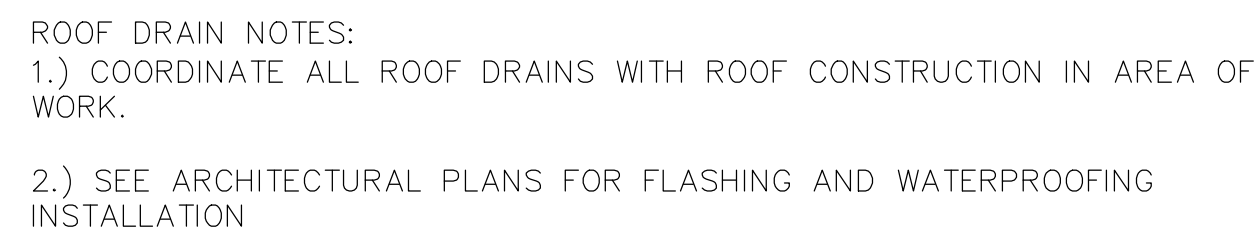






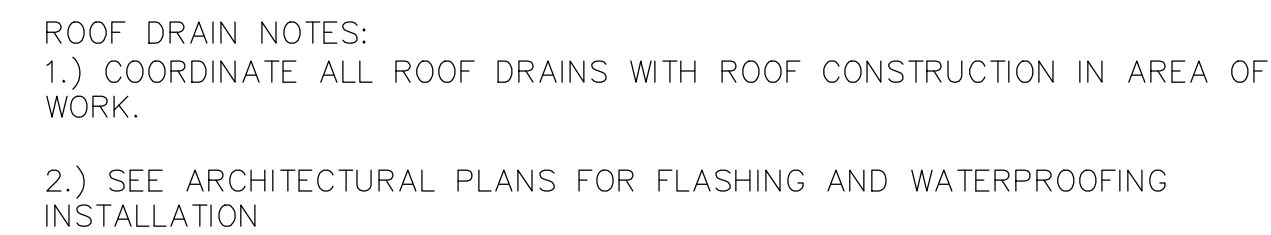




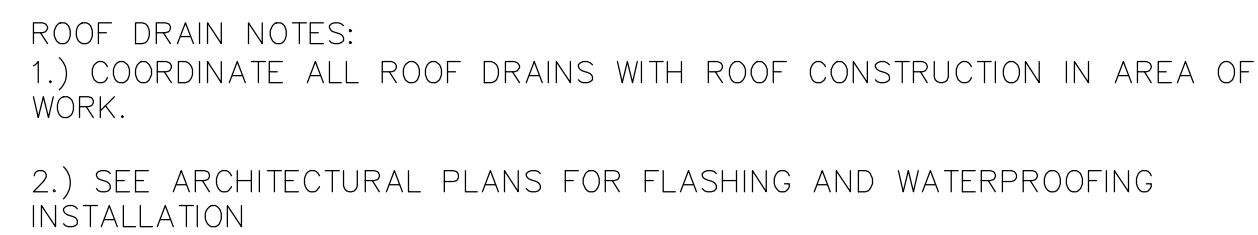


### 3 PLAZA DRAIN DETAIL

SCALE: NONE

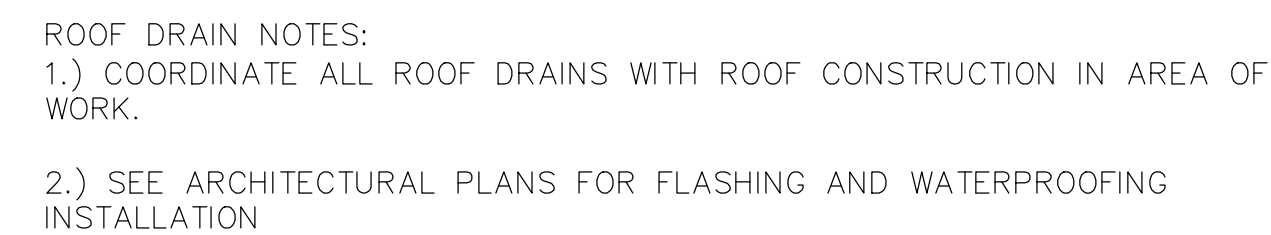


1 SCUPPER DRAIN DETAIL  
SCALE: NONE



### 3 PLAZA DRAIN DETAIL

SCALE: NONE



1 SCUPPER DRAIN DETAIL  
SCALE: NONE

# **PROJECT MANUAL** **LEAK REMEDIATION DESIGN**

## **PROJECT LOCATION:**

BATTERY PARK CITY AUTHORITY  
200-300 NORTH END AVENUE  
NEW YORK, NY 10280

## **OWNER:**

BATTERY PARK CITY AUTHORITY  
200-300 NORTH END AVENUE  
NEW YORK, NY 10280

## **ISSUED:**

MAY 16, 2018  
APS PROJECT # P15-036

## **ARCHITECT:**



ARCHITECTURAL PRESERVATION STUDIO, DPC  
594 BROADWAY, SUITE 919  
NEW YORK, NY 10012  
212.477.7976

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## **SECTION 00 01 10 - TABLE OF CONTENTS**

### **TECHNICAL SPECIFICATIONS**

#### **DIVISION 01, GENERAL REQUIREMENTS**

SECTION 01 01 00	SUMMARY OF WORK
SECTION 01 21 00	ALLOWANCES
SECTION 01 29 73	SCHEDULE OF VALUES
SECTION 01 31 13	PROJECT COORDINATION
SECTION 01 32 13	SCHEDULING OF WORK
SECTION 01 29 73	SUBMITTALS
SECTION 01 41 00	REGULATORY REQUIREMENTS
SECTION 01 42 16	REFERENCE
SECTION 01 43 00	QUALITY ASSURANCE
SECTION 01 51 00	TEMPORARY UTILITIES
SECTION 01 52 00	CONSTRUCTION FACILITIES
SECTION 01 74 19	CONSTRUCTION-WASTE MANAGEMENT

#### **DIVISION 02, EXISTING CONDITIONS**

SECTION 02 17 30	WATERPROOFING REMOVAL
SECTION 02 41 19	SELECTIVE REMOVAL

#### **DIVISION 03, CONCRETE**

SECTION 03 01 00	CONCRETE REPAIR
SECTION 03 13 00	PERVIOUS CONCRETE
SECTION 03 30 53	CAST-IN-PLACE CONCRETE

#### **DIVISION 04, MASONRY**

SECTION 04 43 00	STONE MASONRY
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#### **DIVISION 05, METALS**

SECTION 05 12 00	STRUCTURAL STEEL
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#### **DIVISION 06, WOOD, PLASTIC & COMPOSITES**

SECTION 06 10 00	ROUGH CARPENTRY
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#### **DIVISION 07, THERMAL AND MOISTURE PROTECTION**

SECTION 07 14 70	CRYSTALLINE WATERPROOFING
SECTION 07 15 00	CHEMICAL RESIN INJECTION GROUTING
SECTION 07 51 13	BUILT UP ROOFING
SECTION 07 62 00	FLASHING AND SHEET METAL
SECTION 07 92 00	JOINT SEALERS

**DIVISION 09, FINISHES**

SECTION 09 29 00 GYPSUM WALL BOARD  
SECTION 09 30 00 TILES  
SECTION 09 90 00 PAINTING AND COATINGS

**DIVISION 22, PLUMBING**

SECTION 22 14 26.16 FACILITY AREA DRAINS

**DIVISION 32, EXTERIOR IMPROVEMENTS**

SECTION 32 12 00 ASPHALT UNIT PAVING

**END OF SECTION 00 10 10 - TABLE OF CONTENTS**



## **SECTION 01 01 00 - SUMMARY OF WORK**

### **PART 1 - GENERAL**

#### **1.01 GENERAL PROVISIONS**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

#### **1.02 SUMMARY**

- A. Project consists of leak remediation including complete re-waterproofing and repaving of the plaza at 200-300 North End Avenue, New York, NY 10282, as shown on Contract Documents prepared by Architectural Preservation Studio dated May 16, 2018.
- B. Summary by Reference: Work of the Contract can be summarized by reference to the Contract, Specification Sections as listed in the "Index", and Drawings as listed in the "Schedule of Drawings" bound herewith, Addenda and modifications to the Contract Documents issued subsequent to the initial printing of this project manual, and including but not necessarily limited to printed matter referenced by any of these.

#### **1.03 WORK SUMMARY**

- A. The following, in conjunction with the Drawings and Technical Specification Sections, shall identify the items of work for this project. Contract Prices provided by the Contractor shall include all labor, materials, permits, insurances, taxes, overhead and profit necessary to perform the full extent of the work as described herein and in the Drawings:
  - 1. The Contractor shall secure and maintain all required permits to undertake the work. If any equipment/assembly that is required to accomplishing the work interfaces with existing street trees, the Contractor will need to secure all required permits from the NYC Department of Parks and Recreation.
  - 2. The Contractor shall coordinate all required inspections with the Owner-retained special inspection agency.
  - 3. Provide all required ladders, hoists, sidewalk sheds, fixed pipe scaffolding, and other support devices to undertake the work of this project. All installations shall be code compliant. The Contractor shall retain their own licensed structural engineer to design hoists, sheds, fixed and suspended scaffolding.
  - 4. The Contractor shall provide all required temporary utilities including power, water, heat, and bathrooms. If the Owner allows the Contractor to use existing utilities, the Contractor shall make all required connections and undertake removals at the end of the project.
  - 5. The selected Contractor may choose to store construction materials and construction debris (dumpsters) on the street. If so, a street-closure permit shall be secured by the Contractor from the NYC Department of Transportation. Temporary fencing/barricades will be required to secure this area in the street. The Contractor shall verify if the streets around the site are considered a restricted access road by the Department of Transportation between the hours of 4:00 PM and 7:00 PM.
  - 6. Provide all required mock-ups, test panels, etc. required by the Technical Specifications and the proper execution of the work. All shall be approved by the Architect and Owner prior to executing that section of work. If rejected, provide new mock-ups, test panels, etc until approved.

## 1.04 CONTRACT PRICE

1. Mobilization and general administrative requirements.
2. Reinstall existing railings handrails, trellises, etc: Remove site fixtures as required to accomplish the work, including but not limited to railings/handrails, trellises, benches and their components, etc., protect, and store for reinstallation.
3. Railing Posts and Anchor Bolt Penetrations: Post penetrations and anchor bolt penetrations to match existing locations. Prepare concrete and embed post and/or anchors in epoxy as indicated on drawings. At locations, to be determined, weld base plates to existing railings.
4. Upper Plaza – Waterproofing and Assembly: Carefully remove and salvage existing pavers, granite panels and metal panels along buildings' perimeter for reinstallation. Remove all substrate materials down to structural deck. Repair deck with modified repair mortar (assume 15%). Prepare and prime concrete deck as required to receive 3-ply torch down bituminous waterproofing membrane, reinforced liquid flashing along entire perimeter of horizontal to vertical backup surfaces, terminate 8" min. above deck (typ.). Install drainage mat, insulation, filter fabric, gravel and pervious concrete (sloped to drains), and asphalt setting bed. Reinstall existing pavers in running bond pattern. Install 1" min. closed cell compressible backer rod and sealant at perimeter between planter/parapet granite and pavers. Assume 20% of pavers require replacement.
5. Parapet/Lintel and Window/Wall Waterproofing: Remove and dispose granite bricks. Rebuild with new granite bricks to match existing. Remove and salvage granite and coping stones for re-installation, as noted on drawings, typical. Install vapor barrier up back up wall, turned in at sill and jambs, extend beyond the lintel (form end dams) and terminate membrane by overlapping the liquid base flashing, as per details. Provide stainless steel brick ties every 2 sq. ft., weeps every 16" o.c., insulation and mortar net. Remove existing window frames as required to accomplish work.
6. Planter #1 – Reinstall Granite Panels: Reinstall granite stone panels at planter #1 and waterproof at inboard (soil/fill side of planter).
7. Planter #2: Permanently remove planter #2.
8. Planter Waterproofing: At planters #1, #3, #4, #5, #6, and #7, remove and dispose granite bricks. Remove and salvage granite coping stones for reinstallation, as noted on drawings (typ). Remove existing waterproofing and substrate materials to structural deck. Repair deck with modified repair mortar (assume 15%). Prepare and prime deck to receive 3-ply torch down bituminous waterproofing membrane. Install reinforced liquid flashing up inboard planter wall to terminate top of planter curb, typical. Install peel and stick waterproofing membrane to overlap liquid membrane 4" min. at top of curb and base flashing. Prepare liquid flashing at are overlap as per the requirements the manufacturer. Rebuild brickwork to match existing.
9. Planter Fill and Plantings: Remove and discard soil and small plantings; salvage and relocate trees and larger plantings to be replanted in wood containers. Provide plywood covers to temporarily seal and protect planter openings. Coordinate w/ BPCA landscape team for removal; including furnishing temporary wood planters & reinstallation.

10. Plaza Drain Replacement/Removal/Installation: Remove existing concrete catch basins and plaza drains. Install plaza drain and body as specified. Provide new piped connections to existing plumbing lines. See plumbing drawings. Grates to be slip resistant and ADA complaint. Re-install existing frame and grates.
11. Planter Drain Replacement: Remove existing catch basins and planter drains. Install planter drain and body as specified. Provide new piped connections to existing plumbing lines. See plumbing drawings.
12. Scupper Drain Replacement: Remove existing scuppers and concrete catch basins at sidewall. Install new sidewall scupper drains and body as specified. Provide new piped connections to existing plumbing lines. Waterproofing below drain body. See plumbing drawings.
13. Replace trench drain: Replace existing trench drain and grating as specified. Waterproof concrete trough with cold liquid applied waterproofing. Grating to be slip resistant and ADA complaint.
14. Expansion joint (Type 1): Install expansion joint at lot line, as specified.
15. Expansion Joint (Type2): Install 1 1/4" minimum pre-compressed expansion joint system, as specified, at horizontal joints between metal skirt and plaza pavers (upper plaza).
16. Expansion Joint (Type 3): Install 1/2" minimum compressible expansion joint system, as specified and shown on drawings to create soft-control joints (upper plaza). Sealant to match color of pavers.
17. Masonry expansion Joint (Type 4): Saw cut existing crack, replace broken granite bricks as needed. Install joint stabilizers every six courses. Install backer rod and sealant.
18. Backer-rod and sealant: Install backer rod and sealant at window and door frame perimeters at storefront (east central stair courtyard), transverse coping joints, and as noted on drawings.
19. Granite Steps and Ramps at North End Ave., Warren and Murray Street: Carefully remove and salvage granite step stones for re-setting. Secure stones as per drawings. Carefully remove and salvage existing pavers, associated railings etc. for reinstallation; remove existing substrate materials and waterproofing down to concrete for repair, waterproofing and flashing, typical. Prepare and prime deck to receive new waterproofing system. Terminate membrane at planter/parapet/building walls and sidewalk interface.
20. Partial Lower Plaza Waterproofing/Assembly: Remove 3'-0" of existing pavers and substrate materials to structural deck. Maintain existing waterproofing on structural deck where soundly adhered. Prepare horizontal and vertical surfaces as required for installation of reinforced liquid flashing. Liquid flashing to overlap existing sound waterproofing system and extend up foundation wall and turn in at sill and jambs. Remove and reinstall metal wall panels. Replace dirt and pour new concrete slab on grade. Install hexagonal pavers. Replace drains as noted on drawings.
21. Grout Injection and Crack Repair at Interior Stair and Foundation Wall: Injection grouting at interior sill stair landing and foundation wall. Area to be treated with crystalline waterproofing.

22. Sidewalk replacement: Replace concrete sidewalk flags on Warren and Murry St, as indicated on drawings and reset blue stone sidewalk at North End Ave.
23. Tiled pier and finishes: Remove existing tile panels. Patch and waterproofing and rebuild. Repair finishes damaged by water. Repair, prime and paint interior plaster. Replace removed interior finishes to match existing.
24. Install steel plate and galvanized steel angles per drawings at metal stair landing.

## **1.05 UNIT PRICES**

- A. If approved in writing by the Owner and Architect, additional items of work shall be performed on a Unit Price basis. No Unit Price work shall be performed before Contractor is in possession of an approved Change Order, which specifically requests the performance of that work. Unit Prices shall include all labor, materials, insurances, taxes, overhead and profit. The Owner reserves the right to increase or reduce the Scope of Work using the Unit Prices provided by the Contractor in the Bid Form.

## **1.06 TIME AND MATERIALS**

- A. The Contractor agrees to perform additional work, not described in the Contract Prices or Unit Prices, on a Time and Materials basis, at the hourly rates for workers provided by the Contractor in the Bid Form. No Time and Materials work shall be performed before Contractor is in possession of an approved Change Order which specifically requests the performance of that work. Contractor shall include original itemized receipts for materials used in work with invoices for Time and Materials work. Contractor will not be reimbursed by Owner for materials if the purchase of the materials is not documented by receipts. Additional work may also be performed on a Lump Sum basis when requested by Owner.

## **1.07 SEQUENCING**

- A. Contractor to propose phasing plan to be reviewed by CM and Architect, and to be coordinated and approved by Owner, according to the Owner's scheduling requirements.

## **1.08 WORK SUMMARY**

### **PRE-CONSTRUCTION CONDITION SURVEY**

- A. The Contractor, at his option, shall document the pre-construction condition of the interior of the exterior walls in each space in the building where contract work may impact the integrity of the interior, using photographs or video. Copies of all documentation shall be provided to the Owner before the exterior work begins. Access to all these spaces will be provided to the Contractor so that the interior of every exterior wall as well as the flooring and ceilings of adjacent spaces can be documented. The Contractor is also encouraged to document any exterior damage at the building, prior to construction, which shall not be repaired as part of the work. Interior and exterior damage observed during the work will be compared to the pre-construction documentation in order to determine if the damage was pre-existing or was caused by the work of the Contractor. If Contractor fails to record prior conditions, he shall be responsible to repair damage if so requested without requiring proof that same was caused as a consequence of this work.

## **1.09 PAYMENT APPLICATION**

- A. Applications for payment shall be submitted for approval by the Contractor to the Architect at the end of each month. Contractor shall include a set of blueprints graphically indicating the

location and extent of work performed that month. (Contractor shall be provided with sepias for reproduction purposes.

#### **1.10 INTERPRETATIONS**

- A. Site Visit: The Contractor shall visit the site during the bidding process to familiarize himself with all existing conditions. The Contractor shall be responsible for verifying the existing conditions and laying out the work as indicated on Drawings, and informing the Architect, in writing, of any discrepancies, and shall not proceed with any work affected until receiving written instructions from the Architect.
- B. Information: All information relating to this contract shall be obtained at the office of the Architect.
- C. Discrepancies: During the course of the work, should any ambiguities or discrepancies be found on the Drawings or in the Specifications, or should any discrepancies be found between the Drawings and the Specifications, the Contractor shall apply to the Architect, in writing, with a copy to the Owner, for an interpretation and determination of the intent of the Drawings and Specifications. No verbal statement regarding the Contract by any person shall be authoritative.
- D. Drawings: Figures and dimensions on all Drawings are approximate and shall be checked by the Contractor, who shall note any discrepancies and shall bring them to the attention of the Architect. The Contractor shall not alter the Specifications, Drawings or figures, nor make alterations or additions to the quantity, character or arrangement of materials or work, whether same shall involve additional work or not, unless same shall be agreed upon first in writing, as provided for by the Contract; this provision however, shall not abridge, in any way, the Architect's rights as to the interpretation of the Specifications, Drawings or figures thereon, as described in the General Conditions.

#### **1.11 CONTRACTOR USE OF PREMISES**

- A. Use of the Existing Building: Maintain the existing building in a weathertight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building and its occupants during the construction period.
- B. Full Owner Occupancy: The building will be occupied at the time of construction. All work must be phased so that access to building is unobstructed and all surfaces are constantly protected from the weather. Access to all spaces within the building shall be coordinated with the Owner. The Contractor shall provide safe, free and easy access at all times to all exits, walks and stairs in and around the building. Work hours shall be 8:00 AM. to 5:00 P.M., Monday through Friday.
- C. All demolition debris shall be removed using methods agreed upon with the Owner.

#### **1.12 GENERAL**

- A. Restoration Specialist: Work must be performed by a firm having not less than five (5) years successful experience in comparable masonry and waterproofing work and employing personnel skilled in the processes and operations indicated.
- B. Regulatory Requirements: Work shall be carried out in accordance with all applicable Federal, State and local codes and requirements of other agencies having jurisdiction. In all cases, the more restrictive limitation of any applicable requirements shall be followed.

- C. Materials and Methods: All materials and methods of construction shall comply with the requirements of the New York City Building Code (NYCBC) and the Uniform Construction Code.
- D. Workmanship: The work shall be conducted in accordance with pertinent trade-association standards and practices for materials and installation.
- E. Permits, Etc.: Permits, inspections and certificates required by work under this contract, shall be obtained and paid for by Contractor.
- F. Demolition: Demolition and removal shall proceed in an orderly manner minimizing noise or other disturbances to the operations of adjacent facilities. All debris and refuse shall be removed from building at end of each working day and properly disposed of off the Owner's property. All hazardous-containing materials shall be properly disposed of in accordance with the requirements of the regulatory agencies having jurisdiction.
- G. Condition of Structure: Owner assumes no responsibility for the actual condition of the building, and conditions existing at time of inspection for bidding purposes will be maintained by Owner in so far as practicable.
- H. Coordination: Work performed by others shall be properly coordinated.
- I. Fires: Fires for burning rubbish and debris or for any other purposes are forbidden.
- J. Protection:
  - 1. Protection of Existing Work: Protect streets, private roads, and sidewalks, including overhead protection where required, and make necessary repairs for damage thereto during course of the Work at no additional expense to Owner. Do not leave building, or portion thereof, open to weather, nor inadequately protected when work is not actually in progress. Place temporary roll plastic material or other membrane taped or otherwise completely sealed before any rain or snow begins. Any damage occurring due to lack of protection shall be repaired at the Contractor's expense to the satisfaction of the Owner and Architect. Take all measures necessary to protect all persons and property from damage and harm caused by the work of all sections.
  - 2. Protection of Adjacent Property: Provide necessary protection for adjacent properties and lateral support thereof. Any adjacent existing surfaces or material damaged in the sequence of work shall be repaired or replaced to match original condition at no cost to the Owner.
  - 3. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and reduce possibility that air, waterways, and subsoil might be contaminated or polluted, or that other undesirable effects might result. Avoid use of tools and equipment that produce harmful noise. Restrict use of noise making tools and equipment to hours that will minimize complaints from persons or firms near site.
  - 4. Provide protection against weather (rain, winds, storms, frost, or heat) to maintain all work, materials, apparatus, and fixtures free from injury or damage. At end of day's work, cover new work likely to be damaged from exposure.
- K. Clean-Up: Upon completion of the work, Contractor shall thoroughly clean up all dirt and waste resulting from his work as required to restore work areas to the state of cleanliness existing before work began. In general, cleaning requirements are limited to the removal of rubbish, spatters, stains, smears, foot tracks, dust, etc.

1. Contractor shall clean all affected adjacent areas to remain above or below, including of adjacent property roofs, as required to restore areas to the same cleanliness existing before work began.
- L. Foreman: The foreman for the work of all sections shall be on site daily during the course of construction, shall speak the English language fluently, and shall have had a minimum of five (5) years experience working on similar restoration projects.
- M. Workmen: In acceptance or rejection of work no allowance will be made for lack of skill or competence on the part of workmen.
- N. Access: Access shall be provided to all areas of the site, including scaffolding, when requested by Architect.
- O. Fire Extinguishers: Provide fire extinguishers as would be reasonably effective in extinguishing fires during scope of work.
- P. Temporary Power: Provide weatherproof, grounded, power distribution system sufficient to accommodate construction operations requiring power, use of power tools, etc. Provide overload protection. Locate multiple outlets (not less than 4-gang) at each level of construction, spaced so that entire area of construction can be reached by power tools on a single extension cord of 100' maximum length.
- Q. Temporary Covering: Cover stored material exposed to weather with tarpaulins with UL label and flame spread of 15 or less.
- R. Temporary Water: Water connection to the Owner's existing system at approved locations with equipment supplied by the Contractor will be permitted.
- S. Temporary Toilets: Coordinate with Owner's Representative as to use of existing toilet facilities.
- T. Job Conferences: Job conferences will be set up only by the Architect. These conferences will be on a regular schedule for the purpose of discussing work, procedures, coordination and other matters pertinent to this work. Attendance, when requested, will be mandatory for the Contractor and his primary Subcontractors.

### **1.13 CONSTRUCTION DOCUMENTS**

- A. The Contractor will be required to maintain within the field office a complete and current set of Contract Documents, including Addenda, Change Orders and Modifications thereto, approved shop drawings, samples, color schedules, and other data pertinent to the project.

### **1.14 SUBMITTALS**

- A. General: Should the Contractor propose any substitutions, a note shall be made on the submission notifying the Architect of a request for review of a proposed substitution.
- B. Products: Submit Product Data and samples of all specified products to Architect and CM.
- C. Samples: Submit cured samples of each type of mortar, caulking materials and sealants, expansion joint material, showing range of color and texture which can be expected in finished work. Submit samples of each type of masonry, including brick units and cast stone, which are intended for use. Submit samples of metal and membrane flashings.

- D. Shop Drawings: Submit shop drawings for all items where required in the individual Sections of the Specifications. Before proceeding with the fabrication of materials or equipment requiring shop drawings, prepare and submit complete assembly, setting and detail drawings giving all information necessary for installation of such equipment and materials, and for demonstrating that it complies with the Specifications.
- E. An electronic PDF of each shop drawing shall be submitted to the Architect for approval at the earliest possible date.
- F. Drawings shall be drawn to the following or a larger scale:
  - 1. Plans and Sections: 1/4-inch scale.
  - 2. Details: 3-inch scale.
- G. Check all shop drawings for conformance with contract requirements before submitting the drawings to the Architect for approval. A note shall be made on the drawings indicating that the Contractor has made this check.
- H. The Architect will, within ten (10) working days after his receipt of drawings, return to the Contractor the transparency with notations "Approved", "Approved with Corrections, as Noted", or "Returned for Correction".
- I. Make necessary corrections and revisions on transparencies marked "Approved with Corrections as Noted", or "Returned for Correction" and resubmit transparencies and prints for approval in the same routine as for the original approval. Time required for such revision and resubmitting will not entitle the Contractor to any extension of time, but the Architect will examine and return such transparencies as promptly as possible.
- J. The Architect will keep two (2) black and white print of drawings noted "Approved as Noted" or "Returned for Correction" for their records.
- K. Have prints made and distribute shop drawings to all concerned as required for proper coordination. One copy of all shop drawings marked "Approved" shall be forwarded to the Owner.
- L. Any work done, material ordered or delivered by the Contractor prior to the receipt of transparency marked "Approved with Corrections as Noted", or "Approved" by the Architect, shall be at the Contractor's risk. When the corrections have been made on transparencies marked "Approved with Corrections as Noted", prints of such transparencies may be used for fabrication unless specifically stated otherwise by the Architect.
- M. If, at any time before the completion of the work, changes are made necessitating the revision of approved drawings, make such revisions and proceed in the same routine as for the original approval.
- N. If additional copies of shop drawings are required by the Architect, they shall be furnished by the Contractor without additional cost.
- O. Sample requirements shall be as listed in individual Specification Sections.

#### **1.15 MATERIAL STORAGE, PLACEMENT AND REMOVALS, MOBILIZATION PLAN, PROGRESS SCHEDULE**



- A. Mobilization Plan: Contractor shall, within ten (10) days of award of Contract prepare for approval, in writing, a Mobilization Plan and Progress Schedule to include: (a) Distribution Plan for materials for installation describing method for transporting materials from ground level to appropriate locations for storage and installation. Include locations where materials will be temporarily stored; (b) Disposal Plan for debris, etc., describing method for transporting all debris (old materials, etc.) to ground level, proposed location of debris containers, cartage locations; (c) All other information as required for proper execution of project.
- B. Debris Removal and Material Placement: (Refer to article 1.10, C above.) No debris shall be removed through the building, unless otherwise agreed upon with Owner. Contractor is responsible to provide the means required for disposal of debris, unless a method of debris removal is provided/approved by the owner. Contractor is responsible for all hoists required for material transport. All debris shall be removed from the site each day. Rubbish shall not be allowed to accumulate. Containers shall be emptied at end of each day. Location shall be approved by Owner before placement. Any hazardous-containing materials shall be properly removed from the site and disposed of in conformance with the regulatory agencies having jurisdiction.

## **1.16 JOB CONDITIONS**

- A. Contractor must review installation procedures and coordinate with other work.
- B. Protect mortar materials and masonry accessories from weather, moisture and contamination by earth and other foreign materials.
- C. Prevent grout or mortar from staining adjacent masonry. Remove immediately grout or mortar in contact with masonry.
- D. Protect ground and projections from droppings of mortar. Clean up all mortar droppings the day they are dropped.
- E. Protect areas affected by the work of this project at all times, including adjacent property and areas accessible to pedestrian traffic. Contractor is responsible to keep plaza watertight during all phases of construction. Any water damage due to improper protection is the Contractor's responsibility. Any damage to areas, where work will not be performed, is the Contractor's responsibility.
- F. Contractor shall arrange with the appropriate representative of the building Owner for means of access to premises and necessary utilities, space for storage of materials and equipment, etc.
- G. Weather Protection: Ambient-weather conditions of moisture, temperature, humidity and wind can adversely affect the application, setting, curing, etc. of the specified products. The Contractor shall take positive actions to offset any unfavorable state of one or more of these conditions as specified or recommended by the product(s) manufacturers.
  - 1. Do not use frozen materials or materials mixed or coated with ice or frost. Do not use salt to thaw ice in anchor holes or slots or for any other purpose. Do not lower the freezing point of mortar or concrete by use of admixtures or anti-freeze agents, and do not use any chlorides in mortar, grout or concrete.
  - 2. Do not build on frozen work; remove and replace masonry work damaged by frost or freezing.
  - 3. Proceed with waterproofing work only when existing and forecasted weather conditions will permit work to be performed in accordance with manufacturers'

recommendations and warranty requirements. Do not apply membrane flashing and liquid membrane during adverse weather or below 30 degrees F without taking precautionary measures recommended by manufacturers.

4. Protect mortar from direct sunlight and wind using protection measures submitted and approved when ambient air temperature exceeds 75 degrees F. Do not use or prepare mortar when ambient air temperature is above 90 degrees F at the location of work.

H. Quality Assurance:

1. Pointing: Prepare two sample areas of approximately two (2) linear feet for repointing of each material required and for each type of masonry. One sample will be for quality of work in removal of mortar joints, and the other will be for quality of materials and workmanship in pointing mortar joints. The samples, upon Architect's approval, will be the standard for the entire job.
2. Sealant Installation: If sealant installation is called for, the Contractor shall prepare a sample area of approximately two (2) linear feet for each type of sealant installation required. The samples, upon the Architect's approval, will be the standard for the entire job.

### **1.17 CUTTING AND PATCHING**

- A. It shall be the responsibility of the Contractor to patch all openings created by either himself or his subcontractors. All patching work must be approved by Architect and Owner.
- B. The Contractor shall at his own expense do all cutting, fitting or patching of his work in a neat and competent manner, and to the satisfaction of the Architect.

### **1.18 GUARANTEES**

- A. Contractor's Guarantee: The Contractor shall extend the guarantee in writing to five (5) years for all work and materials. The Contractor guarantees to the Owner that said Contractor shall be responsible for any defective materials and workmanship incorporated for a period of five (5) years. The period of guarantee shall start from the date of the Owner's acceptance of the work. The Contractor further guarantees to make permanent repairs forthwith to restore the defective areas, and to make permanent repairs without reference to or consideration of the cause of any defects in the work.
- B. Manufacturer's Guarantee: Guarantees as provided by the manufacturers shall apply. Refer to Technical Specification Sections.

### **1.19 MISCELLANEOUS**

- A. Inspection: Contractor must examine supporting structure and conditions under which granite and stone is to be installed, and notify Owner and Architect in writing of any conditions detrimental to proper and timely completion of work. Do not proceed with repairs to masonry until conditions have been corrected in a manner acceptable to Owner and Architect.

## **END OF SECTION 01 01 00 - SUMMARY OF WORK**

## **SECTION 01 21 00 – ALLOWANCES**

### **PART 1 - GENERAL**

#### **1.01 RELATED DOCUMENTS**

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

#### **1.02 SUMMARY**

- A. This Section includes administrative and procedural requirements governing allowances.
  - 1. Selected materials and equipment are specified in the Contract Documents by allowances. In some cases, these allowances include installation. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation.
- B. Types of allowances include the following:
  - 1. Lump-sum allowances.

#### **1.03 SELECTION AND PURCHASE**

- A. Allowances are for use at the sole discretion of the Owner.
- B. At the earliest practical date after award of the Contract, advise the Architect of the date when the final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- C. At the Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- D. Purchase products and systems selected by the Architect from the designated supplier.
- E. Lump-Sum Allowances: The amounts herein specified are the amounts available for purchase of the materials specified, including taxes (if any), and each change order amount shall be based thereon. All other costs associated with the performance of the work under the allowance, including but not limited to installation, insurance, storage, handling, overhead, profit, etc., are a part of the allowance, and shall be included in the allowance amount.
  - 1. In the event the actual purchase amount of the actual work exceeds the specified allowance, the Owner will pay the excess; should the actual amount of the work, be

less than the specified allowance, the Contractor shall credit the Owner with the difference.

#### **1.04 SUBMITTALS**

- A. Submit invoices or delivery slips to show the actual quantities of materials delivered to the site for use in fulfillment of each allowance.

#### **1.05 UNUSED MATERIALS**

- A. Return unused materials to the manufacturer or supplier for credit to the Owner, after installation has been completed and accepted.
  - 1. When requested by the Architect, prepare unused material for storage by Owner where it is not economically practical to return the material for credit. When directed by the Architect, deliver unused material to the Owner's storage space. Otherwise, disposal of unused material is the Contractor's responsibility.

### **PART 2 - PRODUCTS**

(No materials are required by this Section.)

### **PART 3 - EXECUTION**

#### **3.01 EXAMINATION**

- A. Examine products covered by an allowance promptly upon delivery for damage or defects.

#### **3.02 PREPARATION**

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

#### **3.03 SCHEDULE OF ALLOWANCES**

### **END OF SECTION 01 21 00 - ALLOWANCES**

## **SECTION 01 29 73 - SCHEDULE OF VALUES**

### **PART 1 - GENERAL**

#### **1.01 RELATED DOCUMENTS**

- A. General Contract Provisions and the General Requirements of Division 01 apply to the work of this Section.

#### **1.02 DESCRIPTION**

- A. This section pertains to the Contractor's preparation and submission of a Schedule of Values including the format, details, and content and the preparation and submittal of his periodic applications for payment.

#### **1.03 SUBMISSION OF SCHEDULE OF VALUES**

- A. Schedule of Values for the total work is to be a summary of all amounts and the General Conditions.
- B. At least ten (10) days prior to submission by the Contractor of his first Application for and Certificate for Payment, he shall submit a Schedule of Values for his work, which shall be subject to review and approval of the Contractor and the Architect and acceptance of the Owner.
- C. The first Schedule of Values shall be submitted with the first Application and Certificate for Payment for any work.
- D. Such Schedule of Values shall be amended each month to add the amounts of subcontracts closed in the previous month and/or to show adjustment in subcontract amounts by Change Order and/or back charges.
- E. Upon request of the Owner, the Contractor shall support all values presented with substantiating data and shall submit quantities for designated materials. Payment for materials stored either on or off the job site will be limited to those materials scheduled.
- F. The Schedule of Values shall be used only as a basis for the Applications for Payment.
- G. The Schedule of Values and all subsequent submissions and Applications for Payment shall be typewritten in a format acceptable to the Owner and the Architect.

#### **1.04 REVIEW AND RESUBMITTAL**

- A. Any submission of the Schedule of Values or a portion thereof which is not acceptable to the Owner will be returned. The Contractor shall revise, substantiate, and resubmit within five (5) days.
- B. No Application for Payment from the Contractor will be considered until all requirements for their Schedules of Values have been met and are acceptable to the Owner.

#### **PART 2 - PRODUCTS**

(No materials are required by this Section.)

#### **PART 3 - EXECUTION**

(No execution is required by this Section.)

**END OF SECTION 01 29 73 - SCHEDULE OF VALUES**

## **SECTION 01 31 13 - PROJECT COORDINATION**

### **PART 1 - GENERAL**

#### **1.01 RELATED DOCUMENTS**

- A. General Contract Provisions and the General Requirements of Division 01 apply to the work of this Section.

#### **1.02 CONTRACT ADMINISTRATION**

- A. The Contractor shall refer all communications and documents specifically regarding the Architectural Drawings and Specifications, Change Orders, Submittals, or any other issue related to the product of the Work, to the Architect and CM. The Contractor shall also copy the Owner's designated project representative(s).
- B. The Contractor shall refer all communications and documents regarding all contractual or administrative issues not directly related to the product of the Work, to the Owner. The Contractor shall also copy the Architect and CM.
- C. The Contractor shall keep and provide a complete set of Construction Drawings and Construction Specifications on site at all times during construction until the Project is complete. Absolutely no Bid Documents are permitted on site once construction begins.
- D. The Contractor shall be responsible for ensuring that all sub-contractors are performing their respective trade work as drawn and specified in the Construction Documents.

#### **1.03 MATERIAL AND EQUIPMENT LEAD TIMES**

- A. The Contractor shall determine lead-times for all materials and equipment required for the Work, and shall arrange for purchase and delivery of said items through a Sub-Contractor or on his own, so as not to adversely affect the schedule or sequencing of the Work.

### **PART 2 - PRODUCTS**

(No materials are required by this Section.)

### **PART 3 - EXECUTION**

(No execution is required by this Section.)

## **END OF SECTION 01 31 13 - PROJECT COORDINATION**

## **SECTION 01 32 13 – SCHEDULING OF WORK**

### **PART 1 - GENERAL**

#### **1.01 RELATED DOCUMENTS**

- A. General Contract Provisions and the General Requirements of Division 01 apply to the work of this Section.

#### **1.02 WORK SUMMARY**

- A. This Section includes all labor, materials, equipment, and services necessary to complete progress schedule as specified herein, including but not limited to the following:
  - 1. Format
  - 2. Content
  - 3. Revisions to schedules
  - 4. Submittals

#### **1.03 WORK SPECIFIED ELSEWHERE**

- A. Division 01, General Requirements
- B. Section 01 33 00 – Submittals

#### **1.04 BASIC REQUIREMENTS**

- A. Time is of the essence in the performance of this Contract.
- B. Work shall commence as directed by the Owner.
- C. All work must be substantially complete as determined by the Owner and/or Owner's Designed Representative(s).

#### **1.05 FORMAT**

- A. Prepare Schedules as a horizontal bar chart with separate bar for each major portion of Work or operation, identify first workday of each week.
- B. Sequence of Listings: The chronological order of the start of each item of Work.
- C. Scale and Spacing: To provide space for notations and revisions.



## **1.06 CONTENT**

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- C. Identify work of separate stages and other logically grouped activities.
- D. Provide sub-schedules to define critical portions of the entire Schedule.
- E. Show accumulated percentage of completion of each item, and total percentages of Work completed, as of the first day of each month.
- F. Provide separate schedule of submittal dates for shop drawings, product data, and samples, including Owner furnished products, and dates reviewed submittals will be required from the Architect.
- G. Provide a separate schedule for when access to individual apartments is required.

## **1.07 REVISIONS TO SCHEDULES**

- A. Indicate progress of each activity to date of submittal, and projected completion date of each activity.
- B. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
- C. Provide narrative report to define problem areas, anticipated delays, and impact on the schedule. Report corrective action taken, or proposed, and its effect including the effect of changes on schedule of separate contractors.

## **1.08 SUBMITTALS**

- A. Submit initial schedules within ten (10) days after the date of an executed agreement between the Owner and Contractor. After review, resubmit required revised data within five (5) days.
- B. At a minimum, every two weeks after initial approval of the Construction Schedule, submit updated schedules as required, accurately depicting progress to first day of each month. Updated schedules shall be submitted with monthly requests for payment as required.
- C. Distribute copies of the approved schedules to the Owner, Architect, other Contractors and other concerned parties. Instruct each recipient to report any inability to comply and provide detailed explanation with suggested remedies.

## **1.09 DISTRIBUTION**

- A. Distribution: Following response to the initial submittal, correct, print, and distribute copies to the Architect, Owner, Sub-Contractors, and other parties required to comply with scheduled dates.
1. Revise and update the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each bi-monthly progress meeting.
  2. When the revisions and updates are made distribute to the same parties. The Contractor may delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.
  3. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in Schedules.

## **1.10 CONSTRUCTION SCHEDULE**

- A. It is the intent that all operating systems, such as heating, ventilating, air-conditioning, sprinkler systems, plumbing and drainage, electric power and lighting, shall be maintained in operating condition to serve the needs of the existing building during alterations and construction of the new work. Prior to the start of work on any of these systems, the Contractor shall consult with the Owner to establish a mutually satisfactory schedule for cut over, cutoff, or other changes in operation of the system. When established, such schedules shall be adhered to, except as mutually adjusted by the Contractor and the Owner.
- B. For any areas required to be vacated by Owner for the work to be performed under this Contract, Contractor shall submit a notification not less than twenty-one (21) days prior to the time such areas are required for construction operations. The notifications shall indicate the length of time the area will be unavailable for Owner's use, and the work shall not proceed until the Owner approves the proposed length of time the space will be out of service.

## **PART 2 - PRODUCTS**

(No materials are required by this Section.)

## **PART 3 - EXECUTION**

(No execution is required by this Section.)

## **END OF SECTION 01 32 13 - SCHEDULING OF WORK**

## **SECTION 01 33 00 - SUBMITTALS**

### **PART 1 - GENERAL**

#### **1.01 RELATED DOCUMENTS**

- A. General Contract Provisions and the General Requirements of Division 01 apply to the work of this Section.

#### **1.02 WORK SUMMARY**

- A. General: This Section includes procedural requirements for non-administrative submittals including Shop Drawings, Product Data, Samples, and other miscellaneous work related submittals.
  - 1. Work-related submittals are required to be submitted by the Contractor to amplify, expand, and coordinate the information contained in the Contract Documents. These include but are not limited to:
    - a. Condition of Site Report
    - b. Contractor's Construction Schedule
    - c. Contractor's Submittal Schedule
    - d. Product Data
    - e. Shop Drawings
    - f. Integrated Drawings
    - g. Samples and Option Selections
    - h. Field Reports
    - i. Certificates of Compliance
    - j. Project Photographs
    - k. "As built" drawings
  - 2. Refer to other sections of the Specifications, and other Contract Documents, for administrative, non-work-related submittals.

#### **1.03 SUBMITTAL PROCEDURES**

- A. Where two or more kinds, types, brands, manufacturers, or materials are named in these specifications, they are to be regarded as the required standard of quality and are presumed to be equal. The contractor may select one of these items or, if the contractor desires to use any kind, type, brand, manufacturer, or materials other than those named in the specifications, the contractor shall indicate in writing, when requested, and prior to the award of contract, what kind, type, brand, manufacturer or material is included in the base bid for the specified item."
- B. General: Except as otherwise specifically directed by the Architect, the basic procedures for submittal handling are as specified herein.

- C. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
  2. Coordinate transmittal of different units of submittals for related elements of the Work so processing will not be delayed by the need to review a related submittal.
  3. The Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- D. Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to properly process submittals; including sufficient time(s) for resubmittal(s) if necessary. Allow additional time if processing must be delayed to permit coordination with subsequent submittals.
1. Allow ten (10) working days for initial review.
  2. If intermediate submittals are necessary, process the same as the initial submittal.
  3. Contractor shall advise the Architect on each submittal transmittal, when processing time is critical to the progress of the work.
  4. The Architect will attempt to process submittals as expeditiously as is practicable. Considering that processing time, at any point, is directly dependent on the quality, quantity, and coordination of the Contractor's submission, it will be the responsibility of the Contractor to transmit submittals in advance of the Work to permit adequate processing.
  5. No extension of Contract time will be authorized because of the failure to transmit submittals to the Architect sufficiently in advance of the Work to permit adequate processing.
  6. Except for submittals for the record, information and similar purposes, where action and return on submittals is required or requested, the Architect will review each submittal; mark with a uniform, self-explanatory action stamp appropriately executed.
- E. Preparation: Place a permanent label or title block on each submittal for identification. Include the following spaces and information on the label for processing and recording action to be taken.
1. Name of the Entity that prepared the submittal.
  2. Project name.

3. Date.
4. Name and address of Architect.
5. Name and address of Contractor.
6. Name and address of Sub-Contractor.
7. Name and address of supplier.
8. Name of Manufacturer.
9. Number of the applicable Specification section.
10. Contractor's review and approval markings.
11. A 4X5" clear space, abutting the top of the title block, for the Architect's stamp, and Owner's stamp.

F. Submittal-Number Description

1. A three-part identification number shall be assigned by the Contractor to each individual Shop Drawing, sets of Product Data, or Samples required to be submitted by the Specifications. An example of a number is: 05 12 00-014B. The information relayed by the three parts is as follows:
  - a. 05 12 00-14B The first five digits identify the CSI Specification Section. This number refers to Specification Section 05 12 00 Structural Steel.
  - b. 05 12 00-14B The next three digits identify individual submittals within the same Specification Section. This number indicates that this is the 14<sup>th</sup> individual submittal related to the Structural Steel section.
  - c. 05 12 00-14B The last letter indicated the number of times an individual item has been submitted for review. "A" identifies the initial submittal, "B" indicates the first resubmittal, "C" indicates the second resubmittal and so on.
2. The submittal number should be noted or attached to all individual submittals and on the accompanying transmittal. In addition, the transmittal should also include the following information for each submittal number: drawing originator (sub-contractor, fabricator, or manufacturer), name or brief description of each submittal, and the originator's number. For example:

<u>Submittal No.</u>	<u>Originator</u>	<u>Description</u>	<u>Drawing No.</u>
05 12 00-14B	Titan Steel	Erection Dwgs: Upper Level	E-5

- G. Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to Architect using a transmittal form. Submittals received from sources other than the Contractor will not be recorded for processes.

1. On the transmittal form record relevant information and requests for date. On the form, or a separate sheet attached to the form, record deviations from Contract Document requirements, including minor deviations and limitations.
2. Provide on the transmittal form places for the following information:
  - a. Project Name:
  - b. Date:
  - c. To:
  - d. From:
  - e. Names of Sub-Contractors, Manufacturer, and Supplier.
  - f. References.
  - g. Category and Type of Submittal.
  - h. Submittal Purpose and Description.
  - i. Submittal and Transmittal Distribution Record.
  - j. Signature of Transmitter
  - k. Contractor certification stating that the information submitted complies with the requirements of the Contract Documents, with a place for the Contractor's signature.
3. Transmittals should be numbered numerically beginning with No. 001. Each transmittal should be limited to one Specification Section only; however, multiple submittals within one Specification Section are acceptable on a single transmittal.
4. Transmittals should describe each submittal by its unique submittal number and a brief description including name of the drawing originator (sub-contractor), name of drawing, and originator's drawing number.

#### **1.04 CONTRACTOR'S SUBMITTAL SCHEDULE**

- A. Concurrently with the Contractor's Construction Schedule, submit a complete Schedule of Submittals. Coordinate Submittal Schedule with the list of sub-contractors, as well as the Contractor's Construction Schedule.
- B. Prepare the schedule in chronological order. Provide the following information:
  1. Related Specification Section number.
  2. Related Drawings and Detail number.
  3. Name of Sub-Contractor, Manufacturer, or Supplier.
  4. Number of Drawings or Items in the Submittal.
  5. Submittal Category.
  6. Name and/or Description of the Item.
  7. Requested Turn Around Time for Critical Items.
  8. Scheduled Dates for First and Subsequent Submittals.
  9. Target Date for Release or Approval of Final Submission.

10. Manufacturing Lead Time.

- C. Distribution: Following response to initial submittal, correct, print, and distribute copies to the Architect, Owner, Sub-Contractors, and any other parties required to comply with submittal dates indicated.
1. Revise and update the schedule when required; where revisions have been recognized or made. Distribute the updated schedule.
  2. When revision and updates are made, distribute to the same parties. Contractor may delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

**1.05 PRODUCT DATA**

- A. General: Information required specifically as product Data includes manufacturer's standard printed recommendations for application and use, compliance with recognized trade associates and testing agency standards, application of testing agency labels and seals, special notation of dimensions verified by field measurements, notation of coordination requirements for interfacing the material, product, or system with other work; where applicable, input and performance data.
1. Submittal of Product Data is primarily to confirm the product purchased and related general information.
  2. Review is only for conformance with the design concept and information given in the Contract Documents; it is not intended to imply that Product Data submittals have been reviewed for technical details.
- B. Preparation: Collect required Product Data in a single submittal for each unit of Work or system.
1. Mark each copy to show which choices and options are applicable to the Project.
  2. Where Product Data has been printed to include information on several similar products, some of which are not required for use on the project or are not included in this submittal, mark the copies to show clearly that such information is not applicable.
  3. Where Product Data must be specifically prepared for required products, materials, equipment, or systems, because standard printed data is not suitable for use submit data as "Shop Drawings" and not as "product Data."
- C. Submittals

1. Do not submit Product Data until compliance with the requirements of the Contract Documents has been confirmed by the Contractor.
2. Unless otherwise instructed, all submittals shall be made electronically in PDF format to the Office of the Architect with copies to the Owner's designated representative(s).
3. Provide as many additional sets; of re-submittals as may be required.
4. When finalized, furnish copies of Product Data to Sub-Contractors, Suppliers, Fabricators, Manufacturers, Installers, Governing Authorities, and others as required for proper performance of the Work.
5. Do not proceed with installation of materials, products, equipment, and systems until a finalized copy of Product Data applicable to the installation is in the possession of the Installer. Do not permit the use of unmarked copies of Product Data in connection with the performance of the Work.

## **1.06 SHOP DRAWINGS**

- A. General: Information required specifically as Shop Drawings and Erection Drawings include newly prepared information, drawn to accurate scale with dimensions verified by field measurements, identification of products and materials included, compliance with specific standards, coordination requirements; including fabrication and installation, setting diagrams, schedules, patterns, templates, and similar drawings.
1. Erection drawings must be submitted showing details of layout/components of each element of the job.
  2. Highlight, encircle, or otherwise indicate deviations from the Contract Documents on Shop Drawings to bring them to the Architect's attention.
  3. Include detailed indication of adjacent materials and interfaces, and provide notation of coordination requirements for interfacing the materials, products, or systems with other Work.
  4. Review is only for conformance with the design concept and information given in the Contract Documents; it is not intended to imply that Shop Drawings submittals have been reviewed for technical details.
  5. The Architect reserves the right to reject, without action, any submission that appears to be sub-standard, incomplete, uncoordinated, or unchecked by the Contractor. The Contractor shall have no claims upon the Architect or Owner for any costs or delays resulting from such rejection.



B. Preparation: Shop Drawings shall be drawn to accurate scale; sufficiently large to show all the pertinent aspects of the item and its method of connection to the Work.

1. Drawings shall be on sheets not less than 8.5" x 11"; except for actual patterns or templates, the maximum size shall be a multiple of 8.5" x 11".
2. Indicate the name of the entity that prepared each Shop Drawing and provide appropriate project identification in the title block. Provide a space not less than 3" x 4" besides the title block for marking the record of the review process and the Architect's stamp and Owner's approval. Indicate applicable Specification Sections and numbers of applicable Drawings and Details.
3. Do not reproduce Contract Documents or reproduce standard printed information as the basis of Shop Drawings.
4. Prior to submittals the Contractor shall review Shop Drawings for completeness, accuracy, confirmation of field dimensions, and where applicable coordination of trades. Incomplete submissions and resubmissions resulting in numerous reviews (more than three) shall become the Contractor's responsibility. The Contractor will bear the cost of review by the Architect and the Architect's Consultants.

C. Submittals

1. Do not submit Shop Drawings until compliance with the requirements of the Contract Documents have been confirmed by the Contractor.
2. Unless otherwise instructed, all submittals shall be made electronically in PDF format to the Office of the Architect with copies to the Owner's designated representative(s).
3. Provide as many additional sets of re-submittals as may be required.
4. When finalized, furnish prints of the reproducible Shop Drawings to Sub-Contractors, Suppliers, Fabricators, Manufacturers, Installers, Governing Authorities, and others as required for proper performance of the Work.
5. Do not proceed with Work unless a finalized copy of Shop Drawings applicable to the Work is in possession of the Fabricators and Installers when they are working. Do not use Shop Drawings without an appropriate stamp indicating final action to be taken in connection with construction.

## **1.07 SAMPLES AND OPTION SELECTION SUBMITTALS**

- A. General: Samples and Option Selection Materials are submitted for the Architect's visual review of general generic kind, color, pattern, and texture, and for final check of the coordination of these characteristics with other related elements of the Work. Refer to individual Sections of these Specifications for additional Sample requirements, which may be intended for examination or testing of additional characteristics.
1. Documentation required for Samples includes a generic description of the Sample, the Sample source or the product name or Manufacturer; compliance with governing regulations and recognized standards.
  2. Samples for materials which are to be installed in Mock-Ups shall be submitted for processing sufficiently in advance of construction of Mock-Ups to allow review and approval of Sample prior to Construction of Mock-Ups.
  3. Indicate limitations in terms of availability, sizes, delivery time, and similar limiting characteristics, if any.
- B. Preparation: Prepare and submit full-scale, fully fabricated, units which have been cured and finished in the manner specified. Samples shall be physically identical with the proposed material or product to be incorporated in the Work.
1. Where variations in color, pattern, or texture are inherent in the material or product represented by the Sample, submit not less than two (2) units, which show the approximate limits of potential extremities of variations.
  2. Where Samples are for the Architect's selection of color, texture, or pattern, submit a full set of available choices for the material or product.
  3. Mount, display, or package Samples in the manner specified to facilitate the review of indicated qualities.
- C. Option Selection Submittals: Where Samples are for selection of color, pattern, texture or similar characteristics from a range of standard choices, submit three (3) full sets of choices for the material or product. Submittals will be reviewed and one (1) set returned with the Architect's stamp indicating selection or other action. When making submittals send Owner and User a copy of the transmittal (only).
- D. Sample Submittals: Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation and similar characteristics, submit three (3) sets; one will be returned marked with the action taken. When making submittal send Owner and User a copy of the transmittal (only).

- E. Re-Use of Samples: Unless otherwise specified in other Sections, the Architect's retained samples will not be available for use in the construction of the installed items. Where reuse is allowed by Specification, the Architect retained samples will only be available for use in construction when it is, in the opinion of the Architect, undamaged.

#### **1.08 MOCK-UPS**

- A. Mock-Ups: Prior to start of work, prepare samples/mock-ups where directed by Architect for each material, assembly, installation, etc., as specified in individual specification Sections. Obtain Architect's acceptance of visual qualities and label mock-ups before proceeding with the work. Retain approved panels during construction in undisturbed condition, suitably marked, as standard for judging completed work. For each submission, show range of possible color, texture and other qualities of appearance.
  - 1. Mock-ups shall be prepared by the Contractor using the same workers, methods and materials that will be employed for the remainder of the work.

#### **1.09 MISCELLANEOUS SUBMITTALS**

- A. Daily Construction Reports: Prepare a Daily Construction Report, recording the following information concerning events at the site; and submit duplicate copies to the Architect:
  - 1. List of Sub-Contractors at the Site.
  - 2. Approximate Count of Personnel at the Site.
  - 3. High and Low Temperatures; General Weather Conditions
  - 4. Summary of Work Done.
  - 5. Meetings and Significant Decisions.
  - 6. Stoppages, Delays, Shortages, and Losses.
  - 7. Meter Readings and Similar Recordings.
  - 8. Emergency Procedures.
  - 9. Orders and Request of Governing Authorities.
  - 10. Change Orders Received; Implemented.
  - 11. Services Connected; Disconnected.
  - 12. Equipment or Systems Tests and Start-Ups.
  - 13. Partial Completions Authorized.
  - 14. List of Accidents and Unusual Events.
  - 15. Substantial Completions Authorized.
- B. Certificates of Compliance: Certify that all materials used in the Work comply with all Specified provisions thereof. Certifications shall not be construed as relieving the Contractor from furnishing satisfactory materials if the material is later found to not meet Specified requirements.
  - 1. Show on each certification the name and location of the Work, name and address of Contractor, quantity and date or dates of shipment or delivery to which the certificate

applies, and the name of the manufacturing or fabricating company. Certification shall be in the form of a letter or company-standard forms containing all required data. Certificates shall be signed by a duly authorized officer of the manufacturing or fabricating company.

2. In addition to the above information, all laboratory test reports submitted with Certificates of Compliance shall show the date or dates of testing, the specified requirements for which testing was performed, and results of the test or tests.
  3. Furnish two (2) executed copies of such certificates, with back-up data. Provide two (2) additional copies where required for maintenance manuals.
- C. Reporting Accidents: The Contractor shall immediately advise the Owner and Architect in the event of an accident; then prepare and submit reports of significant accidents, at site and anywhere else work is in progress. Record and document data and actions. For this purpose, a significant accident is defined to include events where personal injury is sustained, or property loss of substance is sustained, or where the event posed a significant threat of loss or personal injury.

#### **1.10 CONSTRUCTION PHOTOGRAPHS**

- A. During the progress of the Work, have digital photographs taken twice a month, consisting of twelve (12) views, all taken at the direction of the Architect. At the completion of all Work, twelve (12) final photographs shall be taken at the direction of the Architect.
- B. At the completion of all Work, provide the Owner and Architect with a compact disk containing all digital photographs.

#### **1.11 PROJECT RECORD DOCUMENTS**

- A. As the work progresses, keep a complete and accurate record of changes or deviations from the Contract Documents and the Shop Drawings, indicating the Work as actually installed.
1. Changes shall be neatly and correctly shown on the respective portions of the affected documents, using reproducible Mylar's of the drawings affected, or the Specifications, with appropriate supplementary notes.
  2. The records above shall be arranged in order, in accordance with the various Sections of the Specifications, and properly indexed.
  3. This record set of Drawings, Shop Drawings, and Specifications shall be kept at the job site for inspection by the Architect and Owner.
- B. At the completion of the Work, certify by endorsement thereof that each of the revised Drawings and Specifications is complete and accurate.

- C. Prior to application of final payment, and as a condition to its approval by the Architect and Owner, deliver the record Drawings and Specifications, arranged in proper order, indexed, and endorsed as herein before specified. Provide suitable transfer causes and deliver the records therein, indexed and marked for each division of the Work.
- D. No review or receipt of such records by the Architect or Owner shall be a waiver of any deviation from the Contract Documents or the Shop Drawings, or in any way relieve the Contractor from its responsibility to perform the work in accordance with the Contract Documents and the Shop Drawings to the extent that they are in accordance with the Contract Documents.

## **PART 2 - PRODUCTS**

(No materials are required by this Section.)

## **PART 3 - EXECUTION**

(No execution is required by this Section.)

## **END OF SECTION 01 33 00 - SUBMITTALS**

## **SECTION 01 41 00 - REGULATORY REQUIREMENTS**

### **PART 1 - GENERAL**

#### **1.01 RELATED DOCUMENTS**

- A. General Contract Provisions and the General Requirements of Division 01 apply to the work of this Section.

#### **1.02 ORDINANCES, PERMITS, FEES, ETC.**

- A. All necessary permits from the municipal or other public authorities shall be secured by and at the cost and expense of the Contractor who shall give all notices required by law, municipal ordinances, or the rules and regulations of the various municipal bureaus or departments, and also as a part of the Contract, and without extra charge or compensation, shall comply with all Federal and State laws and all municipal ordinances or regulations that may be applicable to this work, together with all orders of the Department of Buildings, Department of Health, Department of Environmental Protection for water, Con Edison for Gas and Electricity, Fire Department, etc., which shall be issued (in compliance with ordinances or regulations existing at the time of Notice to Proceed) by any or all of said departments as applying to the work of the Contract.
- B. The Contractor shall secure, pay for and maintain during construction all of the insurance policies required by the Owner and by law. Insurance certificates shall name the Owner, with the Architect and CM listed as additionally insured, and shall include a right of notice no less than thirty (30) days prior to cancellation or any material change in coverage.
- C. Wherever in these specifications the name of a city official, bureau or department is mentioned, it is intended to mean the Official, Bureau or Department having jurisdiction.
- D. Attention is called to certain provisions of the Building Code regarding safety of public and property during construction operations, particularly obstruction of sidewalks and streets, support of walls adjoining excavations, sidewalk sheds, scaffolding, hoists and material handling equipment, protection of floor openings, overloading, demolition operations, structures to be carried up, which provisions shall be complied with.
- E. The Contractor shall deliver to the Owner all permits or Certificates of Approval and Controlled Inspections issued by the municipal agencies having jurisdiction in connection with this work, before the certificate for final payment is issued.

#### **1.03 COMPENSATION AND LABOR LAWS**

- A. The Contractor shall comply with all applicable Workmen's Compensation Laws.

## **PART 2 - PRODUCTS**

(No materials are required by this Section.)

## **PART 3 - EXECUTION**

(No execution is required by this Section.)

**END OF SECTION 01 41 00 - REGULATORY REQUIREMENTS**

## **SECTION 01 43 00 - QUALITY ASSURANCE**

### **PART 1 - GENERAL**

#### **1.01 RELATED DOCUMENTS**

- A. General Contract Provisions and the General Requirements of Division 01 apply to the work of this Section.

#### **1.02 MINIMUM STANDARDS**

- A. As a minimum, all work shall comply with all prevailing codes including, but not limited to, the latest editions of the local/state Building Code, the local/state Energy Conservation Code, the Uniform Building Code, the N.F.P.A. National Electrical Code, the N.F.P.A. Life Safety Code, and all related Standards referenced by these Codes.
- B. As a minimum, all work shall comply with all generally recognized means and methods of good building and construction practice.
- C. All work shall be performed as required whether or not indicated by the Contract Documents, so as to create a complete and fully functioning project.

#### **1.03 INSPECTIONS**

- A. The Contractor shall comply with the inspection requirements cited in each Section of this Specification.
- B. The Contractor shall notify the inspecting party a minimum of five working days prior to a proposed date of inspection.

#### **1.04 VERIFY IN FIELD**

- A. Contractor or Sub-Contractors shall verify all dimensions, existing conditions and all other conditions on site prior to commencement of their work and at the time of the uncovering of new conditions.
- B. The Contractor shall notify the Architect immediately of any discrepancies between field conditions and the Contract Documents or the execution of the intent of the Contract Documents.
- C. No work shall proceed until discrepancies between the field conditions and the Contract Documents have been resolved by the Owner and Architect by Change Order or other written method, as required by the General Conditions.



- D. Commencement of work, or continuation of work on newly uncovered conditions, shall imply acceptance of said conditions and their consequences by the Contractor.

#### **1.05 SOURCE OF MATERIALS**

- A. Manufacturers supplying specialty products shall have been regularly engaged and specialized for the preceding ten (10) years.

#### **1.06 PROJECT CONDITIONS**

- A. Cold-Weather Conditions:
  - 1. Do not use frozen materials or materials mixed or coated with ice or frost. Do not use salt to thaw ice in anchor holes or slots or for any other purpose. Do not build on frozen work; remove and replace masonry construction damaged by frost or freezing.
  - 2. Do not lower freezing point of mortar by use of anti-freeze, calcium chloride, or other additives.
- B. Hot-Weather Protection: The work shall be protected during hot weather from premature or rapid drying or curing by the use of dampened fabric coverings.
- C. Protect materials from weather, moisture and contamination by earth and other foreign materials.

### **PART 2 - PRODUCTS**

(No materials are required by this Section.)

### **PART 3 - EXECUTION**

(No execution is required in this Section.)

### **END OF SECTION 01 43 00 - QUALITY ASSURANCE**

## **SECTION 01 51 00 - TEMPORARY UTILITIES**

### **PART 1 - GENERAL**

#### **1.01 RELATED DOCUMENTS**

- A. General Contract Provisions and the General Requirements of Division 01 apply to the work of this Section.

#### **1.02 DESCRIPTION**

- A. This Section pertains to the provision, maintaining, and removal of all temporary utilities and services and related items required completing the work.

#### **1.03 TEMPORARY UTILITIES**

- A. Temporary-utility connections and distribution lines shall be installed and maintained by the Contractor in accordance with Municipal Codes and ordinances having jurisdiction of the trades involved; contractor shall pay all costs for fees and permits pertaining thereto. When the temporary-service lines are no longer required, they shall be removed prior to final inspection. Any part of the permanent service lines or grounds disturbed or damaged by the installation and use of the temporary-utility lines shall be restored to acceptable condition at no additional cost to the Owner.

#### **1.04 TEMPORARY LIGHTING AND POWER**

- A. Provide immediately upon the start of work, electric power for use by all trades engaged in the construction, and provide sufficient lighting for the proper execution of all work. In no case shall work be performed, when the light level on the work surface is less than 50-foot candles.
  - 1. Electric power from Owner's existing systems will be available for Contractor's use during construction.
  - 2. Should there be any wastage or misuse of this privilege, in the opinion of the Owner, which impairs the operation of the existing building, permission to use Owner's power supply will be withdrawn, and Contractor will be required to provide electric power from other sources at his own expense.
  - 3. The Contractor will be required to provide alternate power supplies if the existing building service is not adequate or if power is not available in all work areas at his own expense.

## **1.05 TEMPORARY WATER**

- A. Provide, immediately upon the start of work, adequate temporary water for construction use, fire protection, and adequate drinking water for site personnel. All temporary-water supply lines shall be properly valved, maintained, protected, and kept tight and free from leaks and freezing conditions.
1. Water from Owner's existing systems will be available for Contractor's use during construction.
  2. Consult Owner for location and method of connection to Owner's water supply. Maintain temporary-water service in operating condition until the new construction is completed and usable.
  3. Protect water service from damage or freezing and be responsible for repairs necessitated through negligence or carelessness in this respect.
  4. Should there be any wastage of water or misuse of this privilege, in the opinion of the Owner, which impairs the operation of the existing building, permission to use Owner's water supply will be withdrawn, and Contractor will be required to provide water from other sources at his own expense.

## **1.06 TEMPORARY HEAT**

- A. The Contractor shall provide all required temporary heating required to suit the project schedule. Temporary heat will be supplied by the Contractor. When the temporary-heating system is ready for operation, it may be used for temporary heating, but only with the permission of the Owner.
- B. Every precaution must be taken to maintain uniform temperature and prevent shrinkage, cracking or swelling of floors, trim and other work in building due to varying conditions.

## **PART 2 - PRODUCTS**

(No materials are required by this Section.)

## **PART 3 - EXECUTION**

(No execution is required by this Section.)

## **END OF SECTION 01 51 00 - TEMPORARY UTILITIES**

## **SECTION 01 52 00 - CONSTRUCTION FACILITIES**

### **PART 1 - GENERAL**

#### **1.01 RELATED DOCUMENTS**

- A. General Contract Provisions and the General Requirements of Division 01 apply to the work of this Section.

#### **1.02 DESCRIPTION**

- A. This Section pertains to the provisions, maintaining, and removal of all temporary construction and facilities and similar related work.

#### **1.03 TEMPORARY SHEDS**

- A. Provide and maintain a suitable temporary storage sheds and other temporary buildings as required at the job site.
- B. Materials stored in the open on the job site shall be stored on planks or other dunnage as necessary to keep materials from contact with ground and shall be covered with tarpaulins to protect them from the weather.

#### **1.04 TEMPORARY TOILETS**

- A. If the Owner agrees, the Contractor will have access to designated toilets; otherwise, the Contractor shall provide and maintain temporary toilets through the construction phase of the project

#### **1.05 TEMPORARY HOISTWAYS, LADDERS, BARRICADES AND PROTECTIONS**

- A. Any use of hoists, ladders, barricades and safety protection shall comply with all applicable local, state, and federal codes.
- B. Contractor shall provide adequate equipment for performance of all parts of his work. Equipment is to be located at sufficient distance (at least 3'-0") from the exterior walls and be so protected as to prevent damage, staining or marring any permanent work. Platforms and gangways shall not slope or drain toward the building.
- C. The Contractor shall provide all ladders required for his work. Ladders shall comply with all Labor Law requirements.

## **1.06 RESPONSIBILITY, SECURITY, ETC.**

- A. Hours of Responsibility: Contractor shall be responsible at all times for the loss, theft, or damage of all material, construction, or equipment stored at the Job Site or incorporated in the work until final acceptance by the Owner.
- B. The Contractor shall provide an outdoor security system for the bridge scaffolding that complies with the Owner's requirements for site security.

## **1.07 TEMPORARY ENCLOSURES**

- A. Contractor shall provide temporary enclosures for the protection of the interiors of the existing building during the work involved in demolition and removal within the existing building.
- B. Temporary enclosures shall be insulated and constructed of such materials and in such manner and extent that the interior of the existing premises shall be kept free of the elements and occupants of the building are protected. The enclosures shall consist of plywood on suitable frames covered with heavy-duty polyethylene-film barrier or tarpaulins, or other suitable protection of adequate size for the purpose intended. Insulation shall be minimum full thick foil-covered fiberglass-batt insulation with stapling flanges.

## **1.08 TEMPORARY PARTITIONS**

- A. Contractor shall provide temporary dust-tight partitions or barricades as required to seal off connections within existing buildings, as well as to isolate areas of work from occupied portions of the existing building. Enclosures shall be installed around all cutting operations such as floors, walls or ceilings to prevent dust from spreading. Where holes are cut in ceiling, or roof, the underside shall be dustproofed to catch any debris and dust which may result from these operations and to protect personnel from damage or injuries.
- B. Temporary dust-tight partitions shall be substantially constructed to Owner's satisfaction. Joints in the partitions, including joints at walls, floor and ceilings shall be sealed dustproof with 1-½-inch wide pressure-sensitive tape. Provide dust-tight doors of similar construction where necessary, including hinges and a first-quality padlock and hasp on each door.
- C. Temporary partitions shall be erected over a layer of 30-lb roofing felt for protection of existing floors.
- D. Temporary partitions shall be relocated as necessitated by the work and shall be removed only when directed by the Architect. Patch and repair any damage resulting from temporary work.
- E. Contractor shall verify that all occupied spaces adjacent to the areas of demolition are completely secured and rendered dustproof prior to the commencement of demolition.

## **1.09 POSTERS AND SIGNS ON SHEDS OR BUILDINGS**

- A. No posters, advertising billboard or signs of any nature shall be placed on any part of any post, fence, bridge, railing, shed, existing and new buildings or structures of any kind about the premises, except such as may be necessary in connection with the work under this Contract to identify the Contractor and his work.

## **1.10 "NO SMOKING" SIGNS**

- A. Signs with the words "NO SMOKING" painted or stenciled thereon, with letters 2-inches high shall be furnished by the Contractor and hung in conspicuous places as directed, and kept in position until the completion of all work.

## **1.11 PROTECTION OF WINDOWS**

- A. All necessary precautions shall be taken by mechanics and workmen performing the work of masonry repairs, painting, caulking, cleaning, etc., against marring, soiling or defacing any part of the windows. All dirt, residue, etc., on the window resulting from the work of such mechanics and workmen shall immediately be cleaned off leaving the window and entrance assemblies in a clean, operating condition ready for final cleaning and adjustment as required by the specifications.

## **1.12 EXITWAYS**

- A. Contractor shall maintain all existing exits as required by prevailing Codes throughout the construction period.

## **1.13 REMOVAL OF RUBBISH**

- A. The Contractor shall at all times keep the building, premises and surrounding sidewalks and streets clean and free from his rubbish and discarded or surplus materials; he shall provide suitable receptacles of adequate size and number, in handy locations about the premises to receive his own rubbish and discarded or surplus materials and also that of his various subcontractors, and shall direct his subcontractors, to deposit their rubbish and surplus materials in the receptacles provided for this purpose, or in orderly piles in locations as he may designate; also he shall provide all labor required to remove said rubbish and discarded or surplus materials from the various floors and yards, and shall cart it from the premises.
- B. Rubbish shall not be thrown out of windows. Rubbish shall not be allowed to pile against the building and thus mar its appearance.
- C. Should the Contractor fail to keep the building, premises and surrounding streets and walks shovel clean and free from his rubbish at all times, then the Owner shall employ such parties as he pleases, in the open market, to remove the rubbish and shall withhold from any payment

due the Contractor such sums as may be required to pay for the removal of the rubbish or materials, and such sums shall be deducted from the amount of the Contract.

#### **1.14 REMOVAL OF TEMPORARY WORK**

- A. All temporary work such as guards, shoring, scaffolding, etc., provided or erected by the Contractor shall be removed and shall become the property of the Contractor when such temporary work is no longer required, or when directed, or at completion of the Contract.
- B. Repair any finishes damaged by temporary construction facilities to match existing to the approval of the Architect and Owner.

#### **PART 2 - PRODUCTS**

(No materials are required by this Section.)

#### **PART 3 - EXECUTION**

(No execution is required by this Section.)

#### **END OF SECTION 01 52 00 - CONSTRUCTION FACILITIES**

## **SECTION 01 74 19 - CONSTRUCTION-WASTE MANAGEMENT**

### **PART 1 - GENERAL**

#### **1.01 MANAGEMENT**

- A. The Contractor shall take a pro-active, responsible role in the management of construction and demolition waste and require all subcontractors, vendors and suppliers to participate in the effort. Construction and demolition waste includes products of demolition or removal, excess or unusable construction materials, packaging material for construction products, and other materials generated during the construction process but not incorporated into the work. In the management of waste consideration shall be given to the availability of viable markets, the condition of the material, the ability to provide the material in suitable condition and in a quantity acceptable to available markets, and time constraints imposed by internal project completion mandates. The contractor shall be responsible for implementation of any special programs involving rebates or similar incentives related to recycling of waste. Revenues or other savings obtained for salvage, or recycling shall accrue to the Contractor. Firms and facilities used for recycling, reuse, and disposal shall be appropriately permitted for the intended use to the extent required by federal, state, and local regulations.

#### **1.02 PLAN**

- A. A waste-management plan shall be submitted to the Architect and Owner's Representative within 15 days after contract award and before initiating any site preparation work. The plan shall include the following:
1. Name of individuals on the Contractor's staff responsible for waste prevention and management.
  2. Actions that will be taken to reduce solid-waste generation.
  3. Description of the specific approaches to be used in recycling/reuse of the various materials generated, including the areas and equipment to be used for processing, sorting, and temporary storage of the waste.
  4. Characterization, including estimated types and quantities, of the waste to be generated.
  5. Name of landfill and/or incinerator to be used and the estimated costs for use, assuming that there would be no salvage or recycling on the project.
  6. Identification of local and regional reuse programs, including non-profit organizations such as schools, local housing agencies and organizations that accept used materials, such as materials exchange networks and Habitat for Humanity.



7. List of specific waste materials that will be salvaged for resale, salvaged and reused or recycled. Recycling facilities that will be used shall be identified.
8. Identification of materials that cannot be recycled/reused with an explanation or justification.
9. Anticipated net-cost savings determined by subtracting Contractor program-management costs and the cost of disposal from the revenue generated by sale of the materials and the incineration- and /or landfill-cost avoidance.

### **1.03 RECORDS**

- A. Records shall be maintained to document the quantity of waste generated; the quantity of waste diverted through sale, reuse, or recycling; and the quantity of waste disposed by landfill or incineration. The records shall be made available to the Architect and Owner during construction, and a copy of the records shall be delivered to the Owner upon completion of the construction.

### **1.04 COLLECTION**

- A. The necessary containers, bins, and storage areas to facilitate effective waste management shall be provided and shall be clearly and appropriately identified. Recyclable materials shall be handled to prevent contamination of materials from incompatible products and materials and separated by one of the following methods:
  1. Source-separated method: Waste products and materials that are recyclable shall be separated from trash, sorted into appropriately marked separate containers, and then transported to the respective recycling facility for further processing.
  2. Co-mingled method: Waste products and recyclable materials shall be placed into a single container and then transported to a recycling facility where the recyclable materials are sorted and processed.
  3. Other Methods: Other methods proposed by the Contractor may be used when approved by the Owner and Architect.
  4. Disposal: Except as otherwise specified in other Sections of the specifications, disposal shall be in accordance with the following:
    - a. Reuse: First consideration shall be given to salvage for reuse since little or no reprocessing is necessary for this method, and less pollution is created when items are reused in their original form. Sale or donation of waste suitable for reuse shall be considered. Salvaged materials, other than those specified in other sections to be salvaged and reinstalled, shall not be used in this project.

- b. Recycle: Waste materials not suitable for reuse, but having value, as being recyclable, shall be made available for recycling whenever economically feasible.
- c. Waste: Materials with no practical use or economic benefit shall be disposed at a landfill or incinerator.

## **PART 2 - PRODUCTS**

(No materials are required by this Section.)

## **PART 3 - EXECUTION**

(No execution is required by this Section.)

**END OF SECTION 01 74 19 - CONSTRUCTION-WASTE MANAGEMENT**

## **SECTION 02 17 30 – WATERPROOFING REMOVAL**

### **PART ONE – GENERAL**

#### **1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### **1.02 SUMMARY**

- A. Work Included: The work of this Section includes, but is not limited to, the following:
  - 1. Selective removal of existing paving assembly (pavers to be salvaged for reinstallation unless otherwise requested by owner) and other overburden including setting bed, topping slab, insulation, drainage mat and associated fasteners, existing deck waterproofing assembly including flashings down to structural deck. Remove existing sidewall scuppers; cut and cap two (2) planter drains at planter #2.
  - 2. Remove existing granite stone bricks and copings (copings to be salvaged for reinstallation) for removal of underlying waterproofing on vertical concrete backup surfaces
  - 3. Coordinate waterproofing removals with new repairs for protection of decks to receive new waterproofing system.
  - 4. Coordinate system removals and for protection of stone surfaces to remain
  - 5. Provide miscellaneous removals associated with new work, including, removal of railings, planter soil, irrigation system in planters for incorporation of new work. Dispose of planter soil.
  - 6. Coordinate temporary removal of railings, trellises, benches, etc. for installation of waterproofing system and flashing.

#### **1.03 RELATED SECTIONS**

- A. 01 33 00, Submittals
- B. 02 41 19, Selective Demolition
- C. 07 51 13, Modified-Bitumen Waterproofing System
- D. 32 12 00, Pavers
- E. 22 14 26, Plumbing/Drains
- F. 04 43 00, Stone Masonry

#### **1.04 SUBMITTALS**

- A. Submit written description in a timely manner, of the intended method of ensuring that the area affected by removals, including all penetrations and perimeters, is complete and watertight at the end of each work day.
- B. Prior to the start of work submit, date marked, photographs of existing conditions of structures, surfaces, equipment, and adjacent work that might be misconstrued as damage related to removal operations. Submit copies to the Construction Manager prior to the start of work.

- C. As appropriate, submit hazardous materials and asbestos management proposal, including all requirements for staging, containment, removals, handling and disposal of materials.

#### 1.05 QUALITY ASSURANCE

- A. Foreman Qualifications: The foreman of the crew performing roof removals shall be a qualified roofer or waterproofing journeyman with at least five (5) years experience in roofing removals similar in nature and scope to the Work of this Section.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before starting roof removals and related selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
  - 1. All removal and demolition work shall comply with requirements of State and Local Building Codes, OSHA, EPA, other local governing authorities having jurisdiction and Owner's requirements.
- C. Pre-Waterproofing Removal Conference: Conduct conference at Project site to comply with requirements. Review methods and procedures relating to roof removal and related selective demolition including, but not limited to, the following:
  - 1. Inspect and discuss condition of waterproofing and related construction.
  - 2. Review structural load limitations of existing structure.
  - 3. Review and finalize waterproofing removal schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
  - 4. Review requirements of work performed by other trades that rely on substrates exposed by waterproofing-removals demolition operations.
  - 5. Review protections and environmental-containment procedures.
  - 6. Review hazardous-materials issues and containment procedures.
- D. As appropriate, notify agencies of any hazardous materials found on the site. Do not proceed with removal of said substance until so instructed.

#### 1.06 PROJECT CONDITIONS

- A. No representation is made that the assembly exists uniformly throughout the area to be removed.
- B. Protections: Ensure safe passage of persons around area of demolition. Conduct operations to prevent injury to adjacent portions of the building, structure, utilities, other facilities, and to the public and other persons.
  - 1. Protect from damage existing work that is to remain in place and becomes exposed during demolition operations.
  - 2. As required, provide protective enclosures and bridges at areas surrounding the building perimeter. As required, provide protective devices over areas that have operable windows.

3. Containment: Provide containment of existing materials during removals and demolition. The Work of this Section shall include preventing dislodgment and blow-off of materials being removed, debris production and other hazardous conditions.
  - a. Fully coordinate containment with the requirements for ACM removals and waste management as specified elsewhere.
4. Containment procedures and protections shall be constructed and secured in a secure manner that does not harm the public and other persons and does not damage or compromise the building envelop and associated waterproof membranes to remain, adjacent structures/building structure and adjacent facilities.
- C. Damages: Promptly repair damages caused to adjacent materials and equipment by demolition work at no cost to the Owner. All remedial work to be done by the Contractor shall first be approved by the Construction Manager and the Architect.
  1. Any dust and debris falling into the interior of the building due to the work of this Section shall be removed by the Contractor.
- D. Traffic: Conduct removal operations and removal of debris to ensure minimum interference with streets, walks, and other adjacent or used facilities.
  1. Do not enclose or obstruct streets or other occupied or used facilities without permission from the Construction Manager, Owner, and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- E. Partial RemovalS: Items indicated to be removed but not saved are of salvageable to Contractor may be removed from the structure as work progresses. Transport salvaged items from site as they are removed.
  1. Storage or sale of removed items will not be permitted on the site.
- F. Damages: Promptly repair damages caused to adjacent facilities by demolition operations.
- G. Flame Cutting: Use of torches is strictly forbidden. However, methods utilizing torches must maintain portable fire suppression devices during removal operations and as required by the FDNY.
- H. Utility Services: Maintain existing utilities indicated to stay in services and protect against damage during demolition operations.
  1. Do not interrupt existing utilities serving occupied or used facilities, except when authorized by the Owner and other authorities having jurisdiction. Provide temporary services during interruption to existing utilities, as acceptable to governing authorities.
  2. Arrange for disconnecting and sealing utilities serving structures to be demolished, prior to start of removal and demolition work.

3. Do not start removal and demolition work until utility disconnections have been completed and verified in writing.
- I. Environmental Controls: Use temporary enclosures, water sprinkling, and other methods to limit dust and dirt migration. Comply with governing regulations pertaining to environmental protection.
  1. Do not use water when it may create hazardous or objectionable conditions such as damage to finishes, flooding, and pollution.
    - a. Fully coordinate environmental controls with the requirements for ACM removals and waste management as specified in the Contract Documents.
- J. Provide tarping or other types of temporary waterproofing as removals and related demolition of exterior building elements and waterproofing is underway. Completely protect structure from water damage. Provide anchoring to protect temporary roofing from wind damage or dislocation, anchoring methods shall not impair building water tightness nor bring harm to persons or property.

## PART 2 – PRODUCTS

### 2.01 REPAIR MATERIALS

- A. Use repair materials identical to existing materials.
  1. Where identical materials are unavailable or cannot be used for exposed surface, use materials that visually match adjacent surfaces to the fullest extent possible.
  2. Use a material whose installed performance equals or surpasses that of existing materials.
- B. Repair work, of structures or waterproofing damaged prior to selective demolition/demolition shall be specified within the applicable Sections(s), as indicated.

## PART 3 - EXECUTION

### 3.01 GENERAL

- A. General: The removal work is to be coordinated with the installation new pervious concrete, masonry, flashing, waterproofing and overburden systems and related construction.
  1. General: Execute removal work carefully. Minimize interference with existing building and site operations, inconvenience to building tenants, building staff, the public, danger to persons, and damage to existing building materials from the upper plaza.
  2. Do not throw removed materials in area other than where required for daily disposal.
- B. Coordination: Coordinate work of trades and schedule elements of removal work by procedures and methods to expedite completion of work.

- C. Noise Control: Maintain noise levels of removal work and equipment at a minimum level as to avoid disturbance to building tenant and adjacent building occupants. Comply with governing regulations pertaining to environmental protection and OSHA.
- D. Pollution Controls: Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air. Comply with governing regulations pertaining to environmental protection.
  - 1. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.
  - 2. Provide duct-proof barriers for interior removals and demolition, prevent uptake of duct and debris into air-handling system.
  - 3. Clean adjacent structures and improvements of duct, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing prior to start of work.
- E. Demolition: Demolish structures completely and remove from site. Use such methods as required to complete work within limitations of governing regulations.
  - 1. Proceed with demolition in systematic manner, from top of an item to be removed or demolished to bottom. Complete demolition work above each level or tier before disturbing supporting members on lower levels.
- F. If unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit a report to the Architect in written, accurate detail. Pending receipt of directive from the Architect, rearrange selective demolition schedule as necessary to continue overall job progress without undue delay.
- G. Prior to removal work, check all drains and leaders and document any plugged or non-working drains and leaders and notify the Architect.
  - 1. Provide protection of site and planter drains from becoming obstructed and clogged.
- H. Promptly remove debris to avoid imposing excessive loads on the roof and supporting walls, floors or framing. Do not exceed 20-psf of deck loading.
- I. Ensure that removed waterproofing is coordinated with the new waterproofing work, where required so that all penetrations and perimeter are completed and watertight at the end of each work day.
- J. In cutting the existing waterproofing ensure that cutting tools do not penetrate into the structural slab intended to remain.

1. If cutting machines are used in the performance of the Work, set the blade depth high enough to prevent penetration into the substrate intended to remain.
- K. Where waterproofing removal is required remove existing waterproofing materials complete, down to the existing structural deck.
- L. Substrate Observation: During roof removals and demolition, the contractor shall observe roofing substrates and decks, if unacceptable conditions of substrates and structural decks including but not limited to; deterioration, and detrimental conditions that will affect both waterproofing removals and placement of new waterproofing are observed, promptly make the building watertight and notify the Construction Manager and Architect. Maintain protection until the disposition of the condition is resolved.
1. If in addition to the above other conditions are uncovered that vary substantially from those indicated to the extent that modifications to the work may be required, promptly make the building watertight and notify the Architect and Construction Manager. Maintain protection until the disposition of the condition is resolved.
- M. The work of this Section includes removal of damaged substrates and decking as required for repairs.
1. If damaged waterproofing substrates and decking are identified by the Architect and Construction Manager, Contractor shall proceed as directed by the Architect and Construction Manager. Where removals are directed, properly remove damaged substrate and decking, provide supports, shoring and bracing, refer to selective demolition for additional requirements for removals and demolition work, coordinate removals with requirements of repair work. Provide protection of adjacent structures, finishes, and interior spaces from damage during the Work of this Section. Provide temporary secure watertight protection of interior spaces as the Work progresses.
- N. Sweep or vacuum all surfaces, remove loose aggregate and foreign substances. Provide at the end of the Work of this Section an existing waterproofing system free of loose materials or conditions objectionable to the installation of new waterproofing.
- O. Remove existing equipment and curbs as indicated, existing structural framing is to remain. Provide protection of adjacent structures, finishes, and interior spaces from damage during the Work of this Section. Provide temporary secure watertight protection of interior spaces at existing openings as the Work progresses.

### 3.02 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove debris, rubbish and other materials resulting from demolition operations from building site. Do not let products of demolition accumulate.
- B. Transport waste materials resulting from demolition work and legally dispose of off-site. Cost of transportation and disposal of all waste materials shall be included in the contract price. Hazardous



materials shall be handled and disposed of in accordance with all State, City, and Federal regulations.

### 3.03 CLEAN-UP AND REPAIR

- A. Upon completion of demolition work, remove tools, equipment and demolished materials from site.
- B. Repair demolition performed in excess if that required. Return structures and surfaces to remain to condition prior to demolition. Repair adjacent construction or surfaces soiled or damaged b this demolition work.

### **END OF SECTION 021735 – WATERPROOFING REMOVAL**

### **END OF DIVISION**



## **SECTION 02 41 19 - SELECTIVE REMOVAL**

### **PART 1 - GENERAL**

#### **1.01 GENERAL PROVISIONS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### **1.02 SUMMARY**

- A. Work by Subcontractors: Contractor is responsible for the coordination of any removal work to be performed by subcontractors. Contractor is responsible for the coordination between removal masonry, shoring and permanent installation of masonry, so that the emergency evacuation route is fully operable at all times. Contractor shall coordinate all hazardous materials abatement.
- B. Demolition & Disposal: Items to be demolished and properly disposed of include but shall not be limited to the following:
1. All plaza components as required to complete the full extent of the work indicated in Drawings and Specifications.
    - a. Contractor is responsible for all asbestos abatement, if any, including monitoring of air quality, as required and in conformance with all federal, state and local agencies having jurisdiction. All asbestos-containing materials shall be legally disposed of in accordance with the law.
    - b. Contractor will remove and re-install as necessary any electrical and lighting attached to the area of work.
- C. Salvage Items: Items to be salvaged, stored and reused may include, but shall not be limited to, the following:
1. Granite Coping Stones
  2. Stone Steps
  3. Dimensional stone panels at exterior walls, planter walls and walls to receive new waterproofing
  4. Railings
  5. Benches, Trellises and irrigation system
  6. Mature trees and shrubs
  7. Aluminum panels
  8. Undamaged pavers
  9. Blue stone pavers
  10. Interior Tiles (unless contractor can match existing)



### 1.03 SUBMITTALS

- A. Schedule: Submit schedule indicating proposed methods and sequence of operations for selective demolition work to Owner's Representative for review prior to commencement of work. Include details for dust and noise control and protection.
- B. Building Access: Provide detailed sequence of demolition and removal work to ensure uninterrupted access for the occupants to all entrances of the building.

### 1.04 JOB CONDITIONS

- A. Sequencing: The work is to be performed from the top downwards or as otherwise agreed upon with Owner. Coordinate scheduling with Owner's requirements.
- B. Occupancy: The building will be continuously occupied during selective demolition. Conduct selective demolition work in manner that will minimize need for disruption of occupant's normal operations. Provide minimum of 72 hours advance notice to Owner of demolition activities, which will impact occupant's normal operations. Coordinate demolition schedule with Owner.
- C. Condition of Structures: Owner assumes no responsibility for actual condition of items or structures to be demolished.
- D. Existing Conditions: Conditions existing at time of commencement of Contract will be maintained by Owner insofar as practicable.
- E. Partial Demolition and Removal: Items indicated to be removed but of salvageable value to Contractor may be removed from structure as work progresses. Transport salvaged items from site as they are removed. Storage or sale of removed items on site will not be permitted.
- F. Protections: Provide temporary sidewalk bridges, above ground level protective measures, barricades and other forms of protection as required by authorities having jurisdiction and as required to protect the occupants and general public from injury due to selective demolition work. Provide protection for areas to remain as necessary.
- G. Shoring: Provide interior and exterior shoring, bracing, or support if necessary to prevent movement, settlement, or collapse of structure or element to be demolished, and adjacent facilities or work to remain.
- H. Protection - Finishes: Protect from damage existing finish work that is to remain in place and becomes exposed during demolition operations.
- I. Protection - Floors: Protect floors with suitable coverings when necessary.
- J. Protection - Drains: Protect all site drains with screens, and as required to prevent the passage of debris caused by selective demolition and construction work.
- K. Protection - Weather: Provide temporary weather protection during interval between demolition and removal of existing construction on exterior surfaces, and installation of new construction to insure that

no water leakage or damage occurs to structure or interior areas of existing building.

- L. Protection - Removal: Remove protections at completion of work.
- M. Damages: Promptly repair damages caused to adjacent facilities by demolition work at no cost to Owner.
- N. Traffic: Conduct selective demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.
- O. Obstruction: Do not close, block or otherwise obstruct streets, walks or other occupied or used facilities without written permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- P. Explosives: Use of explosives will not be permitted.
- Q. Environmental Controls: Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air to lowest practical level. Comply with governing regulations pertaining to environmental protection.
- R. Water: Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.

## **PART 2 - PRODUCTS**

(Not Applicable)

## **PART 3 - EXECUTION**

### **3.01 INSPECTION**

- A. Prior to commencement of selective demolition work, inspect areas in which work will be performed. Photograph existing conditions of structure surfaces, equipment or surrounding properties, which could be misconstrued as damage resulting from selective demolition work. File with Owner's Representative prior to starting work.

### **3.02 PREPARATION**

- A. Removals: Coordinate asbestos-abatement removals, if any, so that building remains watertight at all times.
- B. Shoring: Provide interior and exterior shoring, bracing, or support to prevent movement, settlement or collapse of structures to be demolished and adjacent facilities to remain if required.
- C. Dangerous Conditions: Cease operations and notify the Owner's representative immediately if safety of structure appears to be endangered. Take precautions to support structure until determination is made

for continuing operations.

- D. Partitions: Erect and maintain dust-proof partitions and closures as required prevent spread of dust or fumes to occupied portions of the building.
- E. Weather Protection: Provide weatherproof closures for exterior openings resulting from demolition work.
- F. Window Protection: Provide adequate protection for windows in affected areas.
- G. Protection: Provide adequate protection in areas affected and below affected areas, and on adjacent properties if affected.
- H. Mechanical Equipment, Etc: Provide adequate protection for mechanical equipment, etc where affected by work of this contract. Coordinate with Owner's Representative

### 3.03 DEMOLITION

- A. Performance: Perform selective demolition work in a systematic manner. Use such methods as required to complete work indicated on Drawings in accordance with demolition schedule and governing regulations.
- B. Cutting: Demolish masonry in small sections. Cut masonry at junctures with construction to remain using power-driven masonry saw or hand tools; do not use power-driven impact tools.
  - 1. Carefully saw cut railings where necessary to accomplish scope of work. When reinstalling, weld and burnish as required to return to like new condition.
- C. Debris Removal: Locate demolition equipment throughout structure and promptly remove debris to avoid imposing excessive loads on supporting walls, floors or framing.
- D. Pollution Control: Provide services for effective air and water pollution controls as required by local authorities having jurisdiction.
- E. Unforeseen Conditions: If unanticipated mechanical, electrical or structural elements which conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to Architect in written, accurate detail. Pending receipt of directive from Architect, rearrange selective demolition schedule as necessary to continue overall job progress without delay.

### 3.04 SALVAGE MATERIALS

- A. Return salvaged materials to original locations. Coordinate with Owner regarding salvaged mature trees and shrubs.



### 3.05 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove debris, rubbish and other materials resulting from demolition operations from building site. Transport and legally dispose of materials off site.
- B. Hazardous Materials: If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling and protection against exposure or environmental pollution.
- C. Burning: Burning of removed materials is not permitted on project site.

### 3.06 CLEAN-UP AND REPAIR

- A. Upon completion of demolition work, remove tools, equipment and demolished materials from site. Remove protections and leave areas broom clean.
- B. Repair demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selective demolition work. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

**END OF SECTION 02 41 19**

## **SECTION 030100 - CONCRETE REPAIR**

### **PART 1 - GENERAL**

#### **1.1 GENERAL PROVISIONS**

- A. Perform work in accordance with requirements of General Conditions and Division 01 - General Requirements as well as provisions of all applicable laws, codes, ordinances, rules and regulations. If applicable, all regulations regarding the transportation, handling, storage and removal of hazardous materials shall be strictly adhered to.

#### **1.2 RELATED WORK SPECIFIED ELSEWHERE:**

- 1. Section 07 51 13 - Siplast Waterproofing System
- 2. Section 07 92 00 - Joint Sealers

#### **1.3 SUMMARY**

- A. Extent of concrete restoration work is as indicated on Drawings, as specified herein, and as required by conditions and regulatory authorities, for the proper completion of the work.
- B. Briefly, and without force and effect upon Contract Documents, work of this Section includes, but is not limited to, the following:
  - 1. Visual inspection and sounding of all exposed concrete 100%
  - 2. Remove spalls, loose and deteriorated concrete until sound concrete is met.
  - 3. Trowel-applied patches:
    - a. The concrete should be square and undercut to provide a mechanical key. Install additional 3/16" diameter threaded stainless steel ASTM 316 rods bedded in epoxy spaced as detailed. Install new properly formulated patching material, mechanically secured and keyed into the sound adjacent concrete. Install flush with adjacent sound concrete or per details on Drawings.
- C. Extent and Location: Work of this Section shall be performed where indicated on Drawings, as specified herein, and include, but not be limited to, the following:
  - 1. All exposed concrete on decking and vertical concrete surfaces.

## 1.4 QUALITY ASSURANCE

### A. System Approach:

1. The Contractor shall install a “system-oriented” restoration of the concrete. The “system” shall consist of the coordinated use of Architect-approved repair products and techniques.
2. The Contractor shall ensure that all products used in the restoration shall be fully compatible with each other. The Contractor must submit for each proposed product a manufacturer’s written certification that the product is compatible with the other products in the system, and that the use of multiple manufacturers’ products shall not in any way infringe on any of the manufacturers’ warranties.
3. Any manufacturer’s system or products must conform to the requirements of this specification in order to be considered acceptable, and to receive the approval of the Architect.

### B. Qualifications: Work must be performed by a firm having not less than five (5) years regular, successful, experience in comparable concrete restoration projects and employing personnel skilled in the restoration processes and operations indicated. Comply with all requirements set forth in Division 1 of these specifications.

The concrete restoration contractor or subcontractor must submit documentation of being approved or trained by the manufacturer(s) of the selected concrete patching.

In evaluation of work offered for the acceptance of the Architect, no allowance will be made for lack of skill or competence on the part of workers.

### C. Pre-Installation Conference: A pre-installation conference shall be held prior to commencement of field operations to establish procedures, to maintain optimum working conditions and to coordinate this work with related and adjacent work. Agenda for meeting shall include special details and flashings. Attendees shall include manufacturer's representative, representative of the approved Contractor, Owner's Representative and the Architect/Engineer.

### D. Materials: Manufacturer shall be a Company specializing in manufacturing of polymer-modified Portland cement mortar with a minimum of ten years’ experience. As deemed necessary to warranty the installation, the manufacturer shall supply a technical representative on the job site during the course of the work to approve the application.

1. Work specified herein shall be performed by and be the responsibility of the installation contractor. The installation contractor shall be certified by the manufacturer of the materials used to be a qualified installer of their product and to have the necessary equipment and facilities to fulfill the requirements of the manufacturer and of this section.



2. The installation contractor shall submit a list of three (3) projects in which similar work to that specified was successfully completed. The list shall contain the following for each project: Project name, Property owner, Owner's representative's name and phone number, Scope of work, Date of completion, Total square footage of work.
3. Field-Constructed Mock-Ups: Prior to start of general concrete restoration, prepare the following sample panels on building where directed by Engineer/Architect. Obtain Owner and Engineer/Architect's acceptance of visual qualities and Manufacturer's representative acceptance of technical qualities before proceeding with the work. Retain acceptable panels in undisturbed condition, suitably marked, during construction as a standard for judging completed work.
  - a. Concrete Patch: Prepare sample panels of size indicated for each type of masonry material indicated. Erect mock-up panels into an existing wall, unless otherwise indicated, to demonstrate quality of materials and workmanship.
  - b. Perform mock ups of concrete removal and surface preparation for approval of Architect and Manufacturer.
  - c. Provide 3 concrete repair mocks up approximately 8" by 6" wide with new replacement patch and approved color installed in dismantled area.
4. Coating: Prepare 3 separate color sample areas of approximately 1' high by 1' wide over the approved patches.

**E. Coordination:**

1. Coordinate concrete restoration work and coating work to ensure that patching and treatment compounds have cured, as required by water repellent manufacturers, prior to application of the water repellent.
2. All concrete patching work must take place and have cured before water repellent work may proceed on repaired concrete.

## **1.5 SUBMITTALS**

- A.** Data and Sample Submittal Schedule: Submit 2 copies of shop drawings, brochures certifications, samples and maintenance data to Owner or Owner's representative prior to any work and leaving sufficient time for their review prior to schedule site work.
- B.** Methods: The contractor shall submit a detailed description of the methods he will use to accomplish the façade repair work. Specified methods of the following are required.
  1. Storage and protection of material.
  2. Hoisting material.
  3. Cutting material.
  4. Shoring material.

5. Movement of material.
6. Disposal of debris.
7. Distribution of material.
8. Dust and noise control.
9. Movement of personnel.
10. Protection of existing surfaces and adjacent property including netting installation.
11. All weather masonry construction including hot and cold weather protections.
12. Protection for exposed and unfinished work areas.
13. A detailed logistic plan showing work schedule, scaffold locations, method of rigging (other than outriggers), special rigging, demolition plan, and protection of adjacent property.

All such operations must be approved by the Owner and its representative, who will provide information governing access to work areas, use of elevators, etc. All rules, regulations and directions concerning noise, removal of debris, storage of materials and tools, etc., as issued by the Owner must be strictly obeyed.

**All Submittals:** Comply with General Provisions of the Contract and Division 1 Specification Sections.

- C. Product Data:** Submit selected manufacturers' technical data for each manufactured product offered for inclusion in the work. Include manufacturer's recommendations for use, and instructions for handling, storage, installation and protection of each product. Include test reports and certifications substantiating that products comply with specified requirements.
- D. Shop Drawings:** No shop drawings are required.
- E. Samples:** Submit for verification purposes samples of all materials required for the work of this Section, whether specified or not. Minimum size of powder and liquid samples shall be 250 ml (1 cup) of each. The following samples must be included:
  1. Patching compounds.
  2. Steel primer.
  3. Epoxy bonding agent/grout adhesives.
  4. Stainless steel fasteners, anchors and threaded rod.
  5. Water-repellent coating.
- F. Test Results:** Manufacturer of patching compound shall provide recent independent test results verifying that patching material shows a length change of less than 500 microstrains when tested in accordance with ASTM C 157 using the air-cured method. Provide a notarized certificate stating that the materials specified herein meet the specified requirements.

**As part of the submittals contractor shall submit the test results for selection of concrete patch repair material.**

- G. Affidavit:** Provide affidavit certifying materials meet specified requirements and issuance of certification for use in City of New York, NY.
- H. Warranty:** Submit a printed 5-year manufacturer's warranty and installer's guarantee from the date of final completion as accepted by the Owner for the Work of this Section, describing type and period of coverage.

## **1.6 SCOPE OF WORK**

- A.** Furnish all labor, materials, tools, and equipment required to perform the work of this section as shown on the drawings and as specified herein. In general, the work shall include, but not necessarily be limited to, the following:
  - 1. Selective removal of concrete, including cutting, chipping, and removing of all deteriorated, unsound concrete on horizontal, vertical, and overhead surfaces, as directed in the drawings or by the Engineer.
  - 2. Proper surface preparation of the concrete area, in accordance with the instruction material of the manufacturer of the repair material.
  - 3. Preparation and coating of all exposed reinforcement steel.
  - 4. Placement of appropriate repair material to horizontal and vertical surfaces.
  - 5. Matching concrete aggregate finish.
  - 6. Proper surface preparation of the patch concrete substrate according to the manufacturer's instructions before installation of coating.
  - 7. Apply two coats of the acrylic, anti-carbonation protective coating to vertical and overhead surfaces at a minimum dry film thickness of 5 mils.

## **1.7 DELIVERY, STORAGE, AND HANDLING**

- A.** Deliver the specified material in original, unopened containers with the manufacturer's name, labels, product identification, batch numbers, and expiration date.
- B.** Store material in conditions as recommended by the manufacturer.

## **1.8 PROJECT CONDITIONS**

- A. Local Climate:** Ambient weather conditions of moisture, temperature, humidity and wind can adversely affect the application, setting, curing, etc. of the products specified herein for concrete restoration. The Contractor shall take positive actions to offset any unfavorable state of one or more of these conditions as specified or recommended by the restoration product(s) manufacturers.



1. Temperature: Do not use concrete restoration products and materials unless air temperatures are between 40 degrees F and 80 degrees F. and will remain so for at least 48 hours after completion of work. Do not install concrete restoration products and materials on substrates that are frozen or have been below 40 degrees F. for at least 48 hours prior to installation.
  2. If air temperatures are between 70 and 80 degrees F and the building is in direct sunlight apply patching compound only as follows:
    - a. Wet surfaces of area to be patched with cool water before patching.
    - b. Cover new patches with opaque fabric or membrane immediately after completion of patch. Keep patch covered for 8 hours or until facade is out of direct sunlight.
    - c. Do **not** apply patching compound on the south facade at any time when the air temperature is between 70 and 80 degrees F and the building is in direct sunlight.
  3. Protect newly applied materials from rain and other precipitation.
  4. Provide moist curing immediately after finishing. **No curing compounds shall be permitted**, as these may inhibit the subsequent application of the water repellent stain, unless specifically approved by the manufacturer in writing.
- B.** Protect sills, ledges, window frames, glazing and projections from droppings and spills.
- C.** Protect persons, motor vehicles, surrounding surfaces of building whose concrete surfaces are being restored, building site, and surrounding buildings from damage or injury which could result from the performance of the work.
- D.** Site shall be left broom clean at the end of each workday.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

- C.** Polymer-modified Portland cement mortar for horizontal, vertical and overhead repairs shall meet the following requirements.
1. The material shall not contain asbestos, chlorides, nitrates, added gypsum, added lime, or high aluminum cements.
  2. The material shall be non-combustible, both before and after cure.
  3. The mortar shall be supplied in factory proportioned units.
- D.** The steel reinforcement protective coating shall be an epoxy-cementitious coating that will not create a bond barrier between the polymer-modified Portland cement mortar used for concrete repair and the steel reinforcement.

## 2.2 ACCEPTABLE PRODUCTS

**E.** Polymer-modified Portland cement mortar for vertical and overhead repairs:

1. SIKAREPAIR SHB with Latex R, Manufactured by Sika Corporation, 201 Politi Avenue, Lyndhurst, New Jersey 07071 .
2. Sikatop 123 Plus Manufactured by Sika Corporation, 201 Politi Avenue, Lyndhurst, New Jersey 07071 .
3. HB2 Repair Mortar manufactured by BASF Construction Chemicals LLC 889 Valley Park Drive Shakopee, MN 55379

**Selection of repair material will depend on the test results of the existing concrete.**

**F.** Steel reinforcement protective coating:

1. Sika Armatec 110 Epocem, Manufactured by Sika Corporation, 201 Politi Avenue, Lyndhurst, New Jersey 07071.

## 2.3 MISCELLANEOUS MATERIALS

**A. Stainless Steel Rods:** Bend 3/16" diameter threaded stainless steel rods, ASTM A-316, or approved equal.

**B. Epoxy:**

1. For bedding rods: Sikadur 32 Hi-Mod Epoxy, high-modulus, two-component, solvent-free, moisture-insensitive, structural epoxy adhesive conforming to current ASTM C 881, as manufactured by Sika Corporation (201) 933-8800, or approved equal.

**C. Abrasive Blasting Aggregate (If Required):** Use only aggregate which does not release free silica into the air.

**D. Water:** Potable, free of deleterious amounts of oils, rust, acids, alkalies and organic matter.

## 2.4 SUBSTITUTIONS:

The use of other than the specified product will be considered providing the contractor requests its use in writing to the Engineer. This request shall be accompanied by (a): A certificate of compliance from an approved independent testing laboratory that the proposed substitute product meets or exceeds the specified performance criteria, tested in accordance with the specified test standards; and (b): Documented proof that the proposed substitute product has a five year proven record of performance, confirmed by actual field tests and five successful installations that the Engineer can investigate.

## PART 3 - EXECUTION

### 3.1 GENERAL PROCEDURES

- A. It is the Contractor's responsibility to locate and remove all defective exposed concrete on all deck surfaces exposed for waterproofing. In general, all deteriorated concrete must be removed until sound concrete is reached. Follow manufacturer's instructions and methods for patch preparation and installation for selected concrete patching products.
- B. The Contractor is advised that the Drawings and Specifications do not undertake to illustrate or describe every item, detail or location of work necessary to complete this Project. The Documents intend to convey quantities of work insofar as they have been determined visually prior to full access to the building, and these quantities at a minimum shall be included in the Contract Price.
- C. **Previous Coatings:** Prior to commencement of patching, remove all previous coatings, waterproofing, etc. that may interfere with the compatibility and integrity of the patching and mortar products. Shot-blasting shall be an acceptable means of removing previous coatings.
- D. **Survey Mark-Ups:** Mark all areas of hollowness or losses on the deck and on copies of the Drawings supplied by the Architect.
- E. **Architect's Verification of Survey:** After marking locations of hollowness and losses, inform Architect to come to the site to inspect these areas. Architect will inspect the areas and confirm the removals and quantities for repair.
- F. **Coordination:** Coordinate all concrete repairs with waterproofing installation to maintain watertight conditions.

### 3.2 PREPARATION

- A. **Inspection:** Visually inspect and sound all exposed concrete 100% on deck and exposed vertical concrete surfaces.
- B. **Removals:** Remove all eminent spalls, cracked, loose, rust-stained and deteriorated concrete. Prepare all defective locations as specified. All rebar exposed by sounding or spalling must be fully exposed (360°) as described below:



1. Length of deteriorated concrete areas to be removed on vertical surfaces: Remove concrete as specified from around 100% of the circumference of rebars in both directions along length of bar until minimum 1" of clean, un-corroded rebar is exposed.
  2. Depth of deteriorated concrete areas to be removed: Voids containing rebar must be deep enough to provide 1" minimum clearance between the back of rebar and the back of the void. Voids which do not contain rebar must be a minimum of 3" deep.
  3. Surface width of deteriorated concrete areas to be removed: Voids containing rebar must be wide enough to provide 4" of clearance on each side of rebar. Width of voids not containing rebar shall have concrete removed a minimum of 3" across in all directions.
- C. Cutting:** At locations where the reinforcing steel is back far enough from the surface of the concrete to allow for proper patching (3" min), use grinders to square and undercut the outline of patch openings. Grinder should be held on a minimum 10 degree angle when cutting concrete to form an undercut void, allowing for a keyed patch. Do not cut into or through rebars with grinders.
- D. Removals:** Remove concrete from within patch outline. A minimum depth of 3/8 inches shall be provided at all edges of the patch. Do **not** hit rebars with hammers, chisels or power tools during removal process. The bond between unexposed rebar and concrete will be broken if rebar is hit or vibrated.
- F.** At all locations where spalls have occurred, the spalls shall be removed adequately to expose the condition of the reinforcing bars and the extent of deterioration. Reinforcing bars that have lost more than 10% of their section shall be reinforced by splicing with additional bars as required and as recommended by the Architect on a case-by-case basis.
- G.** The Contractor shall clean 100% circumference of exposed rebars to bright, white metal. Conform to Specification #SSPC-SPG-63 - Commercial Blast Cleaning. Pay special attention to cleaning the back of the rebar. The contractor shall also clean any exposed steel sleeves for railing post system encountered.
1. Abrasive blasting is preferred, provided the Contractor follows local code restrictions and employs equipment that provides full containment of abrasive grit and residues, or retains such materials by vacuum in a closed cycle.
  2. Power wire brushing will be acceptable, provided the Contractor meets the requirements of this specification and the requirements of manufacturers whose products depend on this preparation.
- H.** The surface must be mechanically prepared. Areas to be patched must be clean and sound. All loose and deteriorated concrete shall be removed by mechanical means approved by the Engineer. Chip concrete substrate to obtain a surface profile of + 1 inch min, with fractured aggregate surface. Be sure the area to be patched is not less than 1 in. in depth. Scrape and sandblast reinforcing steel to remove all contaminants and rust. Where reinforcing steel is encountered, the following procedures will be used. If reinforcing bar is exposed, chip out behind the reinforcing bar. The distance chipped behind the reinforcing bar shall equal or exceed the diameter of the reinforcing bar. Expose corroded rebar 4 in. beyond end of corrosion to expose sound uncorroded steel.

- I. Cracks in the substrate in the area of the patching or overlay work must be treated as directed by the Engineer.
- J. Extend all existing control and expansion joints through any patch or overlay. Install new joints as directed by the Engineer. Fill all joints as directed by the Engineer.
- K. **Rebar Coating and installation of pins:** Prime rebar and sleeves as soon as possible, but preferably within three (3) hours of cleaning, using specified primer and following manufacturer's instructions. Apply two (2) coats of primer. The second application should be of a slightly different shade to differentiate the two (2) coats. Make sure that the primer coats 100% of the exposed rebar surface. Allow primer to cure properly before proceeding. Avoid spilling or over-brushing primer on back or sides of void in concrete substrate unless manufacturer recommends the primer's use, and the Contractor uses it, as a bonding agent. (Any bonding agent must be overlaid with patching compound while still tacky.) Follow manufacturer's recommendations for curing of rebar coating. Provide and install pins as described in the drawings details.

### 3.3 TROWEL-APPLIED PATCH APPLICATION

- A. **Mixing:** Mix and apply specified patching compound following manufacturer's instructions. Match texture and profile of surrounding concrete.
  - 1. Do not apply patching compound when ambient temperatures are below 40 degrees F. or above 80 degrees F. or are predicted to be either within 48 hours of installation. Do not apply patching compound on substrates with ice or frost or which have been below 40 degrees F. for at least 48 hours prior to installation. Contractor shall install thermometer on each facade of building to monitor temperatures as work progresses.
  - 2. At all locations the area of concrete removed on the backside of the any/all steel to allow for proper cleaning and painting of the steel shall be fully patched. Do not patch areas of damaged concrete smaller than 3"x 3" but remove any loose concrete and prepare surface to same as for patching and enlarge void to minimum size for patching.
  - 3. At all areas of damaged concrete to receive trowel-applied patch, form a squared opening with keyed edges, as wide as is required and with minimum depth of 1".
  - 4. **Patches are applied in lifts of 1/2" or as directed by the manufacturer's representative for complete warranty**

### 3.4 CURING PATCHES

- A. **General:** Protect freshly placed patching compound from premature drying and excessive cold or hot temperatures. Follow manufacturer's directions for curing fresh patches.
- B. **Formwork Removal:** Formwork shall be left in place no less than seven (7) days to provide a proper cure. Formwork shall be stripped only after recasting concrete is sufficiently hard to not be damaged by formwork removal operations.
- C. Repair and patch defective areas of recast concrete with cement mortar immediately after re-

moval of forms. Follow manufacturer's recommendations.

- D. Start of Curing:** Start curing process immediately after installation of patching/recasting compound.
- E. Curing:** A combination of wet burlap and polyethylene sheet or a pre-combined product called "Burlene" shall be secured tightly over the fresh concrete. Smooth the wet burlap and polyethylene tightly over the surface. Secure with duct tape or other approved means that will not cause damage to the concrete. Material must be held in tight contact with the concrete surface, especially at edges. Burlap must be continuously moist. Keep finished repair moist for a period of seven (7) days minimum. Refer to ACI 308, "Standard Practice for Curing Concrete." In cold weather conditions, the finished repair must be protected from freezing.
- E. Architect's Inspection:** Inform Architect when patching is complete and has cured. Architect will inspect completed patching from Contractor's scaffold.

### **3.5 CLEANING**

- A.** The applicator shall promptly remove all temporary coverings and protections of adjacent work areas and will clean these areas of all foreign materials resulting from their work.
- B.** The uncured polymer-modified Portland cement mortar can be cleaned from tools with water. The cured polymer-modified Portland cement mortar can only be removed mechanically.
- C.** Leave finished work and work area in a neat, clean condition without evidence of spillovers onto adjacent areas.

**END OF SECTION 03 01 00**

## **SECTION 03 13 00 – PERVIOUS CONCRETE**

### **PART 1 - GENERAL**

#### **1.01 DESCRIPTION OF WORK**

- A. The Work to be completed includes the furnishing of all labor, materials and equipment necessary for construction of Portland Cement Pervious Concrete topping slabs conforming with the plans and specifications

#### **1.02 RELATED SECTIONS**

- A. Section 02 41 19 – Selective Demolition
- B. Section 04 43 00 – Stone Masonry
- C. Section 05 12 00 - Structural Steel
- D. Section 22 14 26 - Drains
- E. Section 32 12 00 – Asphalt Paving
- F. Section 07 51 13 – Built Up Modified Bitumen Roofing

#### **1.03 REFERENCES**

References and industry standards listed in this Section are applicable to the Work. Unless more restrictive criteria or differing requirements are explicitly stated in the Specifications, or mandated by governing codes or regulations, the recommendations, suggestions, and requirements described in the referenced standards shall be deemed mandatory and applicable to the Work.

- A. American Concrete Institute
  - 1. Concrete Field Testing Technician Grade I
- B. American Society for Testing and Materials
  - 1. ASTM C 29 “Test for Bulk Density (Unit Weight) and Voids in Aggregate ASTM C33 “Specification for Concrete Aggregates”
  - 2. ASTM C 33 “Specification for Concrete Aggregates”
  - 3. ASTM C 94 “Specification for Ready-Mixed Concrete”
  - 4. ASTM C 150 “Specification for Portland Cement”
  - 5. ASTM C 260 “Specification for Air-Entraining Admixtures for Concrete”
  - 6. ASTM C 494 “Specification for Chemical Admixtures for Concrete”
  - 7. ASTM C 595 “Specification for Blended Hydraulic Cements”
  - 8. ASTM C 618 “Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete.”
  - 9. ASTM C 685 “Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing”



10. ASTM C 989 "Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars."
11. ASTM C 1438 "Standard Specification for Latex and Powder Modifiers for Hydraulic Cement Concrete and Mortar."
12. ASTM C 1602 "Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete"
13. ASTM C 1688 "Standard Test Method for Density and Void Content of Freshly Mixed Pervious Concrete"
14. ASTM C 1701/C1701M "Standard Test Method for Infiltration Rate of In Place Pervious Concrete"
15. ASTM C 1751 "Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)"
16. ASTM C 1752 "Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction."
17. ASTM D 994 "Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type)"
18. ASTM E 329 "Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction."

C. National Ready Mixed Concrete Association

1. Text Reference for Pervious Concrete Contractor Certification

#### **1.04 QUALITY ASSURANCE**

A. The Contractor or Pervious Concrete Subcontractor:

1. Shall Submit:
  - a. Evidence of two successful pervious concrete pavement projects including: the project name and address, owner's name, contact information and size of each project.
  - b. Verification of current NRMCA Certification requirements described below:
2. Shall meet, at the time of bidding: one of the following criteria for the minimum certification for each placement crew and submit verification of NRMCA Pervious Concrete Certification with the bid.  
 ([http://www.nrmca.org/Education/Certifications/Pervious\\_Contractor.htm](http://www.nrmca.org/Education/Certifications/Pervious_Contractor.htm))
  - a. The pervious concrete subcontractor shall employ no less than one (1) NRMCA Certified Pervious Concrete Craftsman who must be onsite, actively

guiding and working with each placement crew during all pervious concrete placement.

- b. The pervious concrete subcontractor shall employ no less than three (3) NRMCA Certified Pervious Concrete Installers who must be onsite, actively guiding and working with pervious concrete for projects.
  - c. The pervious concrete subcontractor shall employ no less than three (3) NRMCA Pervious Concrete technicians and one (1) Pervious Installer who shall be onsite, actively guiding and working with each placement crew during all pervious concrete placement.
- B. Performance: Upon completion of the initial curing, the pervious concrete shall be tested for initial baseline infiltration in accordance with ASTM C1701. The rate shall be a minimum of 100 inches per hour.

## **1.05 SUBMITTALS**

Before starting work, submit the following:

- A. Product Data – Concrete Materials
  - 1. Proposed concrete mixture proportions including all material weights, volumes, density (unit weight), water / cementitious ratio, and void content. The mix design shall not specify a compressive or flexural strength.
  - 2. Aggregate type, source and gradation.
  - 3. Cement, fly ash, ground granulated blast-furnace slag and admixture manufacturer certifications.
  - 4. Cured weight
- B. Qualifications: Evidence of qualifications listed under Quality Assurance.
- C. Project details: Specific plans, details, schedule, construction procedures and quality control plan.
- D. Test Panel:
  - 1. Construct Test panel(s) to meet requirements of contract documents. Place a minimum one 225 sq. ft panel. Provide joints and curing using materials, equipment, and personnel proposed for the project as described in Section 1.02.B. Coordinate location of test panels with Owner and Architect/Engineer.
  - 2. The test panel shall be tested for acceptance in accordance with section 3.08 Quality Control.
  - 3. An approved test panel will be used as quality control for the project and may be incorporated into the project if of acceptable quality.
  - 4. Remove and legally dispose of all materials used for test panels not approved and all excess materials.
  - 5. Provide shop drawing signed and sealed by NY licensed structural engineer confirming weight is adequate for plaza loading.

## **PART 2 - MATERIALS**

## **2.01 Materials:**

- A. Cement: Portland cement Type II or V conforming to ASTM C150 or Portland cement Type IP or IS conforming to ASTM C595.
- B. Supplementary Cementitious Materials:
  - 1. Class F Fly Ash: ASTM C618
  - 2. Ground Granulated Blast-Furnace Slag: ASTM C989
- C. Chemical Admixtures: 1. Air entraining agents shall comply with ASTM C260. 2. Chemical Admixtures shall comply with ASTM C494. 3. Latex bonding agents shall comply with ASTM C1438.
- D. Aggregates: Coarse lightweight Aggregate: ASTM C33. The maximum size and gradation shall meet the project criteria for surface appearance and void content.
- E. Water: ASTM C 1602. F. Isolation Joint Material: Shall comply with ASTM D994, D1751, or D1752

## **2.02 Mixture Proportions:**

The composition of the proposed concrete mixtures shall be submitted to Architect representative for review and shall comply with the following provisions unless an alternative composition is demonstrated to comply with the project requirements. Conform to all requirements for pavements and walkways.

- A. Cementitious Content: Comply with the approved mix design.
  - 1. Supplementary cementitious content:
    - a. Fly ash: 25% maximum of the total cementitious material or in accordance with approved mix design.
    - b. Slag: 40% maximum of the total cementitious material or in accordance with approved mix design.
- B. Water / Cementitious Ratio Shall range between 0.27 lb/lb and 0.31 lb/lb. or in accordance with approved mix design.
- C. Aggregate Content: As appropriate for approved mix design.
- D. Admixtures: Use in accordance with approved mix design.
- E. Mix Water: as appropriate for approved mix design.
- F. Color: Pigments to be selected by the architect.

## **PART 3 - EXECUTION**

**3.01 Subgrade:** Verify subgrade preparation, grade, and conduct permeability and density and density tests for conformance to project requirements and is acceptable for installation of pervious concrete.

**3.02 Recharge Basin (Detention Basin):** When base material is used under pervious concrete for water recharge, it shall be composed of uniform sized aggregate conforming to ASTM C33, minimum size 6. For minimum void content, refer to civil or geotechnical contract documents. **3.03 Formwork:** Form materials: any material permitted by AHJ and of sufficient strength and stability to support mechanical equipment without deformation of plan profiles following spreading, strike-off and compaction operations.

**3.03 Formwork:** Form materials: any material permitted and of sufficient strength and stability to support mechanical equipment without deformation of plan profiles following spreading, strike-off and compaction operations.

### **3.04 Mixing and Hauling:**

- A. Production: Pervious concrete shall be manufactured and delivered in accordance with applicable sections of ASTM C 94 or ASTM C 685. B. Mixing: Pervious concrete shall be produced in central mixers, transit mixers or in volumetric mixers.
- B. Delivery: Deliver pervious concrete directly from the mixer by means of conveyer as close as possible to final position.
- C. Discharge: Each truckload will be visually inspected for consistency of concrete mixture. Job site water additions are permitted to obtain and maintain the required mix consistency throughout the discharge. Discharge shall be a continuous operation. Concrete shall be deposited as close to its final position as practical and such that discharged concrete is incorporated into previously placed plastic concrete.

**3.05 Placing and Finishing:** Shall comply with the content of the National Ready Mixed Concrete Association's 'Text Reference for Pervious Concrete Contractor Certification' with the following provisions:

- A. Internal vibration shall not be permitted. Use mechanical screed equipment. Do not use hand screeds except in confined and small areas. Cross roll compacted concrete to remove any screeding and compaction marks on the concrete surface.
- B. Compact to the required cross-section and shall not deviate more than + 3/8 inch in 10 feet from profile grade.
- C. Slope to drains at a minimum of 1/8" per/ft.

### **3.06 Jointing**

- A. Joints shall be installed at locations and to depths shown on the project plans.
- B. Control (contraction) joints shall be installed at regular intervals not to exceed 1.5 times the width of the placement or 20 feet, or in accordance with approved joint placement plan. The control joints shall be 6 installed at 1/4 the thickness of the pavement but not to exceed 1-1/2".



These joints can be installed in the plastic concrete or saw cut after the concrete has hardened. New joints in plastic concrete or recently hardened concrete shall align with joints in older concrete. Joints abutting curbs and other fixed concrete shall be installed within 10 degrees of perpendicular to the older concrete as possible.

1. Control joints to match those in reset asphalt pavers
  2. Expansion joints to match existing locations.
- C. Install joints to match approved sample.
- D. Transverse construction joints: Install whenever placing is suspended for 20 minutes or whenever concrete is no longer workable.
- E. Do not dowel longitudinal joints between successive placements.
- F. Isolation joints: Use when abutting fixed vertical structures. Place isolation material before concrete is placed and to the depth of the pavement section.

### **3.07 Curing**

- A. Final curing procedures shall begin no later than 20 minutes after the concrete has been discharged from the mixer. The pavement surface shall be covered with a minimum of six (6) mil thick white or clear polyethylene sheet or other approved covering material. In cold weather black plastic may be used to aid in heat retention. The cover shall prevent air infiltration to the fresh concrete and shall overlap all exposed edges and shall be secured to prevent dislocation due to winds or adjacent traffic conditions.
- D. The curing cover shall remain securely in place for a minimum of 7 days.

### **3.08 Quality Control**

- A. The contractor shall employ a testing laboratory that conforms to the requirements of ASTM E329 and ASTM C1077. All personnel engaged in testing shall be certified by the American Concrete Institute as ACI Concrete Field Technicians or equivalent and shall be certified by NRMCA as a Pervious Concrete Technician.
- B. Prior to each placement, the formed thickness shall be at least the design thickness testing within -0" to +3/4".
- C. Plastic concrete shall be sampled in accordance with ASTM C 172 and density (unit weight) measured in accordance with ASTM C 1688. The density (unit weight) of the delivered concrete shall be +/- 5 pcf of the design density (unit weight).
- D. Plastic void content shall be calculated as per ASTM C1688 Gravimetric Air Determination and compared to the void percentage required by the hydraulic design. E. Upon completion of initial curing, the pervious concrete shall be tested for a baseline infiltration rate using ASTM C1701.

### **END OF SECTION 03 13 00 – PERVIOUS CONCRETE**

## **SECTION 033053 - MISCELLANEOUS CAST-IN-PLACE CONCRETE**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes cast-in-place concrete, including reinforcement, concrete materials, mixture design, placement procedures, and finishes.
- B. Extent of new concrete curbs is as indicated on Drawings, as specified herein, and as required by conditions and regulatory authorities, for the proper completion of the work.
- C. Briefly, and without force and effect upon Contract Documents, work of this Section includes, the following:
  - 1. Concrete curb construction at planter #1
  - 2. Sidewalk flag reconstruction

#### **1.3 RELATED WORK SPECIFIED ELSEWHERE**

Section 02 41 19 - Selective Demolition  
Section 06 10 00 - Rough Carpentry  
Section 04 43 00 - Stone Masonry

#### **1.4 ACTION SUBMITTALS**

- A. Product Data: For each type of product.
- B. Shop Drawings: Provide shop drawings of new curbs designed, signed and sealed by a NYC licensed structural engineer.
- C. Builders Pavement Plan

#### **1.5 QUALITY ASSURANCE**

- A. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

## PART 2 - PRODUCTS

### 2.1 CONCRETE, GENERAL

- A. Comply with the following sections of ACI 301 (ACI 301M) unless modified by requirements in the Contract Documents:
  - 1. "General Requirements."
  - 2. "Formwork and Formwork Accessories."
  - 3. "Reinforcement and Reinforcement Supports."
  - 4. "Concrete Mixtures."
  - 5. "Handling, Placing, and Constructing."
  - 6. "Lightweight Concrete."
- B. Comply with ACI 117 (ACI 117M).

### 2.2 STEEL REINFORCEMENT

- A. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 25 percent.
- B. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.
- C. Plain-Steel Wire: ASTM A 1064/A 1064M, as drawn.
- D. Plain-Steel Welded-Wire Reinforcement: ASTM A 1064/A 1064M, plain, fabricated from as-drawn steel wire into flat sheets.
- E. Deformed-Steel Welded-Wire Reinforcement: ASTM A 1064/A 1064M, flat sheet.

### 2.3 CONCRETE MATERIALS

- A. Regional Materials: Concrete shall be manufactured within 500 miles of Project site from aggregates and cementitious materials that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site.
- B. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from single source, and obtain admixtures from single source from single manufacturer.
- C. Cementitious Materials:
  - 1. Portland Cement: ASTM C 150/C 150M, Type I
  - 2. Fly Ash: ASTM C 618, Class C or F.
  - 3. Slag Cement: ASTM C 989/C 989M, Grade 100 or 120.
  - 4. Blended Hydraulic Cement: ASTM C 595/C 595M

Normal-Weight Aggregate: ASTM C 33/C 33M, 1-1/2-inch nominal maximum aggregate size.

- E. Lightweight Aggregate: ASTM C 330/C 330M, 1-inch nominal maximum aggregate size.

- F. Air-Entraining Admixture: ASTM C 260/C 260M.
- G. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and that do not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
  - 1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
  - 2. Retarding Admixture: ASTM C 494/C 494M, Type B.
  - 3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
  - 4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
  - 5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
  - 6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.
- H. Water: ASTM C 94/C 94M.

## 2.4 FIBER REINFORCEMENT

- A. Synthetic Micro-Fiber: fibrillated polypropylene micro-fibers engineered and designed for use in concrete, complying with ASTM C 1116/C 1116M, Type III, 1/2 to 1-1/2 inches long.

## 2.5 RELATED MATERIALS

- A. Vapor Retarder: Plastic sheet, ASTM E 1745, Class A or B.
- B. Vapor Retarder: Polyethylene sheet, ASTM D 4397, not less than 40 mils thick; or plastic sheet, ASTM E 1745, Class C.
- C. Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.

## 2.6 CURING MATERIALS

- A. Evaporation Retarder: Waterborne, monomolecular film forming; manufactured for application to fresh concrete.
- B. Absorptive Cover: AASHTO M 182, Class 3, burlap cloth or cotton mats.
- C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- D. Water: Potable.
- E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.
- F. Clear, Waterborne Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.
  - 1. VOC Content: 200 g/L or less.



## 2.7 CONCRETE MIXTURES

- A. Comply with ACI 301 (ACI 301M).
- B. Normal-Weight Concrete:
  - 1. Minimum Compressive Strength: 4000 psi at 28 days.
  - 2. Maximum W/C Ratio: 0.50
  - 3. Cementitious Materials: Use fly ash, pozzolan, slag cement, and silica fume as needed to reduce the total amount of portland cement, which would otherwise be used, by not less than 40 percent.
  - 4. Slump Limit: 5 inches for concrete with verified slump of 2 to 4 inches before adding high-range water-reducing admixture or plasticizing admixture plus or minus 1 inch.
  - 5. Air Content: Maintain within range permitted by ACI 301 (ACI 301M). Do not allow air content of trowel-finished floor slabs to exceed 3 percent.
- C. Structural Lightweight Concrete Mix: ASTM C 330/C 330M, proportioned to produce concrete with a minimum compressive strength of 3000 psi at 28 days and a calculated equilibrium unit weight of 110 lb/cu. ft. plus or minus 3 lb/cu. ft. as determined by ASTM C 567/C 567M. Concrete slump at point of placement shall be the minimum necessary for efficient mixing, placing, and finishing.
  - 1. Limit slump to 5 inches (125 mm) for troweled slabs and 4 inches (100 mm) for other slabs.
- D. Synthetic Fiber: Uniformly disperse in concrete mix at manufacturer's recommended rate, but not less than a rate of 1.0 lb/cu. yd. (0.60 kg/cu. m).

## 2.8 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and ASTM C 1116/C 1116, and furnish batch ticket information.
  - 1. When air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.
- B. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Mix concrete materials in appropriate drum-type batch machine mixer.
  - 1. For mixer capacity of 1 cu. yd. (0.76 cu. m) or smaller, continue mixing at least 1-1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released.
  - 2. For mixer capacity larger than 1 cu. yd. (0.76 cu. m), increase mixing time by 15 seconds for each additional 1 cu. yd. (0.76 cu. m).
  - 3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mix type, mix time, quantity, and amount of water added. Record approximate location of final deposit in structure.

## PART 3 - EXECUTION

### 3.1 FORMWORK INSTALLATION

- A. Design, construct, erect, brace, and maintain formwork according to ACI 301 (ACI 301M).

### 3.2 EMBEDDED ITEM INSTALLATION

- A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

### 3.3 VAPOR-RETARDER INSTALLATION

- A. Install, protect, and repair vapor retarders according to ASTM E 1643; place sheets in position with longest dimension parallel with direction of pour.
  - 1. Lap joints 6 inches (150 mm) and seal with manufacturer's recommended adhesive or joint tape.

### 3.4 STEEL REINFORCEMENT INSTALLATION

- A. Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
  - 1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

### 3.5 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.
- C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness, as follows:
  - 1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover marks on concrete surfaces.
  - 2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch wide joints into concrete when cutting action does not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.
- D. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
  - 1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface unless otherwise indicated.

### 3.6 CONCRETE PLACEMENT

- A. Comply with ACI 301 (ACI 301M) for placing concrete.
- B. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301 (ACI 301M).
- C. Do not add water to concrete during delivery, at Project site, or during placement.
- D. Consolidate concrete with mechanical vibrating equipment according to ACI 301 (ACI 301M).
- E. Equipment Bases and Foundations:
  - 1. Coordinate sizes and locations of concrete bases with actual equipment provided.
  - 2. Construct concrete bases 8 inches and 6 inches high unless otherwise indicated; and extend base not less than 6 inches in each direction beyond the maximum dimensions of supported equipment unless otherwise indicated or unless required for seismic anchor support.
  - 3. Minimum Compressive Strength: 4000 psi at 28 days.
  - 4. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 12-inch (450-mm) centers around the full perimeter of concrete base.
  - 5. For supported equipment, install epoxy-coated anchor bolts that extend through concrete base, and anchor them into structural concrete substrate.
  - 6. Prior to pouring concrete, place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
  - 7. Cast anchor-bolt insert into bases. Install anchor bolts to elevations required for proper attachment to supported equipment.

### 3.7 FINISHING FORMED SURFACES

- A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections exceeding 1/2 inch
  - 1. Apply to concrete surfaces not exposed to public view.

### 3.8 FINISHING UNFORMED SURFACES

- A. General: Comply with ACI 302.1R for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- B. Screed surfaces with a straightedge and strike off. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane before excess moisture or bleedwater appears on surface.
  - 1. Do not further disturb surfaces before starting finishing operations.
- C. Scratch Finish: Apply scratch finish to surfaces indicated and surfaces to receive concrete floor topping or mortar setting beds for ceramic or quarry tile, portland cement terrazzo, and other bonded cementitious floor finishes unless otherwise indicated.
- D. Float Finish: Apply float finish to surfaces indicated, to surfaces to receive trowel finish, and to floor and slab surfaces to be covered with fluid-applied or sheet waterproofing, fluid-applied or direct-to-deck-applied membrane roofing, or sand-bed terrazzo.

- E. Trowel Finish: Apply a hard trowel finish to surfaces indicated and to floor and slab surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin film-finish coating system.
- F. Trowel and Fine-Broom Finish: Apply a partial trowel finish, stopping after second troweling, to surfaces indicated and to surfaces where ceramic or quarry tile is to be installed by either thickset or thinset methods. Immediately after second troweling, and when concrete is still plastic, slightly scarify surface with a fine broom.
- G. Slip-Resistive Broom Finish: Apply a slip-resistive finish to surfaces indicated and to exterior concrete platforms, steps, and ramps. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route.

### 3.9 CONCRETE PROTECTING AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and with ACI 301 (ACI 301M) for hot-weather protection during curing.
- B. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m x h) before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- C. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- D. Curing Methods: Cure formed and unformed concrete for at least seven days by one or a combination of the following methods:
  - 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
    - a. Water.
    - b. Continuous water-fog spray.
    - c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) lap over adjacent absorptive covers.
  - 2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period, using cover material and waterproof tape.
  - 3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
  - 4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

### 3.10 FIELD QUALITY CONTROL

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



B. Tests: Perform according to ACI 301 (ACI 301M).

1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd. (4 cu. m), but less than 25 cu. yd. (19 cu. m), plus one set for each additional 50 cu. yd. (38 cu. m) or fraction thereof.
2. Testing Frequency: Obtain at least one composite sample for each 100 cu. yd. (76 cu. m) or fraction thereof of each concrete mixture placed each day.

**END OF SECTION 033053**

## **SECTION 04 43 00 – STONE MASONRY**

### **PART 1 - GENERAL**

#### **1.1 GENERAL PROVISIONS**

- A. Drawings and General Provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to work of this Section.

#### **1.2 SUMMARY**

- A. Work of this Section shall include furnishing all labor and materials for, but not be limited to, the following: Briefly and without force and effect upon Contract
  - 1. Granite bricks at plaza planter, parapet and selective exterior wall locations
  - 2. Coping stones to be reinstalled
  - 3. New copings (allowance)
  - 4. Metal anchors and accessories
  - 5. Vapor Barrier installation and insulation if any

#### **1.3 RELATED WORK SPECIFIED ELSEWHERE**

- A. Section 02 41 19 – Selective Demolition
- B. Section 07 92 00 – Joint Sealers
- C. Section 02 51 20 – Asphalt Paving
- D. Section 03 30 53 – Cast-In-Place Concrete
- E. Section 07 51 13 – Waterproofing
- F. Section 07 62 00 – Flashing and Sheet Metal

#### **1.4 REFERENCE STANDARDS**

- ASTM C 270 - Standard Specification for Mortar for Unit Masonry
- ASTM C 615 - Standard Specification for Granite Dimension Stone
- BSI - Building Stone Institute
- IMIAWC (CW) - Recommended Practices & Guide Specifications for Cold Weather Masonry Construction; International Masonry Industry All-Weather Council
- NBGQA - National Building Granite Quarries Association.

#### **1.5 QUALITY ASSURANCE**

- A. Source of Materials: A. Stone Fabricator Qualifications: Company specializing in fabricating cut stone with minimum ten years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type required by this section, with minimum five years of documented experience.
- C. The Architect reserves the right to visit the fabricating facilities of the Subcontractor at any time when the work is in progress. All shop and field materials and workmanship shall be subject to inspection by the Architect at all times. Such inspections do not relieve the Contractor from

obligations to provide materials conforming to all requirements of the Contract Documents.  
Battery Park City Leak Remediation Design BID ISSUE May 11, 2018

- D. The Contractor, by commencing the work of this Section, assumes overall responsibility, as part of his warranty of the work, to assure that all assemblies, components and parts shown or required within the work of this Section, comply with the Contract Documents. The Contractor shall further warrant:
1. That all components, specified or required to satisfactorily complete the installation, are compatible with each other and with the conditions of installation and expected use.
  2. The overall effective integration and correctness of individual parts and the whole of the systems.
  3. Compatibility with adjoining substrates, materials and work of other trades.
  4. There shall be no premature material failure due to improper design and fabrication of the stone. All materials are to fully perform to their normal life expectancy.
  5. Each and every piece of stone shall be subject to the Architect's approval, and any piece or pieces which may be rejected after having been set shall be carefully cut out and replaced with new suitable stone without delay, and without cost to the Owner. Any piece or pieces damaged in the removal and resetting of the defective pieces shall also be removed, and suitable, approved pieces provided and set.
- E. Architect's inspection of the stone does not relieve the Contractor from his responsibility to provide all stonework in accordance with the approved samples and shop drawings.

B. Guarantee: In accordance with the Article of "GUARANTEES" in the "General Conditions", the Contractor guarantees that the assembly shall be watertight and free from defects as to materials, installation and/or workmanship, for a period of five (5) years from the date of final completion as accepted by the Owner.

During the five year guarantee period, the Contractor agrees to promptly repair, replace, restore or rebuild, as the Owner may determine, any finished Work in which defects of materials or workmanship may appear or to which damage may occur because of such defects at no cost to the Owner.

## 1.6 SUBMITTALS

- A. Product Data: Submit product data for all materials used in the work of this Section, whether specified or not.
- B. Material Samples: Submit for verification purposes samples of all materials used in the work of this Section, whether specified or not. Samples shall include, but not limited to, the following:
1. Bricks/Cut Stone: Provide full range of granite bricks.  
Submit samples of all materials and finishes and details. Samples include standard submission samples, visual mock-up samples, sample slabs, production samples, and additional samples as described below.
    - a. Submit two stone samples illustrating minimum and maximum stone sizes, color range, texture, and markings.

- b. Samples shall demonstrate the complete range of visual properties of the material and finish as specified.
    - c. Samples shall represent the single exposed surface grain, i.e. head, rift or lift, as proposed by the Contractor and approved by the Architect.
  - 2. Mortar: Provide cured mortar samples to match existing for color verification purposes.
- C. Samples: Prior to ordering the below listed materials, submit representative samples to Architect for selection and approval as follows. Do not order materials until Architect's approval has been obtained. Delivered materials shall closely match the approved samples. Submit duplicate samples of each type listed below showing full range of color variation, finish and texture that can be expected in the permanent work:
  - 1. Granite Bricks: Six samples minimum, 2"x12"x4" thick samples showing the full range of color and finish expected in the final work. Label each sample with job name, supplier, color, and finish.
  - 2. Sand: (2) one-pint bags.
  - 3. Expansion Joint Material: 6" length.
  - 4. Mortar: Color Sample, 6" length.
  - 5. Joint Filler Material: (2) one-pint bags.
  - 6. Additional Samples: The Contractor for the Work of this Section shall have available an adequate quantity of matching approved samples as in Item a. above to be provided in order to enable the Architect to coordinate the construction and finishes of other trades
- D. In-Place Samples: Retain acceptable panel during construction as a standard for judging completed work. The samples upon the Architect's approval, will be standard for the entire job.
  - 1. Masonry Installation: Prepare a 2 sq ft sample panel for new masonry installation. Use masonry units, mortar, bonding, type of joint and workmanship required for masonry in project. Provide range of color, texture and workmanship expected in completed work.
  - 2. Repointing: Prepare two (2) sample areas of approximately 2'-0" high by 2'-0" wide for type of repointing required, one for demonstrating methods and quality of workmanship expected in removal of mortar from joints, and the other for demonstrating quality of materials and workmanship expected in pointing mortar joints.
  - 3. Sealant Installation: The Contractor shall prepare a sample area of approximately two (2) linear feet for each type of sealant installation required. Refer to section 07 92 00—Joint Sealers.



E. Shop Drawings:

1. Submit detailed shop drawings as specified in Division 1 for any items required by the Architect.
2. Three (3) black and white prints of each shop drawing shall be submitted to the Architect for approval at the earliest possible date.
3. Drawings shall be drawn to the following or a larger scale:
  - a. Plans and Sections: 1/4 inch scale
  - b. Details: 3 inch scale.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Shipping: Carefully pack, handle and ship masonry units and accessories strapped together in suitable packs or pallets. Unload and handle to prevent chipping and breakage.
- B. Delivery: Deliver materials to site in manufacturer's original and unopened containers and packaging, bearing labels as to type and names of products and manufacturers. Sand and lime shall be delivered to the job site in unopened bags marked with proper ASTM designations. No unmarked materials will be permitted on the site.
- C. Storage: Protect grout, mortar and other materials from deterioration by moisture and temperature. Store in dry location or in waterproof containers. Keep containers tightly closed and away from open flames. Protect liquid components from freezing. Comply with manufacturer's recommendations for minimum and maximum temperature requirements for storage.

1.7 PROJECT CONDITIONS

- A. Coordination: Coordinate work of this Section with interfacing and adjoining work.
- B. Staining: Prevent grout or mortar from staining adjacent masonry. Remove grout or mortar in contact with masonry immediately. Prevent grout or mortar used in repair work from staining the face of surrounding masonry and other surfaces. Protect sills, ledges and projections from droppings. The use of acid pH cleaners will not be permitted.
- C. Cold Weather Protection: Do not use frozen materials, or materials mixed or coated with ice or frost. Do not use salt to thaw ice in anchor holes or slots or for any other purposes. Do not lower the freezing point of mortar by use of admixtures or anti-freeze agents, and do not use any chlorides in mortar or grout. Do not build on frozen work; remove and replace masonry damaged by frost or freezing. No masonry work shall be performed when:
  - A. Air and substrate temperature is at or below 40 degrees F prior to, during, and for 48 hours after completion of work.
  2. Air and substrate temperature is above 40 degrees F and is predicted to fall lower within 72 hours.

- D. Hot Weather Protection: Protect mortar from direct sunlight and wind using protection measures submitted and approved when ambient air temperature exceeds 75 degrees F. Do not use or prepare restoration mortar when ambient air temperature is above 90 degrees F at the location of work.
- E. Damage: Damage occurring to the building as a result of work of this Section or Contractor's failure to protect against such damage shall be the Contractor's responsibility. The Contractor shall restore damaged areas to the complete satisfaction of the Architect at no additional expense to the Owner.
- F. Protection: Protect all openings in building wall surfaces during construction with overlapping tarps, for size greater than repair area. Overlap tarps ¼ of length; anchor tarps with stainless steel removable anchors set into mortar joints only. No damage to surrounding masonry to remain will be allowed.

## **PART 2 - PRODUCTS**

### **2.1 MANUFACTURER**

- A. Unit Masonry/Granite bricks:
  - 1. Replacement granite masonry to match existing, Olympic Green Granite, Split Face Finish, and to comply with ASTM C615/C615M, *Standard Specification for Granite Dimension Stone*.
  - 2. Replacement granite brick and stone to match color, texture, dimensions and profiles of existing unless otherwise specified.
- B. Stone Quarriers:
  - 1. Vermont Stone Art, 15 North Main Street, Suite 2010, Barre, VT 06841, (802) 476-4480  
[www.VermontStoneArt.com](http://www.VermontStoneArt.com)
  - 2. Trowel Trades Supply, (802) 655-3166
  - 3. Champlain Stone, Ltd; Product Warrensburg, NY 12885, 518.623.2903;:  
[www.champlainstone.com](http://www.champlainstone.com).
  - 4. Approved equal
- C. Surface Textures: Split face wall units with sawn horizontal setting surfaces, honed finish copings, with split faces
  - 1. Stone/granite bricks for walls: Split face, sawn horizontal bed surfaces.
  - 2. Dimensional stone and copings: All exposed surfaces honed.
- D. Color: Gray-green to match existing
- E. Mortar Materials

1. Portland Cement: ASTM C 150, Type I - Normal; color as required to produce approved color sample. Minimum of 25% by weight recycled content such as fly ash or silica fume.
2. Packaged Dry Mortar: ASTM C 387/C 387M, Type N, using gray color cement.
3. Hydrated Lime: ASTM C 207, Type S.
4. Quicklime: ASTM C 5, non-hydraulic type.
5. Mortar Aggregate: ASTM C 144.
6. Grout Aggregate: ASTM C 404.
7. Water: Clean and potable.
8. Accelerating Admixture: Nonchloride type for use in cold weather.
  - a. or approved equal
9. Moisture-Resistant Admixture: Water repellent compound designed to reduce capillarity.
  - a. or approved equal
10. Bonding Agent: Latex type.

F. Mortar Mixes

1. Mortar for Unit Masonry: ASTM C 270, Property Specification.
2. Setting Mortar: ASTM C 270, Type S
3. Pointing Mortar: Type N using the Property Method in ASTM C 270.
  - a. Color: 88A CHARCOAL
  - b. Provide mortar manufactured by:  
Lehigh Heidelberg Cement Group, 66 Demarest Road, Sparta NJ, 973-579-2111

## 2.3 MASONRY TIES AND REINFORCEMENT

- A. Metal Components - General: All metal components required for the work of this Section shall be made of stainless steel type 302/304 unless specifically stated otherwise in the Drawings or the Specifications.
- B. Brick Ties for Anchoring New Brick to Back-UP: # HB 213 Adjustable veneer anchor manufactured by Hohmann & Barnard Inc. (800-645-0616), or approved equal. Secure with Metal Hit Anchors, stainless steel, minimum 2" long, as manufactured by Hilti.
- C. Brick Ties for Anchoring New Bricks to Columns: D/A-F/P and D/A-F/RA Column Flange Anchors, 1/4" diameter, stainless steel, length as required, as manufactured by Dur-O-Wal or approved equal.
- D. Expansion-Joint Reinforcement: DA 2200 Joint Stabilizing Anchor, stainless steel, as manufactured by Hohmann & Barnard Inc

## 2.4 COPING STONE INSTALLATION

- A. Rods for Securing Coping Stones: 6" by 1/4" diameter threaded stainless steel eyebolts and 4" stainless steel dowels.

- B. New Coping Stone Setting: Provide new granite coping stone to match existing. Finished height of parapet including coping stones shall match all existing heights from finished plaza surface unless otherwise noted.
- C. Flashing: Install copper thru-wall flashing on top of rebuilt parapet. Provide adequate galvanic protection between dissimilar metals. Seal all penetrations through flashing.
- D. Anchoring: Drill 3/8" diameter by 2" deep holes in the ends of all stones.
- E. Installation: Set coping stones in mortar on top of copper thru-wall flashing. Insert eyebolts and dowels at the transverse joints in two-part epoxy and as shown on Drawings. Leave transverse joints free of mortar.
- F. Joint Treatment: Install backer rod, sealant and lead joint cap in transverse coping stone joints as specified in Section 07900 – Joint Sealers.

## 2.5 COPING STONE RESETTING

- A. Removal: Carefully remove existing coping stones designated for resetting. Removal of stone shall be performed taking care not to damage stones or adjacent materials. Original stones shall be carefully cleaned of old mortar, caulk, soil and other materials which might inhibit their reuse. Unobtrusively label each coping stone so that stones can be reset in the same location from which they were removed
- B. Flashing: Install copper thru-wall flashing on top of parapet set in mortar. Seal all penetrations through flashing. Provide adequate galvanic protection between dissimilar metals. Integrate into adjacent masonry and provide end dams where coping stones abut vertical masonry. Overlap if necessary where coping stone levels vary.
- C. Anchoring: Drill 3/8" diameter x 3" deep holes in the ends of stones abutting masonry.
- D. Installation: Reset coping stones in mortar on top of copper thru-wall flashing. Insert stainless steel eyebolts at transverse joints in two-part epoxy. Seal all penetrations through flashing. Insert dowels through eyebolts into edges of coping stones. Refer to Drawings.
- E. Transverse Joint Treatment: Back point transverse joints at copings before sealant is installed. Install backer rod, sealant and lead joint cap in transverse coping stone joints as specified in Section 07900 – Joint Sealers

## 2.6 MISCELLANEOUS MATERIALS/ACCESSORIES

- A. Weeps: Quadro-Vent's honeycomb design by H& B Standard size: 3/8" x 2 1/2" x 3 3/8" Jumbo size: 3/8" x 3 1/2" x 3 1/2" (grey)



- B. Inner-Wall Flashing Membrane: As specified on the drawings or otherwise PERM-A-BARRIER Wall Flashing, as manufactured by Grace Construction Products (800-444-6459) or approved equal.
- C. Inner-Wall Flashing Mastic/Sealant: As specified on the drawings or otherwise "EM-3000" Bituthene Mastic, as manufactured by Grace Construction Products (800-444-6459) or approved equal.
- D. Inner-Wall Flashing Primer: As specified on the drawings or otherwise PERM-A-BARRIER Surface Conditioner, as manufactured by Grace Construction Products (800-444-6459) or approved equal.
- E. Termination Bar: 1/8" natural anodized aluminum break-formed at top edge to receive sealant. Refer to Section 07 60 00 – Flashing and Sheet Metal.
- F. Metal Flashing: 20-oz lead-coated copper. Refer to Section 07 60 00 – Flashing and Sheet Metal.
- G. Sealant: Refer to Section 07 92 00 – Joint Sealer.
- H. Backer Rod: As manufactured by BASF or approved equal. Refer to Section 07 92 00 – Joint Sealers or approved equal.
- I. Compressible Filler: As manufactured by BASF or approved equal. Refer to Section 07 92 00 – Joint Sealers or approved equal.
- J. Epoxy: Sikadur 32, Hi-Mod, as manufactured by Sika Corporation (201-933-8800) or approved equal.
- K. Lintels (if needed): Hot Dipped Galvanized; Comply with ASTM A 36 Standard Specification for Carbon Structural Steel and ASTM A 53. Size shall and shape shall match existing.
- L. Dowels: 1/4" – 1/2" stainless steel
- M. Drip Edge: Stainless steel drip edge. Refer to section 07 62 00, Flashing and Sheet Metal
- N. Steel Primer and Finish Paint: Refer to Section 09 91 00 – Painting.

### **PART 3 - EXECUTION**

#### **3.1 GENERAL**

- A. Brick Ties: New brickwork installation shall be tied to adjacent masonry with a minimum of one (1) stainless steel tie per two (2) square feet.
- B. Lintel and shelf angel Flashing: Flashing membrane shall be installed over new lintels. Flashing shall be adhered to back-up material. Flashing membrane shall be secured at top

edge to back-up material with aluminum termination bar.

- C. Weep: If the brickwork to be rebuilt is directly above flashing, weep shall be installed and staggered on 16" horizontal centers in the course of brickwork sitting directly on flashing as well as the second course above flashing.
- D. Galvanic Separation: Provide adequate galvanic separation between dissimilar metals. Seal flashing at all penetrations.
- E. Steel: All steel exposed during the course of the work shall be scraped, cleaned with wire brushes, primed and flashed. Contractor shall inspect all exposed steel scheduled to remain and bring steel that has lost more than 10% of its thickness to the attention of the Architect.
- F. Shoring: Provide adequate temporary shoring as necessary to perform the work described herein. Remove and dispose of temporary shoring when completed.

### 3.2 REMOVAL

- A. Removal: Removal shall proceed in an orderly manner minimizing noise or other disturbances to the operations of adjacent facilities. All debris and refuse to be removed from building at end of each working day.
- B. Shoring: Adequate shoring must be provided by the contractor, and designed by the contractor or an engineer retained by the contractor, for all masonry demolition work. The shoring must be designed to prevent any movement or damage to adjacent masonry. Remove and dispose of temporary shoring when completed.
- C. Disposal: All construction debris must be disposed of legally.

### 1.3 MORTAR MIXING

- A. General: Mix mortar materials in the specified proportions to match appearance of existing mortar. Do not adjust proportions without prior written approval of the Architect.
- B. Measurement and Mixing: Measure cementitious and aggregate material in a dry condition by volume or equivalent weight. Do not measure by shovel; use known measure. Mix materials in a clean, mechanical batch mixer for 3 to 5 minutes.
  - 1. Mixing Pointing Mortar: Thoroughly mix cementitious and aggregate materials together before adding any water. Then mix again adding only enough water to produce a damp, unworkable mix that will retain its form when pressed into a ball. Add remaining water in small portions until reaching mortar of a workable consistency. A mortar is workable if its consistency allows it to be spread with little effort and if it will readily adhere to vertical masonry surfaces. Do not make mixture too wet – avoid bleeding of water and segregation of constituents.
  - 2. Water content for setting bed mortar shall contain minimum amount of water necessary to produce a workable consistency.
  - 3. Let mortar set for 20 minutes prior to use to allow for initial shrinkage. Place mortar

within 2 hours of mixing. Do not re-temper or use partially hardened material.

- C. Mortar Pointing Mix: Shall be 1:1:5 (cement/lime/sand) for all brick joints.
- Cement:  $\frac{3}{4}$  part White Portland Cement, Type 1 and  $\frac{1}{4}$  part Saylor Cement, Type 1
  - Lime: 1 part Hydrated Lime, Type S
  - Aggregate: 5 parts composed of 3 parts Schofield 181 and 2 parts Imperia Brothers Mason Sand.
  - Pigment: Rainbow Dry Colors, color to match existing mortar
- D. Mortar Setting Mix: Shall be 1:1:5 (cement/lime/sand)
- Cement –  $\frac{1}{2}$  part white and  $\frac{1}{2}$  Grey Portland Cement, Type 1
  - Lime -- 1 part hydrated lime, Type S
  - Aggregate -- 5 parts sand
- E. Keep mortar damp (80-90% RH) for 72 hours or until mortar is set.
- F. The use of admixtures will not be permitted without prior written approval of the Architect.

### 3.4 REPOINTING

- A. Extent and Location: After review with Architect and approval, repoint all defective joints in designated area of work.
- B. Cutting: Joints shall be cut and raked back to sound, solid, back-up material, a minimum depth of  $\frac{3}{4}$ ", but not more than 1-1/2" in depth. Loose and deteriorated mortar joints in the brickwork shall be raked out using a masonry blade narrower than the joint. Do not widen the joint. Clean all mortar from the joint so that the new pointing mortar bonds to the masonry, not old mortar. Do not spall or chip the masonry edges. Do not cut through bricks at the ends of head joints. Do not cut through adjacent masonry to remain.
- C. Joint Depth: Reinstalled mortar joint depth shall be at least  $\frac{3}{4}$ ". Joints shall be raked out deep as the deterioration goes to expose sound mortar. All joints shall be pointed a minimum depth of twice the joint width.
- D. Cleaning: Brush, vacuum, blow out or flush joints to remove dirt and loose debris.
- E. Preparation: Wet surface of masonry adjacent to joint prior to pointing. Maintain a five (5) gallon pressure sprayer filled and on the scaffold at all times that masonry work is in progress. Soak joints thoroughly before pointing. Surface of masonry should be damp but not flooded with water.
- F. Pointing: Place repointing mortar in layers no thick than  $\frac{1}{2}$ ". Roughen surface of each layer to provide a key for next.
- G. Tooling: Tool all joints to match historic original joint profile. Do not allow mortar to extend over the edges of the masonry (featheredging). Remove excess mortar from edge of joint or crack by brushing.

- H. Curing: Keep mortar damp (80 - 90% RH) for 72 hours or until set. This shall be accomplished by thoroughly soaking the pointed and patched areas at the beginning and end of each working day until 72 hours have passed.

### 3.5 STONE BRICK REPLACEMENT:

- A. Extent and Location: Remove as much masonry as necessary to perform repairs, and where directed by the Architect.
- B. Removal: Carefully remove brick by hand. It is the sole responsibility of the Contractor to protect all bricks to remain surrounding cracked bricks or brickwork scheduled for rebuilding. If necessary, the Contractor shall replace other bricks damaged by removal operations.
- C. Shoring: Support and protect remaining masonry which surrounds removal area.
- D. Cleaning: Clean remaining brick at edges of removal areas by removing mortar, dust and loose debris in preparation for rebuilding.
- E. Flashing: Refer to Drawings. Seal all penetrations through flashing. Provide adequate galvanic separation where necessary. Provide staggered weeps as described in Part 3.1 C.
- F. Brick Ties to Spandrel: Install brick ties to spandrels on top of new inner-wall membrane flashing following methods recommended by manufacturer. Seal all penetrations through flashing .
- G. Brick Ties – Back-Up Masonry: Fasten brick ties to back-up masonry with “Metal Hit Anchors” inserted in drilled holes.
- H. Brick Unit Installation: Install new brick to replace and match removed brick. Fit replacement units into bonding and coursing pattern of existing brick. If cutting is required, use motor driven saw designed to cut masonry with clean, sharp, unchipped edges. Lay replacement brick with completely filled bed, head and collar joints. Butter ends with sufficient mortar to fill head joints and shove into place. Wet bricks so that units are nearly saturated but surface dry when laid. Maintain joint width for replacement units to match existing.
- I. Tooling: Tool exposed mortar joints in repaired areas to match joints of surrounding existing brickwork.
- J. Repointing: Repoint new mortar joints in repaired area to comply with requirements for repointing existing masonry, except rake out joints before mortar sets.

### 3.6 DIMENSIONAL STONE REINSTALLATION:

- A. Carefully dismantle and non-destructively label stone panels and treads/risers to be dismantled so that they can be returned to their original location.
- B. Following waterproofing installation reinstall dimensional stone in original location.
  - 1. Install stainless steel anchors if required to support panels.
  - 2. Provide 4 stainless steel threaded rods bedded in epoxy at each tread.



### 3.7 LINTEL AND SHELF ANGLE REPLACEMENT (IF REQUIRED)

- A. Extent and Location: Extent and location of lintel replacement shall be as indicated on Drawings.
- B. Shoring: Provide temporary shoring and bracing members with connections of sufficient strength to bear imposed loads. Remove temporary members and connections when permanent members are in place and final connections are made.
- C. Removal: Carefully dismantle distressed brickwork above lintels as required to remove existing lintel and install new lintel. Remove existing corroding lintels.
- D. Replacement Lintels: Install new lintels in size specified for a minimum bearing of 8" at each bearing point. New lintels shall be galvanized steel.
- E. Flashing: Install inner-wall membrane flashing by adhering to back-up material. Flashing shall rise a minimum of 6" up the back of the opening. Top edge shall be secured with an aluminum termination bar and caulked with sealant. Provide end dams. All new membrane flashing shall extend 1" beyond face of rebuilt masonry, and then be cut flush with masonry once it has been reinstalled. Rebuild masonry to match existing.
- F. Weeps: Install weeps in two (2) courses directly above flashing staggered on 16" centers.
- G. Touch-Up Painting: Touch-up paint at exposed area of lintel as necessary.

### 3.8 FINAL CLEANING

- A. Cleaning: After mortar has fully hardened, thoroughly clean exposed masonry surfaces of excess mortar and foreign matter using stiff nylon or bristle brushes and clean water spray applied at low pressure. Clean brickwork and ledges and surfaces below work area at the completion of work.
- B. Scrapers: Use of metal scrapers or brushes will not be permitted.

## **END OF SECTION 04 43 00 – MASONRY RESTORATION**

## **SECTION 051200 - STRUCTURAL STEEL**

### **PART 1 - GENERAL**

#### **1.01 DESCRIPTION OF WORK**

- A. Furnish and erect all structural steel as shown on Drawings. Provide shop painting and galvanizing as specified.

#### **1.02 PRODUCTS FURNISHED BUT NOT INSTALLED UNDER THIS SECTION**

- A. Anchor Bolts for Structural Steel for Anchoring into Concrete
- B. Base Plates and Steel plates for Structural Steel

#### **1.04 RELATED SECTIONS**

Section 04 43 00 – Stone Masonry  
Section 03 13 00- Pervious Concrete

#### **1.05 REFERENCES**

References and industry standards listed in this Section are applicable to the Work. Unless more restrictive criteria or differing requirements are explicitly stated in the Specifications, or mandated by governing codes or regulations, the recommendations, suggestions, and requirements described in the referenced standards shall be deemed mandatory and applicable to the Work.

- A. American Society of Testing and Materials (ASTM) standards, latest editions.
  - A6 Standard Specification for General Requirements for Rolled Steel Bars, Plates, Shapes, and Sheet Piling.
  - A29 Standard Specification for Steel Bars, Carbon and Alloy, Hot-Wrought, General Requirements for
  - A36 Standard Specification for Carbon Structural Steel.
  - A53 Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
  - A108 Standard Specification for Steel Bars, Carbon, Cold-Finished, Standard Quality.
  - A123 Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
  - A153 Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
  - A194 Standard Specification for Carbon and Alloy Steel Nuts for Bolts for High-Pressure and High-Temperature Service, or Both.

- A307 Standard Specification for Carbon Steel Bolts and Studs, 60000 psi Tensile Strength.
- A325 Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength.
- A490 Standard Specification for Structural Bolts, Alloy Steel, Heat Treated, 150 ksi Minimum Tensile Strength.
- A500 Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
- A563 Standard Specification for Carbon and Alloy Steel Nuts.
- A780 Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coating.
- A992 Standard Specification for Steel for Structural Shapes for Use in Building Framing
- F436 Standard Specification for Hardened Steel Washers
- F1554 Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength
- F1852 Standard Specification for "Twist Off" Type Tension Control Structural Bolt/Nut/Washer Assemblies, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength
- F2280 Standard Specification for "Twist Off" Type Tension Control Structural Bolt/Nut/Washer Assemblies, Steel, Heat Treated, 150 ksi Minimum Tensile Strength
- B. "Specification for Structural Steel Buildings" - American Institute of Steel Constructors (AISC 360-05).
- C. "Seismic Provisions for Structural Steel Buildings, including Supplement No. 1 dated 2005 (AISC 341-05).
- D. "Code of Standard Practice for Steel Buildings and Bridges" (AISC 303).
- E. "Standard Welding Symbols - A2.0" - American Welding Society (AWS).
- F. "Specification for Mild Steel Covered Arc-Welding Electrodes - A5.1" - AWS.
- G. "Specification for Low-Alloy Steel Covered Arc-Welding Electrodes - A5.5" - AWS.
- H. "Structural Welding Code - D1.1" - AWS.

- I. "Solvent Cleaning - SP1" - Steel Structures Painting Council (SSPC).
- J. "Hand Tool Cleaning - SP2" - SSPC.
- K. "Power Tool Cleaning - SP3" - SSPC.
- L. "Commercial Blast Cleaning - SP6" - SSPC.
- M. "Pickling - SP8" - SSPC.
- N. "Near-white Blast Cleaning – SP10" - SSPC.

## **1.06 DEFINITIONS**

### **A. Structural Steel**

Structural Steel consists of the steel elements of the structural steel frame essential to support the design loads. These elements consist of material as shown on the structural steel plan and listed in Article 2.1 of the AISC "Code of Standard Practice for Steel Buildings and Bridges."

### **B. Other Steel**

Structural steel does not apply to those elements listed in Article 2.2 of the AISC "Code of Standard Practice for Steel Buildings and Bridges."

## **1.07 SUBMITTALS**

### **A. Product Data**

Submit manufacturers' specifications for the following products:

- 1. Expansion anchors and adhesive anchors
- 2. Steel plates

### **B. Shop Drawings**

- 1. Provide shop drawings prepared by NYC licensed structural engineer.
- 2. All connections shall be designed by and all drawings shall be prepared under supervision of a Professional Engineer licensed in the State of New York. Do not submit unchecked shop drawings. First submissions of all job standards, shop drawings of connections not shown on, or that are in deviation of, the job standards, and calculations shall have one set sealed and signed by the Engineer. After final approval of all shop drawings, submit a final set sealed and signed by the Professional Engineer.



3. Shear connections (framed beam, seated beam, single plate, etc.) shall be designed by the detailer's licensed engineer and detailed by the structural steel detailer, unless otherwise shown on Drawings. All wind and seismic connections (moment connections, bracing, etc.) are generally detailed on the Drawings. Based on the indicated loads (axial force, moment, etc.), the structural steel detailer's engineer shall design the connections. Those not detailed shall be detailed by the structural steel detailer.
4. Immediately after award of Contract and before preparing steel shop drawings, submit for review a set of job standards showing all necessary joint details with full particulars of connection pieces, shop and field welds, and holes for erection bolts and permanent bolts. These shall include any moment and shear connection designed by the Engineer of Record as well as those designed by the detailer. Appropriate marks for designating all types and sizes of joint details shall be included. Submit all calculations pertaining to the job standards. After approval of these job standards, the erection plans are to be submitted and shall be marked to indicate unmistakably the type and size of joint to be used for every beam connection. Do not order steel in advance of approval of the job standards and the erection plans with joint marks, except at own risk.
5. Prepare remainder of steel shop drawings after approval of job standards and erection plans. Drawings submitted prior to approval of job standards will be returned without review. Submit drawings gradually and not all at the same time so that sufficient time is allowed for checking and approval. No more than 100 drawings are to be submitted within a 14-day period to allow for checking and approval of package before submittal of next package. Shop Drawings for MEP equipment dunnage and access platforms shall not be submitted until after approval of the submitted MEP units. Ensure shop drawings submitted for MEP equipment dunnage and access platforms are coordinated and based on unit approved, which may vary substantially from the Basis of Design. The Contractor shall take into account in their schedule the potential time impact in the sequencing of the steel drawings.
6. Steel shop drawings shall include framing plans, bolted and welded work, and details such as camber and other pertinent data not shown on job standards. Detail openings and reinforcement due to other Work. Coordinate with Drawings of other Work.
7. Indicate welds by standard AWS symbols and show size, length, and type of each weld in accordance with AWS A2.0.
8. Identify columns using same identification system shown on Drawings.
9. Provide setting drawings, templates, and directions for installation of anchor bolts and other anchorages to be installed under other Sections.
10. Shop drawings will be checked for size of material and strength of connection by the Engineer of Record, which shall not render the Engineer of Record responsible for any errors in construction dimensions, etc. that have been made in preparation of shop

drawings. The Contractor shall assume full responsibility for the correctness of dimensions and fit.

11. Submit calculations for design of connections on job standard and all other connections such as moment, brace, and trusses.
12. After shop drawings are 100% complete and approved and all field changes have been made, a CD rom of the as-built drawings are to be submitted to the Authority in an AutoCad format.

C. Quality Control Submittals

1. Certificates and Affidavits

- a. Furnish bolt manufacturer's test reports, covering physical and chemical tests, for each lot of high strength bolts submitted.
- b. Furnish steel manufacturer's certificate certifying welders employed on the Work are current with their AWS qualifications (including having their required maintenance forms from their employer) and for work performed in the field are NYC licensed welders as per Section §28-407.1 of the NYC Administrative Code.
- c. Furnish complete listing of ASTM's of materials listed in Part 2 of this Section and certification that materials supplied meet those listed.
- d. For mechanical and adhesive anchors installed in concrete, submit ICC certification for use in cracked concrete.

2. Contractor Qualifications

- a. Provide proof of Fabricator, Erector, Detailer/Engineer, and Adhesive Anchor Installer specified under "Quality Assurance".

**1.08 QUALITY ASSURANCE**

A. Qualifications

1. Fabricator: Company specializing in the fabrication of steel products to be used in this Contract shall have a minimum of five years experience. The fabricator is to be AISC certified.
2. Erector: Company specializing in performing the Work of this Section shall have a minimum of three years experience and have done at least three projects with similar quantity of material.
3. Detailer: Company shall be specialized in the detailing and design of structural steel shop drawings with a minimum of three years experience. Connections shall be

designed by and shop drawings prepared under direct supervision of a Professional Structural Engineer experienced in design of this Work and licensed by the State of NY engaged.

4. Adhesive Anchor Installer: Installer for adhesive anchors installed in a horizontal or upwardly inclined position supporting sustained tension loads shall be certified per ACI Appendix D9.2.2 as per Section BC 1912 of the 2014 NYC Building Code.

B. Regulatory Requirements

1. Building Code: Work of this Section shall conform to all requirements of the 2014 NYC Building Code and all applicable regulations of governmental authorities having jurisdiction, including safety, health, noise, and anti-pollution regulations. Where more severe requirements than those contained in the Building Code are given in this Section, the requirements of this Section shall govern.
2. New York City Board of Standards and Appeals (BSA): Rules for Arc and Gas Welding and Oxygen Cutting and Steel Covering the Specifications for Design, Fabrication, and Inspection of Arc and Gas Welded Steel Structures and Qualification of Welders and Supervisors.
3. Industry Standards: Standards specified herein apply to Work of this Section. Where more severe requirements than those contained in the Standards are given in this Section or the Building Code, requirements of this Section or the Building Code shall govern.
  - a. "Code of Standard Practice for Steel Buildings and Bridges" – AISC 303-05. Modification to the code shall be as follows:
    - 1) Paragraph Glossary Definitions:
      - a) "Structural Engineer of Record" representative for the preparation of the plans and specifications."
      - b) "Owner's designated representative for construction" to read "The Authority's designated representative for construction of the structure."
      - c) "Owner" to read "The Owner for the purpose of construction of the proposed stair roof. In Section 7.2 through 7.16, the owner shall mean the Contractor.
    - 2) Paragraph 3.1.1: Add to the end of the sentence the words "unless otherwise noted."
  - b. AISC 360 as modified by the 2014 NYC Building Code.
  - c. Seismic Provisions for Structural Steel Buildings AISC 341-05.

- d. "Specifications for Structural Joints using ASTM A325 or A490 Bolts" approved by the Research Council on Riveted and Bolted Structural Joints of the Engineering Foundation (RCRBSJ) – AISC-2000.
    - e. "Structural Welding Code" - AWS.
  - 4. Recommendations or suggestions in the codes and references listed in this Article and under "References" shall be deemed to be mandatory unless they are in violation of the Building Code.
- C. Certifications
  - 1. Structural steel shall conform to the material acceptance, certification, and inspection requirements of Section BC 1701.
  - 2. Qualify welding processes and welding operators in accordance with AWS "Standard Qualification Procedure".

#### **1.09 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver materials to the site at such intervals as to insure uninterrupted progress of Work.
- B. Deliver anchor bolts and other anchorage devices, which are to be embedded in cast-in-place concrete or masonry, in ample time so as not to delay Work.
- C. Store materials to permit easy access for inspection and identification.
  - 1. Shop-primed steel. (Painted or galvanized): Primed steel stored in the field or shop shall be kept off ground (using pallets, platforms, or other supports) and so positioned as to minimize water-holding pockets, dust, and other contamination of the primer. Repair damage to primed surfaces due to improper storage in a manner approved by the Authority.
  - 2. Unpainted Steel: Steel stored in field or shop shall be kept off ground (using pallets, platforms or other supports), kept clean and in general protected against damage and corrosion.
- D. Do not store materials on erected structure in a manner that might cause distortion or damage to the members or supporting structures. Repair or replace damaged materials or structures as directed by the Authority.

#### **1.10 FIELD MEASUREMENTS**

- A. Take field measurements as required by Drawings. Where possible take field measurements of existing conditions prior to fabrication. Verify that field measurements are the same as those shown on Drawings and shop drawings. Report all deviations to the Authority in writing.



## **PART 2 - PRODUCTS**

### **2.01 MANUFACTURERS**

A. Expansion/Screw/Adhesive Anchors, Fasteners

1. Hilti, Inc.

### **2.02 MATERIAL**

A. Structural Steel Shapes, Plates, and Bars

1. Structural steel shall conform to ASTM A316 or A304.

B. Headed Stud-Type Shear Connectors

C. Bolts

1. Anchor Bolts (Anchor Rods): Shall conform to the provisions of ASTM F1554, Grade 36, unless different grade is specified elsewhere. Size and detailing indicated on Drawings.
2. Unfinished Bolts: Shall conform to the provision of ASTM A307.
3. High-Strength Bolts: Shall conform to the requirements of ASTM A325 or F1852 unless otherwise indicated on Drawings.
4. Expansion/Screw/Adhesive Anchors: Provide types as indicated on Drawings. The anchor specified shall be considered the basis of design.
  - a. As a minimum, all anchors exposed to weather or embedded in masonry are to be Type 316 stainless steel.
  - b. Anchors installed in concrete shall have current ICC-ES listing for performance in cracked concrete as per Section BC 1912.
    - 1) Wedge Expansion and Undercut Anchors/ expansion bolts shall have an ICC-ES Evaluation Service Report (ESR) issued in accordance with ACI 355.2 or ICC-ES AC 193 for use in cracked concrete, including seismic applicability loading, and pursuant to the Office of Technical Certification and Research (OTCR) Building Bulletin 2014-018. Anchors installed in grouted masonry shall have a report issued in accordance with AC 01.
    - 2) Adhesive anchors in concrete shall have an ICC-ES Evaluation Service report (ESR) issued in accordance with ACI 355.4 or ICC-ES AC 308 for use in cracked concrete, including seismic applicability loading, and pursuant to the Office of Technical Certification and Research

(OTCR) Building Bulletin 2014-018. Anchors installed in grouted masonry shall have a report issued in accordance with AC 58.

- 3) Concrete Screw Anchors shall have an ICC-ES Evaluation Service report (ESR) issued in accordance with ICC-ES AC193 for use in cracked concrete and seismic loading and pursuant to the Office of Technical Certification and Research (OTCR) Building Bulletin 2014-019. Anchors installed in grouted masonry shall have a report issued in accordance with AC 106.

- c. Design and installation provisions shall be based on current ICC-ES ESR report and ACI 318 Appendix D.

D. Hardware

1. Nuts for anchor bolts and unfinished bolts shall conform to the requirements of ASTM A563.
2. Nuts for high-strength bolts shall conform to the provisions of ASTM A194 or ASTM A563.
3. Washers shall conform to the provisions of ASTM F436.

E. Filler Metal for Welding

1. Welding electrode shall conform to E70XX classification of AWS A5.1, except as described below.
2. Welding electrode shall be compatible with existing steel where connections are made to steel of existing building. Electrode shall be E7018 unless determined otherwise. E7018 are low hydrogen electrodes that must be kept extremely dry.

F. Structural Steel Primer Paint

Provide type of primer indicated on steel under the following application conditions.

1. General application: Acrylic rust-inhibitive type containing no lead equal to Tnemec 115 Unibond. Paint must meet SCAQMD standards for VOC emissions.
2. Cavity wall (including steel within the exterior block back-up or not separated from the cavity by a full block), exterior application, and as a primer after zinc metallizing: Epoxy paint equal to Tnemec Co. Series FC27 Typoxy or Carboline Carboguard 888.
3. Touch-up primer for cavity wall and exterior application: High adhesion high-solids epoxy coating equal to Tnemec Co. Series 135 Chembuild or Carboline Carboguard.

## **2.03 SHOP ASSEMBLY - FABRICATION**

### **A. General**

1. Do not fabricate until shop drawings have been approved.
2. Fabricate items and assemblies in accordance with AISC Specifications and the shop drawings.
3. Properly mark members for field assembly. Fabricate items in order to match delivery sequence that will expedite erection.
4. Mill column ends at base plates, cap plates, and splices to a common plane by means of an approved milling machine.

### **B. Shop Connections**

1. Weld or high-strength bolt shop connections as indicated on Drawings.
2. High-strength bolt connections are friction (slip-critical) connections. Install high-strength bolts in accordance with "Specification for Structural Joints using ASTM A325 or A490 Bolts" (RCRBSJ). Utilize Class A connections. If steel surface of connection area is prepared to SSPC-SP5 surface preparation, Class B may be utilized pending inspection by the Authority's Special Inspection lab that surface meets the required preparation. Pay all costs to the Authority incurred for this inspection.
3. Welding: Comply with "Structural Welding Code" for procedures, appearance, and quality of welds and methods used in correcting welded work.
4. Holes for other Work
  - a. Provide holes and openings required for securing other Work to steel framing and for passage of other Work through framing members. Coordinate with Drawings of other Work.
  - b. Provide threaded nuts welded to framing, and other specialty items as indicated to receive other Work.
  - c. Cut, drill, flame cut, or punch holes perpendicular to metal surfaces. Method of cutting must not produce a roughness of over 1000 microinches. Surfaces exceeding these limits must be repaired by machine grinding.
  - d. Reinforce all openings with steel shapes as shown on shop drawings.

## **2.05 GALVANIZING**

### **A. General**

Galvanize the following members:

1. All angles supporting exterior masonry or exposed to the weather, including shelf, arch, relieving angles.
2. All connections between the above angles and the supporting structural member, including WT's, hangers, clip angles, hardware, etc.
3. All exterior steel supporting mechanical equipment (dunnage steel) and any other steel members indicated on Drawings.

### **B. Cleaning and Surface Preparation**

1. Hardware (bolts, nuts, etc.): Clean and leave free of mill scale before galvanizing.
3. Clean all steel first in accordance with SSPC-SP1 if needed.
3. Steel members: Clean in accordance with SSPC-SP8 before hot-dip galvanizing.
4. Steel members: Clean in accordance with SSPC-SP10 before zinc metallizing. Surface shall have a 3-4 mil anchor pattern. Moisture cannot be present on steel and temperature cannot be less than 5°F above the dew point. Thermal spray must be applied within 4 hours of blasting.

## **2.06 SOURCE QUALITY CONTROL**

### **A. Testing**

#### **1. General**

- a. Structural steel work is subject to all tests required by the Special Inspection requirements of the 2014 NYC Building Code.
- b. Cooperate with the Testing Laboratory in making all required tests.

#### **2. Tests: To be performed by the Authority's Testing Laboratory.**

- a. Shop bolted connections: Tested in accordance with AISC specifications.
- b. Shop welding: The laboratory will perform the following functions:
  - 1) Certify welders.



- 2) Visually inspect all welds, record type and locations of defects, and perform tests if necessary. Check all corrected work.
- 3) Perform following non-destructive tests if necessary or as required by the Special Inspector. Tests used shall be at the Special Inspector's option:
  - a) Liquid Penetrant Inspection: ASTM E165.
  - b) Magnetic Particle Inspection: ASTM E709. Perform on roof pass and on finished weld.
  - c) Radiographic Inspection: ASTM E94 or E149. Minimum quality level 2-2T.
  - d) Ultrasonic Inspection: ASTM E164.

3. Welding of Critical Joints

- a. All welded joints that are critical to the integrity of the structure, and require non-destructive testing to assure the adequacy of the critical weld, are indicated on the Drawings.
- b. To insure general weld quality of less critical groove and butt welds, a quality control program may be required to check the welds by non-destructive testing. The Drawings specify whether non-destructive testing is required and, if necessary, the method of inspection.
- c. Requirements of critical welds and non-destructive testing shall be in conformance with NYC BSA Rules for Arc and Gas Welding, Rules 16.5 through 16.5.3, and Rule 17.

B. Inspection

1. Testing Laboratory

- a. The Authority will engage a Testing Laboratory or Special Inspection Agency to assist in the inspection of steel fabrication and conduct tests at the mill, shop, or foundry. The laboratory will assist in checking erection tolerances and provide shop and field testing required for all structural steel work, including metal deck and studs.
- b. The Testing Laboratory will be responsible to and under the supervision of a Special Inspector.

2. Special Inspector

The Authority will assign, under the requirements of Section BC 1704.3, a Special Inspector to supervise the Work listed above under "Testing Laboratory".

3. Notification: Notify the Authority before beginning fabrication of the structural steel and supply laboratory with copies of agreements, approved drawings, approved prints of all shop details, etc., and all necessary information relating thereto. Do not ship material to job site until after inspection and approval by the Testing Laboratory.
4. Discretionary Inspections: No mill, shop, foundry, or field inspection, such as is above provided for, shall be held to prohibit or preclude inspection of such materials during delivery and erection at the building by such other persons as the Authority shall direct.
5. Reports: Shop and field reports, including shipments, will be submitted by the Testing Laboratory to the Authority as the work proceeds at the shop or job site. A final report will be submitted by the Testing Laboratory when work is completed at the shop, and again when work is completed in the field. The Special Inspector reserves right to reject material not in compliance with specified requirements at any time.
6. Corrections: Correct deficiencies in work which inspections and tests have indicated to not be in compliance with requirements. Pay for additional tests, at own expense, necessary to reconfirm any non-compliance of original work and as necessary to show compliance of corrected work.
7. Contractor's Responsibility: Inspection and acceptance or failure to inspect shall in no way relieve the Contractor or the mill and shops from their responsibility to furnish satisfactory material strictly in accordance with Drawings and Specifications.

## **PART 3 - EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that field conditions are acceptable and that erection may proceed. Notify the Authority in writing of conditions that adversely affect the Work. Do not proceed with erection until conditions have been corrected. Beginning of installation means the erector accepts existing conditions.

### **3.02 ERECTION**

A. General

1. Erection shall conform to Sections BC 2205.6.3 and BC 3305.2.
2. All work shall be erected plumb, square, and true to lines and levels in strict accordance with the structural requirements of the building.

3. Provide all machinery, apparatus, and staging required for the erection of steelwork in a thoroughly safe and efficient manner. Install, maintain and remove, without injury to other Work, such temporary bracing, scaffolding, etc. as may be necessary or required. Care shall be taken that no part of the structure is overloaded during construction.
4. Arrange for deliveries of material to facilitate the rapid and continuous progress of operation, but the site or streets adjacent to same shall not be used for the storage of material unless absolutely necessary and then only with special permission of the Authority and other authorities having jurisdiction.
5. Employ a Licensed Professional Engineer and Land Surveyor to ensure accurate erection of the steel.
6. Do not alter or cut structural members without written approval of the Engineer of Record.

B. Temporary Shoring and Bracing

Provide temporary shoring and bracing members with connections of sufficient strength to bear erection loads and guy wires to maintain structure plumb and in true alignment until completion of erection. Remove temporary work when permanent members and bracing are in place and final connections are made.

C. Anchors Bolts

1. Furnish to the concrete and brick masons anchor bolts and other connectors required for securing structural steel to the foundation and other in-place concrete work, together with instructions, templates, etc. necessary for setting them. Anchor bolts are to be surveyed and any approved modifications made prior to placement of columns.
2. Tighten anchor bolts after support members have been positioned and plumbed. Cut off protruding edges of wedges or shims flush with edge of base or bearing plate prior to packing with grout.

D. Base and Bearing Plates

1. Clean concrete and masonry bearing surfaces of loose and bond-reducing materials.
2. Set loose and attached base plates and bearing plates for structural members on shims and other adjusting devices, such as leveling plates, within specified tolerances. Elevations of shims and leveling plates shall be surveyed and adjusted to correct elevation prior to placement of column or beam. Plates are to have grout holes.

E. Field Assembly

1. Erect structural frames accurately to lines and elevations indicated. Align and adjust members forming a part of a complete frame or structure before permanently fastening.
2. Clean bearing surfaces and other surfaces that will be in permanent contact before assembly.
3. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.
4. Level and plumb individual members of the structure within specified tolerances. Do not tighten structure until surveys verify that structure is within allowable tolerances.
5. Establish required leveling and plumbing measurements on mean operating temperature of structure. Make allowances for difference between temperature at time of erection and mean temperature at which structure will be when completed and in service.
6. Splice members only where indicated and accepted on shop drawings.

F. Connections

1. Field connections shall be welded or bolted, except where welding is specifically called for on the Drawing.
  - a. Provide high-strength bolts for bolted connections except where unfinished bolts are indicated on the Drawings. High-strength bolt connections are friction (slip-critical) connections. Install high-strength bolts in accordance with "Specification for Structural Joints using ASTM A325 or A490 Bolts."
  - b. Provide unfinished bolts where indicated on Drawings. Lock nuts by upsetting bolt end or by similar method when unfinished bolts are not encased in concrete. Tighten all bolts and nuts fully.
  - c. For ASTM A307 bolts, hardened washer shall be installed under the turned element. For ASTM A325, F1852, A490 and F2280 bolts, hardened washer shall be installed under the head and nut. This washer is not required under the head for oversized or short-slotted holes for bolts conforming to F1852 bolts (from 1/2" to 1½" in diameter) and for bolts conforming to F2280 bolts when the bolt diameter is  $\leq 1"$ .
  - d. Expansion/screw/adhesive anchors shall be installed in accordance with the manufacturer's installation instructions. Holes shall be cleaned completely using wire brush and compressed air following manufacturer's guidelines. Tighten to the torque values specified by the manufacturer. For installation in existing substrates not installed as part of the Work, have bolt manufacturer



perform pullout test in each substrate to verify capacity and quality of substrate prior to final approval of anchor to be utilized.

2. Holes

- a. The size of boltholes shall be in accordance with AISC "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings."
- b. Ream holes that must be enlarged to admit bolts. Burning or use of drift pins is not permitted.

G. Erection Holes

Fill erection bolt holes on exposed to view members with plug welds and grind smooth.

H. Lintels and Relieving Angles

1. Erect all exterior steel lintels and relieving angles connected (by hangers, clips, bolts or otherwise) to the structural steel work.
2. Loose lintels (interior and exterior) and lintels secured to concrete are part of the Work Section 05700.

I. Flame Cutting

Flame cutting in field of members to correct fabrication errors is to be avoided and to be done only upon approval of the Engineer of Record based on the method proposed. Roughness cannot exceed 1000 microinches. Repair of surfaces shall be by mechanical grinding.

J. Field Touch-Up

1. Painted Members: After erection, clean all damaged areas in shop coat, exposed surfaces of bolts, bolt heads, nuts and washers, abrasions, and all field welds and unpainted areas adjacent to field welds to the same standards as the shop coat and paint with primer paint to same thickness as the shop coat. Finish painting is specified in Section 09900.
2. Galvanized Members: After erection, clean and paint all damaged areas to the galvanizing, welds, and areas adjacent to welds with the galvanizing repair paint. For galvanized members to be painted, finish painting is specified in Section 09900 and shall be the final two coats of the epoxy paint system.

### 3.03 TOLERANCES

- A. Erection tolerances shall be in accordance with "Code of Standard Practice for Steel Buildings and Bridges", except as indicated in B below.
- B. The following overall maximum deviations (tolerances) from theoretical are permitted:

200-300 NORTH END AVENUE  
PLAZA WATERPOOFING

FLASHING AND SHEET METAL  
05 12 00 - PAGE 16

- a. Column location @ base plate: 1/2"
- b. Base Plate, bearing plate and column splice elevation:  $\pm 1/8"$
- c. Column Plumbness: in or out 3/4" in column length, 1 1/4" for total building height
- d. Beam or girder elevation:  $\pm 1/2"$
- e. Beam camber: 1/8"
- f. Lintel elevation:  $\pm 1/16"$   
Lintel location:  $\pm 1/4"$

### 3.04 FIELD QUALITY CONTROL

- A. The Contractor shall cooperate with the Special Inspector and the Testing Laboratory performing Special Inspection testing by providing adequate notification for when work is performed that will require the inspection and provide all required access and means for the laboratory to perform the inspection and testing.
- B. As per Section BC 1704.3, the Special Inspector will inspect erection of the structural framework and test field bolting and welding as listed in Part 2 of this Section. The Special Inspector will also check the welding of deck and metal studs described in Section 05300. Where post-installed anchors are utilized, the Special Inspector will perform Special Inspection on post-installed anchors as per Section BC 1704.32. Adhesive anchors installed in concrete in a horizontal or upwardly inclined position supporting sustained tension loads shall be installed under continuous Special Inspection as required by paragraph D9.2.4 of ACI 318-11.
- C. The Contractor shall engage an engineer licensed in the state of New York to check tolerances and inspect the erection.
- D. Contractor's Surveys

Provide surveys of items listed below. Surveys are to indicate the actual location and elevation and the deviation from theoretical. Highlight those numbers that exceed permissible tolerances. Surveys are to be submitted in a timely manner in order for corrections to be made prior to installation of the next item in sequence (e.g. anchor bolt and base plate survey prior to column installation), including placement of concrete. The following items are to be surveyed:

- 1. Anchor bolt location
- 2. Elevation of bottom of base plates (top of shims or leveling plate).
- 3. Elevation of lowest column splice.
- 4. Location (x,y, & radial) and plumbness of columns.

5. Elevation of steel members taken at approximately 20 members from each floor for those members not cambered.
6. Elevations of cambered members taken at each end and in center. The average of the two ends subtracted from the center will be the measured camber. Approximately 20 members will be selected by the Engineer of Record to be surveyed. Survey is to be done prior to and after placing concrete.
7. Elevation and location of lintels prior to installation of masonry.

### **3.05 CLEANING**

- A. Structural steel or portions of such to receive sprayed fireproofing shall be clean of dust, grease, oils, loose material, and any other matter which would impair the adhesion of the fireproofing material to the steel.

### **END OF SECTION**

## **SECTION 06 10 00 - ROUGH CARPENTRY**

### **PART 1 - GENERAL**

#### **1.01      DESCRIPTION OF WORK**

- A. Provide rough carpentry Work as indicated on the Drawings, as required for the completed Work of this Contract, and as specified herein, including, but not limited to, the following:
1. Wood Grounds, nailing strips, blocking, furring, nailers, and framing.
  2. Rough hardware, including nails, screws, anchors, brackets, braces, bolts, nuts, fittings, and other devices required for the proper fitting, connecting, and erecting of the Work.
  3. Rough frames for windows and for other items, if required.
  4. Formwork for concrete pour
  5. Protection of exterior stonework and ornamental work.

#### **1.02      REFERENCES**

- A. References and industry standards listed in this Section are applicable to the Work. Unless more restrictive criteria or differing requirements are explicitly stated in the Specifications, or mandated by governing codes or regulations, the recommendations, suggestions, and requirements described in the referenced standards shall be deemed mandatory and applicable to the Work.
1. U.S. Department of Commerce.  
American Softwood Lumber Standard PS 20  
Product Standard PS 1 for Softwood Plywood
  2. APA Engineered Wood Association. APA Design/Construction Guide
  3. Western Wood Product Association (WWPA).  
Grading Rules
  4. Southern Pine Inspection Bureau (SPIB).  
Grading Rules
  5. Redwood Inspection Service (RIS).  
Grading Rules
  6. American Wood Preservers' Association (AWPA).  
Standard C2 (Lumber and Timber)  
Standard C9 (Plywood)

7. American Society for Testing and Materials (ASTM).  
**E84 Standard Test Method for Surface Burning Characteristics of Building Materials**  
  
D226 Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing
8. Underwriters Laboratories, Inc. (UL).  
UL Test 723
9. Federal Specifications (FS).
10. American Lumber Standards Committee (ALSC).
11. West Coast Lumber Inspection Bureau (WCLIB).  
Grading Rules
12. National Fire Protection Association (NFPA).  
Test 255 Method of Test of Surface Burning Characteristics of Building Materials

### **1.03 SUBMITTALS**

#### **A. Quality Control Submittals**

1. Certificates: Certification for the following wood treatments:
  - a. Dip Treatment: Certification by treating plant stating chemical solutions used, submersion period, and conformance with applicable standards.
  - b. Pressure Treatment: Certification by treating plant stating chemicals and process used, net amount of chemical preservative retained, and conformance with specified standards.
  - c. Waterborne Preservatives: Certified written statement that moisture content of treated materials was reduced to a maximum of 19 percent prior to shipment to Project site.
  - d. Fire-Retardant Treatment: Certification by treating plant stating treated material complies with specified standards and treatment will not bleed through specified finishes. Submit BS/A and MEA approval certification.



## **1.04      QUALITY ASSURANCE**

### **A.      Mill and Producers Mark**

Each piece of lumber and plywood shall be grade stamped indicating type, grade, mill, and grading agency certified by the Board of Review of the American Lumber Standards Committee. Mark shall appear on unfinished surface, or ends of pieces with finished surfaces.

1.      Pressure Preservative Treated Material: Accredited agency quality mark on each piece of wood including treatment.
2.      Fire-Retardant Treated Material: Accredited testing agency mark on each piece of wood indicating compliance with the fire hazard classification.

### **B.      Standards**

Comply with the following unless otherwise specified or indicated on the Drawings:

1.      Lumber: American Softwood Lumber Standard PS 20 by the U.S. Department of Commerce. Comply with applicable provisions by each indicated use.
2.      Plywood: Product Standard PS 1 for Softwood Plywood, Construction and Industrial by the U.S. Department of Commerce.
3.      Plywood Installation: APA Design/Construction Guide, by the American Plywood Association (APA), except as indicated otherwise.
4.      Grading Rules:
  - a.      Douglas Fir, Hem-Fir, Idaho White Pine, and other Western Woods: Western Wood Products Association (WWPA) or West Coast Lumber Inspection Bureau (WCLIB).
  - b.      Southern Pine: Southern Pine Inspection Bureau (SPIB).
  - c.      Redwood: Redwood Inspection Service (RIS).
5.      Preservative Treatment: American Wood Preservers' Association (AWPA) Standards, quality control methods, and inspection requirements
6.      Fire-Retardant Treatment: American Wood Preservers' Association (AWPA) Standards.

### **C.      Regulatory Agencies**

1.      NYC Board of Standards and Appeals (BS/A).
2.      NYC Materials and Equipment Acceptance (MEA).

## **1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Keep materials dry during delivery. Store materials 6" minimum above ground surface. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber and plywood, and provide air circulation between stacks.
- B. Cover stored materials until ready for use for protection from moisture. Place and anchor covering in a manner which will assure good ventilation under the covering.

## **1.06 PROJECT CONDITIONS**

- A. Correlate location of supporting members to allow proper attachment of other Work as specified in this Section.

## **PART 2 - PRODUCT**

### **2.01 LUMBER**

- A. General

Furnish seasoned dimensional lumber dressed to nominal sizes indicated with 19 percent maximum moisture content at time of dressing, marked "S-DRY". Comply with dry size requirements of PS 20.

- 1. Dress: Surfaced 4 sides (S4S) unless otherwise indicated.

- B. Framing Lumber

Species: Douglas Fir (WWPA or WCLIB), or Southern Pine (SPIB), unless otherwise indicated.

Refer to Drawings

- 1. Light Framing; 2" through 4" thick, less than 6" wide:

- a. Stud Framing Grade: Construction Grade.

- b. Other Light Framing Grade: No. 2.

- 2. Structural Framing; 2" through 4" thick, 6" and wider:

- a. Grade: No. 1.

- C. Board Lumber; less than 2" thick:

- 1. (Not Used)

2. (Not Used)
3. Concealed Board Lumber: Southern Pine No. 3 (SPIB), any species No. 4 (WWPA) or any species Standard (WCLIB), or Redwood Merchantable (RIS).

D. Miscellaneous Lumber

Standard grade, No. 3 grade, or better grade of the following species unless otherwise indicated:

1. Nailers and Blocking: Douglas Fir, Hem-Fir, Idaho White Pine or Southern Pine.
2. Furring: Douglas Fir or Southern Pine.
3. Plaster Grounds:
  - a. Interior Use: Douglas Fir or Southern Pine.
  - b. Exterior Use: Western Red Cedar or Redwood.
4. Door and window Bucks: Western Red Cedar or Redwood.

## 2.02 **PLYWOOD**

- A. Roof and Wall Sheathing and Subflooring: APA RATED SHEATHING, EXPOSURE 1. Furnish APA PS 1 veneered panels, with span ratings for the required thicknesses as listed below unless otherwise indicated.

<u>Thickness</u>	<u>Span Rating</u>
3/8"	24/0
1/2"	32/16
5/8"	40/20
3/4"	48/24

- B. Underlayment

APA UNDERLAYMENT, EXPOSURE 1.

## 2.03 **MISCELLANEOUS MATERIALS**

- A. Underlayment Patching Compound

Hardsetting, quicksetting type with latex or polyvinyl acetate binder.

- B. Asphalt Felt

Asphalt-saturated felt, No. 15, without perforations, complying with ASTM D226.

C. Rosin Paper

Commercial, rosin-sized building paper, 0.010" thick.

D. Hardboard

PS 58, Class "Tempered, S1S, plainboard.

E. Adhesive

APA Specification AFG-01.

## **2.04     PRESERVATIVE TREATMENT**

A. Treat lumber and plywood where indicated and as specified. Comply with applicable AWPA Standards and quality control and inspection requirements.

1. Fasteners and anchoring devices to be used with wood treated with waterborne preservatives shall be hot-dip galvanized or stainless steel if the wood will be exposed to moisture.

B. Complete fabrication of items to be treated to the greatest extent possible, prior to treatment. Where items must be cut after treatment, coat cut surfaces with heavy brush coat of the same chemical used for treatment or other solution recommended by AWPA Standards for the treatment.

C. Inspect wood after treating and drying. Discard warped or twisted items.

D. Pressure Treatment (Above Ground Use)

Treat the following wood items with waterborne preservatives for above ground use, complying with . AWPA Standards C2 & C9 Redry wood to a maximum moisture content of 19 percent after treatment.

1. Nailers, blocking, cants, shim stock, and similar members used in conjunction with roofing (including related flashings, trim and vapor barrier), coping, and waterproofing.
2. Nailers, blocking, furring, stripping, and similar concealed members in contact with exterior masonry and concrete (including interior wythe of exterior walls), and all sills for framing.
3. Wood items indicated or scheduled on the Drawings to be preservative treated.

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## **2.05      FIRE-RETARDANT TREATMENT**

- A.    Where lumber is indicated or required to be fire-retardant treated, provide "FR-S" lumber, complying with AWWPA Standards for pressure impregnation with fire-retardant chemicals to achieve a flamespread rating of 25 or less, when tested in accordance with UL Test 723, ASTM E84 or NFPA Test 255.
1.        Where treated items are indicated to receive a transparent or paint finish, use a fire-retardant treatment which will not bleed through or adversely affect bond of finish.
  2.        Provide UL label or identifying mark on each piece of fire-retardant lumber.
  3.        Redry treated items to a maximum moisture content of 19 percent after treatment.
- B.    Fire-retardant Treated Plywood
- Comply with APA requirements.

## **2.06      FRAMING HARDWARE**

- A.    Fasteners and Anchoring Devices

Provide items of type, size, style, grade, and class as required for secure installation of the Work. Items shall be galvanized for exterior use. Unless shown or specified otherwise, comply with the following:

1.        Nails and Staples: FS FF-N-105.
2.        Wood Screws: FS FF-S-111.
3.        Bolts and Studs: FS FF-B-575.
4.        Nuts: FS FF-N-836.
5.        Washers: FS FF-W-92.
6.        Lag Bolts or Lag Screws: S FF-B-561.
7.        Masonry Anchoring Devices: Expansion shields, masonry nails and drive screws: FS FF-S-325.
8.        Toggle Bolts: FS FF-B-588.
9.        Bar or Strap Anchors: ASTM A575 carbon steel bars.
10.       (Not Used)
11.       (Not Used)



12. Metal Hangers and Framing Anchors: Size and type for intended use, galvanized finish, manufacturer's recommended fasteners.
13. Buck Anchors: Corrugated type, galvanized steel not lighter than 12 USS gage min, 4" wide (except where partitions are less than 4" thick) by 8" long, punched for two 5/16" carriage bolts at buck end.
14. Sleeper Anchors: Approved type, galvanized steel not lighter than 20 USS gage min, not less than 1-1/4" wide, designed to anchor into concrete not less than 1-1/2" and permit height adjustment of sleeper.

### **PART 3 - EXECUTION**

#### **3.01 EXAMINATION**

##### **A. Verification of Conditions**

Examine substrate and supporting structure on which rough carpentry is to be installed for defects that will adversely affect the execution and quality of the Work. Do not proceed with installation until unsatisfactory conditions are corrected.

#### **3.02 INSTALLATION - GENERAL**

- A. Do not use units of material with defects which impair the quality of the Work and units which are too small to fabricate the Work with minimum joints or with optimum joint arrangement.
- B. Install Work accurately to required lines and levels with members plumb and true, accurately cut and fitted and securely fastened. Closely fit rough carpentry to other associated construction.
- C. Securely attach carpentry Work to substrates by anchoring and fastening as indicated, or, if not indicated, as required by the referenced standards. Select fasteners of size that will not penetrate through members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; predrill as required. Set nail heads in exposed Work which is to be painted or stained and fill resulting holes.
- D. Fire-retardant Treated Wood
  1. Do not rip or mill; only end cuts, drilling holes and joining cuts shall be permitted.
  2. Where material is cut to length, shaped or grooved after treatment, surfaces thereby exposed shall be protected by tightly butting them against noncombustible or fire-retardant treated material, in accordance with the NYC Building Code. Drilled holes shall be covered with tightly fitting noncombustible cover plates.

### **3.03     WOOD FRAMING**

- A. Install framing members of nominal sizes indicated or of units built-up to dimensions indicated, at spacings shown. Construct required openings for installation of related work. Do not splice structural members between supports.
- B. Anchor and nail members as indicated. If not included, comply with recommendations of the NFPA.
- C. Install miscellaneous blocking and framing indicated and as required for attachment and support of facing materials, fixtures, specialty items, and trim.

### **3.04     WOOD NAILERS, BLOCKING, AND GROUNDS**

- A. Install required items where indicated and where required for support, attachment or screeding of other Work. Form to shapes indicated or required. Coordinate locations and cut and shim as required to provide items at true and level planes to receive Work to be attached. Install closure strips to nailers at all edges.
  - 1. Attach to substrates as indicated; if not indicated, size and space fasteners as required to support applied loading. Maximum spacing of fasteners shall not exceed 16". Unless otherwise shown on the Drawings, install and secure material to non-wood construction as follows:
    - a. To Concrete: Attach material less than 1-1/2" thick with screws and non-ferrous metal expansion shields. Attach materials 1-1/2" and thicker with machine bolts and non-ferrous metal compound type anchors.
    - b. (Not Used)
    - c. To Brick Masonry: Attach material to new masonry with annular ring nails driven into wall plugs. Attach material to existing masonry with machine screws and non-ferrous metal expansion shields.
    - d. To Steel: Attach material with galvanized bolts and nuts or stainless steel machine screws tapped into the metal, as required by conditions.
    - e. To Non-Ferrous Metal: Attach material with stainless steel or other approved non-ferrous metal bolts and nuts or self-tapping screws, as required by conditions.
  - 2. Counter-sink bolts and nuts flush with surfaces, unless otherwise shown. Build into masonry during installation of masonry Work. Where possible, anchor to formwork before concrete placement. Bevel both edges of members to be anchored in concrete. Shims shall be cedar shingles or redwood wedges.

### **3.05     PLYWOOD SHEATHING, SUBFLOORING, AND UNDERLAYMENT**

A.    Comply with printed installation requirements of the APA Design/Construction Guide, for plywood application required, unless otherwise indicated.

B.    (Not Used)

C.    Roof Sheathing

Install panels with face grain across supports. Provide supports at edges by use of clips, wood blocking, or T. & G. panels. Allow 1/16" spacing at panel ends; 1/8" spacing at edges.

Nail 6" o.c along edges and 12" o.c at intermediate supports.

D.    Wall Sheathing

Allow 1/16" spacing at panel ends and 1/8" spacing at edges.

Nail 6" o.c along panel edges and 12" o.c at intermediate supports.

E.    Nails

Common.

For plywood thickness to 1/2": 6d.

For plywood thickness greater than 1/2": 8d.

### **3.06     (Not Used)**

### **3.07     WOOD FURRING**

A.    Install members plumb and level with closure strips at all edges. Shim with wood as required to achieve tolerance specified.

1.    Fastening: Attach to substrates as indicated; if not indicated, attach material as specified for nailers and blocking.

2.    Tolerance: Shim and level wood furring to a tolerance of 1/8" in 10'.

3.    Furring to Receive Plywood Paneling: Unless otherwise indicated, 1" x 3" furring at 2' o.c, horizontally and vertically.

### **3.08     (Not Used)**

### **3.09     (Not Used)**

### **3.10     (Not Used)**

**3.11     PROTECTION OF STONWORK**

- A.    The top surfaces, projections, door jambs, sills, steps, ornamental work, of exterior stonework, where liable to damage, shall be protected by temporary boxing. Furnish and set boxing, using only galvanized nails, as soon as the stonework is set and maintain the boxing until the stonework is cleaned down. No material shall be used which will stain or damage the stonework.

**3.12     ROUGH HARDWARE**

- A.    Furnish and install all rough hardware, such as nails, bolts, buck anchors, clips, (including expansion and carriage bolts for wall seats, wardrobe brackets, etc.), and all other rough hardware required to secure the carpentry work in place, unless otherwise specified.

**END OF SECTION 06 10 00**

\* \* \*

## LIST OF SUBMITTALS

### SUBMITTAL DATE SUBMITTED

### DATE APPROVED

Quality Control Certificates:

1. Dip Treatment- Certification by treating plant stating chemical solutions used, submersion period, and conformance with applicable standards.
2. Pressure Treatment- Certification by treating plant stating chemicals and process used, net amount of chemical preservative retained, and conformance with specified standards.
3. Waterborne Preservatives- Certified written statement that moisture content of treated materials was reduced to a maximum of 19 percent prior to shipment to Project site.
4. Fire-Retardant Treatment- Certification by treating plant stating treated material complies with specified standards and treatment will not bleed through specified finishes. Submit BS/A and MEA approval certification.

\* \* \*



## **SECTION 07 14 70 - CRYSTALLINE WATERPROOFING**

### **PART 1 - GENERAL**

#### **1.01 DESCRIPTION OF WORK**

- A. Provide labor, materials, equipment, services to install crystalline waterproofing on walls and slabs as indicated.

#### **1.02 RELATED SECTIONS**

- A. Section 02 41 19 Selective Demolition

#### **1.03 REFERENCES**

References and industry standards listed in this Section are applicable to the Work. Unless more restrictive criteria or differing requirements are explicitly stated in the Specifications, or mandated by governing codes or regulations, the recommendations, suggestions, and requirements described in the referenced standards shall be deemed mandatory and applicable to the Work.

- A. International Concrete Repair Institute (ICRI)
- B. American Society of Testing and Materials (ASTM)
  - ASTM C109                      Standard Test Methods for compressive Strength of Hydraulic Cements
- C. US Army Corp of Engineers
  - CRD-C 48-92                      Method of Test for Water Permeability

#### **1.04 SUBMITTALS**

- A. Product Data
  - Provide manufacturer's information on the waterproofing material, including application instructions.
- B. Quality Control Submittals
  - 1. Certificates: Furnish manufacturer's certification that materials meet or exceed specification requirements.

2. Procedure: Submit written description of water-proofing procedures and operations sequencing based on manufacturer's requirements prior to commencing the Work.
3. Submit intent to warranty document from manufacturer of waterproofing with a performance guarantee against water penetration through waterproofing system for 5 years with any necessary replacement material and labor supplied at no cost to Owner.
4. Contractor Qualifications: Provide proof of installer qualifications specified under "Quality Assurance".

C. Warranty

Submit a printed 5-year manufacturer's warranty and installer's guarantee from the date of final completion as accepted by the Owner for the Work of this Section, describing type and period of coverage.

D. Mock-up

Provide mock-up as indicated under Quality Assurance.

## 1.05 QUALITY ASSURANCE

A. Qualifications

Waterproofing Installer: Company specializing in the installation of crystalline waterproofing shall have a minimum of five years successful experience and at least three similar installations of equal magnitude that have proven successful in all respects for a period of at least three years. Contractor shall be trained by the waterproofing manufacturer and shall have a certificate of training on file from the manufacturer.

B. Manufacturer's Representative

All work of this Section shall be performed under the supervision of the waterproofing material manufacturer's representative.

C. Job Mockups

Prior to performing the work of this Section, prepare a sample panel of not less than 25 sq. ft. of waterproofing work. Do not proceed further with the work until the sample panel has been approved by the Architect and Owner's representative. Sample shall be a portion of the area to be restored and may be kept if approved.

## 1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver the specified product in original, unopened containers with the manufacturer's name, labels, product identification and batch numbers.
- B. Store and condition the specified product as recommended by the manufacturer.
- C. Do not store liquid material in hot sun. Keep material from freezing.

## 1.07 ENVIRONMENTAL REQUIREMENTS

- A. Do not apply if the temperature unless surface temperature and ambient temperatures are 45-50°F and rising and below 85°F unless the material manufacturer is consulted for recommendations.
- B. Do not use frozen materials or materials coated with ice or frost.
- C. Protect from rain until material is completely dry.

## 1.08 WARRANTY

- A. Furnish both manufacturer's and installer's warranty/guarantee in a form satisfactory to the Owner that guarantees all Work for a period of five (5) years from the date of final completion as accepted by the Owner for the Work of this Section against any defects in workmanship or material and that this work will remain absolutely watertight for the entire period of the guarantee.
- B. Should any defects develop or any leaks occur in the Work within the guarantee period, such defects or leaks shall at once be remedied and made good without cost or expense to the Owner.

## PART 2 - PRODUCTS

### 2.01 MANUFACTURER

- A. Xypex Chemical Corporation, Richmond, BC, Canada
- B. Aquafin, Inc, Elkton, MD
- C. Kryton International, Inc, Vancouver, BC, Canada
- D. Vandex USA, Morrisville, PA

## 2.02 MATERIAL

### A. Crystalline Waterproofing

1. Chemically reactive material that when placed on concrete or masonry creates a crystalline structure preventing the passage of water.
  - a. Compressive strength 3000 psi @ 28 days  
ASTM C109
  - b. Permeability  
CRD-C48 or acceptable  
test by other agency
  - No measurable leakage  
when tested at 65 psi  
Positive or negative
2. Product
  - a. Xypex Concentrate by Xypex
  - b. Vandex Super White by Vandex Corp.
  - c. Aquafin IC by Aquafin
  - d. Krystol T1 and T2 by Kryton International

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Do not begin surface preparation and application of waterproofing compound until all cracks, joints, and surface defects are repaired. Verify that all reglets have been formed at joints to receive the material.

### 3.02 SURFACE PREPARATION

- A. All substrates shall be clean and sound, free of frost, dust, laitance, grease, curing compounds, waxes, impregnations, foreign particles, other coatings, and disintegrated materials. All projections, rough spots, etc., shall be dressed off.
- B. Rout out faulty joints or cracks exceeding .02" to 3/4" wide by 1" deep minimum, as well as honey combs. Repair defects according to manufacturer's instructions with manufacturer's repair product, which shall be included in the written procedure.
- C. Roughen form tie holes.

- D. Mechanically prepare surface by high-pressure waterblasting, shot blasting, or mechanical means to clean surface and provide the required surface profile. Provide an ICRI CSP 3 surface preparation (light shot blasting).
- E. Do not damage previously repaired surfaces and cracks.
- F. Rinse surfaces to be waterproofed several times so that concrete or masonry is thoroughly saturated. Remove any standing water, as surface is to be surface-saturated dry.

### 3.03 APPLICATION

- A. At all reglets, tie holes, and prepared cracks, mix material to consistency required by manufacturer and fill out with manufacturer's waterproofing patch product flush with adjacent surface, leaving a brush finish. Apply a slurry coat of material around the joint if required. Entire procedure is to be included in the Contractor's submittals. Follow manufacturer's instructions.
- B. Mix components in accordance with manufacturer's instructions and in correct proportions to a slurry consistency. Mixing of the components shall be done mechanically, using a low-speed (400-600 rpm) drill and jiffy paddle. Mix components in a clean, dry mixing container. Do not add water to mixture.
- C. Coating shall be applied only to approved prepared surfaces with trowels, high-quality brushes, rollers, or "hopper type" spray equipment. Immediately trowel the product level. Surface shall be saturated surface dry prior to application. For hot surfaces in direct sunlight, wet down surface with clean water then allow to surface dry prior to coating. Coating shall be applied at ambient and substrate temperatures between 45°F and 85°F.
- D. Apply material for slabs at a rate of 2 lb/sq.yd. (or as required by specific manufacturer) in one or two coats as recommended by manufacturer. For walls, apply in two coats. Base coat shall be applied at a rate of 1.25-1.4 lb/sq.yd (or as required by specific manufacturer). After initial set but while still "green", apply finish coat at a rate of 1.25-1.4 lb/sq.yd. Leave strokes in a parallel, uniform direction. Use light pre-watering between coats when rapid drying conditions occur.

### 3.04 TESTING

- A. After manufacturer's recommended curing period, fill tanks and pits with water and let stand for a week. Do not fill at a rate of greater than 6.5' in 24 hours. Should leakage occur, drain tanks and to perform repairs.
- B. Repair leaks by routing out large joints and cracks and installing manufacturer's water plug material. Apply additional applications of slurry at areas of fine cracks or seepage.



### 3.05 PROTECTION AND CLEANING

- A. Protect material from extreme heat and cold during the curing process using tarps or other means as recommended by the materials manufacturer.
- B. Clean material from adjacent surfaces not to be protected as well as residue from the protective measures (i.e. tape residue)
- C. Clean surface with 100 ppm chlorine water solution.

### 3.06 FIELD QUALITY CONTROL

- A. The Architect will inspect surfaces and reject any that contain cracks or other defects. These areas shall be fixed at Contractor's expense.
- B. Engage the services of the material manufacturer's representative to instruct in the proper usage of the material and to inspect the work throughout the project.

## **END OF SECTION 07 14 70 - CRYSTALLINE WATERPROOFING**

## **SECTION 07 15 00 - CHEMICAL RESIN INJECTION GROUTING**

### **PART 1 - GENERAL**

#### **1.01 DESCRIPTION OF WORK**

- A. Seal wet and dry fine cracks and joints in concrete and masonry by pressure injecting chemical resin into the walls and floor slab of the area indicated to prevent water leakage into the areas. Work includes, but not limited to, the following:
  - 1. Removal of all deposits of chemicals, oil and other foreign materials from walls and floor by solvents and steam cleaning from areas to be waterproofed.
  - 2. Injection of chemical resin to seal all the cracks and joints in all the areas indicated. Inject construction joints between slabs and walls as well as all other cracks and joints in slab and walls. Inject chemical grout through the slab and walls to create a positive side water barrier where indicated. Include all associated dewatering needed to perform the work.
  - 3. Clean all the work areas after completion.

#### **1.02 RELATED SECTIONS**

- A. N/A

#### **1.03 REFERENCES**

- A. New York City Board of Standard and Appeals (BSA)
- B. American Society for Testing and Materials (ASTM)
- C. American National Standard Institute (ANSI)

#### **1.04 SUBMITTALS**

- A. Product Data
  - 1. Provide manufacturer's information and technical data on the waterproofing materials.
- B. Samples
  - 1. Injection sealant materials, 1 each type.
  - 2. Packers

C. Quality Control Submittals

1. Certificates: Furnish manufacturer's certification that materials meet or exceed Specification requirements, including certified test laboratory reports as necessary for compliance with the requirements.
2. Manufacturer's Instructions: Furnish manufacturer's literature, specifications, and application instructions.
3. Procedure: Submit written description of water-proofing procedures and operations sequencing based on manufacturer's requirements prior to commencing the Work.
4. Submit intent to guarantee and warranty document with a performance guarantee against water penetration through waterproofing system for 5 years with any necessary replacement material and labor supplied at no cost to Owner.
5. Quantity of material: At the beginning of injection work, provide a list of batch numbers for the product shipped to the site and save lids/labels showing the quantity used to the designer and manufacturer's representative.
6. Contractor Qualifications: Provide proof of Manufacturer and Applicator qualifications specified under "Quality Assurance".

D. As-built Drawing: Provide drawing indicating all areas and specific joint/cracks injected. Also include all void areas injected.

E. Guarantee

Submit a printed 5-year manufacturer's warranty and installer's guarantee from the date of final completion as accepted by the Owner for the Work of this Section, describing type and period of coverage.

**1.05 QUALITY ASSURANCE**

- A. Qualifications: Company specializing in the waterproofing repair of cracks and barrier membrane injection shall have a minimum of three years experience and at least three similar installations of equal magnitude and installation techniques (two part acrylate injection, crack and barrier) that have proven successful in all respects for a period of at least three years. Contractor shall also be trained by the waterproofing manufacturer and certified in order to obtain the manufacturer's warranty.

B. Manufacturer's Representative

All work of this Section shall be performed under the supervision of the waterproofing material manufacturer's representative. The representative shall attend pre-construction meetings and make regular visits during the course of construction to ensure that method of installation is acceptable so that warranty will be obtained.

**1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver all materials in the manufacturer's sealed original container's bearing the manufacturer's name and product identification in a manner to prevent damage by breakage, water or moisture.
- B. Store and handle all products of this section in a strict compliance with the manufacturer's instructions.

**1.07 PROJECT CONDITIONS**

- A. Do not execute the Work of this section unless the Owner's Representative and/or Architect is present, or unless the Owner Representative directs that the Work be performed during the Representative's absence.
- B. Execute the work of the section in presence of the product manufacturer's representative.

**1.08 ENVIRONMENTAL REQUIREMENTS**

- A. Do not apply if the temperature is below 50°F or above 85°F unless the material manufacturer is consulted for recommendations.

**1.09 GUARANTEE AND WARRANTY**

A. Contractor's Guarantee

Five-year written guarantee from the date of final completion as accepted by the Owner for the Work of this Section covering defects in materials and workmanship. Maintenance Bond shall be provided for the entire five-year period and shall be equal to the original cost of installation.

B. Manufacturer's Warranty

In addition to the Contractor's guarantee, furnish the grout manufacturer's printed 5-year warranty from the date of final completion as accepted by the Owner for the Work of this Section. The warranty shall include but not be limited to, repair of leakage caused by defects in materials or workmanship at areas of repair. The monetary value of the warranty shall be at least equal to the original material cost of the installation.

- B. Should any defects develop or any leaks occur in the Work within the guarantee/warranty period, such defects or leaks shall at once be remedied and made good without cost or expense to the Owner.

## **PART 2 - PRODUCTS**

### **2.01 MANUFACTURERS**

- A. BBZ, USA, Greenstreak  
3400 Treecourt Ind. Blvd.  
St. Louis, MO 63129  
(1-800-814-4498)
- B. DeNeef Construction Chemicals  
5610 Brystone Dr  
Houston Tx 77041  
713-896-0123
- C. Aquafin, Inc.  
505 Blue Ball Rd., No.160  
Elkton, MD 21921  
(1-866-278-2346)

### **2.02 MATERIALS**

- A. General
1. Chemical resins are to be used for sealing concrete cracks and joints to prevent current or future water seepage. The selection of a particular material for use at a specific location shall be based on the nature of the crack or joints in relation to the materials properties.
  2. The non-foaming polyurethane gel and expanding polyurethane grout are intended for use in running water conditions or where moderate to large joints and cracks with active leakage are encountered, and otherwise as directed by the Architect/Engineer. They are injected prior to the installation of the acrylate-ester resin at the same location.
  3. The acrylate-ester water-swelling resin is intended for use in filling small to moderate sized cracks in concrete with little or minimal running water. It can also be used to create a positive side water barrier under slabs where numerous hairline cracks (40 mils or less) are present in a given area, making it impractical to inject into each individual hairline crack.



4. The expanding polyurethane is also intended for use in filling voids behind slabs and walls prior to injection to create a barrier with the acrylate ester resin.

B. Products

1. Non-foaming polyurethane gel
  - a. Two-component polyurethane resin capable of sealing large cracks and active leaks. Material shall be chemically resistant. Viscosity shall be less than 700 cp.
  - b. Material shall be:
    - 1) Duro-Rapid by BBZ
    - 2) Rapidflex-213 by Aquafin
2. Acrylate-ester water-swelling resin
  - a. Hydrophilic acrylate-ester resin, approximately 50% solids by weight prior to mixing, capable of infinite number of wet-dry cycles used for sealing small to moderate sized cracks with little or none active water. Viscosity shall be less than 5 cp.
  - b. Material shall be:
    - 1) Duroseal Inject 215 by BBZ
    - 2) Superflex by DeNeef
    - 3) PM3811 by Aquafin
3. Expanding Polyurethane Grout
  - a. Hydrophobic closed cell urethane expanding to at least 10 times its volume capable of sealing medium to large cracks and active leaks as well as filling voids, depending on product recommended by manufacturer. Material shall be compatible with the acrylate-ester water swelling resin and be acceptable to the acrylate ester manufacturer to ensure warranty will be attained.
  - b. Material shall be:
    - 1) Cut PRe by DeNeef

## **2.03 PRE-INJECTION GROUTING CONFERENCE**

- A. Before the injection grouting Work is scheduled to commence, a conference will be called by the Architect and the Owner's Representative at the site for the purpose of reviewing the Drawings and the Specifications and discussing requirements for the Work. The conference shall be attended by the Contractor, the injection applicator, the injection resin manufacturer's Company Field Advisor, the Owner's CID inspector and the Architect/Engineer of Record.

## **PART 3 - EXECUTION**

### **3.01 EXAMINATION**

- A. Examine all adjoining work on which this Work is in anyway dependent for proper installation and workmanship. Report to the Owner and Architect any conditions that prevent the performance of this Work.
- B. Prior to beginning injection for barrier wall work, Contractor shall drill test holes through slab/wall to determine if void spaces are noted (ensure holes are repairs such they don't leak). If void spaces are found, notify the Architect/Engineer of Record for inspection and drill holes in their presence for verification.

### **3.02 SURFACE PREPARATION AND PROTECTION**

- A. Remove paint, oil, and foreign material off all concrete surfaces of area to be waterproofed prior to injection using solvents and steam cleaning. Remove water to map cracks and allow inspection by the Architect/Engineer of Record.
- B. Protect adjacent areas from chemicals.
- C. Keep area dry by mopping and pumping in order to place material and determine crack location.
- D. Clean surface of injection area to locate crack.
- E. Preparatory Work
  - 1. Joint/Crack injection

- a. Drill holes diagonally at a 45° angle to intersect crack or joint. Hole diameter shall suit injection packer size. Injection packer shall be acceptable to the grout manufacturer.
- b. Distance from starting of hole to crack or joint shall be equal to one-half the thickness of the structural slab or wall. This will be usually be determined by trial and error.
- c. If the repair is at a crack, holes should be spaced on both sides and alternating to ensure that at least one-half of the total number of holes shall intersect the crack.
- d. Spacing of holes shall be dependent upon crack width and chemical grout material viscosity to ensure continuity of seal within the crack or joint. Spacing of holes should not exceed 1'-6" on center, unless demonstrated to be effective at a greater spacing.

## 2. Barrier Injection

- a. Drill holes perpendicular to surface through the wall/slab. If there are obstructions to the pattern, holes may be drilled at an angle to ensure complete coverage.
- b. Spacing of holes should not exceed 1'-6" on center with each line of holes offset from those rows above and below by one half the distance between the holes (creating a diamond pattern). Wider spacing may only be used if it is demonstrated to be effective at producing port to port continuity in the presence of the Owner, Architect and manufacturer's representative.
- c. When injecting through masonry, install a tube or extended packer, depending on the quality of the masonry, through the wall to ensure that the resin is getting to the soil behind and not into the void spaces in the masonry. Another option is to use expanding polyurethane grout injected into the drill hole to fill the hole and any immediate voids surrounding the hole and then the holed re-drilled through the grout to create a path for the resin injection to get to the exterior.

### 3.03 INJECTION WORK

- A. For barrier injection work, if preconstruction drill holes indicate voids, inject expanding polyurethane grout or cement grout as determined by the Architect/Engineer of Record prior to injection of the acrylate ester. Drill holes at appropriate spacing to fill voids (beyond provisions included in the contract for such).

- B. Prepare components as per manufacturer's instructions. Add accelerator to suit field conditions, including, but not limited to, water flow, surface being injected, ambient temperature, crack or joint width, etc. Process chemical resin materials using appropriate protective gear including gloves, mask or goggles, and appropriate clothing. Follow manufacturer's recommendation for product safety guidelines.
- C. For cracks and construction/cold joints, flush the crack with clean water prior to injection of the resin. Typical pressure needed to flush a crack shall be between 200 and 300 psi. The flushing may reveal blind drill holes, voids, cavities, honeycombs that require special treatment. Modify application procedure as required. After flushing is completed at one injector, the Contractor shall repeat the procedure at the next injector until all have been flushed.
- D. Using suitable power stainless steel pumping equipment acceptable to the manufacturer, pump components through a suitable static mixer to ensure homogeneous blending of the components. Static mixer shall be firmly coupled to injection packer to make sure residue does not clog. During pumping operations, take proper precautions against loose or spalled concrete dislodging and falling.
- E. If injection packers have been left out of holes to verify material travels, once material is observed at the next hole, a packer shall be securely placed in that hole. Begin pumping at that next packer. If all packers have been installed prior to pumping, when material flow has been observed exiting crack or joint adjacent to another packer, begin pumping at that packer. Packers that have removable zerks, such as SealBoss S-type, allow applicator to fully install packers and observe material flowing through the adjacent packer. The zerk connector is then inserted to inject that packer.
- F. If water is actively flowing, use the two-component non-foaming polyurethane gel or expanding polyurethane grout to prevent water from flowing. After the water is stopped, reinject the same crack/joint with the acrylate-ester resin. Other cracks and joints shall be repaired by using the acrylate-ester resin to create a barrier.
- G. Should set time need to be hastened, accelerator may be added in accordance with manufacturer's recommendation and Injection Contractor's experience.
- H. When work is either complete or temporarily halted, flush static mixer with manufacturer's recommended solvent to prevent clogging.
- I. Injection pressures shall be kept as low as possible to allow material to thoroughly permeate the full depth of the crack or joint or to fill the interstitial void spaces in the soil behind the wall/slab.
- J. Inject all packers until no further chemical resin can be pumped.

- K. If during the barrier injection process the Injection Contractor suspects that a void exists behind and/or beneath the wall/slab substrate after pumping more than five (5) gallons of mixed injection resin into an injection port installed in a vertical wall and/or seven (7) gallons into a floor slab, he/she should cease all pumping activities and immediately notify the Owner's Representative and the Architect/Engineer of Record.
1. This contact and notification must take place within 24 hours of the work stoppage.
  2. A jobsite meeting should be organized to include all parties involved, i.e., General Contractor, injection sub-contractor, Authorities Representative, Architect/Engineer of Record, and manufacturer's representative.
  3. During this meeting, the area in question should be identified and investigated, which may not have been found during the preconstruction drilling. A detailed plan will be discussed and formulated to ascertain what steps may be necessary to remediate the problem. Remedial work may require the void space to be filled with expanding polyurethane grout or cement grout by injection to fill the void prior to injecting the area further. The Contractor will be paid extra for the work in the area requiring the remedial grout injection work (beyond provisions included in the contract for such).
- J. If crack or joint continues to leak, drill hole(s) in accordance with above procedures at the leaking segment(s) and repeat procedures for injection.
- K. Remove the ports after work is complete. Remove at least 1" of injection material from the top 1" of the hole and fill hole with hydraulic cement, matching the texture of the existing concrete surface.

### **3.04 CLEANING AND PROTECTION**

- A. Clean all adjacent areas of excess material; powder, resin, and droppings.

### **3.05 FIELD QUALITY CONTROL**

- A. The Architect representative will inspect the work to verify the drill pattern and determine if testing is required to verify to drill holes penetrated the required distance and grouting was performed. The Contractor shall include in the bid the cost of mobilization, labor and material for one day to drill and re-grout approximately 10 to 20 holes. If holes are determined to not have been properly done and thus the grouting incomplete, additional test holes at the contractor's expense shall be performed, including all remedial work.
- B. All work is to be done under the supervision of the manufacturer's representative. Manufacturer's representative shall make regular inspections during the work in addition to preconstruction meeting.



**END OF SECTION 07 15 00 - CHEMICAL RESIN INJECTION GROUTING**

## **SECTION 07 51 13 - MODIFIED BITUMEN MEMBRANE WATERPROOFING**

### **PART 1 GENERAL**

#### **1.01 SECTION INCLUDES:**

- A. PREPARATION OF EXISTING DECK AND ROOF SYSTEM SELECTIVE AREAS TO RECEIVE ROOFING MATERIALS
- B. ROOF MEMBRANE APPLICATION
- C. ROOF FLUID APPLIED FLASHING APPLICATION
- D. ROOF PROTECTION SYSTEM APPLICATION
- E. INCORPORATION OF SHEET METAL FLASHING COMPONENTS AND ROOFING ACCESSORIES INTO THE ROOF SYSTEM

#### **1.02 PRODUCTS INSTALLED BUT NOT FURNISHED UNDER THIS SECTION**

- A. SHEET METAL FLASHING AND TRIM
- B. SHEET METAL ROOFING SPECIALTIES

#### **1.03 RELATED SECTIONS**

- A. SECTION 06 10 00 - ROUGH CARPENTRY
- B. SECTION 03 01 00 – CONCRETE REPAIR
- C. SECTION 07 92 00 – JOINT SEALERS
- D. SECTION 22 14 26 - DRAINS

#### **1.04 REFERENCE STANDARDS**

References in these specifications to standards, test methods, codes etc., are implied to mean the latest edition of each such standard adopted. The following is an abbreviated list of associations, institutions, and societies which may be used as references throughout these specifications.

ASTM	American Society for Testing and Materials Philadelphia, PA (215) 299-5585
BOCA	Building Officials and Code Administrators International, Inc. Country Club Hills, IL (708) 799-2300
FM	Factory Mutual Engineering and Research Norwood, MA (617) 762-4300

ICBO	International Conference of Building Officials Whittier, CA (562) 699-0541
NRCA	National Roofing Contractors Association Rosemont, IL (847) 299-9070
OSHA	Occupational Safety and Health Administration Washington, DC (202) 523-1452
SMACNA	Sheet Metal and Air Conditioning Contractors National Association Chantilly, VA (703) 803-2980
UL	Underwriters Laboratories Northbrook, IL (708) 272-8800

#### 1.05 DESCRIPTION OF WORK

The basic work descriptions (components, layering and attachment methods) required in this specification are referenced below. See also Parts 2 & 3 for specific products, preparation, application and details.

PROJECT TYPE: Tear-off

DECK: Concrete

SLOPE: Less than 1/2 inch

SUBSTRATE PREPARATION: Prime with asphalt primer, at a rate of 100 square feet per gallon.

VAPOR BARRIER: Siplast Irex 40, torch applied;

ROOF SYSTEM: Paradiene 20TG, torch applied;  
Teranap 1m Sanded Finish, torch applied.

FLASHING SYSTEM: Siplast Parapro 123 fluid applied reinforced flashing system.

PROTECTION LAYER: Siplast Paradrain Drainage Mat, loose laid.

INSULATION: Extruded polystyrene insulation, having a minimum thickness of 2 inches, loose laid.

PAVERS (RE-USE): Asphalt Paver system over pourous asphalt setting bed, installed in strict accordance with the requirements of paver manufacturer.

SPECIFIED GUARANTEE: Twenty Five year Teranap Waterproofing Guarantee.

#### 1.06 SUBMITTALS

All submittals which do not conform to the following requirements will be rejected.

A. SUBMITTALS OF EQUALS. Submit primary roof systems to be considered as equals to the specified roof system no less than 10 days prior to bid date. Primary roof systems which have been reviewed and accepted as equals to the specified roof system will be listed in an addendum prior to bid date; only then will equals be accepted at bidding. Include the following submittals of equals prior to bid:

1. Two 3 inch x 5 inch samples of the primary roofing and flashing sheets.
2. Latest edition of the roofing system manufacturer's specifications and installation instructions.
3. Descriptive list of the materials proposed for use.
4. Letter from the proposed primary roofing manufacturer confirming the number of years it has directly manufactured the proposed primary roofing system under the trade name and/or trademarks as proposed.
5. List of three (3) of the manufacturer's projects, located in the United States, of equal size and degree of difficulty which have been performing successfully for a period of at least five (5) years.
6. Complete list of material physical and mechanical properties for each sheet including: weights and thicknesses; low temperature flexibility; breaking load; ultimate elongation; dimensional stability; compound stability; granule embedment and resistance to thermal shock (foil faced products).
7. Sample copy of the specified guarantee.

B. SUBMITTALS PRIOR TO CONTRACT AWARD:

1. Letter from the proposed primary roofing manufacturer confirming that the bidder is an acceptable Contractor authorized to install the proposed system.
2. Letter from the primary roofing manufacturer stating that the proposed application will comply with the manufacturer's requirements in order to qualify the project for the specified guarantee.

C. SUBMITTALS PRIOR TO PROJECT CLOSE-OUT:

1. Manufacturer's printed recommendations for proper maintenance of the specified roof system including inspection frequencies, penetration addition policies, temporary repairs, and leak call procedures.

#### 1.07 QUALITY ASSURANCE

- A. ACCEPTABLE PRODUCTS. Primary roofing products, including each type of sheet, all manufactured in the United States, shall be supplied by a single manufacturer which has been successfully producing the specified types of primary products for not less than 10 years. Secondary or accessory products shall be acceptable to the manufacturer of the primary roofing products.
- B. ACCEPTABLE CONTRACTOR. Contractor shall have a minimum of 2 years experience in successfully installing the same or similar roofing materials and be certified in writing by the roofing materials manufacturer to install the primary roofing products.

- C. **SCOPE OF WORK.** The work to be performed under this specification shall include but is not limited to the following: Attend necessary job meetings and furnish competent and full time supervision, experienced roof mechanics, all materials, tools, and equipment necessary to complete, in an acceptable manner, the roof installation in accordance with this specification. Comply with the latest written application instructions of the manufacturer of the primary roofing products. In addition, application practice shall comply with requirements and recommendations contained in the latest edition of the Handbook of Accepted Roofing Knowledge (HARK) as published by the National Roofing Contractor's Association, amended to include the acceptance of a phased roof system installation.
- D. **LOCAL REGULATIONS.** Conform to regulations of public agencies, including any specific requirements of the city and/or state of jurisdiction.
- E. **MANUFACTURER REQUIREMENTS.** Ensure that the primary roofing materials manufacturer provides direct trained company personnel to attend necessary job meetings, perform periodic inspections as necessary, and conducts a final inspection upon successful completion of the project.
- F. **FLOOD TESTING:** Perform flood tests in areas where work is completed prior to installation of overburden.

#### 1.08 PRODUCT DELIVERY STORAGE AND HANDLING

- A. **DELIVERY.** Deliver materials in the manufacturer's original sealed and labeled containers and in quantities required to allow continuity of application.
- B. **STORAGE.** Store materials out of direct exposure to the elements. Store roll goods on a clean, flat and dry surface. All material stored on the roof overnight shall be stored on pallets. Rolls of roofing must be stored on ends. Store materials on the roof in a manner so as to preclude overloading of deck and building structure. Store materials such as solvents, adhesives and asphalt cutback products away from open flames, sparks or excessive heat. Cover all material using a breathable cover such as a canvas. Polyethylene or other non-breathable plastic coverings are not acceptable.
- C. **HANDLING.** Handle all materials in such a manner as to preclude damage and contamination with moisture or foreign matter. Handle rolled goods to prevent damage to edges or ends.
- D. **DAMAGED MATERIAL.** Any materials that are found to be damaged or stored in any manner other than stated above will be automatically rejected, removed and replaced at the Contractor's expense.

#### 1.09 PROJECT/SITE CONDITIONS

##### A. REQUIREMENTS PRIOR TO JOB START

- 1. **NOTIFICATION.** Give a minimum of 5 days notice to the Owner and manufacturer prior to commencing any work and notify both parties on a daily basis of any change in work schedule.
- 2. **PERMITS.** Obtain all permits required by local agencies and pay all fees which may be required for the performance of the work.



3. SAFETY. Familiarize every member of the application crew with all fire and safety regulations recommended by OSHA, NRCA and other industry or local governmental groups.

#### B. ENVIRONMENTAL REQUIREMENTS

1. PRECIPITATION: Do not apply roofing materials during precipitation or in the event there is a probability of precipitation during application. Take adequate precautions to ensure that materials, applied roofing, and building interiors are protected from possible moisture damage or contamination.
2. LOW TEMPERATURES: Do not apply Parapro 123 fluid reinforced flashing system if outside temperature is predicted to fall below 23 degrees F.

#### C. PROTECTION REQUIREMENTS

1. MEMBRANE PROTECTION. Provide protection against staining and mechanical damage for newly applied roofing and adjacent surfaces throughout this project.
2. TORCH SAFETY: Designate one person on each crew to perform a daily fire watch. The designated crew member shall watch for fires or smoldering materials on all areas of roof construction. Continue the fire watch for one hour after roofing material application has been suspended for the day.
3. LIMITED ACCESS. Prevent access by the public to materials, tools and equipment during the course of the project.
4. DEBRIS REMOVAL. Remove all debris daily from the project site and take to a legal dumping area authorized to receive such materials.
5. SITE CONDITION. Complete, to the owner's satisfaction, all job site clean-up including building interior, exterior and landscaping where affected by the construction.

### 1.10 GUARANTEE/WARRANTY

- A. ROOF MEMBRANE GUARANTEE. Upon successful completion of the project, and after all post installation procedures have been completed, furnish the Owner with the Manufacturer's twenty five (25) year labor and materials membrane guarantee. The guarantee shall be a term type, without deductibles or limitations on coverage amount.

> Siplast twenty five year Teranap Waterproofing Guarantee

## PART 2 PRODUCTS

### 2.01 ROOFING SYSTEM ASSEMBLY/PRODUCTS

- A. VAPOR BARRIER PLY SHEET. A fiberglass reinforced specially oxidized asphalt coated sheet having an minimum weight of 70 lb./square. Type: Siplast Irex 40.

- B. ROOFING MEMBRANE SYSTEM. A roof membrane system consisting of two (2) plies of a prefabricated, torch grade Styrene-Butadiene-Styrene (SBS) copolymer modified asphalt system secured to a prepared substrate. The modified bitumen base ply and modified bitumen finish ply shall be prefabricated using a fiberglass mat reinforcement. Both reinforcement mats shall be impregnated and coated each side with a high quality SBS modified bitumen blend. Both modified bitumen sheets shall be coated on one side with a high quality torch grade SBS bitumen blend. The adhesive layer shall be manufactured using a process that embosses the surface with a grooved pattern to provide optimum burn-off of the plastic film and to maximize application rates. The modified bitumen base sheet shall possess waterproofing capability, such that a phased roof application, with only the modified bitumen base ply in place, can be achieved for prolonged periods of time without detriment to the watertight integrity of the entire roof system.

> Siplast Paradiene 20 TG/Teranap - torchable roof system

1. MODIFIED BITUMEN BASE PLY, STRIPPING PLY AND FLASHING REINFORCING SHEET

- a) Thickness (avg.): 114 mils - 2.9 mm
- b) Weight (avg. per 100 ft<sup>2</sup> of coverage) - 80 lbs - 3.9 kg/m<sup>2</sup>
- c) Low temperature flexibility @ 13° F (-25° C) - PASS (ASTM D 5147)
- d) Breaking Load (avg.) @ 73° F - 30 lbf/inch (ASTM D 5147)
- e) Ultimate Elongation (avg.) @ 73° F - 50% (ASTM D 5147)
- f) Compound Stability (min.) - 248° F (120° C)
- g) Approvals - UL Class listed, FM Approved (products shall bear seals of approval)
- h) Reinforcement - fiberglass mat

> Siplast Paradiene 20TG

2. MODIFIED BITUMEN FINISH PLY

- a) Thickness (avg.): 160 mils - 4.0 mm
- b) Weight (per 100 ft<sup>2</sup>) - 90 lbs - 4.4 kg/sq m
- c) Low temperature flexibility @ -13° F (-25° C) - PASS (ASTM D 5147)
- d) Breaking Load (avg.) @ 73° F - 70 lbf/inch (ASTM D 5147)
- e) Ultimate Elongation (avg.) @ 73° F - 90% (ASTM D 5147)
- f) Compound Stability (min.) - 248° F (120° C)
- h) Reinforcement - non woven polyester geotextile
- l) Surfacing – Sanded Surface

> Siplast Teranap 1M Sand/Sand

- C. FLASHING MEMBRANE ASSEMBLY. Resin for Flashing Applications: A multi-component, flexible, polymethylmethacrylate (PMMA) based resin combined with a thixotropic agent for use in combination with fleece fabric to form a monolithic, reinforced flashing membrane.

> Parapro 123 fluid reinforced flashing system

## 1. REINFORCED FLUID APPLIED PMMA FLASHING SYSTEM

- a) Catalyst: A reactive agent used to induce curing of polymethylmethacrylate (PMMA) resins.
  - > Pro Catalyst by Siplast; Irving, TX
- b) Fleece for Membrane and Flashing Reinforcement: A non-woven, 110 g/m<sup>2</sup>, needle-punched polyester fabric reinforcement as supplied by the membrane system manufacturer.
  - > Pro Fleece by Siplast; Irving, TX
- c) Resin for Flashing Applications: A multi-component, flexible, polymethylmethacrylate (PMMA) based resin combined with a thixotropic agent for use in combination with fleece fabric to form a monolithic, reinforced flashing membrane.
  - > Parapro Flashing Resin by Siplast; Irving, TX

## D. PROTECTION SYSTEM. A protection system consisting of the following components:

- 1. PREFABRICATED DRAINAGE PANEL. A multi directional core, geotextile covered, high flow capacity, interlocking, high compression strength prefabricated drainage panel.
  - > Paradrain manufactured by Siplast – 1-800-922-8800
- 2. INSULATION
  - a) EXTRUDED POLYSTYRENE. (XEPS) A continuous closed-cell polystyrene foam panel conforming to ASTM C 578-87 TYPE IV and ICBO 2257, BOCA 86-98, or SBCCI 8774. Thickness shall be minimum two (2").
    - > The acceptable XEPS type is PlazaMate brand by the Dow Chemical.

## 2.02 ROOFING ACCESSORIES

### A. ROOFING ADHESIVES

- 1. FLASHING ADHESIVE. A slump resistant, asphalt cutback flashing adhesive, reinforced with non-asbestos fibers, conforming to ASTM D 4586 Type II requirements.
  - > Siplast PA-828 Flashing Cement

### B. BITUMINOUS CUTBACK MATERIALS

- 1. PRIMER. A high flash, quick drying, asphalt low solvent blend which meets or exceeds ASTM D 41 requirements.
  - > Siplast PA-917LS Asphalt Primer

2. MASTICS. An asphalt cutback mastic, reinforced with non-asbestos fibers, used as a base for setting metal flanges conforming to ASTM D 4586 Type II requirements.

- > Siplast PA-1021 Plastic Cement

#### C. PMMA Primers

1. PMMA Primer for Concrete/Masonry/Wood/Plywood Substrates: A two component, PMMA based primer for use over concrete, concrete repair materials, masonry substrates and wood/plywood substrates.

- > Pro Primer W by Siplast; Irving, TX

2. PMMA Primer for Asphaltic Substrates: A two component, fast-curing, PMMA based primer for use over asphaltic materials.

- > Pro Primer R by Siplast; Irving, TX

- #### D. Preparation Paste: A multi-component, fast curing, PMMA based paste used for remediation of depressions in substrate surfaces or other irregularities.

- > Pro Paste Resin by Siplast; Irving, TX

- #### E. CAULKING/SEALANTS. A single component, high performance, elastomeric sealant conforming to ASTM D 232, ASTM C 920, or ASTM C 920. Acceptable types are as follows:

- > Tremseal by TREMCO; Cleveland, OH (216) 292-5000

- > Sonolastic NP 1 by Sonneborn Building Products; Minneapolis, MN (612) 922-7090

- > Black Jack No. 1010 by Gibson-Homans; Twinsburg, OH (216) 425-3255

- #### F. Preparation Paste: A multi-component, fast curing, PMMA based paste used for remediation of depressions in substrate surfaces or other irregularities.

- > Pro Paste Resin by Siplast; Irving, TX

- #### G. CAULKING/SEALANTS. A single component, high performance, elastomeric sealant conforming to ASTM D 232, ASTM C 920, or ASTM C 920. Acceptable types are as follows:

- > Tremseal by TREMCO; Cleveland, OH (216) 292-5000

- > Sonolastic NP 1 by Sonneborn Building Products; Minneapolis, MN (612) 922-7090

## PART 3 EXECUTION

### 3.01 PREPARATION

- A. GENERAL. Sweep or vacuum all surfaces, removing all loose aggregate and foreign substances prior to commencement of roofing.
- B. REMOVE ALL EXISTING:
  - Roof membrane
  - Base flashings
  - Edge metal
  - Flanged metal flashings
  - Cants, wood blocking
  - Walkways
  - Non functional penetrations/curbs
  - Drain assemblies
  - Metal trim, counterflashing, etc.

### 3.02 SUBSTRATE PREPARATION

- A. PREPARATION OF THE EXISTING MEMBRANE SURFACE. Prime the surface of the existing roof membrane using PA-917LS Primer at the rate of 1 gallon per 100 square feet of surface.
- B. VAPOR BARRIER APPLICATION. Torch apply the ply sheets directly to the prepared surface lapping sides and ends a minimum of three (3) inches. Apply the sheets free of wrinkles, creases or fishmouths and exert sufficient pressure on the roll during application to ensure the prevention of air pockets. Seal each penetration and termination using fiberglass tape and the specified plastic cement to ensure that the temporary roof configuration is completely water-tight.

### 3.03 ROOF MEMBRANE INSTALLATION

- A. MEMBRANE APPLICATION. Apply roofing in accordance with roofing system manufacturer's instructions and the following requirements. Application of roofing membrane components shall immediately follow application of base sheet and/or insulation as a continuous operation.
- B. AESTHETIC CONSIDERATIONS. An aesthetically pleasing overall appearance of the finished roof application is a standard requirement for this project. Make necessary preparations, utilize recommended application techniques, apply the specified materials (i.e. granules, metallic powder, etc.), and exercise care in ensuring that the finished application is acceptable to the Owner.
- C. PRIMING. Prime metal flanges (all jacks, edge metal, lead drain flashings, etc.) and concrete and masonry surfaces with a uniform coating of ASTM D 41 asphalt primer.
- D. BITUMEN CONSISTENCY. Cutting or alterations of bitumen, primer, and sealants will not be permitted.



- E. ROOFING APPLICATION. Apply all layers of roofing free of wrinkles, creases or fishmouths. Exert sufficient pressure on the roll during application to ensure prevention of air pockets. Stagger the lap seams between the base ply layer and the finish ply layer. Stagger the courses to ensure this.
1. Apply all layers of roofing perpendicular to the slope of the deck.
  2. Fully bond the base ply to the prepared substrate, utilizing minimum 3 inch side and end laps. Apply each sheet directly behind the torch applicator. Stagger end laps a minimum of 3 feet.
  3. Fully bond the finish ply to the base ply, utilizing minimum 6 inch side and end laps. Apply each sheet directly behind the torch applicator. Stagger end laps of the finish ply a minimum 3 feet. Stagger side laps of the finish ply a minimum 12 inches from side laps in the underlying base ply. Stagger end laps of the finish ply a minimum 3 feet from end laps in the underlying base ply.
  4. Maximum sheet lengths and special fastening of the specified roof membrane system may be required at various slope increments where the roof deck slope exceeds 1/2 inch per foot. The manufacturer shall provide acceptable sheet lengths and the required fastening schedule for all roofing sheet applications to applicable roof slopes.
- F. FLASHING APPLICATION -MIXING OF RESIN PRODUCTS. Preparation/Mixing/Catalyzing Resin Products: Pour the desired quantity of resin into a clean container and using a spiral mixer or mixing paddle, stir the liquid for the time period specified by the resin manufacturer. Calculate the amount of catalyst powder needed using the manufacturers guidelines and add the pre-measured catalyst to the primer. Mix again for the time period specified by the resin manufacturer, ensuring that the product is free from swirls and bubbles. It is imperative that air is not entrained into the product during the mixing process. To avoid aeration, do not use a spiral mixer unless the spiral section of the mixer can be fully contained in the liquid during the mixing process. Mix only enough product to ensure that it can be applied before expiration of resin pot life.
- G. REINFORCED FLUID APPLIED PMMA FLASHING APPLICATION
1. Using masking tape, mask the perimeter of the area to receive the flashing system. Apply resin primer to substrates requiring additional preparation and allow primer to set. Prepare surface of Teranap finish ply to receive fluid applied flashing by removing protective polyester resin with open flame torch.
  2. Pre-cut fleece to ensure a proper fit at transitions and corners prior to membrane application.
  3. Apply an even, generous base coat of flashing resin using a roller at the rate of 19 kg/sq (2.0 kg/m<sup>2</sup>) to prepared surfaces requiring flashing coverage. Work the fleece into the wet, catalyzed resin using a brush or roller to fully embed the fleece in the resin and remove trapped air. Lap fleece layers a minimum of 2 inch (5 cm) and apply an additional coat of catalyzed resin between layers of overlapping fleece. Again using a roller, apply an even top coat of catalyzed resin at the rate of 12 kg/sq (1.3 kg/m<sup>2</sup>) immediately following embedment of the fleece, ensuring full saturation of the fleece. Ensure that the flashing resin is applied to extend a 0.25 inch (6 mm) beyond the fleece. Remove the tape before the catalyzed resin sets. Make allowances for saturation of roller covers and application equipment.

4. Should work be interrupted for more than 12 hours or the surface of the catalyzed resin becomes dirty or contaminated by the elements, wipe the surface to be lapped with new flashing resin using the specified cleaner/solvent. Allow the surface to dry for a minimum 20 minutes and a maximum 60 minutes before continuing work.
- H. WATER CUT-OFF. At end of day's work, or when precipitation is imminent, construct a water cut-off at all open edges. Cut-offs can be built using asphalt or plastic cement and roofing felts, constructed to withstand protracted periods of service. Cut-offs must be completely removed prior to the resumption of roofing.

### 3.04 ROOF SYSTEM INTERFACE WITH RELATED COMPONENTS

The following is a list of verbal descriptions for correct installation of components integrated into the roof membrane assembly. In all cases, unless otherwise approved, incorporate flanged components into the system between the application of the base ply and the finish ply. The flange must be primed with a uniform coating of approved ASTM D 41 asphalt primer and allowed to dry thoroughly; all flanges must be set in approved mastic.

- A. EDGE METAL. Completely prime metal flanges and allow to dry prior to installation. Turn the base ply down 2 inches past the roof edge and over the nailer. After the base ply and continuous cleat (if applicable) have been installed, set the flange in mastic and stagger nail every 3 inches on center. Strip-in the flange using the stripping-ply material, extending a minimum of 4 inches beyond the edge of the flange. Terminate the finish ply at the gravel-stop rise of the edge metal. SEE ITEM: SEALANT, for finish of this detail.
- B. LEAD PIPE FLASHINGS. Completely prime the lead flanges and allow to dry prior to installation. After the base ply has been applied, set the flange in mastic and strip-in the flange using the stripping-ply material, extending a minimum of 4 inches beyond the edge of the flange. Terminate the finish ply at the flange-sleeve juncture of the pipe flashing. SEE ITEM: SEALANT for finish of this detail.
- C. LEAD DRAIN FLASHINGS. Completely prime the lead drain flashing and allow to dry prior to installation. After the base ply has been applied, set the lead flashing sheet in mastic and form to turn down inside of the drain bowl. Ply-in the perimeter of the lead flashing using an additional layer of the base ply material, overlapping the perimeter of the lead a minimum of 4 inches. Terminate the finish ply to extend beneath the clamping ring seal. Install the clamping ring with all clamps, bolts etc., in place.
- D. METAL PIPE FLASHINGS. Completely prime the metal pipe flanges and allow to dry prior to installation. After the base ply has been applied, set the flanges in mastic and strip-in the flange using the stripping-ply material, extending a minimum of 4 inches beyond the edge of the flange. Terminate the finish ply at the flange-sleeve juncture of the pipe flashing. Install a watertight umbrella to the penetration, completely covering the opening of the pipe flashing. SEE ITEM: SEALANT for finish of this detail.
- E. SEALANT. Caulk all exposed finish ply edges at gravel stops, waste stacks, pitch pans, vent stacks, etc..., with a smooth continuous bead of approved sealant.

### 3.05 MEMBRANE PROTECTION - APPLICATION

<p>* NOTE: The roof membrane system must be inspected by the manufacturer's representative prior to installation of the protection system. The manufacturer's representative will compile</p>
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required punchlist items indicating any deficiencies in the roof membrane and flashing membrane system that shall be corrected before the installation will be accepted.

- A. GENERAL. All application of roofing, detailing, shall be completed; all surfaces shall be clean, free of debris, etc.
- B. MEMBRANE PROTECTION LAYER. Place the specified drainage mat unadhered directly over all areas of the newly applied membrane, extending to walls, curbs, and other related junctures. Lap the utilizing factory applied selvage side and end.
- C. INSULATION. Install of the specified insulation unadhered directly over the membrane protection layer, in strict accordance with the insulation manufacturer's requirements and the following recommendations.
  - 1. All end joints must be staggered.
  - 2. Install the panels to fit tightly; leaving a maximum acceptable opening between panels of three-eighths (3/8) inch.
  - 3. Closely abut walls, penetrations and projections with the panels; leave a maximum opening between insulation panels and projections of three-quarter (3/4) inch.
  - 4. Where insulation is installed in multi-layer configurations, use the following modifications.
    - a) The bottom layer must be a minimum two (2) inches in thickness;
    - b) The lower layer must be the thickest;
    - c) Stagger all joints in relation to underlying layers;
    - d) Install all layers unadhered.

### 3.06 FIELD QUALITY CONTROL AND INSPECTIONS

- A. SITE CONDITION. Leave all areas around job site free of debris, roofing materials, equipment and related items after completion of job.
- B. NOTIFICATION OF COMPLETION. Notify the manufacturer by means of manufacturer's printed Notification of Completion form of job completion in order to schedule a final inspection date.
- C. FINAL INSPECTION
  - 1. POST-INSTALLATION MEETING. Hold a meeting at the completion of the project, attended by all parties that were present at the pre-job conference. A punch list of items required for completion shall be compiled by the Contractor and the manufacturer's representative. Complete, sign, and mail the punch list form to the manufacturer's headquarters.
  - 2. DRAIN VERIFICATION. At final inspection of all work, verify that all drains, scuppers, etc., are functioning properly. Ensure that roof drains have adequate strainers.

- D. ISSUANCE OF THE GUARANTEE. Complete all post installation procedures and meet the manufacturer's final endorsement for issuance of the specified guarantee.

## **SECTION 07600 - FLASHING AND SHEET METAL**

### **PART 1 - GENERAL**

#### **1.01 GENERAL PROVISIONS**

- A. Drawings and General Provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to work of this Section.

#### **1.02 SUMMARY**

- A. Work: Work described in this Section includes the following:
  - 1. Lead coated copper drip edges at copings where shown in Project Drawings.
  - 2. Stainless steel drip edges at lintels and sills where shown in Project Drawings.
  - 3. Fluid-applied flashings as shown in Project Drawings.
  - 4. Miscellaneous sheet-metal accessories.
- B. Extent and Location: Extent and location of flashing work is indicated in the Drawings and herein, and includes but is not limited to the following:
  - 1. Lead coated copper cap, base, inner-wall and thru-wall flashing installation at the perimeter of below coping stones.
  - 2. Exterior door thresholds and window sills

#### **1.03 RELATED WORK SPECIFIED ELSEWHERE**

- A. Section 07900 - Joint Sealers
- B. Section 04 43 00 – Stone Masonry

#### **1.04 SUBMITTALS**

- A. Product Data: Submit manufacturer's technical product data for flashing, sheet metal and accessories including installation instructions and general recommendations for each specified sheet material and fabricated product.
- B. Shop Drawings: Submit shop drawings where required for work of this Section.
- C. Samples: Provide 8 inch square samples of all specified flashings, materials, as well as other accessory items and materials.

#### **1.05 PROJECT CONDITIONS**

- A. Coordination: Coordinate work of this Section with interfacing and adjoining work for proper sequencing of each installation. Ensure best possible weather resistance and durability of work and protection of materials and finishes.



## PART 2 - PRODUCTS

### 2.01 SHEET METAL FLASHING AND TRIM MATERIALS

- A. Lead Coated Copper: Cold-rolled, 20 oz. Copper shall be coated on both sides with lead weighing 0.06 to 0.075 lbs/sq ft for each side. Lead coated sheet shall conform to ASTM B 101, Type 1, Class A.
- B. Copper: Temper H00 (cold-rolled), 16 oz, to conform with ASTM B 370.
- C. Termination Bars: 1/8" natural anodized aluminum break formed at top edge to receive sealant. Termination bar shall be approved by roofing manufacturer.
- J. Threshold Plates: 1/8" Type 302/304 stainless steel.
- K. Stainless Steel Drip Edges: 22 gauge Type 302/304 stainless steel.

### 2.02 MISCELLANEOUS MATERIALS AND ACCESSORIES

- A. Solder:
  - 1. Lead coated copper: Provide 60 - 40 tin/lead solder.
  - 2. Copper: Provide 50 - 50 tin/lead solder (ASTM B 32).
- B. Flux: Flux shall be rosin, muriatic acid neutralized with zinc, or approved equal. Acid shall be thoroughly washed off after soldering is completed.
- C. Fasteners: Same metal as flashing/sheet metal or other non-corrosive metal as recommended by sheet manufacturer and as noted on Drawings or in Specifications. Match finish of exposed heads with material being fastened.
- D. Paper Slip Sheet: 5-lb rosin-sized building paper.
- E. Metal Accessories: Provide sheet metal clips, straps, anchoring devices and similar accessory units as required for installation of work, matching or compatible with material being installed, non-corrosive, size and gauge required for performance.

## PART 3 - EXECUTION

### 3.01 INSTALLATION REQUIREMENTS

- A. General: Except as otherwise indicated, comply with manufacturer's installation instructions and recommendations, and with SMACNA "Architectural Sheet Metal Manual". Anchor units of work securely in place by methods indicated, providing for thermal expansion of metal units; conceal fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints and seams which will be permanently watertight and weatherproof. Provide adequate galvanic protection between dissimilar metals. Seal all penetrations through flashing.

- B. Drip Edges Beneath Coping Stones: Install lead coated copper drip edges at refurbished steel lintels as indicated on Drawings. Provide 4" minimum overlap with continuous sealant. Set drip edge in sealant.
- C. Coordination: Coordinate installation of flashing and sheet metals with work done by others. Coordinate with Roofing Contractor.
- D. Expansion Joint Provisions: All flashing shall be unrestrained every 20'-0" at 2" overlap.
- E. Sill Inner-Wall Flashing: Install stainless steel inner-wall flashing below and behind window frames at sill level. Provide end dams. Seal all penetrations through inner-wall flashing. Provide adequate galvanic protection between dissimilar metals.
- F. Termination Bars: Aluminum termination bars shall be secured every 8" OC minimum with stainless steel expansion bolts. Provide neoprene washers. Seal all penetrations. Install sealant bead at top edge. Refer to Section 07900 - Joint Sealers.
- G. Threshold Plates: Remove and discard existing steel or aluminum plates at exterior door thresholds. Install new continuous stainless steel plate. Plate shall turn up under existing threshold. Remove and reinstall existing threshold if necessary to accomplish this. Coordinate with base flashing installation. Refer to Section 07530 - Protected Roof Membrane Assembly. Secure with stainless steel countersunk flat head screws every 24" OC, minimum two (2) per sill. Seal all penetrations.
- H. Drip Edges: Install stainless steel drip edges at steel lintels as indicated on Drawings. Provide 4" minimum overlap with continuous sealant. Set drip edge in sealant.

### 3.02 CLEANING AND PROTECTION

- A. Exposed Flashing: Clean exposed metal surfaces, removing substances which might cause corrosion of metal or deterioration of finishes. Do not use any solvents that might damage the waterproofing membrane.
- B. Protection: Contractor shall follow manufacturer's recommendations and required procedures for surveillance and protection of flashings and sheet metal work during construction, to ensure that work will be without damage or deterioration, other than natural weathering at time of substantial completion.

### **END OF SECTION 07600 - FLASHING AND SHEET METAL**

## **SECTION 07 90 00 – EXTERIOR JOINT SEALERS**

### **PART 1 - GENERAL**

#### **1.01 GENERAL PROVISIONS**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### **1.02 SUMMARY**

- A. Work: Joint sealing work described herein includes the following:
1. Exterior joint preparation and installation of sealants as shown on drawings, including but not limited to:
    - Sealant at backer rod installation
    - Sealant at sheet metal and penetrations in masonry, etc.
    - Sealant at horizontal plaza joints with compressible fillers
    - Sealant at masonry joints, where noted
    - Sealant at transverse horizontal coping joints
    - Sealant at railing posts
    - Sealant at top of termination bars
    - Sealant at perimeter aluminum windows and doors

#### **1.04 SUBMITTALS**

- A. Product Data: Product Data from manufacturers for each type of expansion control system indicated, including instructions for joint preparation and joint sealer application.
- B. Installation: Submit samples of all materials that will contact or affect joint sealers to joint sealer manufacturers for:
1. Samples
    - Compatibility and adhesion testing
    - Color sampling: Provide color(s) of exposed joint sealers as selected by Architect from manufacturer's standard colors.
    - Primer
- C. In-Place Samples: Provide 1'-0" long in-place samples of each type of joint sealer for Architect's review and approval.
- D. Elastomeric Sealant Testing: The Contractor shall conduct periodic testing at a frequency of every 2,000 LF.
1. Adhesion-in-Peel of Elastomeric Joint Sealants, as per ASTM C 794.
  2. Recovery Test using a durometer, as described in ASTM C 794.

3. Test Method of Adhesion and Cohesion of Elastomeric Joint Sealants under Cyclical Movement, as per ASTM C 719.

a. Contractor shall arrange for independent testing laboratory to be present to administer tests. The Contractor shall submit for Architect's review the results of the testing. If the results of the tests are unsatisfactory, the Contractor shall remove and restore defective joints at no additional cost to the Owner.

E. Provide letter from sealant manufacturer that joint sealers, joint fillers and other related materials are totally compatible with one another and with joint substrates under conditions of service and application.

#### 1.05 QUALITY ASSURANCE

A. Installers Qualifications: Engage an installer who has successfully completed within the last five (5) years at least three (3) joint sealer applications of each type as required for this project.

B. Single Source Responsibility for Joint Sealer Materials: Obtain joint sealer materials from a single manufacturer for each different product required.

C. Standards: Sealant installation shall comply with ASTM C 962-86 "Standard Guide for Use of Elastomeric Sealants".

#### 1.06 DELIVERY, STORAGE AND HANDLING

A. Delivery: Deliver materials to project site in original unopened containers or bundles with labels informing about manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multi-component materials.

B. Storage: Store and handle materials in compliance with manufacturers' recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1. Emseal DMS shall be stored indoors at room temperature. Recovery is quicker when warm and slower when cold.

#### 1.07 PROJECT CONDITIONS

A. Environmental Conditions: Do not proceed with installation of joint sealers under the following conditions:

1. When ambient and substrate temperature conditions are outside the limits permitted by joint sealer manufacturers.

2. When joint substrates are wet due to rain, frost, condensation, or other causes.

B. Joint Width Conditions: Do not proceed with installation of joint sealers where joint widths are less than allowed by joint sealer manufacturer for application indicated.

C. Joint Substrate Conditions: Do not proceed with installation of joint sealers until contaminants

capable of interfering with their adhesion are removed from joint substrates.

- D. Prior to the work of this contract, the Contractor shall remove existing joint material to confirm compatibility of existing sealant with new specified sealant, as well as adherence of new sealant to existing joints at typical areas for each specified installation.
- E. General: Provide expansion control systems of design, basic profile, materials, and operation indicated. Provide units with capability to accommodate variations in adjacent surfaces.
  - i. Furnish units in longest practicable lengths to minimize field splicing. Install with hairline mitered corners where expansion control systems change direction or abut other materials.
  - ii. Include factory-fabricated closure materials and transition pieces, T-joints, corners, curbs, cross-connections, and other accessories as required to provide continuous expansion control systems.

## 1.08 WARRANTY

- A. Installer's 5-year workmanship warranty from the date of final completion as accepted by the Owner for the Work of this Section, describing type and period of coverage.
- B. Manufacturer's 20-year material warranty from the date of final completion as accepted by the Owner for the Work of this Section for properly installed silicone sealant.
- C. Manufacturer's 5-year minimum material warranty from the date of final completion as accepted by the Owner for the Work of this Section for properly installed polyurethane sealant.

## **PART 2 – PRODUCTS**

### 2.01 ACCEPTABLE MANUFACTURERS

- A. Dow Corning Corporation, P.O. Box 994, Midland, MI 48686-0994; (800) 248-2481; [www.dowcorning.com/construction](http://www.dowcorning.com/construction).
- B. Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071, 1-800-933-7452
- C. Requests to use equivalent products of other manufacturers shall be submitted in accordance with Section 01330 – Submittals.

### 2.01 SEALANT

- A. *Dow Corning*® 795 Silicone Building Sealant, as manufactured by Dow Corning Corporation for masonry joints, or approved equal.
- B. *Dow Corning*® 995 Silicone Structural Glazing Sealant, as manufactured by Dow Corning Corporation for sealant application around the window frames, or approved equal.

- C. SikaSil 728 SL, Self-leveling for expansion joints at the plaza deck, or approved equal.
- D. SikaFlex15LM, Low Modulus High performance, 1 component, polyurethane base, non-sag elastomeric sealant.
- E. Emseal DSM – DS System, Watertight Joint System for decks stadiums and Below Grade Walls.
- F. Compliance: Sealant shall meet or exceed requirements of these standards.
  - 1. ASTM C920, Type S, Grade NS, Class 50, Use NT, G, A, and O.
  - 2. ASTM C1184, Type S, Use G, A, and O.
  - 3. GSA CID A-A-272A - Sealing Compound: Silicone Rubber Base (For Caulking, Sealing, and Glazing in Buildings and Other Structures).
  - 4. GSA CID A-A-1556 -Sealing Compound Elastomeric Type, Single Component (For Caulking, Sealing, and Glazing in Buildings and Other Structures).
- G. Color: Custom color to be approved by the Architect. Contractor to make submittals as required for color approval prior to its application.
- H. Shelf life: 12 months.
- I. Tack-free time: 3 hours.
- J. Working time: 20 to 30 minutes.
- K. Curing time: 7 to 14 days.
- L. Full adhesion time: 14 to 21 days.
- M. Flow, sag, or slump: [0.1 inch] [2.5 mm], tested in accordance with ASTM C639.
- N. Volatile organic compound (VOC) content: 28 grams/liter.
- O. Cured sealant properties after 21 days at [77 degrees F] [25 degrees C] and 50 percent relative humidity.
  - 1. Joint movement capability: Plus and minus 50 percent, tested in accordance with ASTM C719.
  - 2. Hardness: 35-durometer hardness, Shore A, tested in accordance with ASTM D2240.
  - 3. Tear strength, Die B: [49 ppi] [8.74 kg/cm], tested in accordance with ASTM D624.
  - 4. Maximum peel strength: [40 ppi] [7.14 kg/cm], tested in accordance with ASTM C794.



5. Ultimate tension adhesion: [170 ppi] [1.2 MPa], tested in accordance with ASTM C1135.
6. Staining: None on concrete, marble, granite, limestone, and brick, when tested in accordance with ASTM C1248.
7. Service temperature range: [Minus 40 to plus 300 degrees F] [Minus 40 to plus 149 degrees C].
8. Weathering after 10,000 hours, tested in accordance with ASTM C1135 using QUV Weatherometer:
  - a. At 25 percent extension: [35 psi.] [0.24 MPa.]
  - b. At 50 percent extension: [50 psi.] [0.35 MPa.]
9. Elongation: 5252 percent, tested in accordance with ASTM D412.
- P. Backer Rod and Filler: Sonolastic closed cell backer rod as manufactured by Sonneborn, (612) 835-3434, and as approved by sealant manufacturer.
- Q. Joint Primer: Provide type recommended by joint sealer manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from pre-construction joint sealer/substrate tests and field tests.
  1. Silicone sealant primer: Use appropriate primer prior to installation of pre-compressed sealant and edge sealant.
- R. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.
- S. Cleaners for Non-Porous Surfaces: Provide non-staining, chemical cleaners of type which are acceptable to manufacturers of sealants and sealant backing materials, which are not harmful to substrates and adjacent non-porous materials, and which do not leave oily residues or otherwise have a detrimental effect on sealant adhesion or in-service performance.

### **PART 3 – EXECUTION**

#### **1.1 SYSTEM DESCRIPTION**

- A. General: Provide expansion control systems of design, basic profile, materials, and operation indicated. Provide units with capability to accommodate variations in adjacent surfaces.

Furnish units in longest practicable lengths to minimize field splicing. Install with hairline mitered corners where expansion control systems change direction or abut other materials.

Include factory-fabricated closure materials and transition pieces, T-joints, corners, curbs, cross-connections, and other accessories as required to provide continuous expansion control systems.

- B. Coordination: Coordinate installation of all exterior expansion control systems to ensure that wall transitions are watertight. Roof expansion joint assemblies are specified elsewhere.

### 3.01 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealers to comply with recommendations of joint sealer manufacturers and the following requirements:
  1. Remove all foreign material from joint substrates which could interfere with adhesion of joint sealer, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealers, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
  2. Clean masonry, unglazed surfaces of ceramic tile and similar porous joint substrate surfaces, by brushing, or mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealers. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
  3. Clean metal, glazed surfaces of brick and other non-porous surfaces by chemical cleaners or other means, which are not harmful to substrates or leave residues capable of interfering with adhesion of joint sealers.
  4. Cleaning of all surfaces shall be performed on the same day in which the sealant is applied. Use only solvents recommended by the manufacturer. Cleaning solvents shall not be allowed to air dry or evaporate without wiping. Solvents, when used, shall be wiped dry with a clean cloth or lintless paper towels.
- B. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealer manufacturer based on pre-construction joint sealer-substrate tests or prior experience. Apply primer to comply with joint sealer manufacturer's recommendations. Confine primers to areas of joint sealer bond, do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces which otherwise would be permanently stained or damaged by such contact, or by cleaning methods required to remove sealant smears. Masking tape is also recommended where appropriate to ensure a neat job. Remove tape immediately after tooling and before the sealant begins to cure without disturbing joint seal.

### 3.02 INSTALLATION PROCEDURES

- A. General: Comply with joint sealer manufacturers' printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.
- B. Elastomeric Sealant Installation Standard: Comply with recommendations of ASTM C 962 for use of joint sealants as applicable to materials, applications and conditions indicated.
- C. Installation of Sealant Backings: Install sealant backings to comply with the following requirements:

1. Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths which allow optimum sealant movement capability.
  2. Do not leave gaps between ends of joint fillers.
  3. Do not stretch, twist, puncture, or tear joint fillers.
  4. Remove absorbent joint fillers, which have become wet prior to sealant application and replace with dry material.
  5. Install bond breaker tape between sealants and joint fillers, compression seals, or back of joints where adhesion of sealant to surfaces at back of joints would result in sealant failure.
  6. Install compressible seals serving as sealant backings to comply with requirements indicated above for joint fillers.
- D. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint widths which allow optimum sealant movement capability.
- E. Tooling of Nonsag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated, to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents which discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.
- F. Masking Tape: Use masking tape to protect adjacent surfaces of recessed tooled joints.

### 3.04 PRE-COMPRESSED SEALANT INSTALLATION

- A. Rake out all deteriorated parapet expansion joints removing existing cementitious mortar, pre-compressed sealant, silicone caulking, backer rod, etc. as specified in item 3.01 of this Section. Joint surfaces must be free from gross irregularities, loose particles, foreign matter such as dirt, dust, ice, snow, water, etc, and coatings such as grease, oil, release agents, lacquers, etc, that may be detrimental to adhesion of the sealant.
1. Primer surfaces as required to receive edge finishing silicone sealant.
- B. Remove expanding foam sealant from protective packaging. Expose self-adhesive side by removing release liner. Insert material into joint and secure adhesive face against joint side using putty knife. Material will then expand to fill joint. (At cooler temperatures, recovery can be accelerated by heating.) Join consecutive lengths of material with a 45-degree miter.
- C. Install in accordance with fully detailed installation instructions as provided by Emseal.

### 3.05 CLEANING

- A. Excess Sealant: Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealers and of products in which joints occur.

### 3.06 PROTECTION

- A. Contamination: Protect joint sealers during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealers immediately and installations with repaired areas indistinguishable from original work.

### **END OF SECTION 07 92 00 - JOINT SEALERS**

## **SECTION 09 29 00 – GYPSUM WALLBOARD**

### **1.1 RELATED DOCUMENTS**

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

The work consists of replacement of removed and water-damaged gypsum board and substrate materials along interior corridor in cellar, as needed.

### **1.2 SUMMARY**

- A. Section Includes:
  - 1. Interior gypsum wallboard.
- B. Related Requirements:
  - Section 02 41 19 – Selective Demolition
  - Section 09 30 00 – Tile
  - Section 09 90 00- Painting

### **1.3 ACTION SUBMITTALS**

- A. Product Data: For each type of product.
- B. Samples: For the following products:
  - 1. Gypsum Board Finish
  - 2. Gypsum veneer base and accessories

### **1.4 QUALITY ASSURANCE**

- A. Mockups: Before beginning gypsum wallboard and veneer panel installation, install mockups of at least 4 sq. ft. in surface area to demonstrate aesthetic effects and set quality standards for materials and execution.
  - 1. Install mockups for the following:
    - a. Finished gypsum board at cellar level.
  - 2. Apply or install final decoration indicated, including painting on exposed surfaces for review of mockups.
  - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
  - 4. Shop Drawings: Indicate arrangement, perimeter conditions, junctions with dissimilar materials, control and expansion joints, thresholds, ceramic accessories, and setting details.

## 1.5 DELIVERY, STORAGE AND HANDLING

- A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

## 1.6 FIELD CONDITIONS

- A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.
- B. Do not install paper-faced gypsum panels until installation areas are enclosed and conditioned.
- C. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.
  - 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
  - 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.
- B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.
- C. Low-Emitting Materials: For ceiling and wall assemblies, provide materials and construction identical to those tested in assembly and complying with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

### 2.2 GYPSUM WALLBOARD, GENERAL

- A. Regional Materials: Gypsum panel products shall be manufactured within 500 miles of Project site from materials that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site.
- B. Regional Materials: Gypsum panel products shall be manufactured within 500 miles of Project site.
- C. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with existing support system.



## 2.3 INTERIOR GYPSUM WALLBOARD

- A. Abuse-Resistant Gypsum Board: ASTM C 1629/C 1629M, Level 2.
  - 1. Core: 5/8 inch, Type X
  - 2. Long Edges: Tapered.
  - 3. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.
- B. Gypsum Ceiling Board: ASTM C 1396/C 1396M.
  - 1. Thickness: 1/2 inch.
  - 2. Long Edges: Tapered.

## 2.4 CEMENTITIOUS BACKER BOARD

- A. Cementitious Backer Units: ANSI A118.9 and ASTM C 1288 or 1325, with manufacturer's standard edges.
- B. Water-Resistant Gypsum Backing Board: ASTM C 1396/C 1396M, with manufacturer's standard edges.

## 2.6 Gypsum Board/Plaster Manufacturers:

- A. Georgia-Pacific Gypsum LLC; Product DensArmor Cote Interior Veneer Plaster: [www.gp.com/gypsum](http://www.gp.com/gypsum).
- B. National Gypsum Company; Product Kal-Kote Basecoat and Kal-Kote Smooth Finish Plaster: [www.nationalgypsum.com](http://www.nationalgypsum.com).
- C. USG; Product Diamond Interior Finish Plaster: [www.usg.com](http://www.usg.com).
- D. or approved equal

## 2.5 TRIM ACCESSORIES – GYPSUM BOARD

- A. Interior Trim: ASTM C 1047.
  - 1. Material: Paper-faced galvanized steel sheet
  - 2. Shapes:
    - a. Cornerbead.
    - b. Bullnose bead.
    - c. LC-Bead: J-shaped; exposed long flange receives joint compound.
    - d. L-Bead: L-shaped; exposed long flange receives joint compound.
    - e. U-Bead: J-shaped; exposed short flange does not receive joint compound.
    - f. Expansion (control) joint.
    - g. Curved-Edge Cornerbead: With notched or flexible flanges.

## 2.6 MATERIALS

- A. General: Comply with ASTM C 475/C 475M.
- B. Joint Tape:
  - 1. Interior Gypsum Board: Paper.
  - 2. Exterior Gypsum Soffit Board: Paper.
  - 3. Glass-Mat Gypsum Sheathing Board: 10-by-10 glass mesh.
  - 4. Tile Backing Panels: As recommended by panel manufacturer.
- C. Joint Compound for Interior Gypsum Board: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
  - 1. Prefilling: At open joints, tapered, square edges, and damaged surface areas, use setting-type taping compound.
  - 2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type taping compound.
    - a. Use setting-type compound for installing paper-faced metal trim accessories.
  - 3. Fill Coat: For second coat, use drying-type, all-purpose compound.
  - 4. Finish Coat: For third coat, use drying-type, all-purpose compound.
  - 5. Skim Coat: For final coat of Level 5 finish, use drying-type, all-purpose compound.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine areas and substrates including welded hollow-metal frames and framing, with Installer present, for compliance with requirements and other conditions affecting performance.
- B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION - INTERIOR GYPSUM BOARD

- A. Place acoustical insulation in partitions tight within spaces, around cut openings, behind and around electrical and mechanical items within or behind partitions, and tight to items passing through partitions.
- B. Install gypsum base in accordance with ASTM C 844.
- C. Install gypsum base in accordance with ASTM C844 and GA-216.
- D. Use drywall screws to fasten gypsum base to framing substrate.
- E. Single Layer Base at all interior location indicated to receive gypsum veneer plaster:

1. Install gypsum board base vertical, with ends and edges occurring over firm bearing.
2. At furred partition faces, place 4 inch wide strip of gypsum board, same thickness as furring, at perimeter of wall openings and partition.

F. Double Layer Base at locations indicated:

1. Erect first layer of gypsum board, perpendicular to framing or furring members.
2. Place second layer of gypsum board, perpendicular to first layer. Ensure end joints of second layer do not occur over joints of first layer.
3. Secure second layer with adhesive and sufficient support to hold in place. Apply adhesive in accordance with manufacturer's instructions.

G. Install accessories.

H. Tape, fill, and sand filled joints, edges, corners, openings, and trim to produce surface ready to receive veneer finish.

I. Feather coats onto adjoining surfaces so that joint camber is maximum 1/32 inch.

J. Install acoustical sealant within partition assembly in accordance with manufacturer's instructions.

K. Install acoustical sealant at gypsum board perimeter at:

1. Metal Framing: One bead.
2. Perimeter interruptions.
3. Seal all penetrations of partitions by conduit, pipe, ducts, and rough-in boxes.
  - a. Stagger abutting end joints not less than one framing member in alternate courses of panels.
  - b. At high walls, install panels horizontally unless otherwise indicated or required by fire-resistance-rated assembly.
4. On Z-furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
5. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

### 3.3 INSTALLATION - VENEER PLASTER

A. Install gypsum veneer plaster in accordance with ASTM C 843 and manufacturer's instructions.

B. At All Locations: Two Coat Application:

1. Apply base coat to a thickness of 1/8 inches
2. Apply final coat over slightly green, almost dry base coat, to a thickness of 1/16 inch.
3. Total Thickness: 3/16 inch.

C. Finish surface to flat, smooth, hard trowel finish.

### 3.4 PROTECTION

A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.

- B. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.
- C. Remove and replace panels that are wet, moisture damaged, and mold damaged.
  - 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
  - 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

**END OF SECTION 09 29 00 – GYPSUM WALLBOARD**

## **SECTION 09 30 00 - TILE**

### **1.1 GENERAL**

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

The work consists of replacement of removed veneer tile panels and substrate materials along interior corridor in cellar, as needed.

### **1.2 SUMMARY**

- A. Section Includes:

- 1. Veneer stone tile panel

- B. Related Requirements:

Section 02 41 19 – Selective Demolition  
Section 09 29 00 – Gypsum Wall Board

- C. ACTION SUBMITTALS

- D. Product Data: For each type of product.

- E. Samples: For the following products:

- 1. Veneer stone tile panel to match existing at wall applications

### **1.4 QUALITY ASSURANCE**

- A. Maintain one copy of TCA Handbook and ANSI A108 Series/A118 Series on site.

- B. Manufacturer Qualifications: Company specializing in manufacturing the types of products specified in this section, with minimum 5 years of documented experience.

- C. Replacement Tile Manufacturer: Company regularly engaged in manufacturing glazed ceramic tile similar to the tile required for this project that can demonstrate that their tile have been installed in similar exposed exterior locations for a period of 5 years or more with a record of successful in-service performance.

- D. Installer Qualifications: Company specializing in performing tile installation, with minimum of 5 years of documented experience.

### **1.5 MOCK-UP**

- A. Construct a 2' x 2'tile mock-up where indicated on the drawings, incorporating all components specified for the location.

## **1.6 DELIVERY, STORAGE, AND HANDLING**

- A. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions. Tiles must match existing.

## **1.7 FIELD CONDITIONS**

- A. Do not install adhesives in an unventilated environment.
- B. Maintain ambient and substrate temperature of 50 degrees F during installation of mortar materials.

## **PART 2 - PRODUCTS**

### **2.1 TILE**

- A. Manufacturers: All products of each type by the same manufacturer.
  - 1. Dal-Tile Corporation: [www.daltile.com](http://www.daltile.com)
  - 2. Or approved equal
- B. Stone Mosaic Tile Type ST-1: ANSI A137.1, and as follows:
  - 1. Natural Bluestone Supplied by Trowel Trades Supply, Inc., 802.655.3166:
  - 2. Size and Shape: 2 x 6 to 24 inches x ½ inch thick
  - 3. Edges: Square sawn edges.
  - 4. Surface Finish: Honed.
  - 5. Colors: Blue-gray.

### **2.2 MORTAR MATERIALS**

- A. Manufacturers:
  - 1. Custom Building Products; Product MegaFlex mortar: [www.custombuildingproducts.com](http://www.custombuildingproducts.com).
  - 2. Laticrete International, Inc.; Product Laticrete 3701 Mortar Admix / 226 Thick Bed Mortar.
  - 3. Mapei Products; Product Keribond/Keralastic: [www.mapei.com](http://www.mapei.com).
  - 4. Or approved equal.
- B. Mortar Bed Materials: Portland cement, sand, latex additive, and water.
- C. Mortar Bond Coat Materials:
  - 1. Dry-Set Portland Cement type: ANSI A118.1.
  - 2. Latex-Portland Cement type: ANSI A118.4.
  - 3. Epoxy: ANSI A118.3.

### **2.3 GROUT MATERIALS**

- A. Manufacturers:
  - 1. Custom Building Products; Product Polyblend Sanded or Unsanded Grout: [www.custombuildingproducts.com](http://www.custombuildingproducts.com).
  - 2. Laticrete; Product Laticrete 1500 Sanded Grout or 1600 Unsanded Grout, mixed with



- Laticrete 1776 Grout Admix.
3. Mapei; Product Ultra/Color, Fast-Curing, High Early Strength, Polymer Modified Sanded Tile Grout.
  4. Star Quartz Industries; 866.220.4500, Product Quartz-Lock Grout: [www.starquartz.com](http://www.starquartz.com).
  5. Or approved equal

## **PART 3 – EXECUTION**

### **3.1 EXAMINATION**

- A. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive tile.

### **3.2 PREPARATION**

- A. Protect surrounding work from damage.
- B. Vacuum clean surfaces and damp clean.
- C. Seal substrate surface cracks with filler. Level existing substrate surfaces to acceptable flatness tolerances.
- C. Install cementitious backer board in accordance with ANSI A108.11 and board manufacturer's instructions. Tape joints and corners, cover with skim coat of dry-set mortar to a feather edge.
- E. Install tile backer board in strict accordance with manufacturer's instructions, using galvanized roofing nails or corrosion-resistant bugle head drywall screws. Bed fiberglass self-adhesive tape at all joints and corners with material used to set tiles.

### **3.3 INSTALLATION - WALL TILE**

- A. Over cementitious backer units on studs, install in accordance with TCA Handbook Method W244, using membrane at toilet rooms and showers.
- B. Over cementitious backer units install in accordance with TCA Handbook Method W223, organic adhesive.
- C. Over coated glass mat backer board on studs, install in accordance with TCA Handbook Method W245.
- D. Over gypsum wallboard on wood or metal studs install in accordance with TCA Handbook Method W243, thin-set with dry-set or latex-portland cement bond coat, unless otherwise indicated.
- E. Over interior concrete and masonry install in accordance with TCA Handbook Method W202, thin-set with dry-set or latex-portland cement bond coat.

### **3.4 CLEANING**

- A. Clean tile and grout surfaces.

**END OF SECTION 09 30 00 - TILE**

## **SECTION 09 90 00 - PAINTING**

### **PART 1 - GENERAL**

#### **1.01 RELATED DOCUMENTS**

- A. General Contract Provisions and the General Requirements of Division 01 apply to the work of this Section.

#### **1.02 WORK SUMMARY**

- A. This Section pertains to the provision of all field painting and finishing:
  - 1. All interior plaster wall and ceiling surfaces as indicated on the Drawings.
- B. Color Schemes
  - 1. At interior surfaces the Contractor shall match the existing color scheme.

#### **1.03 RELATED SECTIONS**

- A. Section 09 29 00 - Gypsum Wall Board

#### **1.04 QUALITY ASSURANCE**

- A. Paint
  - 1. The Contractor shall submit a representative sample of interior surfaces with primer and 2 coats of paint to the Architect for approval.
  - 2. Product Data
    - a. Manufacturer's Information: Provide manufacturers technical information, including label analysis and instructions for handling, storing, and applying each coating material proposed for use.
    - b. Certification by the manufacturer that products supplied comply with local regulations controlling the use of volatile organic compounds (VOC's)
  - 3. The Contractor is to provide a Paint Schedule. Paint Schedule will identify all colors of all paints and finishes to match existing.
- B. Reference Standards
  - 1. Benjamin Moore and Company, Architect's Specifications.
  - 2. Steel Structures Painting Council "*Surface Preparation Specifications*" ANSI 159.1 1972.

3. U.S. National Park Service, Preservation Brief No. 10, "Exterior Paint Problems on Historic Wood Work"

C. Inspections

1. The Contractor shall notify the Architect to inspect immediately before and after the application of paints and finishes.

D. Applicator Qualifications

1. Engage an experienced applicator who has completed painting system applications similar in material and extent to that indicated for this Project with a record of successful in-service performance.

- E. Maintenance Stock: At time for substantial completion, deliver stock of maintenance material to the Owner. Furnish five (5) gallons each of each color specified.

## **1.05 DELIVERY AND STORAGE**

- A. Deliver all materials to the job site in original, new and unopened packages and containers bearing manufacturer's name and label.

- B. Provide labels on each container with the following information:

1. Name or title of material.
2. Manufacturer's stock number.
3. Manufacturer's name.
4. Contents by volume, for major pigment and vehicle constituents.
5. Thinning instructions.
6. Application instructions.

- B. Storage: Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 degrees F (7 degrees C). Maintain containers used in storage in a clean condition, free of foreign materials and residue.

- C. Protection: Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary precautions to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing and application.

## **1.06 JOB CONDITIONS**

- A. Do not apply water-base paints when the temperature of surfaces to be painted and the surrounding air temperatures are below 50 degrees F, unless otherwise permitted by the paint manufacturer's printed instructions.

- B. Do not apply solvent-thinned paints or varnishes when the temperature of surfaces to be painted or varnished and the surrounding air temperatures are below 45 degrees F, unless otherwise permitted by the paint or varnish manufacturers' printed instructions.
- C. Do not apply paint or varnish in snow, rain, fog or mist; or when the relative humidity exceeds 85 percent; or to damp or wet surfaces; unless permitted by the paint and varnish manufacturers' printed instructions. Painting and varnishing may be continued during inclement weather only if the areas and surfaces to be painted or varnished are enclosed and heated within the temperature limits specified by the paint or varnish manufacturer during application and drying periods.

## **PART 2 - MATERIALS**

### **2.01 MANUFACTURERS**

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products listed in the paint schedules.
- B. Products: Subject to compliance with requirements, provide one of the products in the paint schedules.
- C. Manufacturers Names: The following manufacturers are referred to in the paint schedules by use of shortened versions of their names, which are shown in parentheses:
  - 1. Devoe & Raynolds Co. (Devoe).
  - 2. Fuller-O'Brien Paints (Fuller).
  - 3. Glidden Co. (The) (Glidden).
  - 4. Benjamin Moore & Co. (Moore).
  - 5. PPG Industries, Inc. (PPG).
  - 6. Pratt & Lambert, Inc. (P & L).
  - 7. Sherwin-Williams Co. (S-W).

### **2.02 PAINT MATERIALS, GENERAL**

- A. Material Compatibility: Provide primers, undercoats, and finish-coat materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
- B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified. Paint-material containers not displaying manufacturer's product identification will not be acceptable.
  - 1. Proprietary Names: Use of manufacturer's proprietary product names to designate colors or materials is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers. Furnish manufacturer's material data and certificates of performance for proposed substitutions.

- C. Colors: Provide custom colors of the finished paint systems to match existing or Architect's samples as required.

### **PART 3 - EXECUTION**

#### **3.01 EXAMINATION**

- A. Examine substrates, areas, and conditions, with the Applicator present, under which painting will be performed for compliance with paint application requirements.
  - 1. Do not begin to apply paint until unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
  - 2. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.
- B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
  - 1. Notify the Architect about anticipated problems using the materials specified over substrates primed by others.

#### **3.02 PREPARATION, GENERAL**

- A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of the size or weight of the item, provide surface-applied protection before surface preparation and painting.
  - 1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
  - 2. The Contractor shall inspect the premises for areas of paint that are still well adhered to the substrate.
- C. Cleaning: Before applying paint or other surface treatments, clean the substrates of substances that could impair the bond of the various new coatings. Remove oil and grease before cleaning.
  - 1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
- D. General Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
- E. Materials Preparation: Mix and prepare paint materials according to manufacturer's written instructions.

1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
  2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
  3. Use only thinners approved by paint manufacturer and only within recommended limits.
- F. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of the same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

### **3.03 APPLICATION**

- A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.
1. Paint colors, surface treatments, and finishes are indicated in the schedules.
  2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
  3. Provide finish coats that are compatible with primers used.
  4. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, convector covers, covers for finned-tube radiation, grilles, and similar components are in place. Extend coatings in these areas, as required, to maintain the system integrity and provide desired protection.
  5. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before the final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
  6. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
  7. Sand lightly between each succeeding enamel or varnish coat.
- B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
1. The number of coats and the film thickness required are the same regardless of application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
  2. Omit primer on metal surfaces that have been shop primed and touchup painted.



3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
  4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and where application of another coat of paint does not cause the undercoat to lift or lose adhesion.
- C. Application Procedures: Apply paints and coatings by brush, roller or other applicators according to manufacturer's written instructions, and in accordance with local work rules.
1. Brushes: Use brushes best suited for the type of material applied. Use brush of appropriate size for the surface or item being painted.
  2. Historic Appearance:
    - a. Rollers may be used for initial paint application to surfaces only if each wet coat is immediately brushed out to eliminate all evidence of roller use. Final effect should be of paint applied only by brush.
    - b. Use rollers of carpet, velvet back, or high-pile sheep's wool as recommended by the manufacturer for the material and texture required.
- D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate. Provide the total dry film thickness of the entire system as recommended by the manufacturer.
- E. Mechanical and Electrical Work: Painting of mechanical and electrical work is limited to items exposed in equipment rooms and in occupied spaces.
- F. Prime Coats: Before applying finish coats, apply a prime coat of material, as recommended by the manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn through or other defects due to insufficient sealing.
- I. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
- L. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

### **3.04 FIELD QUALITY CONTROL**

- A. The Owner reserves the right to invoke the following test procedure at any time and as often as the Owner deems necessary during the period when paint is being applied:

1. The Owner will engage the services of an independent testing agency to sample the paint material being used. Samples of material delivered to the Project will be taken, identified, sealed, and certified in the presence of the Contractor.
  2. The testing agency will perform appropriate tests for the following characteristics as required by the Architect:
    - a. Quantitative material analysis.
    - b. Abrasion resistance.
    - c. Apparent reflectivity.
    - d. Flexibility.
    - e. Washability.
    - f. Absorption.
    - g. Accelerated weathering.
    - h. Dry opacity.
    - i. Accelerated yellowness.
    - j. Recoating.
    - k. Skinning.
    - l. Color retention.
    - m. Alkali and mildew resistance.
  3. The Architect may direct the Contractor to stop painting if test results show material being used does not comply with specified requirements. The Contractor shall remove noncomplying paint from the site, pay for testing, and repaint surfaces previously coated with the rejected paint. If necessary, the Contractor may be required to remove rejected paint from previously painted surfaces if, on repainting with specified paint, the 2 coatings are incompatible.
- B. Special Paint Removal: If the specified methods and/or materials fail to perform as intended, in general or in particular, the Contractor shall cease working on the area(s) in question, immediately notify the Architect and Owner of the problem, and request direction on how to proceed with the work. Pending receipt of written direction from the Architect, rearrange painting schedule as necessary to continue overall job progress without delay.

### **3.05 CLEANING**

- A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the site.
1. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping. Be careful not to scratch or damage adjacent finished surfaces.

### **3.06 PROTECTION**

- A. Protect work of other trades, whether being painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.

- B. Provide "Wet Paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others to protect their work after completing painting operations.
  - 1. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

### **3.07 INTERIOR PAINT SCHEDULE**

- A. Provide an interior paint schedule per the recommendation of the manufacturer.
- B. Gypsum Plaster Substrates:
  - Institutional: Low-Odor/VOC Latex System:
  - Prime Coat: Primer sealer, interior, institutional low odor/VOC, MPI #149.
  - Intermediate Coat: Latex, interior, institutional low odor/VOC, matching topcoat.
  - Topcoat: Latex, interior, institutional low odor/VOC, (Gloss Level 3), MPI #145.

**END OF SECTION 09 90 00 - PAINTING**

## **SECTION 221423 - STORM DRAINAGE PIPING SPECIALTIES**

### **PART 1 - GENERAL**

#### **1.1 GENERAL PROVISIONS**

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

#### **1.2 RELATED WORK SPECIFIED ELSEWHERE**

Section 02 41 19 – Selective Demolition  
Section 03 41 00 - Concrete Repair  
Section 03 13 00 – Pervious Concrete  
Section 07 51 13 – Built-Up-Waterproofing  
Section 32 12 00 – Asphalt Paving

#### **1.3 SUMMARY**

- A. Extent of plumbing work is as indicated on Drawings, as specified herein, and as required by condition and regulatory authorities for the proper completion of work.
- B. Briefly, and without force and effect upon Contract Documents, work of this Section includes, but is not limited to, the following:
  - 1. Selective demolition and repair of concrete for removal and installation of drain assemblies
  - 2. Permanent removal and capping of two (2) plaza drains.
  - 3. Installation of one (1) new plaza drain assembly and associated piping, as noted on drawings.
  - 4. Replacement of all plaza drain assemblies, as noted on drawings.
  - 5. Replacement of all scupper drain assemblies.
  - 6. Replacement of all planter drain assemblies.
  - 7. Replacement of trench drain assembly.
  - 8. Miscellaneous storm drainage piping replacement as needed
  - 9. Snaking of all drain piping to 20'

#### **1.4 ACTION SUBMITTALS**

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

1.5 QUALITY ASSURANCE

- A. Drainage piping specialties shall bear label, stamp, or other markings of specified testing agency.

**PART 2 - PRODUCTS**

2.1 METAL ROOF DRAINS

A. Cast-Iron, 3", 4", and 5" Promenade Plaza Drains

1. Based on Jay R. Smith Model 1409
2. Standard: ASME A112.6.4.
3. Body Material: Cast iron.
4. Dimension of Body: 11" diameter.
5. Combination Flashing Ring and Gravel Stop: Required.
6. Outlet: Bottom.
7. Outlet Type: No hub.
8. Secured Solid Cover: Required.
9. Underdeck Clamp: Required.
10. Expansion Joint: Required.
11. Perforated Gravel Guard: Stainless steel.

B. Cast Iron, Plaza Scupper Drains:

1. Based on Jay R. Smith Model 1510
2. Standard: ASME A112.6.4.
3. Body Material: Cast iron.
4. Outlet: Back.
5. Outlet Type: Threaded.
6. Grate Material: Bronze.
7. Wire Mesh: Stainless steel or brass over grate.
8. Vandal-Proof Grate: Required.
9. Perforated Gravel Guard: Stainless steel.

C. Cast Iron, Planter Drain:

1. Based on Jay R. Smith Model 1930
2. Standard: ASME A112.6.4.
3. Body Material: Cast iron.
4. Dimension of Body: Nominal 11" diameter.
5. Dimension of Frame and Grate: Nominal 20".
6. Outlet: Bottom.
7. Outlet Type: No hub.
8. Grate Material: Stainless Steel.
9. Vandal-Proof Grate: Required.
10. Extension Collars: Required.
11. Underdeck Clamp: Required.
12. Expansion Joint: Required.
13. Sump Receiver Plate: Required.

## 2.2 CHANNEL DRAINAGE SYSTEMS

### A. Sloped-Invert, Polymer-Concrete, Channel Drainage Systems (Trench Drain):

1. Based on Jay R. Smith Model 9930
2. Description: Modular system of channel sections, grates, and appurtenances; designed so grates fit into channel recesses without rocking or rattling to be modified for drainage of water from plaza, as per drawings.
  - a. Channel Sections: Narrow, interlocking-joint, sloped-invert, polymer-concrete modular units with end caps.
    - 1) Include rounded bottom, with built-in invert slope of 0.6 percent and with outlets in number, sizes, and locations indicated.
    - 2) Include extension sections necessary for required depth.
    - 3) Dimensions: To match existing. Include number of units required to form total lengths indicated.
    - 4) Frame: Stainless steel or cast iron for grates.
  - b. Grates: Manufacturer's designation "medium duty," with slots or perforations, and of width and thickness that fit recesses in channel sections.
    - 1) Material: Stainless steel.
    - 2) Locking Mechanism: Manufacturer's standard device for securing grates to channel sections.
  - c. Covers: Solid ductile or cast iron, of width and thickness that fit recesses in channel sections, and of lengths indicated.
  - d. Supports, Anchors, and Setting Devices: Manufacturer's standard unless otherwise indicated.
  - e. Channel-Section Joining and Fastening Materials: As recommended by system manufacturer.

## PART 3 - EXECUTION

### 3.1 Pre-Construction Testing

- A. Prior to start of construction, test drain by inserting a hose in the drain. Run test for a minimum of 15 minutes at a rate of 5 gallons per minute to determine flow capacity. If drain flow is inadequate (due to blockage or undersized plumbing line), notify Architect in writing immediately.

### 3.2 Installation

- A. Install roof drains at low points of roof areas according to roof membrane manufacturer's written installation instructions. Install drains as per manufacturer's instructions. All work shall be performed by a Plumber licensed in New York City. Set, plane, level and rigid.



- B. Replacement of the drain will be required if existing drain is improperly installed, deteriorated or height needs to be adjusted. Replacement of the drains will be determined during the construction.
- C. Maintain integrity of waterproof membrane, where penetrated.
- D. Field verify type and size of pipe connections required to assure a water-tight connection at roof or terrace.
- E. Exercise caution to minimize damage to deck, and to ceiling below drains
- F. Patch opening surrounding drain body to provide a level surface for setting new drain.
- G. Install trench drains at low points of surface areas to be drained. Set grates of drains flush with finished surface unless otherwise indicated.
- H. Assemble channel drainage system components according to manufacturer's written instructions. Install on support devices so that top will be flush with adjacent surface.
- I. Install through-penetration firestop assemblies for penetrations of fire- and smoke-rated assemblies.
  - 1. Comply with requirements in Section 078413 "Penetration Firestopping."

### 3.3 CONNECTIONS

- A. Comply with requirements for piping specified in Section 221413 "Facility Storm Drainage Piping." Drawings indicate general arrangement of piping, fittings, and specialties.

### 3.4 FLASHING INSTALLATION

- A. Fabricate flashing from single piece of metal unless large pans, sumps, or other drainage shapes are required.
- B. Install sheet flashing on pipes, sleeves, and specialties passing through or embedded in floors and roofs with waterproof membrane.
- C. Set flashing on decks in solid coating of bituminous cement.
- D. Secure flashing into sleeve and specialty clamping ring or device.

### 3.5 PROTECTION

- A. Protect drains during remainder of construction period to avoid clogging with dirt or debris and to prevent damage from traffic or construction work.
- B. Place plugs in ends of uncompleted piping at end of each day or when work stops.

**END OF SECTION 22 14 23**

## **SECTION 32 12 00– FLEXIBLE ASPHALT PAVING**

### **PART 1 – GENERAL**

#### **1.01 SUMMARY.**

##### **A. Section Includes:**

1. New and salvaged asphalt pavers and joint sand
2. Bitumen setting bed
3. Asphalt tack coat
4. Cleaning and sealing

#### **1.02 REFERENCES.**

##### **A. American Society for Testing Materials (ASTM)**

1. C33 – Specification for Aggregates.
2. C136 – Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
3. C140 – Standard Test Methods for Sampling and Testing Masonry Units and Related Units.
4. C144 – Standard Specification for Aggregate for Masonry Mortar.
5. C920 – Specification for Elastomeric Joint Sealants.
6. C979 – Standard Specification for Pigments for Integrally Colored .
7. D977 – Standard Specification for Emulsified Asphalt.
8. C1645 – Standard Test Method for Freeze-Thaw and De-Icing Salt Durability of Solid Interlocking Paving Units.
9. D3381 – Standard Specification for Viscosity-Graded Asphalt Cement for Use in Pavement Construction.

#### **1.03 RELATED SECTIONS**

- A. Section 01 33 00, Submittals
- B. Section 02 41 19, Selective Demolition
- C. Section 22 14 26, Plumbing/Drains
- D. Section 04 43 00, Stone Masonry
- E. Section 07 92 00, Joint Sealers
- F. Section 03 13 00, Pervious Concrete

#### **1.04 SUBMITTALS.**

- A. Manufacturer's drawings and details: Indicate perimeter conditions, relationship to adjoining materials and assemblies, expansion and control joints, asphalt paver layout, [patterns, color arrangement, installation and setting] details, and pitch to location of drains in builders pavement plan.
- B. Neoprene modified asphalt adhesive product catalog sheets with specifications.

- C. Bituminous setting bed: Asphalt cement mix design to be used in the bituminous setting bed conforming to ASTM D3381.
- D. Sieve analysis per C136 for sand mixed with bitumen and sand for joints between asphalt pavers.
- E. Pavers:
  - 1. Two representative full-size samples of each paver type, thickness, color, finish that indicates the range of color variation and texture expected in the finished installation. Color(s) selected by Engineer and Owner from manufacturer's available colors.
  - 2. Accepted samples become the standard of acceptance for the work.
  - 4. Manufacturer's certification of pavers as having met applicable ASTM standards.
  - 5. Manufacturer's catalog product data, installation instructions, and material safety data sheets for the safe handling of the specified materials and products.
- F. Paver Installation Subcontractor:
  - 1. A copy of Subcontractor's current certificate from the Interlocking Pavement Institute Paver Installer Certification Program.
  - 2. Job references from projects of a similar size and complexity. Provide Owner/Client/General Contractor names, postal address, phone, fax, and e-mail address.

#### 1.04 QUALITY ASSURANCE.

- A. Paving Subcontractor Qualifications:
  - 1. Utilize an installer having successfully completed paver installation similar in design, material, and extent indicated on this project.
  - 2. Utilize an installer holding a current certificate from the Interlocking Pavement Institute Paver Installer Certification program.
- B. Mock-Ups:
  - 1. Install a 7 foot by 7 foot paver area.
  - 2. Use this area to determine surcharge of the bitumen-sand layer and adhesive, joint sizes, lines, laying pattern(s), color(s) and texture of the job.
  - 3. This area will be used as the standard by which the work will be judged.
  - 4. Subject to acceptance by owner, mock-up may be retained as part of finished work.
  - 5. If mock-up is not retained, remove and properly dispose of mock-up.

#### 1.05 DELIVERY, STORAGE AND HANDLING.

- A. Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers packaging with identification labels intact.

1. Coordinate delivery and paving schedule to minimize interference with normal use of buildings adjacent to paving.
  2. Deliver pavers to the site in steel banded, plastic banded or plastic wrapped packaging capable of transfer by forklift or clamp lift.
  3. Unload pavers at job site in such a manner that no damage occurs to the Product.
- C. Storage and Protection: Store materials protected such that they are kept free from mud, dirt, and other foreign materials. Store paver cleaners and sealers per manufacturer's instructions].
1. Cover joint sand with waterproof covering if needed to prevent exposure to rainfall or removal by wind. Secure the covering in place.

#### 1.06 PROJECT/SITE CONDITIONS.

A. Environmental Requirements:

1. Do not install bitumen setting bed or pavers during heavy rain or snowfall.
2. Do not install bitumen setting bed and pavers over frozen base materials.
3. Do not install frozen bitumen setting bed materials.
4. Do not install pavers on frozen bitumen setting bed materials.

#### 1.07 MAINTENANCE.

- A. Extra Materials: Provide an additional 100 pavers of each color group for use by owner for maintenance and repair.
- B. Pavers shall be from the same production run as installed materials.

### PART 2 PRODUCTS.

#### 2.01 INTERLOCKING PAVERS

A. Manufacturer:

1. Hanover Architectural Products  
Contact: Rick Masemer  
(717)637-0500

B. Interlocking Paver Units to match existing salvaged pavers, Including the following:

1. Paver Type: Brickstone – 12" x 6" x 3" Asphalt Block, Matrix # A80014, Natural Finish
2. Paver Type: Hexagonal - 8" Hexagonal Asphalt Block, Matrix #14, Ground Finish
  - a. Material Standard: Comply with material standard set forth in ASTM C936.

- b. Color and Finish: To be determined at time of shop drawing submittal.
- c. Color Pigment Material Standard: Comply with ASTM C979.
- d. Average Compressive Strength (ASTM C140): 8000 psi with no individual unit under 7200 psi.
- e. Average Water Absorption (ASTM C140): 5% with no unit greater than 7%.
- f. Freeze/Thaw Resistance (ASTM C1645): Resistant to 50 freeze/thaw while immersed in a 3% saline solution. Freeze-thaw testing requirements shall be waived for applications not exposed to freezing conditions.

## 2.02 PRODUCT SUBSTITUTIONS.

- A. Substitutions: No substitutions permitted.

## 2.03 BITUMEN SETTING BED MATERIALS.

- A. Primer for Base: Anionic asphalt emulsion SS-1h, per ASTM D977.
- B. Sand for Asphalt Bed
  - 1. Clean, non-plastic, free from deleterious or foreign matter, symmetrically shaped, natural or manufactured from crushed rock.
  - 2. Do not use limestone screenings, stone dust, or sand in the bedding material that does not conform to the grading requirements.
  - 3. Graded according to ASTM C136.
  - 4. Bedding Sand Material Requirements: Conform to the grading requirements of ASTM C33 with modifications as shown in Table 1.

Table 1  
Grading Requirements for Bedding Sand  
ASTM C33

<u>Sieve Size</u>	<u>Percent Passing</u>
No. 4	100
No. 8	85 to 100
No. 16	50 to 85
No. 30	25 to 60
No. 50	10 to 30
No. 100	2 to 10
No. 200	2 to 10

- C. Asphalt Cement: Heated to 300°F, 7% asphalt mixed with 93% sand in batches 145 pounds asphalt to 1855 pounds sand. Exact proportions to be determined by the contractor.
- D. Neoprene modified asphalt adhesive: Karnak 230 2% neo-asphalt paving block adhesive.

## 2.04 JOINT MATERIALS.

- A. Joint Sand: Grading for conforming to ASTM C144.
- B. Sealant and Backer Materials: Section 07 92 00

## PART 3 – EXECUTION

### 3.01 EXAMINATION

- A. Acceptance of Site Verification of Conditions:
  - 1. General Contractor shall inspect, accept and certify in writing to the paver installation subcontractor that site conditions meet specifications for the following items prior to installation of interlocking pavers:
    - a. Verify that base materials, thickness, surface tolerances and elevations conform to specified requirements.
    - b. Verify location of 2 inch diameter weep holes at spacing shown on plans. Verify holes filled with washed pea gravel. Provide temporary plugs for holes to prevent ingress of sand-asphalt setting bed or neoprene adhesive during construction. Remove plugs when paving adjacent to drain holes.
    - c. Verify that surfaces to receive the bitumen bedding material are free of dust, oil, grease, paint, wax, curing compounds, primer, sealers, form release agents, from cracks over 3/16 inch in width, or any deleterious substances and debris which may prevent or reduce bonding.
    - d. Conduct moisture tests to verify that surfaces are cured, free from hydrostatic pressure and having a moisture content of less than 5%.
    - e. Verify location, type, and elevations of edge restraints, [ collars around] utility structures, and drainage inlets.
    - f. Do not proceed with installation of bedding sand and interlocking pavers until base conditions are corrected by the General Contractor or designated subcontractor.

### 3.02 PREPARATION.

- A. Verify base is dry, certified by General Contractor as meeting material, installation and grade specifications.
- B. Verify that base is clean, dry, and ready to accept tack coat, bitumen setting bed, pavers, and imposed loads.

### 3.03 INSTALLATION.

- A. Base Preparation.
  - 1. Fill any cracks under 3/16 inches wide with mortar.
  - 2. Sweep the surface clean.



- B. Asphalt Primer.
1. Emulsified: Apply at a rate of 0.9 to 1.3 gal/100 square feet.
  2. Cutback: Apply at a rate of 1.2 to 1.5 gal/100 square feet.
- C. Once applied the tack coat should not be disturbed and should be allowed to cure or break before covering with the setting bed material.
- D. Bituminous Setting Bed.
1. Place in panels between 3/4 inches high screed rails spaced approximately 12 feet. Rake and screed smooth with strike board.
  2. Use screed rails to achieve a level setting bed conforming to elevations and slope shown on the drawings. After one panel is complete, advance screed rails to the next position in readiness for screeding adjacent panels with strike board. Fill depressions left from removed screed rails and smooth to height consistent with panel.
  3. Place an area in size that will remain at least 270°F during compaction.
  4. Compact the setting bed with a powered roller compactor to an even, nominal thickness of 3/4 inch after compaction.
  5. Re-heat, fill, and compact low areas with setting bed materials to conform to slope and elevation shown on the drawings.
  6. Re-heat, remove, level, and compact setting bed in high areas to conform to slope and elevation shown on the drawings.
  7. Irregularities or evenness in the grade of the base surface may be corrected with setting bed materials only with approval of the Engineer.
- E. Neoprene Modified Asphalt Adhesive.
1. Apply to cold asphalt setting bed with notched trowel with serrations not exceeding 1/16 inch. Do not apply pavers to adhesive until dry skin forms on surface of adhesive.
- F. Pavers.
1. Free from dust, dirt, and stains. Do not use soiled, cracked, or broken units.
  2. Place paving units firmly onto adhesive with joints not to exceed 1/8 inch or as recommended in manufacturer's literature. Maintain straight pattern lines, joint lines and coursing per the drawings.
  3. Cut pavers to fit edges with a masonry saw. No cut paver shall be smaller than 1/3 of a whole unit if exposed to vehicular traffic. Firmly place all edge units on adhesive.
- G. Joint Filler and Sealant.
1. Extend control and structural joints through full depth of paving units. Do not extend joints through bituminous bedding materials from joints in base that control shrinkage cracking.
  2. Install joints at all building facades or other vertical surfaces.
  3. Install pre-molded joint filler as units are set in bituminous bed. Maintain top of filler 3/8 inch below exposed faces of paving units for insertion of sealant.
  4. Install joint sealant per manufacturer's recommendations.

H. Joint Sand.

1. After the pavers, joint filler, and sealant are installed, spread dry joint sand and fill joints between the slabs.
2. Sweep surface clean.

3.04 FIELD QUALITY CONTROL.

- A. The final surface tolerance from grade elevations shall not deviate more than 3/8 inch under a 10 foot straight edge.
- B. Check final surface elevations for conformance to drawings.
- C. The surface elevation of pavers shall be 1/8 inch to 1/4 inch above adjacent drainage inlets, collars or channels.
- D. Lippage: No greater than 1/8 inch difference in height between adjacent pavers.
- E. Finish level of pavers to be flush with stair and ramp landings.

3.05 JOINT SAND STABILIZATION.

- A. Apply joint sand stabilization materials between pavers in accordance with the manufacturer's written recommendations.

3.06 REINSTALLATION OF SALVAGED ITEMS

- A. Reinstall all trellises, benches, railings, and site furnishings to match existing.

3.07 PROTECTION.

- A. After work in this section is complete, the General Contractor shall be responsible for protecting work from damage due to subsequent construction activity on this site.

**END OF SECTION 32 12 00**

**EXHIBIT I**

**List of BPCA & BPCPC Board Members and Employees**

(attached)

**LIST OF BOARD MEMBERS**

George J. Tsunis

Donald Cappocia

Lester Petracca

Louis J. Bevilacqua

Catherine McVay Hughes

Martha J. Gallo

Anthony Kendall

**Employees:**

Betzayda Abreu  
Deborah Addison  
Curtis Afzal  
Elsa Alvarez  
Dana Anders  
Anthony Andriano  
Stephen Arciold  
Sharmila Baichu  
Marie Baptiste  
Brett Beecham  
Freddy Belliard  
Emily Birdseye  
Nidia Blake-Reeder  
LaToya Brooks-Jones  
Nancy Buivid  
Anthony Buquicchio  
Peter Campbell  
Frances Caperchi  
Monica Centeno  
Carlton Chotalal  
Julissa Cooke  
Sarah Fisher-Curtin  
Gwen Dawson  
Nicole Dawson  
Gilbert DePadua  
Paul Diaz-Larui  
Tonasia Dopson  
Patricia Ehlers  
Abigail Ehrlich  
Maria Ellison  
Richard Faraino  
Anitra Fauntleroy  
Pamela Frederick  
James Gallagher  
Abigail Goldenberg  
Anastasia Gonzalez  
Lenron Goode  
Neresa Gordon  
Sakina Graves  
Ned Greenberg  
Evelyn Gregg  
Jonathan Gross  
Robert Hansen  
Nicole Heater

Sankar Heerah  
St. Clair Henry  
Robert Hinkelman  
Stephanie Huayta  
Craig Hudon  
Jake Jacevicius  
Amy Jogie  
William John  
Jasmine Johnson  
Benjamin Jones  
Roland Kemp  
Ann Ketring  
Susie Kim  
Karl Koenig  
Leandro Lafuente  
Michael Lamancusa  
Della Lee  
Rene Lopcy  
Janira Lopez  
Robert Maggi  
Evelin Maisonet  
Jonathan McCain  
Princess McNeill  
Vanessa Mesine  
Brian Meikle  
Vanessa Mesine  
Ronnie Mohammed  
Dana Morgera  
Eric Munson  
Lauren Murtha  
Bertha Narcisse  
Robert Nesmith  
Siu May NG  
Yoshihiro Nishida  
Anne O'Neill  
Maril Ortiz  
Bienvenido Osorio  
Kevin O'Toole  
Hector Oyola  
Willem Paillant  
Jonathan Parker  
Nimisha Haribaran Patel  
Gladys Pearlman  
Dahlia Pena  
Anthony Peterson

Bruno Pomponio  
Katherine Powell  
Sandra Power  
Robert Quon  
Jason Rachnowitz  
Madelin Ramirez  
Aline Reynolds  
Manual Rivera  
Anthony Robinson  
Kim Robledo  
Nelson Rogers  
Jose Rosado  
Holly Ross  
DeCorey Rowe  
Carlos Santiago  
Nicholas Sbordone  
Jean Schwartz  
Lindsey Senn  
Rekha Sewraj  
Sean Simon  
Kemnarine Singh  
Sarah Smedley  
Bruce Spierer  
Nicole Stallworth-Roper  
Shinay Stewart  
Jerome Sturiano  
Lance Super  
John Tam  
Taujuana Taylor  
Alexis Torres  
Ryan Torres  
Douglas Van Horn  
Noe Velasquez  
Evangelio Villalobos  
Jeffrey Vixamar  
Sharon Wade  
David Wallace  
Annalise Warren  
Eric White  
Angela Whitehead  
Dwight Williams  
Kenneth Windman  
Al Wright  
Jouli Yohannes  
Erin Yokoi

**EXHIBIT J**

**Sample Form of Contract**

(attached)

CONSTRUCTION AGREEMENT

between

HUGH L. CAREY BATTERY PARK CITY AUTHORITY

and

**[NAME OF COMPANY, INC. CORP, CO.]**

Dated as of **[DATE]**

Contract No. **[ENTER CONTRACT NUMBER]**

**(PROJECT NAME)**



## TABLE OF CONTENTS

### **Contents**

ARTICLE 1 - DEFINITIONS .....	1
ARTICLE 2 - SCOPE OF WORK, MATERIALS AND LABOR .....	4
2.1 <i>DEFINITION OF WORK</i> .....	4
2.2 <i>CONTRACT DOCUMENTS</i> .....	4
2.3 <i>INTENT OF CONTRACT DOCUMENTS</i> .....	4
2.4 <i>COMPLETION OF DRAWINGS AND SPECIFICATIONS</i> .....	6
2.5 <i>TITLE TO MATERIALS</i> .....	6
2.6 <i>CONTRACTOR’S OBLIGATIONS</i> .....	6
2.7 <i>“OR EQUAL” CLAUSE</i> .....	7
2.8 <i>QUALITY AND LABELING</i> .....	8
ARTICLE 3 - COMMENCEMENT AND COMPLETION OF THE WORK .....	9
3.1 <i>COMMENCEMENT, COMPLETION AND PROGRESS SCHEDULE</i> .....	9
3.2 <i>COORDINATION WITH OTHER CONTRACTORS</i> .....	11
3.3 <i>NOTICE OF DELAY</i> .....	11
3.4 <i>EXTENSION OF TIME</i> .....	12
ARTICLE 4 - CONTRACT PRICE .....	12
ARTICLE 5 - METHOD, SCHEDULE AND TERMS OF PAYMENTS .....	13
5.1 <i>PARTIAL PAYMENT</i> .....	13
5.2 <i>REQUISITIONS</i> .....	13
5.3 <i>TRADE PAYMENT BREAKDOWN</i> .....	13
5.4 <i>PAYMENT FOR STORED MATERIALS</i> .....	13
5.5 <i>RECEIPTS AND RELEASES OF LIENS</i> .....	14
5.6 <i>TIME OF PAYMENT</i> .....	14
5.7 <i>REDUCTION OF RETAINAGE</i> .....	15
5.8 <i>FINAL PAYMENT</i> .....	15
5.9 <i>RELEASE AND CONSENT OF SURETY</i> .....	15
5.10 <i>BPCA’S RIGHT TO AUDIT AND INSPECT RECORDS</i> .....	15
5.11 <i>WITHHOLDING OF PAYMENTS</i> .....	16
ARTICLE 6 – CONTRACTOR .....	16
6.1 <i>SUPERINTENDENCE BY CONTRACTOR, DISCIPLINE AND EMPLOYEE SKILLS</i> .....	16

6.2	<i>REPRESENTATIONS AND WARRANTIES</i> .....	17
6.3	<i>VERIFYING DIMENSIONS AND SITE CONDITIONS</i> .....	17
6.4	<i>COPIES OF CONTRACT DOCUMENTS FOR CONTRACTOR</i> .....	18
6.5	<i>MEETINGS</i> .....	18
6.6	<i>RELATED WORK</i> .....	18
6.7	<i>SURVEYS AND LAYOUT</i> .....	18
6.8	<i>REPORTS AND ACCESS</i> .....	18
6.9	<i>FINANCIAL INFORMATION</i> .....	18
ARTICLE 7 - CONTRACT ADMINISTRATION .....		18
7.1	<i>ARCHITECT’S RESPONSIBILITIES AND FUNCTIONS</i> .....	18
7.2	<i>CONSTRUCTION MANAGER’S RESPONSIBILITIES AND FUNCTIONS</i> .....	19
7.3	<i>SCOPE OF RESPONSIBILITY OF ARCHITECT AND CONSTRUCTION MANAGER</i> .....	19
ARTICLE 8 - INSPECTION AND ACCEPTANCE .....		19
8.1	<i>ACCESS TO THE WORK</i> .....	19
8.2	<i>NOTICE OF REQUIRED INSPECTIONS AND TESTS</i> .....	19
8.3	<i>ADDITIONAL INSPECTIONS AND TESTS</i> .....	19
8.4	<i>UNCOVERING OF WORK</i> .....	20
8.5	<i>CORRECTION OF WORK</i> .....	20
8.6	<i>CERTIFICATE OF SUBSTANTIAL COMPLETION</i> .....	20
8.7	<i>COMPLETION OF WORK AND ACCEPTANCE</i> .....	21
ARTICLE 9 - CHANGES IN THE WORK .....		21
9.1	<i>CHANGE ORDERS</i> .....	21
9.2	<i>CHANGE IN CONTRACT PRICE AND TIME</i> .....	22
9.3	<i>FIELD ORDERS</i> .....	23
9.4	<i>CHANGED CONDITIONS</i> .....	23
ARTICLE 10 - SUBCONTRACTS AND PURCHASE ORDERS .....		24
10.1	<i>SELECTION OF SUBCONTRACTORS AND MATERIALMEN AND APPROVAL OF SUBCONTRACTS AND PURCHASE ORDERS</i> .....	24
10.2	<i>ACCESS BY BPCA AND OTHERS</i> .....	24
10.3	<i>RETAINAGE</i> .....	25
10.4	<i>MISCELLANEOUS</i> .....	25
ARTICLE 11 - ASSIGNMENT.....		25
11.1	<i>NO ASSIGNMENT OF DUTIES</i> .....	25

11.2	<i>NO ASSIGNMENT OF MONIES</i> .....	26
11.3	<i>ASSIGNMENT BY BPCA</i> .....	26
	ARTICLE 12 - MECHANICS' LIENS AND CLAIMS .....	26
	ARTICLE 13 – INSURANCE AND CONTRACT SECURITY .....	27
13.1	<i>INSURANCE</i> .....	27
13.2	<i>EFFECT OF PROCUREMENT OF INSURANCE</i> .....	31
13.3	<i>CONTRACT SECURITY</i> .....	31
13.4	<i>ADDITIONAL OR SUBSTITUTE BOND</i> .....	31
	ARTICLE 14 - CLAIMS FOR EXTRA WORK.....	31
	ARTICLE 15 - TERMINATION.....	32
15.1	<i>TERMINATION FOR CAUSE</i> .....	32
15.2	<i>TERMINATION FOR CONVENIENCE OF BPCA</i> .....	34
15.3	<i>SUSPENSION OF WORK</i> .....	35
	ARTICLE 16 - COMPOSITE DRAWINGS AND COOPERATION .....	35
	ARTICLE 17 - PROTECTION OF RIGHTS, PERSONS AND PROPERTY .....	36
17.1	<i>ACCIDENT PREVENTION</i> .....	36
17.2	<i>SAFETY PROGRAMS</i> .....	36
17.3	<i>PROTECTION OF WORK AND PROPERTY</i> .....	36
17.4	<i>ADJOINING PROPERTY</i> .....	37
17.5	<i>RISKS ASSUMED BY CONTRACTOR</i> .....	37
	ARTICLE 18 - USE PRIOR TO ACCEPTANCE BY BPCA .....	38
	ARTICLE 19 - EXEMPTION FROM SALES AND COMPENSATING USE TAXES .....	38
19.1	<i>BPCA EXEMPT</i> .....	38
19.2	<i>CERTIFICATES</i> .....	38
	ARTICLE 20 - WARRANTIES AND GUARANTIES .....	38
20.1	<i>IN GENERAL</i> .....	38
20.2	<i>ADDITIONAL GUARANTIES</i> .....	39
20.3	<i>REPAIR BY ANOTHER</i> .....	39
	ARTICLE 21 - INDEMNITY .....	39
21.1	<i>DELAY OR FAILURE</i> .....	39
21.2	<i>INVENTIONS</i> .....	40
21.3	<i>LIABILITY</i> .....	40
	ARTICLE 22 - PATENTS AND ROYALTIES .....	40

ARTICLE 23 - AS-BUILT DRAWINGS.....	41
ARTICLE 24 - SHOP DRAWINGS AND SAMPLES .....	42
24.1    CONTRACTOR SUBMITTAL.....	42
24.2    CONTRACTOR’S RESPONSIBILITY.....	42
ARTICLE 25 – NOTICES.....	42
ARTICLE 26 – EMPLOYMENT AND DIVERSITY .....	43
26.1    PARTICIPATION BY MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISES.....	43
26.2    PARTICIPATION BY SERVICE-DISABLED VETERAN-OWNED BUSINESSES .....	48
ARTICLE 27 - STANDARD PROVISIONS .....	51
27.1    PROVISION REQUIRED BY LAW DEEMED INSERTED.....	51
27.2    COMPLIANCE WITH LAWS, RULES AND REGULATIONS .....	51
27.3    APPLICABLE LAW, FORUM AND JURISDICTION .....	51
27.4    NO THIRD PARTY RIGHTS .....	52
27.5    EXCULPATION; LIMITATION OF LIABILITY .....	52
27.6    PROTECTION OF LIVES AND HEALTH.....	52
27.7    WAIVER OF IMMUNITY CLAUSE .....	52
27.8    PROHIBITED INTERESTS.....	53
27.9    LABOR PROVISIONS .....	53
27.10    DISPUTES RESOLUTION PROCEDURE .....	55
27.11    ADDITIONAL PROVISIONS RELATING TO THE PROSECUTION OF CLAIMS FOR MONEY DAMAGES .....	56
27.12    LIMITATION ON ACTIONS .....	57
27.13    WAIVER OF REMEDIES.....	57
27.14    MODIFICATION OF AGREEMENT .....	58
27.15    SIGNS AND PARKING.....	58
27.16    ENTIRE AGREEMENT .....	58
27.17    RIGHTS AND REMEDIES .....	58
27.18    PARTICIPATION IN INTERNATIONAL BOYCOTT PROHIBITED .....	58
27.19    COMPLIANCE WITH “BUY-AMERICAN” STATUTES .....	59
27.20    PERMITTED SUCCESSORS .....	59
27.21    MACBRIDE FAIR EMPLOYMENT PRINCIPLES .....	59
27.22    IRAN DIVESTMENT ACT.....	59
27.23    TERMINATION FOR FAILURE TO DISCLOSE UNDER STATE FINANCE LAW §139K .....	59

27.24	<i>LABOR PEACE</i> .....	59
27.25	<i>COMPTROLLER'S APPROVAL</i> .....	60
27.26	<i>KEY PERSON/PERSONNEL</i> .....	60
27.27	<i>FORM OF AGREEMENT NOT AN OFFER</i> .....	60
27.28	<i>GENERAL RESPONSIBILITY</i> .....	60

## **EXHIBITS**

EXHIBIT A - SCOPE OF WORK  
EXHIBIT B - DRAWINGS  
EXHIBIT C - SPECIFICATIONS  
EXHIBIT D - MONTHLY UTILIZATION COMPLIANCE REPORTS  
EXHIBIT E - PROMPT PAYMENT POLICY  
EXHIBIT F - INCIDENT REPORT FORM

## CONSTRUCTION AGREEMENT

AGREEMENT made as of \_\_\_\_\_ by and between BATTERY PARK CITY AUTHORITY, d/b/a HUGH L. CAREY BATTERY PARK CITY AUTHORITY, (“**BPCA**”), a body corporate and politic, constituting a public benefit corporation and having a place of business at 200 Liberty Street, 24th Floor, New York, New York 10281, and [NAME OF COMPANY], formed under the laws of the State of [STATE], having an office at [Street Address, City, Zip Code] (“**Contractor**”).

### W I T N E S S E T H:

WHEREAS, BPCA has fee title to certain real property located in the City, County and State of New York, generally consisting of approximately 92 acres of land located on the west side of lower Manhattan, bounded by Pier A to the South, the westerly extension of Reade Street to the North, the United States Bulkhead Line to the East and the United States Pierhead Line to the West (collectively, “**Battery Park City**”); and

WHEREAS, BPCA has caused the staged development of Battery Park City, in individual parcels, creating a richly diversified mixed use community providing residential and commercial space, with related amenities such as parks, plazas, recreational areas and a waterfront esplanade; and

WHEREAS, BPCA intends to hire a contractor to perform [type of services], consisting of the Work, as hereinafter defined, for the [structure] upon which work will be performed (the “**Project**”), located in and adjacent to [location], in Battery Park City, in the Borough of Manhattan, County, City and State of New York (the “**Site**”); and

WHEREAS, Contractor has been selected to perform the Work, upon the terms and conditions hereinafter provided; and

NOW, THEREFORE, in consideration of the mutual covenants hereinafter set forth, Contractor and BPCA hereby agree as follows:

### ARTICLE 1 - DEFINITIONS

The following terms, wherever used in the Contract Documents, as defined herein, shall have the meanings set forth below or in the Section enumerated below next to each term:

- (a) Agreement - as defined in Section 2.2(a).
- (b) Agreement Termination Date - as defined in Section 3.1(a).
- (c) Architect - [include Name, Address, etc., as applicable].
- (d) Artist - [include Name, Address, etc., as applicable].
- (e) BPCA - as defined in the introductory clause of this Agreement. BPCA hereby designates [BPCA Person and Title], as the representative of BPCA for the purpose of acting on behalf



of BPCA whenever action is required to be taken hereunder by BPCA. Such designation may be revoked in writing at any time after notice given by BPCA to Contractor. In addition, such representative of BPCA shall have full power and authority to delegate in writing any or all of her responsibilities hereunder to any one or more persons after notice to Contractor.

- (f) Certificate of Substantial Completion - as defined in Section 8.6.
- (g) Change Order - as defined in Section 9.1(b).
- (h) Construction Manager - [include Name, Address, etc., as applicable].
- (i) Contract Documents - as defined in Section 2.2.
- (j) Contract Price - as defined in Article 4.
- (k) Contract Time - the duration of time during which Construction Manager schedules and coordinates the Work of Contractor pursuant to Section 7.2 hereof.
- (l) Contractor - as defined in the first Recital of this Agreement.
- (m) Drawings - Project drawings comprising part of Exhibit [x].
- (n) Engineer [include Name, Address, etc., as applicable].
- (o) Extra Work - any work in addition to the Work to be performed by Contractor pursuant to the Contract Documents.
- (p) Field Order - as defined in Section 9.3.
- (q) Final Acceptance - as defined in Section 8.7.
- (r) Final Requisition - as defined in Section 5.2.
- (s) Guarantor - as defined in Section 27.3.
- (t) Joint Venture - an entity created pursuant to a written agreement among two or more contractors pursuant to which each shares in the direction and performance of the Work and shares in a stated percentage of profits or losses.
- (u) Key Person/Personnel - as defined in Section 27.25.
- (v) Materialman - supplier of Materials.
- (w) Materials - all products, materials, fixtures, tools, equipment, apparatus, and furnishings intended to form a part of the Work.
- (x) Minority Business Enterprise or Minority Owned Business Enterprise or MBE - as defined in Article 26.

- (y) Minority or Minority Group Member - as defined in Article 26.
- (z) Notice to Proceed - a written directive from BPCA to Contractor signed by a duly authorized BPCA representative directing Contractor to begin performance of the Work set forth in this Agreement on a particular date.
- (aa) Payment Bond - as defined in Section 13.3.
- (bb) Performance Bond - as defined in Section 13.3.
- (cc) Preceding Covered Date - as defined in Section 5.5.
- (dd) Product Data - illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by Contractor to illustrate a Material, product or system for some portion of the Work.
- (ee) Progress Schedule for the Work - as defined in Section 3.1(a).
- (ff) Project - as defined in the third Recital of this Agreement.
- (gg) Purchase Order - as defined in Section 10.1(e).
- (hh) Requisitions - as defined in Section 5.2.
- (ii) Samples - physical examples which illustrate Materials or workmanship and establish standards by which the Work will be judged.
- (jj) Site - as defined in the third Recital of this Agreement.
- (kk) Specifications - the specifications comprising part of Exhibit [x].
- (ll) Subcontract - an agreement between the Contractor and a Subcontractor (as defined in subsection (mm) below) for work on the Site.
- (mm) Subcontractor - a person, firm, partnership or corporation under contract with Contractor.
- (nn) Term - as defined in Section 3.1(a).
- (oo) Trade Payment Breakdown - as defined in Section 5.3.
- (pp) Women's Business Enterprise or Women Owned Business Enterprise or WBE - as defined in Article 26.
- (qq) Work - as defined in Section 2.1.
- (rr) Work Completion Date - as defined in Section 3.1(a).

## **ARTICLE 2 - SCOPE OF WORK, MATERIALS AND LABOR**

### *2.1 Definition of Work*

Contractor shall perform and complete (and shall cause all Subcontractors to perform and complete) for BPCA the work more particularly described in Exhibit A (the “**Work**”) annexed hereto and made a part hereof, required by and in conformity with the Contract Documents in connection with the construction of the Project on the Site. All materials to be furnished and labor and work to be performed and completed by Contractor and/or Subcontractors as required in the Contract Documents and in conformity with all requirements applicable with respect thereto are herein collectively referred to as the “Work.”

### *2.2 Contract Documents*

The “**Contract Documents**” shall consist of the following:

(a) This instrument (the “**Agreement**”), which includes, in addition to the text comprising Articles 1 through 27, the following:

- (1) EXHIBIT A - SCOPE OF WORK (as applicable)
- (2) EXHIBIT B – DRAWINGS (as applicable)
- (3) EXHIBIT C – SPECIFICATIONS (as applicable)
- (4) EXHIBIT D - MONTHLY UTILIZATION COMPLIANCE REPORTS (as applicable)
- (5) EXHIBIT E - PROMPT PAYMENT POLICY (as applicable)
- (6) EXHIBIT F - INCIDENT REPORT FORM (as applicable)

(b) The Payment and Performance Bonds (as defined in Section 13.3).

(c) Change Orders adopted pursuant to Article 9.

The Contract Documents form the contract between BPCA and Contractor. References in the Contract Documents to “the Contract”, “this Contract” or “the Construction Contract” shall be deemed to include all of the Contract Documents. References to “this Agreement” or “the Agreement” shall refer to this instrument (including the Exhibits attached hereto), which is one of the Contract Documents.

### *2.3 Intent of Contract Documents*

(a) The intent of the Contract Documents is to include in the Work all labor and materials, insurance, tools, equipment, permits, licenses, taxes, approvals, transportation, surveys, testing, field engineering and other professional services (other than the services of BPCA’s Architect, Construction Manager, Engineers, and attorneys, and the inspection, survey and testing services of BPCA) and any other items required to execute and complete the Work satisfactorily and in accordance with the Contract Documents. Contractor shall perform and complete the Work in accordance with the true intent and meaning of the Contract Documents and shall perform all Work incident thereto or as is usually performed in connection therewith or as is reasonably inferable therefrom, it being the intention that all work usually performed by the trade covered by

this Agreement and necessary to produce the intended result be performed by Contractor whether or not specifically covered by the Contract Documents.

(b) The Contract Documents are complementary and what is called for by one shall be as binding as if called for by all.

(c) If any conflicts or ambiguities are found in or between the Drawings and Specifications, or among any of the Contract Documents, they shall be brought to the attention of Construction Manager immediately for resolution. Architect and Construction Manager will interpret the Contract Documents so as to secure in all cases the most substantial and complete performance of the Work as is most consistent with the needs and requirements of the Work. In the event that Architect and Construction Manager disagree as to the interpretation of the Contract Documents, such dispute shall be presented to BPCA, which shall have sole authority to resolve the dispute.

(d) Addenda to parts of the Contract Documents are for the purpose of varying, modifying, rescinding or adding to the affected portion of the Contract Documents. All addenda should be read together with the portions of the Contract Documents to which they pertain. Where an addendum modifies a portion of a paragraph or a Section, the remainder of the paragraph or Section shall remain in force unless otherwise stated in the addendum.

(e) Captions, headings, cover pages, tables of contents and footnote instructions contained in the Contract Documents are inserted only to facilitate reference and for convenience and in no way define, limit or describe the scope, intent or meaning of any provision of the Agreement.

(f) Words and abbreviations which have well-known technical or trade meanings are used in the Contract Documents in accordance with such recognized meanings.

(g) Drawings and Specifications are complementary. Anything shown in the Drawings and not mentioned in the Specifications, or mentioned in the Specifications and not shown in the Drawings, shall have the same effect as if shown or mentioned in both.

(h) A typical or representative detail indicated on the Drawings shall constitute the standard for workmanship and Materials throughout corresponding parts of the Work. Where necessary, and where reasonably inferable from the Drawings or Specifications, Contractor shall adapt such representative detail for application to such corresponding parts of the Work. The details of such adaptation shall be subject to prior approval by Architect. Repetitive features shown in outline on the Drawings shall be in exact accordance with corresponding features completely shown.

(i) The layout of mechanical and electrical systems, equipment, fixtures, piping, ductwork, conduit, specialty items, and accessories indicated on the Drawings is diagrammatic, and all variations in alignment, elevation, and detail required to avoid interferences and satisfy Architectural and structural limitations are not necessarily shown. Actual layout of the Work shall be carried out without affecting the architectural and structural integrity and limitations of the Work and shall be performed in such sequence and manner as to avoid conflicts, provide clear access to all control points, including valves, strainers, control devices, and specialty items of

every nature related to such systems and equipment, obtain maximum headroom, and provide adequate clearances as required for operation and maintenance.

#### *2.4 Completion of Drawings and Specifications*

Contractor acknowledges that there are items of work which are not drawn or specified with complete detail in the Drawings and Specifications but which are required for the completion of the Work. Any such item, when identified as part of the reasonable development of the Work, shall be drawn or specified by Architect in consultation with Contractor, in a manner consistent with contemplated kind and quality and customary standards. When such drawing or specification is approved by BPCA, the drawing or specification so approved shall thereupon be part of the Contract Documents and the item of work shall be performed by Contractor as part of the Work without further action or order of Construction Manager or BPCA and without any increase in the Contract Price (as hereinafter defined) as if such drawing and/or specification were originally included in the Contract Documents.

#### *2.5 Title to Materials*

Title to all Materials shall immediately vest in BPCA upon payment in respect of such Materials, whether or not then incorporated or installed into the Project. The Materials shall then become the sole property of BPCA subject to the right of BPCA, Construction Manager or Architect to reject same for failure to conform to the standards of any or all of the Contract Documents. Title to all Work and Materials shall be in BPCA, free and clear of all liens, claims, security interests or encumbrances. Contractor warrants that no Work or Materials shall be fabricated or delivered to the Site by Contractor or any Subcontractor or Materialman subject to any security interest, lien or similar encumbrance.

#### *2.6 Contractor's Obligations*

(a) Contractor shall in a good and workmanlike manner perform all the Work required by this Agreement in accordance with the best practice of Contractor's trade within the time specified herein. Contractor shall supervise and direct the Work using its best skill and attention. Contractor shall be solely responsible for all construction means, methods, techniques, sequences and procedures within the scope of Contractor's Work.

(b) Contractor shall furnish, erect, maintain, and remove such construction plant and such temporary Work as may be required for the performance of the Work. Contractor shall be responsible for the safety, efficiency and adequacy of Contractor's plant, appliances and methods, and for damage that may result from failure or improper construction, maintenance or operation of such plant, appliances and methods. Contractor shall comply with all terms of the Contract Documents, and shall do, carry on and complete the entire Work under the direction of and to the satisfaction of BPCA.

(c) Contractor shall provide all equipment, tools and materials and whatever else may be required for proper performance of the Work unless stated otherwise in the Contract Documents.

(d) Contractor shall deliver all Materials at such times and in such quantities as will insure the speedy and uninterrupted progress of the Work. All Materials shall be delivered to the Site in proper order and quantity and shall be stored at the Site, if storage space is available in Construction Manager's opinion, in such places as Construction Manager shall direct; provided, that no delivery of Materials shall be made to the Site without prior approval by Construction Manager. Contractor has been advised and is aware that the Project is located in a congested metropolitan area, and there may not be sufficient space to store Materials on Site. If storage space is unavailable on Site, Contractor shall make arrangements to store Materials off Site at Contractor's own cost. Contractor shall not be entitled to additional compensation for moving Materials from one storage area to another, whether such storage areas are on or off Site. No Materials shall be removed from the Site without the consent of Construction Manager. Contractor shall handle and take care of all Materials used in performance of the Work whether furnished by Contractor or BPCA, as the same are delivered to the Site or to any applicable offsite storage location and shall be solely responsible for the security and condition of the same. After final completion and acceptance of the Work, or sooner if requested by Construction Manager, Contractor shall remove all surplus Materials and scaffolding furnished by it which have not been incorporated in the Work.

(e) Contractor shall follow and perform the Work in accordance with the Contract Documents as interpreted by Architect, Construction Manager, and BPCA.

(f) Unless otherwise provided in the Contract Documents, Contractor shall secure and pay for all permits and governmental fees, licenses and inspections necessary for the proper execution and completion of the Work. Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the Work. If Contractor observes that any of the Contract Documents are at variance with any applicable laws in any respect, Contractor shall promptly notify Architect and Construction Manager in writing, and any necessary changes shall be accomplished by appropriate modification. If Contractor performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to Architect and Construction Manager, Contractor shall assume full responsibility therefor and shall bear all costs attributable thereto.

(g) Contractor shall be responsible for collecting all paper, cartons and other debris caused by its Work or personnel, placing the same in a location designated by Construction Manager and keeping the portion of the Site upon which Contractor is performing the Work free from all debris.

(h) Contractor shall attend meetings as directed by BPCA or Construction Manager.

## 2.7 *"Or Equal" Clause*

(a) The Materials of manufacturers referred to in the Specifications and on the Drawings are intended to establish the standard of quality and design required by Architect; however, Materials of manufacturers, other than those specified, may be used if equivalent and approved by Architect, Construction Manager and BPCA.

(b) It is deemed that the term "or approved equal" is included after all Materials



referred to in the Specifications or on the Drawings.

(c) Architect will initially judge the equivalency of proposed substitute Materials. Architect will make written recommendation of acceptance or rejection to Construction Manager and/or BPCA. Construction Manager and/or BPCA will then authorize Architect to issue to Contractor written approval or rejection of the substitution.

(d) If Contractor desires to use a substitute item, Contractor shall make application to Architect in writing in sufficient time (with regard to the progress of the Work, the period of delivery of the goods concerned and adequate time for Architect's review) stating and fully identifying the proposed substitute, cost changes (if any), and submitting substantiating data, samples, brochures of the item proposed. It is Contractor's responsibility to provide at its sole expense sufficient evidence by tests or other means to support any request for approval of substitutions.

(e) Prior to proposing any substitute item, Contractor shall satisfy itself that the item Contractor proposes is, in fact, equal to that specified and had been used satisfactorily in similar applications to the application proposed for the Work, for at least three years, that it will fit into the space allocated and within the load allocated for the same, that it affords comparable ease of operations, maintenance and service, that its appearance, longevity and suitability for the climate and use are comparable to that specified, and that the substitution requires no change in dimension or design of any other Work of Contractor, of any other contractor or in the time required for the performance thereof.

(f) The burden of proof that a proposed substitution is equal to a specified item shall be upon Contractor, who shall support its request with sufficient test data and other means to permit Architect to make a fair and equitable decision on the merits of the proposal. Any item by the manufacturer other than those cited in the Contract Documents, or of brand name or model number or of generic species other than those cited in the Contract Documents, will be considered a substitution.

(g) Acceptance of substitutions shall not relieve Contractor from responsibility for compliance with all the requirements of the Contract Documents. If, notwithstanding the provisions of subsection (e) above, changes in other parts of the Work or the work of other contractors are required by its substitutions, Contractor shall be responsible for the costs of any such changes including the cost of all design and redesign services related thereto incurred by the Architect and its Contractors.

(h) The Contract Time shall not be extended by any circumstances resulting from a proposed substitution, nor shall Contractor be entitled to any compensation for any delay caused thereby or related thereto.

## *2.8 Quality and Labeling*

All Materials furnished shall be new and the quality thereof shall be in accordance with the Contract Documents. When Materials are specified to conform to a given standard, the Materials delivered to the Site shall bear manufacturer's labels stating that the Materials meet such standard. The above requirements shall not restrict or affect BPCA's right to test Materials as provided in

this Agreement.

### **ARTICLE 3 - COMMENCEMENT AND COMPLETION OF THE WORK**

#### *3.1 Commencement, Completion and Progress Schedule*

(a) Contractor shall prepare and submit a progress schedule for the Work (“**Progress Schedule for the Work**”) and agrees to be bound by and comply with the Work Completion Date and the Progress Schedule for the Project (as the Progress Schedule for the Project shall be updated pursuant to subsection (b)) and waives any right to charge or claim damages or any increased cost, charges or expenses against BPCA, Construction Manager, or Architect, for delays or disruptions from any cause whatsoever. Contractor’s sole remedy as against BPCA, Construction Manager, or Architect for any delays or disruptions shall be as provided in Section 3.4 hereof. Notwithstanding the foregoing, the Work shall be completed by no later than [date] (the “**Work Completion Date**”) with time being of the essence in respect of said Work Completion Date, as more fully set forth in subsection (h) below; this Agreement shall terminate by [date] (the “**Agreement Termination Date**”) (the period between the date of commencement of the Work and the Agreement Termination Date, the “**Term**”).

(b) The Progress Schedule for the Work shall be formatted in a detailed precedence-style critical path method, or such other format satisfactory to BPCA and Construction Manager and shall also (a) provide a graphic representation of all activities and events including float values that will affect the critical path of the Work, (b) incorporate and coordinate all pertinent information involving each phase of Work, and (c) identify dates that are critical to ensuring the timely and orderly completion of the work in accordance with the requirements of the Contract Documents, including the dates for Substantial Completion of each respective phase of the Work. The Progress Schedule for the Work shall be updated weekly, or at any other time at the request of Construction Manager or BPCA, and submitted to Construction Manager and BPCA for review and approval. Failure to submit any requested update shall constitute a material breach of this Agreement. The Contractor shall promptly give written notice of any actual or potential delays to BPCA and Construction Manager. After submission of the Progress Schedule for the Work, Construction Manager shall coordinate the Progress Schedule for the Work with the Progress Schedule for the Project. The Progress Schedule for the Work may be revised by Construction Manager from time to time.

(c) Contractor shall commence the Work upon receipt of a written notice to proceed signed by BPCA (the “**Notice to Proceed**”), and shall prosecute the Work diligently and in accordance with the time and place requirements of the Project as determined and directed by Construction Manager, by using such means and methods of construction as will assure that the Work will be performed hereunder in accordance with the Contract Documents and Progress Schedule for the Work, and to the satisfaction of BPCA, Architect, and Construction Manager.

(d) If, in the opinion of Construction Manager, Contractor falls behind the Progress Schedule for the Project then in effect, Contractor shall take whatever steps may be necessary to improve its progress and shall, if requested by Construction Manager, submit operational plans to demonstrate the manner in which the lost time may be regained. It is the responsibility of Contractor to maintain its schedule so as not to delay the progress of the Project or the schedules

of other contractors. If Contractor delays the progress of its Work or the work of other contractors, it shall be the responsibility of Contractor to increase the number of workers, the number of shifts, the days of Work and/or, to the extent permitted by law, to institute or increase overtime operations, all without additional cost to BPCA, in order to regain any time lost and maintain the Progress Schedule for the Project then in effect as established by Construction Manager.

(e) If Contractor shall fail to complete the Work by the Work Completion Date, or within the time to which such completion may have been extended, BPCA may, at its option, withhold from any sums otherwise due and owing to Contractor hereunder, so much of the balance thereof as BPCA shall deem necessary to secure it against any costs, expenses, or damages which may be incurred by BPCA as a result of said failure, but any such withholding shall not be deemed to be a waiver of any rights hereunder, and Contractor shall be liable to and shall indemnify and hold BPCA harmless from any and all cost, expense or damage incurred by BPCA by reason of such failure.

[(f) If Contractor shall neglect, fail or refuse to complete the Work on or before the Work Completion Date or any changes thereto in accordance with, or upon the expiration of, any proper extension granted by BPCA, Contractor agrees to pay to BPCA (\$\$\$\$\$), not as a penalty, **but as liquidated** damages for loss of beneficial use of the Project, for each and every calendar day that the Contractor is in default. Default shall include abandonment of the Work by Contractor.] **[delete if no liquidated damages]**

(g) [Said amount of liquidated damages is agreed upon by and between Contractor and BPCA because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages which BPCA would sustain for loss of beneficial use of the Project in the event of delay in completion, and said amount is agreed to be the amount of damages sustained by BPCA and said amount may be retained from time to time by BPCA. The foregoing liquidated damages are intended to compensate BPCA only for the loss of beneficial use of the Project. In addition,] **[delete if no liquidated damages]** Contractor shall be liable to BPCA, to the fullest extent permitted by law, for whatever actual damages (other than actual loss of beneficial use) BPCA may incur as a result of any actions or inactions of Contractor or its Subcontractors including, without limitation, interest expense and carrying costs, liabilities to other Contractors working on the Project or other third parties, job extension costs, and other losses incurred by BPCA. The provisions of this paragraph are exclusive to BPCA, and shall not accrue to other contractors or third parties.

(h) It is further agreed that time is of the essence for each and every portion of the Work. In any instance in which additional time is allowed for the completion of any Work, the new time of completion established by said extension shall be of the essence. Contractor shall not be charged with [liquidated damages or] **[delete if no liquidated damages]** any excess cost if BPCA determines that Contractor is without fault and that the delay in completion of the Work is due to:

(1) any preference, priority or allocation order duly issued by the Government of the United States or the State of New York;

(2) an unanticipated cause beyond the control and without the fault of, or

negligence of Contractor, and approved by BPCA, including, but not limited to, acts of God or of public enemy, fires, epidemics, quarantine, strikes, freight embargoes and unusually severe weather; and

(3) any delays of Subcontractors or Materialmen occasioned by any of the causes specified in subsections 1 and 2 of this paragraph.

(i) Notwithstanding the foregoing, and whether or not, at any given time, a Progress Schedule, or update thereto (as appropriate) has been submitted, the Work shall be completed by the Work Completion Date.

(j) Notwithstanding anything to the contrary, a schedule submitted by Contractor showing a time of completion earlier than that specified in the Contract shall not entitle Contractor to any additional compensation in the event the earlier time of completion is not realized.

### *3.2 Coordination with Other Contractors*

Contractor shall coordinate the Work to be performed hereunder with the work of other contractors performing work for the Project in such manner as Construction Manager shall direct. Contractor shall indemnify and hold BPCA, Construction Manager, and Architect harmless from any and all claims or judgments for damages, costs and expenses to which BPCA, Construction Manager or Architect may be subjected or which they may suffer or incur by reason of Contractor's failure to promptly comply with Construction Manager's directions. If Contractor notifies Construction Manager in writing that another contractor is failing to coordinate its work with the Work to be performed hereunder, Construction Manager shall promptly investigate the charge. If Construction Manager finds that charge to be true, it shall promptly issue such direction to the other contractor with respect thereto as the situation may require. BPCA, Construction Manager and Architect shall not, however, be liable for any damages suffered by Contractor by reason of the other contractor's failure to promptly comply with the directions so issued by Construction Manager or by reason of another contractor's default in performance. Should Contractor sustain any damage through any act or omission of any other contractor, Contractor shall have no claim against BPCA, Construction Manager or Architect for such damage but shall have a right to recover such damage from the other contractor, under a provision similar to a provision contained in the following sentence which is part of this Agreement and which has been or will be inserted in the contracts with the other contractors engaged in the Project.

Should any other contractor having or who shall hereafter have a contract with BPCA for the performance of work upon the Project sustain any damage through any act or omission of Contractor hereunder, Contractor shall reimburse such other contractor for all such damages and to indemnify and hold BPCA, Construction Manager and Architect harmless from all such claims. Any claim against a performance bond surety made by any contractor shall be subordinated to any claim of BPCA then existing or that may arise in the future against such other contractor or its performance bond surety.

### *3.3 Notice of Delay*

Should Contractor be or anticipate being delayed or disrupted in performing the Work hereunder for any reason, including, without limitation, its financial condition or Contractor's

general nonpayment of its debts as such debts become due, it shall promptly and in no event more than three (3) days after the commencement of any condition that is causing or is threatening to cause such delay or disruption notify Construction Manager in writing of the effect of such condition upon the Progress Schedule for the Project, stating why and in what respects the condition is causing or is threatening to cause delay, provided, however, that notwithstanding the above, if such delay or disruption, or anticipated delay or disruption, should be the result of any change or anticipated change in Contractor's financial condition, Contractor shall notify Construction Manager forthwith of such cause or anticipated cause. Failure to strictly comply with this notice requirement shall be sufficient cause to deny Contractor a change in schedule and to require it to conform to the Progress Schedule for the Project then in effect established by Construction Manager.

### *3.4 Extension of Time*

(a) An extension of time under the Progress Schedule for the Project then in effect may be granted by BPCA subject to the provisions hereof upon written application therefor by Contractor. An application for an extension of time under the Progress Schedule for the Project then in effect must set forth in detail the nature of each cause of delay in the performance of the Work, the date or dates upon which each cause of delay began and ended and the number of days delay attributable to each such cause. After the application is submitted, Contractor shall supply any other data that Construction Manager may request.

(b) Contractor shall be entitled to an extension of time under the Progress Schedule for the Project then in effect for delays in the performance of the Work, if caused:

(1) solely by unanticipated acts or omissions of BPCA, Construction Manager or Architect; or

(2) by the unanticipated acts or omissions of other contractors or unanticipated causes beyond the control and without the fault or negligence of Contractor including, but not limited to, acts of God, acts of public enemy, acts of any Government body, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, or delays of Subcontractors or Materialmen arising from unforeseeable causes beyond the control and without the fault or negligence of both Contractor and such Subcontractors or Materialmen; provided, that Contractor shall have used its best efforts and diligently sought to have minimized any such period of delay, by taking whatever measures are necessary, including without limitation, if applicable, seeking alternate sources of Materials, other Subcontractors or other facilities in which to perform the required construction operations; and provided, further, that an application is made pursuant to the requirements of the immediately preceding paragraph.

## **ARTICLE 4 - CONTRACT PRICE**

For the performance and completion of the Work, BPCA shall pay Contractor a lump sum amount of (\$\$\$\$), (such sum is herein sometimes referred to as the "**Contract Price**"), which amount shall include any monies earned by or paid to Contractor prior to the execution of this Agreement, provided, that if the Contract Price shall be expressly revised by a Change Order in accordance with Article 9 hereof, the Contract Price shall thereafter mean the Contract Price as so

revised. Contractor will submit appropriate Time Sheets in the form of Exhibit [x].

## **ARTICLE 5 - METHOD, SCHEDULE AND TERMS OF PAYMENTS**

### *5.1 Partial Payment*

(a) In accordance with Requisitions (as defined in Section 5.2) submitted and approved as provided below for Work performed in accordance with this Agreement, Contractor shall be entitled to partial payment on account of the Contract Price in an amount equal to the value, as determined in accordance with the Trade Payment Breakdown (as defined in Section 5.3), of the portions of the Work completed and acceptable to BPCA and Construction Manager for purposes of such payment, less a retainage equal to ten percent (10%) of the total amount of all prior partial payments. Partial payments shall constitute advances against the Contract Price until final payment is made and accepted. No partial payment made, nor approval of a portion of the Work given for purposes of making a partial payment, shall constitute an acceptance of any Work not in accordance with the Contract Documents.

(b) Upon completion of fifty percent of the Work, Contractor may make written application to BPCA requesting reduction of the retainage set forth in Section 5.1(a) hereof. Approval of such reduction of retainage and the percentage to which the retainage shall be reduced is in the sole discretion of BPCA. If BPCA approves a reduction of retainage as herein described, BPCA shall so notify Contractor in writing. Any reduction of retainage pursuant to this paragraph (b) shall not be deemed to be a waiver of retainage requirements for future partial payments.

### *5.2 Requisitions*

Applications for partial payments (“**Requisitions**”) and application for final payment (“**Final Requisition**”) shall be in the form previously supplied by BPCA and shall be submitted by Contractor to Construction Manager or its designee in five original copies in the manner hereinafter provided for the approval of BPCA and Construction Manager. Each Requisition shall be supported by such data substantiating Contractor’s right to payment as BPCA and Construction Manager may require.

### *5.3 Trade Payment Breakdown*

Prior to the submission of the first Requisition, Contractor shall present to Construction Manager for approval a trade payment breakdown (the “**Trade Payment Breakdown**”) of the various portions of the Work, aggregating the Contract Price, prepared in such form as specified by BPCA and supported by such data to substantiate its correctness as Construction Manager may require. After approval by BPCA and Construction Manager, the Trade Payment Breakdown shall not be changed or revised in any way without the written consent of Construction Manager. The Trade Payment Breakdown, when approved by Construction Manager, shall be used only as a basis for Requisitions and shall not be considered as a basis for reducing or increasing the Contract Price.

### *5.4 Payment for Stored Materials*

If approved in advance of delivery by BPCA and Construction Manager, payments will be



made on account of 80% of the value of Materials that have not been incorporated in the Work to date, but delivered and suitably stored at the Site or at some other offsite location agreed upon in writing by BPCA and Construction Manager. Such payments shall be conditioned upon submission by Contractor of bills of sale or other supporting documentation satisfactory to BPCA and Construction Manager to establish BPCA's title to such Materials including applicable insurance and transportation to the Site for those Materials stored offsite. In the event that Contractor, with approval of BPCA, stores any Materials offsite, the conditions for payment of Material stored off-site shall include but not be limited to the following: (a) the Material shall be properly stored in a secured location approved by the BPCA and/or Construction Manager; (b) the Material will be covered under the BPCA's builder's risk policy subject to policy limits and restrictions; and (c) the Material may be inspected by the BPCA and /or Construction Manager to assure compliance with Contract Documents.

#### *5.5 Receipts and Releases of Liens*

With each Requisition, Contractor shall furnish its affidavit of payment and waiver of lien for Work done and Materials furnished through the date covered by the last preceding partial payment (the "**Preceding Covered Date**") and shall furnish its affidavit certifying that all Subcontractors and Materialmen have been paid for Work performed and Materials furnished through the Preceding Covered Date except for any permitted retainage. BPCA may also require Contractor to attach to each Requisition (i) affidavits of payment and waivers of lien from all Subcontractors and Materialmen dealing directly or indirectly with Contractor for Work performed and Materials furnished through the Preceding Covered Date and/or (ii) the consent of the surety issuing the Payment Bond to such payment. BPCA may require Contractor to execute a waiver of lien at the time payment is made for a Requisition for all Work performed through the date of the Requisition in respect of which payment is being made.

In addition to the documents required to be furnished by the preceding paragraph, with the Final Requisition, Contractor shall furnish (y) its affidavit that there are no liens, claims or demands by, and that there is no indebtedness to, Subcontractors, Materialmen, laborers, other employees or third persons for which BPCA, Construction Manager, or Architect might in any way be responsible and (z) releases from all Subcontractors and Materialmen dealing directly or indirectly with Contractor. Should any such Subcontractor or Materialman fail or refuse to furnish such release, Contractor may be required to furnish a bond satisfactory to BPCA to indemnify it against any such lien, claim or demand. If any such lien, claim or demand remains unsatisfied after all payments are made to Contractor, Contractor shall refund to BPCA all monies that BPCA may be compelled to pay in discharging such lien, claim or demand including all costs, expenses and attorneys' fees which BPCA may incur in connection therewith.

#### *5.6 Time of Payment*

Requisitions shall be submitted by Contractor to BPCA and Construction Manager by the seventh day of each calendar month for Work completed up to the last calendar day of the previous month or other day approved by BPCA, and payment shall be made (pursuant to BPCA's Prompt Payment Policy, a copy of which is attached hereto and made part hereof as Exhibit E) on or about twenty days after BPCA receives the Requisition together with the documents required pursuant to Sections 5.2 and 5.5 hereof. Contractor shall be entitled to payment only in the amount approved

by BPCA and Construction Manager with respect to such Requisitions, each of which must be signed by BPCA and Construction Manager before payment is made. The value of any Work included in a Requisition for partial payment which is found unacceptable by BPCA or Construction Manager may be deducted from that or any subsequent Requisition.

#### *5.7 Reduction of Retainage*

Upon the issuance of a Certificate of Substantial Completion, as defined in Section 8.6, Contractor shall submit a Requisition in an amount equal to the Contract Price less five percent (5%) of the total contract amount (including all approved Change Orders and pending Change Order proposals), and less the total amount of all prior payments. Upon approval of the same by BPCA, BPCA shall pay to Contractor the amount approved less any amount which BPCA is entitled to withhold hereunder.

#### *5.8 Final Payment*

(a) The final balance due Contractor under this Agreement shall be payable to Contractor by BPCA, as final payment hereunder, within thirty days after all of the following have taken place:

- (1) Contractor's Final Requisition has been submitted by Contractor and approved by BPCA and Construction Manager;
- (2) the affidavit provided for in Section 5.5 hereof has been submitted by Contractor, and any other documents or actions expressly specified in the Contract Documents as preconditions to final payment have been submitted or completed; and
- (3) any inspections or approvals with respect to any of the Work that BPCA deems legally required or appropriate by governmental authorities or by the applicable Board of Fire Underwriters have been performed or obtained.

(b) The acceptance of final payment shall constitute a waiver of all claims by Contractor.

#### *5.9 Release and Consent of Surety*

Notwithstanding any other provision of this Agreement, before final payment pursuant to Section 5.8 shall become due pursuant hereto or before reduction of retainage, Contractor shall submit to BPCA a consent of surety to final payment or reduction of retainage in form and substance acceptable to BPCA.

#### *5.10 BPCA's Right to Audit and Inspect Records*

Contractor shall maintain and shall keep for a period of at least six years after the date of Final Acceptance of the Work, pursuant to Section 8.7, all records and other data relating to the Work. BPCA or its designee shall have the right to inspect and audit all records and other data of Contractor relating to the Work at any time and from time to time until the end of such six year

period. Contractor shall promptly respond to any inquiries of BPCA or any representative of BPCA arising out of any such inspection or audit.

#### *5.11 Withholding of Payments*

(a) BPCA may withhold payment or, because of subsequently discovered evidence, may nullify the whole or any part of any previously approved Requisition to such extent as may, in the judgment of BPCA, be necessary:

- (1) to assure payment of just claims or liens of any persons supplying labor or Materials for the Work;
- (2) to protect BPCA from loss due to defective Work or to reimburse BPCA, Construction Manager and Architect for fines on account of non-compliance with applicable laws, rules and regulations, including rules promulgated by the Office of Safety & Health Administration;
- (3) to protect BPCA from loss due to death or injury to persons or damage to the Work or property of BPCA, other contractors or others caused by the act or neglect of the Contractor;
- (4) in the event that there is reasonable evidence that the Work will not be completed for the unpaid balance of the Contract Price;
- (5) in the event that there is reasonable evidence that the Work will not be completed within the time provided; or
- (6) in the event that Contractor persistently fails to perform the Work in accordance with the Contract Documents.

In any of such events, BPCA shall have the right to apply any such amounts so withheld in such manner as BPCA may deem proper to satisfy such claims, to secure such protection, to complete the Work or to compensate BPCA for any loss suffered by reason of Contractor's delay. Such application shall be deemed payment for the account of Contractor. In the event that BPCA gives Contractor notice that it intends to make such application, Contractor shall be estopped from disputing liability or the amount of liability unless, within three days after receipt of such notice, it indicates to BPCA in writing that it is not liable or that the amount of its liability is different from that set forth in the notice.

(b) The provisions of this Section 5.11 are solely for the benefit of BPCA, and any action or non-action by BPCA shall not give rise to any liability on the part of BPCA. Failure to so act shall not be deemed a waiver of any present or future claims of BPCA.

### **ARTICLE 6 – CONTRACTOR**

#### *6.1 Superintendence by Contractor, Discipline and Employee Skills*

Contractor shall provide a competent construction superintendent to be in charge of the

Work. The construction superintendent shall devote full time to the Work, shall be present at the Site during the time the Work is required to be performed and shall have full authority to accept instructions, make decisions and act for Contractor at all times. If at any time the construction superintendent is not satisfactory to BPCA or Construction Manager, Contractor shall, if requested by BPCA, replace such superintendent with another satisfactory to BPCA. Contractor shall enforce strict discipline and good order at all times among Contractor's employees and all Subcontractors. Contractor shall not engage any employee not skilled in the task assigned.

## *6.2 Representations and Warranties*

Contractor represents and warrants that:

(a) Contractor is financially solvent and is experienced in, and competent to perform the Work and has the staff, manpower, equipment, Subcontractor, and suppliers available to complete the Work within the time specified in this Agreement for the Contract Price;

(b) Contractor is familiar with all Federal, State or other laws, ordinances, orders, rules and regulations, which may in any way affect the Work;

(c) any temporary and permanent Work required by this Agreement can be satisfactorily constructed, and such construction will not injure any person or damage any property; and

(d) Contractor has carefully examined the Contract Documents and the Site and, from Contractor's own investigations, is satisfied as to the nature and location of the Work, the character, quality and quantity of surface and subsurface materials likely to be encountered, the character of equipment and other facilities needed for the performance of the Work, the general and local conditions, and all other conditions or items that may affect the Work. Prior to submitting its bid for performance of the Work, Contractor notified BPCA or Construction Manager in writing of any discrepancies or errors in the Contract Documents.

## *6.3 Verifying Dimensions and Site Conditions*

Before proceeding with the Work, Contractor will check all previous and surrounding work and determine the correctness of the same; failure on its part to detect or report discrepancies will relieve BPCA of liability from any and all claims to recover cost, expense, loss or damage resulting therefrom. Contractor shall take, determine, investigate and verify all field measurements, dimensions, field construction criteria and Site conditions for the performance of the Work and shall check and coordinate the information contained in the Contract Documents and the boring logs which shall be available for inspection with the requirements of the Work. Contractor shall be responsible for determining the exact location of and to verify the spatial relationships of all Work. If any conflicts or discrepancies are found in the Contract Documents or if Contractor has any questions concerning the foregoing, it shall immediately notify Construction Manager and shall thereafter perform the Work in accordance with the directions of Construction Manager.

#### *6.4 Copies of Contract Documents for Contractor*

BPCA shall furnish to Contractor, without charge, two sets of the Contract Documents. Any sets in excess of the number mentioned above may be furnished to Contractor at the cost of reproduction and mailing.

#### *6.5 Meetings*

Contractor shall attend all meetings as directed by BPCA or Construction Manager, including meetings set forth in Section 26.3, and shall be represented at such meetings by a person having knowledge of the Work and authorized to act for Contractor at all times. If at any time such person is not satisfactory to BPCA or Construction Manager, Contractor shall, if requested by BPCA, be represented by another person satisfactory to BPCA, having knowledge of the Work and authorized to act for Contractor at all times.

#### *6.6 Related Work*

Contractor shall examine the Contract Documents for related work to ascertain the relationship of such work to the Work under the Contract Documents.

#### *6.7 Surveys and Layout*

Unless otherwise expressly provided in this Agreement, BPCA shall furnish Contractor survey points necessary for the Work, but Contractor shall lay out the Work.

#### *6.8 Reports and Access*

Contractor shall furnish BPCA and Construction Manager with daily and monthly manpower reports on forms provided by BPCA or Construction Manager and such other reports as may be required by BPCA or Construction Manager. BPCA, Construction Manager and Architect shall have full and free access to the shops, plants and factories of Contractor, any Materialmen and Subcontractors to inform themselves as to the progress of the Work.

#### *6.9 Financial Information*

During the Term, Contractor agrees to notify BPCA forthwith in writing of any event which has caused or is reasonably anticipated to cause a material adverse change in Contractor's business or financial condition from that shown in the then most recent financial statements furnished by Contractor to BPCA. Contractor has furnished to BPCA financial statements regarding the period from [date] to [date]. Contractor agrees to furnish to BPCA, at BPCA's request from time to time hereafter, quarterly, or annual financial statements (which shall be audited, if such is the practice of Contractor for financial statements covering the applicable period) and such additional information as BPCA shall deem necessary or desirable to satisfy itself of Contractor's continuing ability to complete the Work.

### **ARTICLE 7 - CONTRACT ADMINISTRATION**

#### *7.1 Architect's Responsibilities and Functions*

Contractor acknowledges that the role of Architect with respect to the Work shall be as specified in this Agreement. Contractor will comply with the instructions of Architect pursuant hereto.

Architect's duties and services shall in no way supersede or dilute Contractor's obligation to perform and complete the Work in conformity with the Contract Documents.

#### *7.2 Construction Manager's Responsibilities and Functions*

(a) Construction Manager shall coordinate and schedule construction to insure that the completion of the Project is on schedule and that the Project is well constructed in accordance with the Contract Documents. Contractor acknowledges that the role of Construction Manager with respect to the Work shall be as specified in this Agreement. Contractor hereby agrees to comply with the directions and instructions of Construction Manager.

(b) Construction Manager shall call for meetings of Contractor, other contractors, Subcontractors and Materialmen as necessary for the proper coordination of the Work. Such meetings shall be held at the Site on regular working days, during regular working hours, unless otherwise directed by BPCA. Attendance shall be mandatory for all parties notified to attend.

#### *7.3 Scope of Responsibility of Architect and Construction Manager*

In no event shall any act or omission on the part of the Construction Manager or Architect relieve Contractor of its obligation to perform the Work in full compliance with the Contract Documents. Neither Architect nor Construction Manager will be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and neither will be responsible for Contractor's failure to carry out the Work in accordance with the Contract Documents or the failure to fulfill any of the requirements of this Agreement.

### **ARTICLE 8 - INSPECTION AND ACCEPTANCE**

#### *8.1 Access to the Work*

BPCA, Construction Manager, Architect or their authorized representatives shall at all times have access to and the right to observe the Work and all facilities where the Work or any part thereof is being fabricated or stored, and Contractor shall provide proper facilities for such access and observation.

#### *8.2 Notice of Required Inspections and Tests*

If the Contract Documents, or any laws, rules, ordinances or regulations, require that any Work be inspected or tested, Contractor shall give BPCA, Construction Manager and Architect at least five days prior written notice of readiness of the Work for inspection or testing and the date fixed for such inspection or testing.

#### *8.3 Additional Inspections and Tests*

(a) Whenever, in the opinion of BPCA, Construction Manager or Architect, it is desirable to require inspection or testing of the Work or its individual components in addition to any such testing that may be originally included in the Work, they shall have authority to do so whether or not such Work be then fabricated, installed, covered or completed. If such inspection or testing reveals a failure of the Work to comply (1) with the requirements of the Contract Documents, or (2) with respect to the performance of the Work, with laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, Contractor shall bear all costs thereof, including Architect's and Construction Manager's additional services made necessary by such failure; otherwise BPCA shall bear such costs, and an appropriate Change Order shall be issued.

(b) In the event that any item of the Work fails inspection or testing, BPCA, Architect or Construction Manager may require inspection or testing of any or all of the other items of the Work at Contractor's cost and expense.

#### *8.4 Uncovering of Work*

(a) If any Work shall be covered or concealed contrary to the request of BPCA, Architect or Construction Manager, such Work shall, if required by BPCA, Architect or Construction Manager, be uncovered by examination, inspection or testing. Any examination, testing or inspection shall not relieve Contractor of the responsibility to maintain quality control over the Work. If any test results are below specified minimums, BPCA may order additional testing. The cost of such additional examination, inspection or testing, any additional professional services required, and any other expenses incurred by BPCA as a result of such examination, inspection or testing shall be borne by Contractor.

(b) In the event that a typical detail fails inspection or testing, BPCA, Architect or Construction Manager may require inspection or testing of any or all of other such typical details at Contractor's cost and expense.

#### *8.5 Correction of Work*

Any Work not approved by BPCA, Architect and Construction Manager shall immediately be reconstructed, made good, replaced or corrected by Contractor including all Work of other contractors destroyed or damaged by such removal or replacement. Rejected material shall be removed immediately from the Site. Acceptance of Materials and workmanship by BPCA shall not relieve Contractor from Contractor's obligation to replace all Work which is not in full compliance with the Contract Documents.

#### *8.6 Certificate of Substantial Completion*

Upon their receipt of written notice from Contractor stating that in Contractor's estimation the Work has been substantially performed in conformity with the Contract Documents, Architect and/or Construction Manager shall perform an inspection for the purposes of determining whether the Work has been so performed, commencing such inspection within ten (10) days of receipt of such notice and completing it with all due diligence. When Architect and/or Construction Manager find upon inspection that, to the best of their knowledge and belief, the Work is so performed, they shall prepare and deliver to BPCA for delivery to Contractor a certificate specifying the date of



substantial completion of the Work for purposes of this Agreement (“**Certificate of Substantial Completion**”) and a punch list of items of Work remaining to be completed.

The delivery of a Certificate of Substantial Completion shall not terminate or alter Contractor’s obligation under this Agreement to complete the Work as expeditiously as practicable in conformity with the Contract Documents and to fulfill all terms and conditions of this Agreement.

#### *8.7 Completion of Work and Acceptance*

Upon their receipt of written notice from Contractor stating its belief that the Work has been fully performed in conformity with the Contract Documents, and confirming that Contractor has completed any items of Work previously noted to it by Architect and Construction Manager as not having been acceptably completed in any punch list or otherwise, Architect and Construction Manager shall perform an inspection for purposes of determining whether the Work has been so performed. Architect and Construction Manager shall commence such inspection within ten (10) days of receipt of such notice and shall pursue and complete it with all due diligence. When BPCA and Construction Manager find upon inspection that, to the best of their knowledge and belief, the Work has been so performed, they shall prepare a certificate of final completion, and, upon delivery by BPCA to Contractor of said certificate, the Work shall be deemed to be finally accepted by BPCA (such delivery of the certificate of final completion to Contractor is hereinafter referred to as “**Final Acceptance**”).

Final Acceptance shall not terminate or alter Contractor’s obligation under this Agreement to complete the Work in conformity with the Contract Documents and to fulfill all terms and conditions of this Agreement.

### **ARTICLE 9 - CHANGES IN THE WORK**

#### *9.1 Change Orders*

(a) BPCA may, at any time, in any quantity or amount, without notice to the sureties and without invalidating or abandoning this Agreement, order Extra Work. Notwithstanding the terms of subsection 3.1(a) hereof, BPCA may, but shall be under no obligation to, change the manner, sequence or method of performance of the Work or direct acceleration of the Work and Contractor shall, therefor, be entitled to a Change Order (as defined in Section 9.1(b)) provided that such change or acceleration was not ordered to maintain the Progress Schedule for the Project, the Progress Schedule for the Work or to coordinate the Work with the work of other contractors. Contractor shall be obligated to perform changed Work promptly in conformity with any Change Order or Field Order issued in accordance herewith and may not suspend or otherwise refuse to perform the Work contained therein or any other aspect of the Work required under this Agreement because a Change Order has yet to be fully executed.

(b) “**Change Order**” shall mean a written order issued by BPCA to Contractor after execution of this Agreement, authorizing or requiring:

- (1) Extra Work,

- (2) items that were erroneously deleted or omitted from the Work,
- (3) items that were included in the Work but were subsequently deleted,
- (4) an extension or decrease of time to complete Work,
- (5) an increase or reduction in the payment to Contractor, or
- (6) any other change in the Contract Documents or in the sequence of performing or phasing of the Work.

(c) All Change Orders shall be prepared, signed and issued by Construction Manager at the instruction of BPCA, and to be valid, must be countersigned by BPCA and Contractor.

## *9.2 Change in Contract Price and Time*

(a) The Contract Price will not be revised due to any change of the Work except as and to the extent expressly provided in the Change Orders. The amount by which the Contract Price is to be increased or decreased by any Change Order shall be determined by BPCA and Construction Manager by one or more of the following methods:

- (1) accepting an amount agreed upon by BPCA and Contractor;
- (2) applying the applicable unit prices and alternates where the Work involved is covered by unit prices in this Agreement;
- (3) receiving from Contractor a detailed breakdown satisfactory to BPCA and Construction Manager, including actual time slips and invoices, itemizing the direct cost of labor and Materials to perform the changed Work and adding thereto fifteen percent (15%) to cover profit and all indirect and overhead costs, except that where the changed Work is performed by a Subcontractor or Materialman, the direct cost of labor and Materials to perform the changed Work plus fifteen percent (15%) for profit and all indirect and overhead costs to Subcontractor or Materialman and an additional sum for profit and all indirect and overhead costs of Contractor equal to ten percent (10%) of the first \$100,000, five percent (5%) of the second \$100,000 and three percent (3%) of any cost in excess of \$200,000 to Contractor. No allowance shall be paid on the premium portion of overtime pay. Where the changed Work involves both an increase and a reduction in any contract Work, the above percentage override shall be applied only on the amount, if any, by which the cost of the increase exceeds the cost of the reduction.
- (4) receiving from Contractor a true copy of its bid work sheets to determine the contract price for the elimination of any contract Work. The amount of reduction shall not include the overhead or profit of Contractor for the eliminated Work. Should Contractor fail to furnish BPCA with such bid work sheets, then Construction Manager shall determine the amount of the reduction. The determination of Construction Manager shall be final and binding unless erroneously or fraudulently arrived at, or arbitrary and capricious;
- (5) adding to the Contract Price only the amount of the premium portion of overtime pay resulting from an acceleration of the Work; or

(6) adding to the Contract Price, the actual incremental labor and equipment costs incurred by the Contractor resulting from a change in the manner, sequence or method of performing the Work.

(b) The compensation specified in a Change Order shall constitute a release and full payment for the Extra Work covered thereby and for any delay and disruption cost or expense occasioned by reason of said change in the Work.

(c) No time extension shall be granted Contractor by reason of the issuance of any Change Order unless it is expressly stated therein.

### *9.3 Field Orders*

Construction Manager shall have the authority to order minor changes in the Work by the issuance of written field orders (“**Field Orders**”), which may be issued without prior approval by BPCA. Field Orders must be countersigned by Contractor. Minor changes in the Work for purposes of this Section shall mean only changes that do not necessitate or warrant any revision in the Contract Price in excess of \$5,000 or affect the time of performance of Contractor’s Work, any change in the basic character or design of the Project, or deviation from design standards established for the Project. Except as otherwise provided in the preceding sentence relating to an increase in the Contract Price, no claim for an increase in the Contract Price may be based upon any Field Order. If Contractor, on receipt of a Field Order, claims that the change of Work involved necessitates a Change Order, it shall proceed in accordance with the Field Order under protest and notify BPCA immediately of its claim for additional compensation for Extra Work pursuant to Article 14.

### *9.4 Changed Conditions*

(a) BPCA assumes no responsibility for the correctness of any boring or other subsurface information and makes no representation of any kind regarding subsurface conditions and test borings, reports, rock cores, foundation investigation and topographical maps which may be made available to Contractor.

(b) Contractor shall promptly, and before such conditions are disturbed, notify Construction Manager of: (1) subsurface or latent physical conditions differing materially from those indicated in the Contract Documents, or (2) unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Agreement. Construction Manager shall promptly investigate the conditions, and if it finds that such conditions do materially so differ and cause an increase or decrease in Contractor’s cost of, or the time required for, performance of any part of the Work under this Agreement, Contractor shall be paid in the manner provided for payment with respect to any Change Order and receive, if warranted, a time extension.

(c) No claim of Contractor under this clause shall be allowed unless Contractor has given the notice required in subsection (b) above.

## **ARTICLE 10 - SUBCONTRACTS AND PURCHASE ORDERS**

### *10.1 Selection of Subcontractors and Materialmen and Approval of Subcontracts and Purchase Orders*

(a) Contractor shall submit to Construction Manager, within 21 calendar days of the issuance of the Notice to Proceed, the names of all persons with whom it has contracted or intends to contract or hereafter contracts with respect to the Work.

(b) Except as specifically provided herein, Contractor shall not enter into any Subcontracts or issue any Purchase Orders (as hereinafter defined) to any Materialmen in connection with the performance of Contractor's obligations hereunder without the prior written consent of BPCA to the use of each such Subcontractor or Materialman, and to the agreement to be entered into between Contractor and any such Subcontractor or Materialman. Contractor shall inform BPCA in writing of any interest it may have in a proposed Subcontractor or Materialman. No such consent by BPCA, or employment, contract, or use by Contractor, shall relieve Contractor of any of its obligations hereunder nor may BPCA be held responsible in any way for the performance of a Subcontractor or Materialman to whom BPCA gave its consent.

(c) Contractor shall be responsible for the performance of the Work of any Subcontractors or Materialmen engaged, including the maintenance of schedules, coordination of their Work and resolutions of all differences between or among Contractor and any Subcontractors. It is expressly understood and agreed that any and all Subcontractors or Materialmen engaged by Contractor hereunder shall at all times be deemed engaged by Contractor and not by BPCA.

(d) Upon the request of BPCA, Contractor shall cause any Subcontractor or Materialman employed by the Contractor in connection with this Agreement to execute a copy of the Agreement wherein such Subcontractor or Materialman shall acknowledge that it has read and is fully familiar with the terms and provisions hereof and agrees to be bound thereby as such terms and provisions are or may be applicable to such Subcontractors or Materialmen.

(e) Contractor shall submit to BPCA promptly following execution, three copies of every revision, amendment, modification or cancellation executed or issued by Contractor with respect to any Subcontractor or Materialman. BPCA is not obligated to make payment on account of Work performed or Materials furnished by a Subcontractor or a Materialman under a Subcontract or contract for construction supplies or Materials (hereinafter "**Purchase Order(s)**") unless there shall have been filed with BPCA prior to the submission of a Requisition for each payment, three copies of such Subcontract or Purchase Order containing the provisions required by this Agreement to be contained therein, except as may otherwise be specified by BPCA with respect to Purchase Orders for minor purchases.

### *10.2 Access by BPCA and Others*

Contractor shall include a provision in all Subcontracts and Purchase Orders stating that, to permit verification of Contractor's costs, BPCA shall have the right to have its representatives inspect and audit the books of account and records of the Subcontractor and Materialmen, including the right to make excerpts from such books and records. All payments by Contractor to a Subcontractor or Materialman shall be by check specifically indicating that payment is

attributable to this Agreement and identifying the invoice(s) for which payment is being made. Contractor shall include a provision in all Subcontracts and Purchase Orders that will enable representatives of the State of New York, Construction Manager and BPCA, as the case may be, to obtain access during working hours to the appropriate books of account and records of the Subcontractors or Materialmen relating to the Work to determine if there is compliance with the requirements of law or this Agreement.

### *10.3 Retainage*

Contractor may provide for a retainage under any of its Subcontracts or Purchase Orders provided that where a Subcontract or Purchase Order provides for a retainage, the retainage shall be no greater in percentage than that provided for under Sections 5.1 or 5.7 hereof with respect to Contractor itself, unless otherwise approved in writing by BPCA. Contractor shall submit with each Requisition a statement setting forth the amounts of all retainage, if any, under its Subcontracts and Purchase Orders.

### *10.4 Miscellaneous*

(a) Contractor shall be fully responsible for the work, acts and omissions of Subcontractors and Materialmen, and of persons either directly or indirectly employed by Subcontractors and Materialmen.

(b) Contractor's use of Subcontractors and Materialmen shall not diminish Contractor's obligation to complete the Work in accordance with the Contract Documents. Contractor shall control and coordinate the work of Subcontractors and Materialmen.

(c) Nothing contained in this Agreement shall create any contractual relationship between Subcontractors or Materialmen and BPCA, Construction Manager or Architect. Nothing in this Section shall obligate BPCA to pay or to see to the payment of any sums to any Subcontractor or Materialmen.

(d) Contractor shall include a provision in all Subcontracts and Purchase Orders exceeding \$50,000, requiring the Subcontractor or Materialman, if requested by BPCA, until the Subcontractor or Materialman finishes its portion of the Work, to deliver to Contractor unaudited and, if available, audited financial statements of the Subcontractor or Materialman similar to the obligation of Contractor under Section 6.8 and promptly upon receipt thereof Contractor shall deliver copies thereof to BPCA.

## **ARTICLE 11 - ASSIGNMENT**

### *11.1 No Assignment of Duties*

Contractor shall not assign this Agreement or the performance of any obligations of Contractor under this Agreement, nor enter into any Subcontract in respect of the Work or any part thereof except in compliance with Article 10 hereof and with the prior written consent of BPCA, and each and every such assignment, Purchase Order and Subcontract without such compliance and consent shall be void and shall revoke and annul this Agreement.

### *11.2 No Assignment of Monies*

Contractor shall not assign any monies payable hereunder nor execute and deliver any order for payment unless Contractor and the assignee shall have complied with the following terms and conditions:

(a) the assignee shall be a commercial bank or finance company regularly engaged in the business of provided financing to construction contractors and shall be providing such financing to Contractor;

(b) the assignee shall, simultaneously with the assignment, execute and deliver to BPCA an undertaking, in favor of BPCA, in form and substance satisfactory to BPCA, providing that:

(1) assignee will cause Contractor to apply for trust purposes, as defined in New York Lien Law Article 3-A (the “**Lien Law**”), all funds advanced by assignee to Contractor;

(2) assignee will file a copy of the assignment, containing the covenant required by the Lien Law, with the County Clerk of New York County and the head of the agency having charge of the underlying project;

(c) the assignee shall agree with BPCA in writing that BPCA and Contractor may modify any of the terms of this Agreement, including any of the terms of payment, without the consent of assignee;

(d) the assignee shall agree with BPCA in writing that after the effective date of the assignment, BPCA may make payment directly to any Subcontractor or Materialman without any liability to the assignee;

(e) the assignee shall agree with BPCA in writing that the assignee shall require and cause Contractor to keep his books and records in the form and manner described in New York Consolidated Laws Service Lien Law Article 3-A Section 75; and

(f) the assignee shall agree with BPCA in writing that the assignee will indemnify and hold BPCA harmless from and against any loss, claim or expense incurred as a result of any failure of performance in accordance with the terms of such undertaking.

### *11.3 Assignment by BPCA*

This Agreement or any rights of BPCA under this Agreement, including any guaranties or warranties of workmanship or material, may at any time be assigned by BPCA to the State of New York or any political subdivision, public corporation or agency of the State.

## **ARTICLE 12 - MECHANICS’ LIENS AND CLAIMS**

If any mechanic’s lien or other claim shall be filed for or on account of the Work, Contractor shall discharge such lien or claim within thirty days of receiving written notice of such lien or other claim.

## **ARTICLE 13 – INSURANCE AND CONTRACT SECURITY**

### *13.1 Insurance*

(a) Contractor shall procure and maintain all of the insurance required under this Article 13 until Final Acceptance of the Work, except with respect to Completed Operations Coverage, as described in 13.1(f)(3) below.

(b) Contractor shall not commence physical performance of the Work at the Site until Contractor has obtained, and required each Subcontractor to obtain, all the insurance required under this Article and until it has furnished to BPCA the certificate or certificates of insurance required by Section 13.1(c) hereof.

(c) Contractor shall furnish to BPCA, before or upon execution of this Agreement, attention: [name], a certificate or certificates of the insurance required under this Article and, upon BPCA's request, certified copies of the original policies of insurance, within the time period required by BPCA and before commencing physical performance of the Work at the Site. Such certificate or certificates shall be in form satisfactory to BPCA, shall list the various coverages and shall contain, in addition to any other provisions required hereby, a provision that the policy shall not be changed, canceled or reduced and that it shall be automatically renewed upon expiration and continued in force until two years after Final Acceptance unless BPCA is given 90 days' written notice to the contrary. Such certificates shall also include riders providing that violation of any of the terms of any policy shall not by itself invalidate such policy. Such policies and certificates should name as additional insureds BPCA, Battery Park City Parks Conservancy Corporation ("BPCPC"), the State of New York, Construction Manager, and Architect.

(d) All insurance required to be procured and maintained must be procured from insurance companies that have a financial rating by A.M. Best Company as published in the most current key rating guide of "A-X" or better and which are authorized to do business in the State of New York.

(e) If at any time any of the required insurance policies should be canceled, terminated or modified so that insurance is not in effect as required, then, if BPCA shall so direct, Contractor shall suspend performance of the Work. If the Work is not suspended then BPCA may, at BPCA's option, obtain insurance affording coverage equal to that required, the cost of such insurance to be payable by Contractor to BPCA.

(f) Contractor and each Subcontractor shall secure in a form satisfactory to BPCA:

(1) Worker's Compensation and Employer's Liability Insurance (including United States Longshoreman & Harbor Workers and Jones Act Coverages) during the Term for the benefit of such employees as are required to be insured by the applicable provisions of law and voluntary compensation for employees excluded from statutory benefits. Employer's Liability Insurance and benefits resulting from disease shall not be less than an annual aggregate amount of (\$\$\$\$\$) for each consecutive 12-month period.

(2) Disability Benefit Insurance during the life of this Agreement for the benefit of such employees as are required to be insured by the applicable provisions of law.



(3) Commercial General Liability Insurance as follows:

Standard commercial general liability insurance policy with contractual, products and completed operations and explosion, blasting, collapse, excavation and underground damage liability coverages, under the occurrence policy format, issued to and covering the liability of Contractor for all the Work and operations relating thereto and all obligations assumed by Contractor under this Agreement including, but not limited to indemnity obligations in an amount which shall not be less than the following limits:

Combined Single Limits, Bodily Injury and Property Damage Liability

(\$\$\$\$\$) per each occurrence and (\$\$\$\$\$) in the aggregate.

Product and Completed Operations

(\$\$\$\$\$)

The completed operations coverage shall continue in force until three years after Final Acceptance of the Work and shall contain, in addition to any other provisions required hereby, a provision that the policy shall not be changed, canceled or reduced. As a condition precedent to the making of Final Payment, Contractor shall furnish BPCA with a certified copy of the completed operations policy.

(4) Automobile Liability Insurance as follows:

A policy covering the use in connection with the Work of all owned, non-owned and hired vehicles bearing license plates, or under the circumstances that such vehicles are being used they are required by the Motor Vehicle Laws of the State of New York to bear license plates. The coverage under such policy shall not be less than the following limits:

Combined Single Limits,

Bodily Injury and Property Damage Liability

(\$\$\$\$\$) per each occurrence.

(5) Marine Protection and Indemnity insurance of not less than [amount] per occurrence, if Contractor or any of its Subcontractors utilizes floating equipment, barges or floats, or performs marine-related construction, covering any and all claims for personal injury, death and property damage arising out of or in connection with this Agreement.

(6) Pollution Liability Insurance, on an occurrence basis, providing coverage for bodily injury liability, property damage or environmental damage caused by pollution conditions with a limit of liability of not less than [amount] per occurrence and in the aggregate. The policy shall include coverage for environmental clean-up on land, in air and on water. The policy shall include coverage for completed operations for two (2) years after the completion of the performance of the Work, gradual and sudden and accidental pollution coverage, with a time element of no less than seven (7) days' notice and thirty (30) days' reporting. The policy shall not

contain a sunset provision, or any other provision, which would prohibit the reporting of a claim and the subsequent defense and indemnity that would normally be provided by the policy. The policy shall provide transportation coverage for the hauling of hazardous materials from the Project Site to the final disposition location.

(7) Vessel Pollution Liability Insurance, on an occurrence basis, providing coverage for bodily injury liability, property damage or environmental damage caused by pollution conditions, emanating from any floating equipment, barges or floats, utilized by Contractor or Subcontractors in the performance of Marine related construction, with a limit of liability of not less than [amount] per occurrence and in the aggregate. The policy shall include coverage for environmental clean-up on land, in air and on water.

(8) Contractor shall secure, pay for, and maintain Property Insurance necessary for protection against the loss of owned, borrowed or rented equipment, tools and materials used in Contractor's performance of the Work. The requirement to secure and maintain such insurance is solely for the benefit of Contractor. Contractor's failure to secure such insurance or to maintain adequate levels of coverage shall not render BPCA or any other Additional Insureds, or their agents and employees, responsible for any such losses, and Owner, the other Additional Insureds, and their agents and employees shall have no such liability.

(9) Valuable Papers Insurance insuring, for the benefit of Contractor and BPCA all plans, designs, drawings, specifications, and documents used under this Agreement by Contractor in a total amount of not less than [\$\$\$\$\$] Contractor may furnish full coverage under one policy, or may submit separate policies from any Subcontractor(s) for their proportionate shares of such coverage.

(10) Comprehensive Crime/Employee Dishonesty Insurance in a reasonable amount or an amount which is customary in the applicable industry, trade or profession.

(11) If the Work involves the removal, repair, installation or testing of underground petroleum storage tanks, or petroleum remediation operations, or the performance of work or services related to excavation, loading, transporting or unloading of hazardous or contaminated materials, Contractor shall provide Contractors Professional Liability Insurance with a limit of [\$\$\$\$\$]. Coverage shall provide and encompass the following:

(i) Contractor's negligent acts, errors or omissions in rendering or failing to render services of an engineering or consulting nature arising out of their environmental engineering or consulting.

(ii) Maximum self-insured retention of [\$\$\$\$\$], or an amount acceptable to BPCA.

(12) Umbrella Liability Insurance [excess of general liability, automobile liability, Marine protection and indemnity, pollution liability, vessel pollution liability and Employer's Liability] in an amount of not less than [amount].

(g) The insurance required under subsections 13.1(f) 3, 4 [and 5] shall be of a type which shall protect Contractor and Subcontractors, respectively, against damage claims which may

arise from operations under this Agreement, whether such operations be by the insured or by anyone directly or indirectly employed by the insured. Each of the aforesaid policies shall provide that the insurance company or an attorney approved and retained by the insurance company shall defend any suit or proceeding against BPCA or any officers, agents or employees of BPCA whether or not such suit is groundless, false or fraudulent. Notwithstanding the foregoing, BPCA shall have the right to engage its own attorneys for the purpose of defending any suit or proceeding against it or its respective officers, agents or employees, and, in such event, Contractor shall, indemnify BPCA for all attorneys' fees and disbursements and other costs incurred by it arising out of, or incurred in connection with, any such defense. The said insurance shall name BPCA, BPCPC, the State of New York, Construction Manager and Architect as additional insureds as respects this location and shall, where applicable, be written on an occurrence basis and shall contain a provision that it is primary and that any similar insurance which BPCA, BPCPC, the State of New York, Construction Manager, Architect, Contractor or Subcontractor elect to carry for their own benefit is secondary or excess and not contributing insurance.

(h) BPCA, at BPCA's cost and expense, may, at its sole option, procure and maintain such insurance as shall in the opinion of BPCA, protect BPCA from contingent liability of BPCA to others for damages arising from bodily injury, including death and property damages which may arise from operations under this Agreement. The procurement and maintenance of such insurance by BPCA shall not in any way be construed or be deemed to relieve Contractor from, or to be a limitation on the nature or extent of, such obligations and risk.

(i) BPCA shall, at all times during the period of construction and until completion and Final Acceptance of the Work procure and maintain at the cost and expense of BPCA "**Builders Risk**" insurance, or its functional equivalent, against direct physical loss or damage to the Work and on all Materials to be made a part of the Work in the names of BPCA, Construction Manager, Contractor and Subcontractors, said amount of insurance to be procured and maintained on a one hundred percentage (100%) completed value basis on the insurable portion of the Work, which insurance shall contain a deductible provision for all losses except flood and earthquake in the amount of TEN THOUSAND DOLLARS (\$10,000) and a deductible provision for flood and earthquake in the amount of TEN THOUSAND DOLLARS (\$10,000). BPCA recognizes that the deductible applicable to flood and earthquake may be greater than TEN THOUSAND DOLLARS (\$10,000) due to insurance market conditions and shall notify Contractor if such deductible is greater than TEN THOUSAND DOLLARS (\$10,000). Losses up to and including the amounts of such deductible provisions shall be borne by Contractor. The insurance specified above may, in certain instances, include other parties as named insureds, as the interests of such parties may appear. Loss, if any, is to be made adjustable with and payable to BPCA on behalf and for the named insureds as the interests of such insureds may appear. BPCA shall, in BPCA's sole discretion, have power to adjust and to settle with the insureds any loss or claim under such insurance. The above is not intended to be a complete, full or accurate description of the coverage provided by the policies of insurance, copies of which are on file with BPCA. This subsection (i) is not intended to create or give any rights to Contractor or Subcontractors other than those which may be made available to such Contractors or Subcontractors under the terms of such policies. BPCA assumes no obligation to obtain insurance other than that evidenced by said policies. Contractor and Subcontractors shall not violate or permit to be violated any term or condition of such policies and shall at all times satisfy the safety requirements of BPCA and of the insurance companies issuing the aforementioned policies. The Contractor shall, upon notification by BPCA,

obtain such insurance at BPCA's expense on a date determined by BPCA, which date shall not be less than thirty (30) days after notice to Contractor of such determination by the BPCA.

### *13.2 Effect of Procurement of Insurance*

Neither the procurement nor the maintenance of any type of insurance by BPCA or Contractor shall in any way be construed or be deemed to limit, discharge, waive or release Contractor from any of the obligations and risks impressed upon Contractor by this Agreement or to be a limitation on the nature or extent of such obligations and risks.

### *13.3 Contract Security*

Contractor shall, if it has not already done so, furnish to BPCA, with the execution of this Agreement, to BPCA, a bond in the form acceptable to BPCA in an amount at least equal to one hundred percent (100%) of the Contract Price for performance of the Work (the "**Performance Bond**"), and a labor and material payment bond in the form acceptable to BPCA in an amount at least equal to one hundred percent (100%) of the Contract Price for the payment of all persons performing labor or providing Materials in connection with the Work (the "Payment Bond"). The surety on said bond shall be a surety company authorized to do business in the State of New York and shall be rated at last B+ by A.M. Best and Company, or meet such other requirements as are acceptable to BPCA.

### *13.4 Additional or Substitute Bond*

If at any time BPCA shall be or shall become dissatisfied with any surety or sureties then obligated upon the Performance Bond or the Payment Bond, or if for any other reason such bonds shall cease to be adequate security to BPCA, Contractor shall within five (5) days after notice from BPCA to do so, substitute an acceptable bond or bonds in such form and sum and signed by such other surety or sureties as may be satisfactory to BPCA, except that the penal sum of said bond shall not exceed the Contract Price as adjusted by Change Orders. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished such an acceptable bond or bonds to BPCA.

## **ARTICLE 14 - CLAIMS FOR EXTRA WORK**

(a) If Contractor is of the opinion that (i) any work that it has been ordered to perform is Extra Work and not Work as set forth in the Contract Documents, (ii) any action or omission of BPCA, Construction Manager or Architect is contrary to the terms and provisions of the Contract Documents and will require the performance of Extra Work or will cause additional expense to Contractor or (iii) any determination, order or directive of BPCA, Construction Manager or Architect is contrary to the terms of the Contract Documents and will require the performance of Extra Work or will cause additional expense to Contractor, Contractor shall:

(1) promptly comply with each determination, order or directive and proceed diligently with the performance of the Work in accordance with BPCA's instructions,

(2) notify BPCA, Construction Manager and Architect in writing within 72 hours of such determination, order, act or omission that Contractor believes such will require it to

perform Extra Work or incur additional expense and the basis for Contractor's conclusion and request a final determination thereon by BPCA; and

(3) present to the Construction Manager for signature daily time and Material tickets to confirm quantities of Material and hours of labor in cases where Contractor is performing the Work which it considers to be Extra Work.

If BPCA determines that (x) such work is Work required to be performed hereunder and not Extra Work, (y) such action or omission is proper, or (z) such determination, order or directive is proper, Contractor, in order to reserve its right to claim compensation for or damages resulting from the performance of such work or the compliance with such determination, order or directive, must notify BPCA in writing within three (3) working days after receiving notice of BPCA's determination that it is performing such work or complying with such determination, order or directive under protest.

In addition to the foregoing, Contractor must submit to BPCA, Construction Manager and Architect within thirty (30) days after it has performed such work or complied with such determination, order or directive, a detailed statement of the extra expense claimed to have been incurred and of any claimed damages resulting from the performance of such work or the compliance with such determination, order or directive.

(b) No claim for Extra Work shall be allowed unless the same was done pursuant to written order approved in writing by BPCA. Contractor's failure to comply with any provision of this Article:

(1) shall constitute a conclusive and binding determination on the part of Contractor that such action, omission, determination, order or directive does not involve Extra Work, has not caused extra expense or damages to Contractor, and is not contrary to the terms and provisions of the Contract Documents; and

(2) shall constitute an irrevocable waiver by Contractor of any claim for compensation for or damages resulting from the performance of such work or the compliance with such determination, order or directive.

(c) The value of claims for Extra Work, if allowed, shall be determined by the methods described in Section 9.2(a).

## **ARTICLE 15 - TERMINATION**

### *15.1 Termination for Cause*

(a) If any of the following events shall occur (an "**Event of Default**") then BPCA or Construction Manager may serve written notice upon Contractor and upon Contractor's surety, if any, terminating this Agreement at a specified date. The notice shall contain the reasons for termination but shall not be effective to terminate this Agreement if Contractor cures all Events of Default stated in the notice prior to the date specified in the notice of termination.

(1) Contractor shall violate any substantial provision of this Agreement,

including, without limitation, by failing to maintain the Progress Schedule for the Project or Progress Schedule for the Work then in effect in accordance with, or failing to discharge any of its responsibilities under, Section 3.1(d) hereof, including abandonment of the Work by Contractor, or by failing to indemnify and hold harmless BPCA (as required by Sections 3.1(e), 3.2, 17.5, 21.1, 21.2, 22(c) or any other provision of this Agreement) from and against any and all claims, liabilities, losses, costs or damages arising out of Contractor's performance of, or failure to perform, its obligations under this Agreement in accordance with its terms, or if the Contractor fails to maintain the insurance required by the provisions of Section 13; or

(2) any material adverse change shall take place in the financial condition of the Contractor;

(3) Contractor takes any action which would result in it becoming the subject of any insolvency proceeding. The term "insolvency proceeding" as used herein shall include the filing of a petition for relief under Title 11 of the United States Code by Contractor or the consent, acquiescence or taking of any action by Contractor, or the filing by or against Contractor of petition or action, looking to or seeking any reorganization, arrangement, composition, readjustment, liquidation, dissolution, or similar relief under any other regulation; or the appointment, with or without the consent of Contractor, of any trustee, custodian, receiver or liquidator of Contractor or of any property or assets of Contractor; or Contractor's making of an assignment for the benefit of creditors or its inability to pay its debts as they become due;

(4) Contractor misrepresented or omitted information in its submission of the Statement of Qualifications of Contractor submitted by Contractor to BPCA in connection with this Agreement; or

(5) any partner, principal, director, officer or shareholder owning in excess of five percent (5%) of the stock of Contractor shall have been convicted of a felony.

(b) Upon the occurrence of an Event of Default, at BPCA's option exercised by written notice to Contractor, title to any or all of Contractor's Materials, equipment, work product, work in process and dies and tools, whether on the Site or off site, which are necessary or useful in completing the Work shall vest in BPCA and BPCA may take possession of and utilize the same for completion of the Work; provided that title to such items shall revert to Contractor upon effectuation of a cure of the Event of Default prior to the termination of this Agreement. If no cure has been effected, this Agreement has been terminated and BPCA has taken possession of the same, then after BPCA has taken possession and the Work shall have been completed by or on behalf of BPCA, BPCA shall pay to Contractor, in respect to the items for which title has vested in BPCA, an amount equal to the sum of:

(1) the direct costs of Contractor for such Materials and Work in progress, and

(2) the depreciated book value of such tools and dies less, if BPCA elects to return the tools and dies to Contractor, the salvage value thereof. BPCA shall have the right to set off against such payment due to Contractor any amounts then due and payable by Contractor to BPCA which may accrue as damages owing by Contractor to BPCA under the terms of this Agreement. Contractor shall execute any further documents (including Form UCC-1 Financing

Statements to give public notice of the potential ownership interest of BPCA as set forth herein) required by BPCA to confirm the terms of this subsection 15.1(b).

(c) Upon termination of this Agreement, BPCA shall have the right, in addition to all other rights and remedies, to complete or have the Work completed by such means and in such manner, by contract or otherwise, with or without public letting as permitted by law, as BPCA deems advisable. BPCA may deduct any loss it incurs thereby from any payment then or thereafter due to Contractor without prejudice to any other remedy BPCA may have.

(d) Immediately upon termination in accordance with the provisions of this Section, each and every Subcontract and Purchase Order entered into by Contractor shall, at BPCA's option, be automatically assigned to BPCA, and Contractor shall insert a provision to this effect in all Subcontracts and Purchase Orders.

(e) Contractor shall, upon the date when such termination shall take effect, promptly notify the union or unions, if any, having jurisdiction over the work by its employees that it releases the Project and consents that the Work be performed by others and Contractor expressly authorizes BPCA to notify the union or unions of such release in the name of Contractor. The failure, neglect or refusal of Contractor to issue such release or the disclaimer by it of the effectiveness of the release issued by BPCA shall subject Contractor to all damages sustained by BPCA.

(f) If this Agreement shall have been terminated by BPCA pursuant to this Section 15.1 and it shall be finally determined by BPCA or a court of competent jurisdiction that adequate grounds for such termination did not exist, then such termination shall be deemed a termination for convenience of BPCA under Section 15.2 hereof and the sole right, remedy and recourse of Contractor against BPCA shall be governed and determined by Section 15.2 hereof.

#### *15.2 Termination for Convenience of BPCA*

(a) BPCA, at any time, may terminate this Agreement for its own convenience. Any such termination shall be effected by delivering to Contractor a notice of termination specifying the extent to which performance of Contractor's Work under the Contract is terminated and the date upon which such termination becomes effective. Upon receipt of the notice of termination, Contractor shall:

(1) stop work under this Agreement on the date specified in the notice of termination;

(2) place no further Purchase Orders or Subcontracts for Materials, services or facilities;

(3) unless directed otherwise by BPCA, terminate all Purchase Orders and Subcontracts;

(4) assign to BPCA, in the manner, at the times, and to the extent directed by Construction Manager, all of the right, title and interest of Contractor under the Purchase Orders and Subcontractors so terminated, in which case BPCA shall have the right, in its sole discretion, to settle or pay any or all claims arising out of the termination of such Purchase Orders and



Subcontracts;

(5) to the extent required by Construction Manager, settle all outstanding liabilities and all claims arising out of such termination of Purchase Orders and Subcontracts, with the approval or ratification of Construction Manager, which approval or ratification shall be final for all the purposes of this Section 15.2;

(6) transfer title to BPCA and deliver in the manner, at the time, and to the extent, if any, directed by the Construction Manager (i) the fabricated or unfabricated parts, Work in process, completed Work, supplies, and other Material produced as a part of, or acquired in connection with the performance of, the Work terminated by the notice of termination, and (ii) the completed or partially completed plans, drawings, work product, information and other property, which if this Agreement had been completed, would have been required to be furnished to BPCA; and

(7) take such action as may be necessary, or as the Construction Manager may direct, for the protection and preservation of the property related to this Agreement which is in the possession of Contractor and in which BPCA has or may acquire an interest.

(b) In the event of a termination of this Agreement pursuant to this Section 15.2, Contractor shall be paid by BPCA only the apportioned Contract Price for Work installed, the fair and reasonable value of Materials stored on the Site and under order for which Contractor is responsible for payment, less any sums properly deductible by BPCA, except that in no event shall Contractor be entitled to compensation in excess of the total Contract Price.

### *15.3 Suspension of Work*

(a) BPCA may at any time and for any reason direct Contractor to suspend, stop, or interrupt the Work or any part thereof for a period of time. Such direction shall be in writing and shall specify the period during which the Work is to be stopped. Upon receipt of a direction of suspension, Contractor shall, as soon as practicable, cease performance of the Work as ordered and take immediate affirmative measures to protect the Work from loss or damage. Contractor shall resume the Work upon the date specified in such direction or upon such other date as BPCA may thereafter specify in writing.

(b) The period during which the Work shall have been suspended, stopped or interrupted may, if warranted, be added to the time fixed for performance. A suspension, stoppage or interruption of the Work pursuant to this provision shall not give rise to any claim against BPCA for additional compensation.

## **ARTICLE 16 - COMPOSITE DRAWINGS AND COOPERATION**

Where Contractor shall perform Work in close proximity to work of other contractors or subcontractors, or where there is evidence that Contractor's Work may interfere with work of other contractors, or subcontractors, Contractor shall assist in arranging space conditions to make satisfactory adjustment for the performance of such work and the Work. Contractor shall prepare composite scale working drawings and specifications as directed by Construction Manager, clearly showing how Contractor's Work is to be performed in relation to work of other contractors or

Subcontractors. Such direction may include the following: the scale of the drawings, where the drawings are to be drafted, the number of prints or reproduces, and the requirement of attendance at meetings. The determination as to who shall provide the composite drawings and the contents of the same shall rest exclusively with Construction Manager. Upon request by Construction Manager, Contractor shall sign and be bound by such composite drawings. Such signature shall indicate Contractor's acknowledgment that such drawing is acceptable as related to its Work covered or included in such drawing. If Contractor performs the Work in a manner that causes interference with the work of other contractors, or Subcontractors, Contractor shall make the changes necessary to correct the condition as directed by Construction Manager.

## **ARTICLE 17 - PROTECTION OF RIGHTS, PERSONS AND PROPERTY**

### *17.1 Accident Prevention*

Contractor shall at all times take every precaution against injuries to persons or damage to property and for the safety of persons engaged in the performance of the Work.

### *17.2 Safety Programs*

Contractor shall be responsible for the initiation, maintenance and supervision of safety precautions and programs as prescribed by Construction Manager in connection with the Work.

### *17.3 Protection of Work and Property*

(a) Contractor shall at all times guard BPCA's property from injury or loss in connection with the Work. Contractor shall at all times guard and protect the Site, the Work and adjacent property. Contractor shall replace or make good any such loss or injury unless such loss or injury is caused directly by BPCA.

(b) Contractor shall have full responsibility to install, protect and maintain all Materials in proper condition and forthwith repair, replace and make good any damage thereto until Final Acceptance of the Work.

(c) No provision is included for stresses or loads imposed by construction operations. If Contractor desires to place such loads in excess of the design load (as shown on the Drawings or Specifications), Contractor shall submit to Architect drawings and calculations prepared by, and bearing the seal of a professional engineer, showing the proposed method for supporting such loads, for Architect's review and approval. No loading of any kind in excess of design loads shall be placed on any part of the Project prior to Architect's approval of such submitted drawings and calculations. The costs of the Architect's review shall be reimbursed to BPCA by Contractor.

(d) Contractor shall be responsible for all cutting, fitting or patching that may be required to complete the Work, to make its several parts fit together properly and to make the Work fit together properly with previous and surrounding work. The requirement to cut, fit or patch shall be determined by Construction Manager; provided, that structural elements of the Project shall not be cut, patched, or otherwise altered or repaired without prior authorization by BPCA. Authorization to proceed with remedial operation on any damaged or defective element or portion of the Project shall not constitute a limitation or a waiver of BPCA's, Construction Manager's or

Architect's right to require the removal and replacement of any Work which fails to fulfill the requirements of the Contract Documents.

#### *17.4 Adjoining Property*

Contractor shall protect all adjoining property and shall repair or replace any such property damaged or destroyed during the progress of the Work.

#### *17.5 Risks Assumed by Contractor*

(a) Contractor solely assumes the following risk whether such risk arises from acts or omissions (whether negligent or not and whether supervisory or otherwise) of BPCA, Construction Manager, of Architect or Contractor, of any Subcontractor, of any Materialman, of third persons or from any other cause, including unforeseen obstacles and difficulties which may be encountered in the prosecution of the Work, whether such risk is within or beyond the control of Contractor and whether such risk involves any legal duty, primary or otherwise, imposed upon BPCA:

The risk of loss or damage, direct or indirect, of whatever nature, to the Work or to any Materials furnished, used, installed or received by BPCA, Contractor or any Subcontractor, Materialmen or workmen performing services or furnishing Materials for the Work, whether such Work or Materials are stored at the Site or at an offsite location in accordance with Section 5.4 hereof. Contractor shall bear such risk of loss or damage until Final Acceptance of the Work by BPCA or until completion of such Materials or removal of such Materials from the Site following a determination that they will no longer be needed for the Project and delivery to the location at which they are to be subsequently stored or disposed of, whichever event occurs last. A portion of the risk of such loss or damage may be insured against under the terms of a "builder's risk" insurance policy maintained in the name of Contractor, among others, as described in Section 13.1(i). Notwithstanding the status of any actual or potential recovery or claim under the said "builder's risk" insurance policy, in the event of any loss or damage, Contractor immediately shall repair, replace or make good any such loss or damage.

(b) Contractor shall not, without obtaining express advance permission of BPCA, raise any defense involving in any way the: (i) jurisdiction of any court in which BPCA brings an action arising under this Agreement, (ii) the governmental nature of BPCA, or (iii) the provisions of any statutes respecting suits against BPCA.

(c) Contractor's obligations under this Article 17 shall not be deemed waived, limited or discharged by the enumeration or procurement of any insurance for liability for damages.

(d) Neither Final Acceptance of the Work nor any payment made hereunder shall release Contractor from Contractor's obligations under this Article 17. The enumeration elsewhere in this Agreement of particular risks assumed by Contractor or of particular claims for which Contractor is responsible shall not be deemed to limit the effect of the provisions of this Article 17 or to imply that Contractor assumes or is responsible for only risks or claims of the type enumerated; and neither the enumeration in this Article 17 nor the enumeration elsewhere in this Agreement of particular risks assumed by Contractor of particular claims for which Contractor is responsible shall be deemed to limit the risks which Contractor would assume or the claims for which Contractor would be responsible in the absence of such enumerations.

(e) The Contractor is advised that the Work under this Agreement may impose certain obligations and requirements mandated by the U.S. Department of Labor Occupational Safety and Health Administration regulations, Title 29 CFR Part 1926.62 Lead Exposure in Construction, relative to the potential exposure to lead by its employees. The Contractor assumes entire responsibility and liability for complying fully in all respects with these regulations.

(f) Contractor agrees that any unsatisfied claims of the BPCA arising from Contractor's obligations under this Article 17 or Article 13 (Insurance) may be offset or deducted by BPCA from any payments due to Contractor hereunder.

#### **ARTICLE 18 - USE PRIOR TO ACCEPTANCE BY BPCA**

(a) If before Final Acceptance of Work, BPCA desires to use the Site or any part thereof that is completed or partly completed, or to place or install therein or thereon equipment, BPCA shall have the right to do so, and Contractor shall in no way interfere with or object to such use by BPCA.

(b) Such use shall not (1) constitute acceptance of space, systems, Materials or elements of the Work, (2) affect the start of any guaranty period, nor (3) affect the obligations of Contractor to complete the Work in accordance with the requirements of this Agreement or other obligations of Contractor under the Contract Documents.

(c) Contractor shall continue the performance of the Work in a manner that shall not unreasonably interfere with such use by BPCA.

#### **ARTICLE 19 - EXEMPTION FROM SALES AND COMPENSATING USE TAXES**

##### *19.1 BPCA Exempt*

BPCA is exempt from payment of sales and compensating use taxes of the State of New York and of cities and counties thereof on all Materials that will become an integral component of the completed Project pursuant to this Agreement.

##### *19.2 Certificates*

Contractor shall obtain and cause Subcontractors and Materialmen to obtain any and all necessary certificates or other documentation from the appropriate governmental agency or agencies, and use such certificates or other documentation as required by law, rule or regulations to obtain said tax exemption.

#### **ARTICLE 20 - WARRANTIES AND GUARANTIES**

##### *20.1 In General*

(a) Contractor guarantees that all Work performed and all Materials furnished will conform to the Contract Documents as to kind, quality, functions, design and characteristics of material and workmanship. Contractor shall remove, replace and repair, at its sole cost and expense, all defects in workmanship, Materials, ratings, capacities, or design characteristics

occurring in or to the Work including, without limitation, any portion of the Work furnished or performed by any Subcontractor or Materialman, within one year from the date of Final Acceptance. Contractor guarantees that all Work performed and all Materials furnished will conform to the Contract Documents as to kind, quality, functions, design and characteristics of material and workmanship. Contractor hereby acknowledges that BPCA may be required to incur substantial expense if correction of the Work is required particularly if such correction involves the uncovering, removal or replacement of concrete, wiring and piping installed at the Site. If Contractor shall fail to reimburse BPCA for any such expense which may become payable as provided in this paragraph, BPCA shall be entitled to deduct such expense from any payments required to be made by BPCA to Contractor pursuant to this Agreement. Contractor, upon demand, shall pay for any and all damage to any Work affected by or from such defects and all expenses necessary to remove, replace and repair such Work that may be damaged in removing, replacing or repairing such defects.

(b) The benefits of this Article 20 shall inure to the benefit of BPCA and its respective successors and assigns. In addition, any bond or guaranty that may be required of Contractor or any Subcontractor or Materialman under the Contract Documents shall inure to the benefit of BPCA and its respective successors and assigns.

(c) The rights and remedies afforded BPCA under this Section are in addition to and not in lieu of and do not in any way affect, change, alter, modify, vary or prejudice any right, remedy or recourse that BPCA may have under other provisions of this Agreement or pursuant to law.

#### *20.2 Additional Guaranties*

In addition to the general guaranty set forth in Section 20.1, any other guaranties set forth in the Contract Documents shall be applicable.

#### *20.3 Repair by Another*

If BPCA has requested Contractor to correct any Work and Contractor shall not have completed any correction of the Work as shall be required pursuant to this Article 20 within ten (10) working days after receipt of written notice from BPCA specifying the defect or damage required to be removed, replaced or repaired, or if such defect or damage is of such a nature that it cannot be completely removed, repaired and replaced within such ten (10) day period and Contractor shall not have diligently commenced removing, repairing and replacing such defect and damage within such ten (10) day period or shall not thereafter with reasonable diligence and in good faith proceed to do such work, BPCA may employ such other person, firm or corporation as it may choose, to perform such removal, replacement and repair, and Contractor shall, upon demand, pay to BPCA all amounts that BPCA expends for such removal, replacement and repair.

### **ARTICLE 21 - INDEMNITY**

#### *21.1 Delay or Failure*

Contractor and its sureties shall be responsible for and pay to BPCA, all loss, damage and additional cost incurred by reasons or on account of (i) the unexcused delays of Contractor

(determined as set forth in Section 3.1 hereof) or (ii) Contractor's failure to fully and completely carry out the terms of this Agreement.

### *21.2 Inventions*

In addition to the indemnity set forth in Section 17.5(a), Contractor shall indemnify and hold BPCA harmless from all claims, demands or liabilities of any kind or nature, including costs and expenses, for or on account of any patented or unpatented plan, design, invention, article, arrangement, appliance, Material, or preparation, manufactured, used or followed in the performance of or incident to the Work hereunder, and shall defend any and all actions arising out of the same. In the event of any injunction or legal action by reason thereof, which shall operate to stop or retard the Work, BPCA shall have the right to substitute such other articles of like kind as will enable it to complete the Project, and all costs and expenses occasioned thereby shall be borne by Contractor.

### *21.3 Liability*

To the fullest extent allowed by law, Contractor shall hold BPCA, BPCPC, the State of New York, Construction Manager and Architect and their servants, agents and employees harmless from and shall indemnify them against any and all liability, loss, cost, damage or expense, including attorneys' fees, by reason of claims of Contractors employees or employees of its Subcontractors or Materialmen for injuries or death or by reason of claims of any other person or persons, including BPCA, BPCPC, the State of New York, Construction Manager, and Architect and their servants, agents or employees, for injuries to person or property or for death occasioned in whole or in part by any act or omission of Contractor, its Subcontractors and Materialmen and their servants, agents and employees whether or not it is contended that BPCA contributed thereto or was responsible therefor by reason of nondelegable duty. If, however, this indemnification is limited by applicable law, then the said indemnification hereby shall be similarly limited to conform with such law, it being the intention that this indemnification shall be as permitted by applicable law. BPCA may retain any monies due or to become due hereunder sufficient to indemnify BPCA, BPCPC, the State of New York, Construction Manager, and Architect and their servants, agents and employees against such injuries, claims, suits, actions, costs or damages should any such claim arise. Contractor shall, at the sole option of BPCA and upon written demand of BPCA, assume the defense in behalf of BPCA, BPCPC, the State of New York, Construction Manager, and Architect or their servants, agents or employees of any action or proceeding commenced against them whether or not Contractor is named as a party therein as part of Contractor's aforementioned obligation to indemnify and hold them harmless.

## **ARTICLE 22 - PATENTS AND ROYALTIES**

(a) In the prosecution of the Work, Contractor will not use or furnish any patented appliance, article, device or method of construction unless it has authorization for such use. Contractor shall pay all royalty and license fees.

(b) Any approval of Materials by Architect shall be construed merely as an approval of their adequacy for the Work.

(c) Contractor will be responsible for all claims against BPCA for the infringement of

any patents. Contractor shall defend all suits and claims for infringement of any patent rights and shall indemnify and hold BPCA harmless from loss on account thereof. Any expenses incurred by Contractor in connection with suits and claims will not offset the Contract Price.

(d) Contractor hereby and presently grants to BPCA an irrevocable and non-exclusive license to utilize all of the Contractor's rights in and to all:

- (1) United States patents and patents registered in any other foreign country;
- (2) proprietary knowledge, data and trade secrets; and
- (3) Engineering data and information necessary in connection with and solely in connection with, all work performed by BPCA or other contractors hired by BPCA to complete the work after termination of this Agreement pursuant to Section 15.1.

Each Purchase Order and Subcontract shall contain a similar clause with respect to the rights of Subcontractor and Materialman in and to the foregoing, in form and substance acceptable to BPCA, granting BPCA the aforesaid license. BPCA shall not be obligated to pay any royalties, license fees or any other consideration to Contractor or any Subcontractor or Materialman for this license. Contractor and each Subcontractor and Materialman shall execute a separate license agreement, in form and substance satisfactory to BPCA, concurrently with the execution of this Agreement, or any Subcontract or Purchase Order, or within ten (10) days thereafter, embodying the terms of this Section. On request, Contractor and each Subcontractor and Materialman shall furnish BPCA with copies of all related Engineering and technical data required to complete the work.

### **ARTICLE 23 - AS-BUILT DRAWINGS**

(a) Contractor shall be furnished by BPCA, at BPCA's expense, with one physical set and two electronic copies (on disk) of 48" x 36" Drawings, on which Contractor, where applicable, shall record the installation of underground utilities, concealed piping, concealed valves and control equipment and record changes in the Work. Such recording shall be kept current and include final and actual sizes as well as the location and elevation of the above figures and offset distances in feet and inches to permanent surface improvements such as buildings, retaining walls or curbs. During the progress of the Work, at the request of Construction Manager and prior to the approval of any Requisition of Contractor, Contractor shall provide a 48" x 36" PDF to BPCA of the up to-date Drawings showing the Work as installed. At completion of the Work, Contractor shall complete, sign and date the 48" x 36" physical set of Drawings and deliver it to Architect.

(b) After review by Architect and return to Contractor for any required changes, Contractor shall furnish to BPCA, at Contractor's expense, at least one physical set and two electronic copies (on disk) of 48" x 36" final Drawings.



## **ARTICLE 24 - SHOP DRAWINGS AND SAMPLES**

### *24.1 Contractor Submittal*

Contractor shall submit to Construction Manager the shop drawings, Product Data and Samples required by the Contract Documents and shall adhere to all submittal and scheduling requirements with respect thereto. After review of such shop drawings, Product Data and Samples by Construction Manager and their approval by Architect, each of such items shall be returned in accordance with the procedures established therefor.

### *24.2 Contractor's Responsibility*

Architect's approval of shop drawings, Product Data and Samples shall not relieve Contractor of responsibility for and deviation from the requirements of the Contract Documents. Contractor shall be responsible for the accuracy of the shop drawings, Product Data and Samples and for the conformity of Documents unless Contractor has notified Architect of the deviation in writing at the time of submission and has received from Architect written approval by separate letter of the specified deviations. Architect's approval shall not relieve Contractor of responsibility for errors or omissions in the shop drawings, Product Data or Samples.

## **ARTICLE 25 – NOTICES**

Whenever it is provided herein that notice, demand, request, consent, approval or other communication shall or may be given to, or served upon, either of the parties by the other, or whenever either of the parties desires to give or serve upon the other any notice, demand, request, consent, approval or other communication with respect hereto, each such notice, demand, request, consent, approval or other communication shall be in writing and shall be effective for any purpose only if given or served by hand with proof of delivery, by delivery by an overnight courier service which obtains receipts, or by mailing the same by express or certified mail, postage prepaid, return receipt requested, addressed to:

- (a) if to BPCA:

Battery Park City Authority  
Attn: [Name], [Title]  
200 Liberty Street, 24th Fl  
New York, NY 10281

with a copy to: General Counsel, at the same address

or to such other address as BPCA may from time to time designate in the manner set forth above.

- (b) if to Contractor:

[Company]  
Attn: [Name], [Title]  
[Street Address]

[City, State, Zip]

or to such other addresses as Contractor may from time to time designate in the manner set forth above.

- (c) if to Construction Manager

[Company]

Attn: [Name], [Title]

[Street Address]

[City, State, Zip]

or to such other addresses as the Construction Manager may from time to time designate in the manner set forth above.

- (d) if to Architect/Engineer/etc.

[Company]

Attn: [Name], [Title]

[Street Address]

[City, State, Zip]

or to such other addresses as Architect or Engineer may from time to time designate in the manner set forth above.

Every notice, demand, request, consent, approval or other communication hereunder shall be deemed to have been given or served (i) in the case of express or certified mail, on the date the receipt is dated by the Post Office or express mail carrier, as the case may be, and (ii) in the case of notice by hand or by overnight courier service, upon delivery, as evidenced by a signed receipt.

## **ARTICLE 26 – EMPLOYMENT AND DIVERSITY**

### *26.1 Participation by Minority and Women-Owned Business Enterprises*

- (a) General Provisions

(1) Owner is required to implement the provisions of New York State Executive Law Article 15-A and Parts 140-145 of Title 5 of the New York Codes, Rules and Regulations (“NYCRR”) for all contracts, as defined therein, with a value (1) in excess of \$25,000 for labor, services, equipment, materials, or any combination of the foregoing or (2) in excess of \$100,000 for real property renovations and construction.

(2) Contractor agrees, in addition to any other nondiscrimination provision herein and at no additional cost to Owner, to fully comply and cooperate with Owner in the implementation of New York State Executive Law Article 15-A and the regulations promulgated thereunder. These requirements include equal employment opportunities for minority group members and women (“EEO”) and contracting opportunities for New York State-certified minority and women-owned business enterprises (“MWBs”). Contractor’s demonstration of

“good faith efforts” pursuant to 5 NYCRR § 142.8 shall be a part of these requirements. These provisions shall be deemed supplementary to, and not in lieu of, the nondiscrimination provisions required by New York State Executive Law Article 15 (the “Human Rights Law”) and other applicable federal, state, and local laws.

(3) Failure to comply with all of the requirements herein may result in a finding of non-responsiveness, non-responsibility and/or a breach of contract, leading to the assessment of liquidated damages pursuant to Section 26.1(g) and such other remedies as are available to Owner.

(b) Contract Goals

(1) For purposes of this Contract, Owner hereby establishes an overall goal of XX% for MWBE participation, XX% for New York State-certified minority-owned business enterprise (“MBE”) participation and XX% for New York State-certified women-owned business enterprise (“WBE”) participation (collectively, “MWBE Contract Goals”) based on the current availability of MBEs and WBEs.

(2) For purposes of providing meaningful participation by MWBEs on the Agreement and achieving the MWBE Contract Goals established in Section 26.1(b)(1) hereof, Contractor should reference the directory of MWBEs at the following internet address: <https://ny.newnycontracts.com>.

(3) Additionally, Contractor is encouraged to contact the Division of Minority and Women’s Business Development at (212) 803-2414 to discuss additional methods of maximizing participation by MWBEs on this Agreement.

(4) Contractor understands that only sums paid to MWBEs for the performance of a commercially useful function, as that term is defined in 5 NYCRR § 140.1, may be applied towards the achievement of the applicable MWBE participation goal. [FOR CONSTRUCTION CONTRACTS – The portion of a contract with an MWBE serving as a supplier that shall be deemed to represent the commercially useful function performed by the MWBE shall be 60% of the total value of the contract. The portion of a contract with an MWBE serving as a broker that shall be deemed to represent the commercially useful function performed by the MWBE shall be the monetary value for fees, or the markup percentage, charged by the MWBE]. [FOR ALL OTHER CONTRACTS - The portion of a contract with an MWBE serving as a broker that shall be deemed to represent the commercially useful function performed by the MWBE shall be 25% of the total value of the contract.]

(5) Contractor must document “good faith efforts,” pursuant to 5 NYCRR § 142.8, to provide meaningful participation by MWBEs as Subcontractors and suppliers in the performance of this Agreement. Such documentation shall include, but not necessarily be limited to:

- (A) Evidence of outreach to MWBEs;
- (B) Any responses by MWBEs to Contractor’s outreach;
- (C) Copies of advertisements for participation by MWBEs in appropriate general circulation, trade, and minority or women-oriented publications;

- (D) The dates of attendance at any pre-bid, pre-award, or other meetings, if any, scheduled by Owner with MWBEs; and,
- (E) Information describing specific steps undertaken by Contractor to reasonably structure the Work to maximize opportunities for MWBE participation.

(c) Equal Employment Opportunity (“EEO”)

(1) The provisions of Article 15-A of the Executive Law and the rules and regulations promulgated thereunder pertaining to equal employment opportunities for minority group members and women shall apply to this Agreement.

(2) In performing the Agreement, Contractor shall:

(A) Ensure that each Contractor and Subcontractor performing work on the Agreement shall undertake or continue existing EEO programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status. For these purposes, EEO shall apply in the areas of recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation.

(B) Contractor shall submit an EEO policy statement to Owner within seventy-two (72) hours after the date of the notice by Owner to award the Agreement to Contractor.

(C) If Contractor, or any of its Subcontractors, does not have an existing EEO policy statement, Owner may require Contractor or Subcontractor to adopt a model statement (see Exhibit D – Equal Employment Opportunity Policy Statement).

(D) Contractor’s EEO policy statement shall include the following language:

(i) Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability, or marital status, will undertake or continue existing EEO programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination, and shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force.

(ii) Contractor shall state in all solicitations or advertisements for employees that, in the performance of the contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.

(iii) Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union, or representative will not discriminate on the basis of race, creed, color, national origin, sex

age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of Contractor's obligations herein.

(iv) Contractor will include the provisions of Sections 26.1(c)(2)(D)(i) through (iii), which provides for relevant provisions of the Human Rights Law, in every subcontract in such a manner that the requirements of the subdivisions will be binding upon each Subcontractor as to the Work.

**[PLEASE NOTE THAT THIS REQUIREMENT “C” IS ONLY APPLICABLE WHERE A STATE AGENCY EXPECTS TO ENTER INTO A STATE CONTRACT WITH A TOTAL EXPENDITURE IN EXCESS OF \$250,000. NOTE: THIS LANGUAGE SHOULD BE DELETED FROM THE FINAL CONTRACT]**

(3) Staffing Plan. To ensure compliance with this Section, Contractor shall submit a staffing plan to document the composition of the proposed workforce to be utilized in the performance of the Agreement by the specified categories listed, including ethnic background, gender, and Federal occupational categories. Contractor shall complete the staffing plan form (<https://www.ogs.ny.gov/MWBE/Docs/EEO100.docx>) and submit it as part of their bid or proposal or within a reasonable time, as directed by Owner.

**WORKFORCE UTILIZATION REPORTS SHALL BE COLLECTED ON A MONTHLY BASIS FOR CONSTRUCTION CONTRACTS AND A QUARTERLY BASIS FOR ALL OTHER CONTRACTS. NOTE: THIS LANGUAGE SHOULD BE DELETED FROM THE FINAL CONTRACT]**

(4) Workforce Utilization Report

(A) Contractor shall submit a Workforce Utilization Report ([https://its.ny.gov/sites/default/files/documents/eo\\_workforce\\_utilization\\_report.xlsx](https://its.ny.gov/sites/default/files/documents/eo_workforce_utilization_report.xlsx)) and shall require each of its Subcontractors to submit a Workforce Utilization Report, in such form as shall be required by Owner on a monthly/quarterly basis during the term of this Agreement.

(B) Separate forms shall be completed by Contractor and any Subcontractors.

(C) Pursuant to Executive Order #162, Contractors and Subcontractors are also required to report the gross wages paid to each of their employees for the work performed by such employees on the contract on a monthly/quarterly basis.

(5) Contractor shall comply with the provisions of the Human Rights Law, and all other State and Federal statutory and constitutional non-discrimination provisions. Contractor and its Subcontractors shall not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

(d) MWBE Utilization Plan

(i) Contractor represents and warrants that Contractor has submitted an MWBE Utilization Plan, or shall submit an MWBE Utilization Plan at such time as shall be required by Owner, through the New York State Contract System ("NYSCS"), which can be viewed at <https://ny.newnycontracts.com>, provided, however, that Contractor may arrange to provide such evidence via a non-electronic method to Owner, either prior to, or at the time of, the execution of the contract.

(ii) Contractor agrees to adhere to such MWBE Utilization Plan in the performance of the Work.

(iii) Contractor further agrees that failure to submit and/or adhere to such MWBE Utilization Plan shall constitute a material breach of the terms of the Agreement. Upon the occurrence of such a material breach, Owner shall be entitled to any remedy provided herein, including but not limited to, a finding that Contractor is non-responsive.

(e) Waivers

(i) If Contractor, after making good faith efforts, is unable to achieve the MWBE Contract Goals stated herein, Contractor may submit a request for a waiver through the NYSCS, or a non-electronic method provided by Owner. Such waiver request must be supported by evidence of Contractor's good faith efforts to achieve the maximum feasible MWBE participation towards the applicable MWBE Contract Goals. If the documentation included with the waiver request is complete, Owner shall evaluate the request and issue a written notice of approval or denial within twenty (20) business days of receipt.

(ii) If Owner, upon review of the MWBE Utilization Plan, quarterly MWBE Contractor Compliance Reports described in Section 26.1(c)(iv)(C), or any other relevant information, determines that Contractor is failing or refusing to comply with the MWBE Contract Goals, and no waiver has been issued in regards to such non-compliance, Owner may issue a notice of deficiency to Contractor. Contractor must respond to the notice of deficiency within seven (7) business days of receipt. Such response may include a request for partial or total waiver of MWBE Contract Goals.

(f) Contractor is required to submit a quarterly MWBE Contractor Compliance Report through the NYSCS, provided, however, that Contractor may arrange to provide such report via a non-electronic method to Owner by the 10<sup>th</sup> day following the end of each quarter during the term of the Agreement.

(g) Liquidated Damages - MWBE Participation

(1) Where Owner determines that Contractor is not in compliance with the requirements of this Section 26.1 and Contractor refuses to comply with such requirements, or if Contractor is found to have willfully and intentionally failed to comply with the MWBE participation goals, Contractor shall be obligated to pay to Owner liquidated damages.

(2) Such liquidated damages shall be calculated as an amount equaling the difference between:

(A) All sums identified for payment to MWBEs had Contractor achieved the contractual MWBE goals; and

(B) All sums actually paid to MWBEs for work performed or materials supplied under the Agreement.

(3) In the event a determination has been made which requires the payment of liquidated damages and such identified sums have not been withheld by Owner, Contractor shall pay such liquidated damages to Owner within sixty (60) days after they are assessed. Provided, however, that if Contractor has filed a complaint with the Director of the Division of Minority and Women's Business Development pursuant to 5 NYCRR § 142.12, liquidated damages shall be payable only in the event of a determination adverse to Contractor following the complaint process.

## *26.2 Participation by Service-Disabled Veteran-Owned Businesses*

### *(a) General Provisions*

Article 17-B of the New York State Executive Law provides for more meaningful participation in public procurement by New York State-certified Service-Disabled Veteran-Owned Businesses ("SDVOB"), thereby further integrating such businesses into New York State's economy. Owner recognizes the need to promote the employment of service-disabled veterans and to ensure that certified service-disabled veteran-owned businesses have opportunities for maximum feasible participation in the performance of Owner contracts.

In recognition of the service and sacrifices made by service-disabled veterans and in recognition of their economic activity in doing business in New York State, Contractors are expected to consider SDVOBs in the fulfillment of the requirements of the Agreement. Such participation may be as Subcontractors or suppliers, as protégés, or in other partnering or supporting roles.

### *(b) Contract Goals*

(i) Owner hereby establishes an overall goal of \_\_\_% for SDVOB participation, based on the current availability of qualified SDVOBs. For purposes of providing meaningful participation by SDVOBs, the Contractor should reference the directory of New York State Certified SDVOBs found at: [http://ogs.ny.gov/Core/docs/CertifiedNYS\\_SDVOB.pdf](http://ogs.ny.gov/Core/docs/CertifiedNYS_SDVOB.pdf). Questions regarding compliance with SDVOB participation goals should be directed to Anthony Peterson at [anthony.peterson@bpca.ny.gov](mailto:anthony.peterson@bpca.ny.gov) or (212) 417-2337. Additionally, following execution of this Agreement, Contractor is encouraged to contact the Office of General Services' Division of Service-Disabled Veterans' Business Development at 518-474-2015 or [VeteransDevelopment@ogs.ny.gov](mailto:VeteransDevelopment@ogs.ny.gov) to discuss additional methods of maximizing participation by SDVOBs on the Agreement.



(ii) Contractor must document “good faith efforts” to provide meaningful participation by SDVOBs as subcontractors or suppliers in the performance of the Contract (see Section 26.2(d) below).

(c) SDVOB Utilization Plan

(i) In accordance with 9 NYCRR § 252.2(i), Contractors are required to submit a completed SDVOB Utilization Plan on Form SDVOB 100 ([https://ogs.ny.gov/Veterans/Docs/2016/SDVOB\\_100\\_Utilization\\_Plan.docx](https://ogs.ny.gov/Veterans/Docs/2016/SDVOB_100_Utilization_Plan.docx)) with their bid.

(ii) The Utilization Plan shall list the SDVOBs that Contractor intends to use to perform the Work, a description of the Work that Contractor intends the SDVOB to perform to meet the goals on the Agreement, the estimated dollar amounts to be paid to an SDVOB, or, if not known, an estimate of the percentage of Work the SDVOB will perform. By signing the Utilization Plan, Contractor acknowledges that making false representations or providing information that shows a lack of good faith as part of, or in conjunction with, the submission of a Utilization Plan is prohibited by law and may result in penalties including, but not limited to, termination of a contract for cause, loss of eligibility to submit future bids, and/or withholding of payments. Any modifications or changes to the agreed participation by SDVOBs after the contract award and during the term of the Agreement must be reported on a revised SDVOB Utilization Plan and submitted to Owner.

(iii) Owner will review the submitted SDVOB Utilization Plan and advise the Contractor of Owner acceptance or issue a notice of deficiency within 20 days of receipt.

(iv) If a notice of deficiency is issued, Contractor agrees that it shall respond to the notice of deficiency, within seven business days of receipt, by submitting to Owner a written remedy in response to the notice of deficiency. If the written remedy that is submitted is not timely or is found by Owner to be inadequate, Owner shall notify Contractor and direct the Contractor to submit, within five business days of notification by Owner, a request for a partial or total waiver of SDVOB participation goals on Form SDVOB 200 ([https://ogs.ny.gov/Veterans/Docs/2016/SDVOB\\_200\\_Waiver\\_Form.docx](https://ogs.ny.gov/Veterans/Docs/2016/SDVOB_200_Waiver_Form.docx)). Failure to file the waiver form in a timely manner may be grounds for disqualification of the bid or proposal.

(v) Owner may disqualify a Contractor’s bid or proposal as being non-responsive under the following circumstances:

- (A) If Contractor fails to submit an SDVOB Utilization Plan;
- (B) If Contractor fails to submit a written remedy to a notice of deficiency;
- (C) If Contractor fails to submit a request for waiver; or
- (D) If Owner determines that Contractor has failed to document good faith efforts.

(vi) Contractor certifies that it will follow the submitted SDVOB Utilization Plan for the performance of SDVOBs on the Agreement pursuant to the prescribed SDVOB contract goals set forth above.

(vii) Contractor further agrees that a failure to use SDVOBs as agreed in the Utilization Plan shall constitute a material breach of the terms of the Contract. Upon the occurrence of such a material breach, Owner shall be entitled to any remedy provided herein, including but not limited to, a finding of Contractor non-responsibility.

(d) Waivers

(i) Prior to submission of a request for a partial or total waiver, Contractor shall speak to Anthony Peterson at [anthony.peterson@bpca.ny.gov](mailto:anthony.peterson@bpca.ny.gov) or (212) 417-2337 for guidance.

(ii) In accordance with 9 NYCRR § 252.2(m), a Contractor that is able to document good faith efforts to meet the goal requirements, as set forth in Section 26.2(e) below, may submit a request for a partial or total waiver on Form SDVOB 200 ([https://ogs.ny.gov/Veterans/Docs/2016/SDVOB\\_200\\_Waiver\\_Form.docx](https://ogs.ny.gov/Veterans/Docs/2016/SDVOB_200_Waiver_Form.docx)), accompanied by supporting documentation. Contractor may submit the request for waiver at the same time it submits its SDVOB Utilization Plan. If a request for waiver is submitted with the SDVOB Utilization Plan and is not accepted by Owner at that time, the provisions of Section 26.2(c)(iii), (iv) and (v) will apply. If the documentation included with the Contractor's waiver request is complete, Owner shall evaluate the request and issue a written notice of acceptance or denial within 20 days of receipt.

(iii) Contractor shall attempt to utilize, in good faith, the SDVOBs identified within its SDVOB Utilization Plan, during the performance of the Work. Requests for a partial or total waiver of established goal requirements made subsequent to award of the Agreement may be made at any time during the term of the Agreement to Owner, but must be made no later than prior to the submission of a request for final payment.

(iv) If Owner, upon review of the SDVOB Utilization Plan and Monthly SDVOB Compliance Report determines that Contractor is failing or refusing to comply with the contract goals and no waiver has been issued in regards to such non-compliance, Owner may issue a notice of deficiency to the Contractor. The Contractor must respond to the notice of deficiency within seven business days of receipt. Such response may include a request for partial or total waiver of SDVOB contract goals. Waiver requests should be sent to Owner.

(e) Required Good Faith Efforts. In accordance with 9 NYCRR § 252.2(n), Contractors must document their good faith efforts toward utilizing SDVOBs on the Agreement. Evidence of required good faith efforts shall include, but not be limited to, the following:

(i) Copies of solicitations to SDVOBs and any responses thereto.

(ii) Explanation of the specific reasons each SDVOB that responded to Contractors' solicitation was not selected.

(iii) Dates of any pre-bid, pre-award or other meetings attended by Contractor, if any, scheduled by Owner with certified SDVOBs whom Owner determined were capable of fulfilling the SDVOB goals set in the Agreement.

(iv) Information describing the specific steps undertaken to reasonably structure the Work for the purpose of subcontracting with, or obtaining supplies from, certified SDVOBs.

(v) Other information deemed relevant to the waiver request.

(f) Monthly SDVOB Contractor Compliance Report

In accordance with 9 NYCRR § 252.2(q), Contractor is required to report Monthly SDVOB Contractor Compliance to Owner during the term of the Agreement for the preceding month's activity, documenting progress made towards achieving the SDVOB goals. This information must be submitted using form SDVOB 101 available at [https://ogs.ny.gov/Veterans/Docs/2016/SDVOB\\_101\\_Monthly\\_Compliance%20Report.docx](https://ogs.ny.gov/Veterans/Docs/2016/SDVOB_101_Monthly_Compliance%20Report.docx) and should be completed by the Contractor and submitted to Owner, by the 10th day of each month during the term of the Contract, for the preceding month's activity to: Anthony Peterson at [anthony.peterson@bpca.ny.gov](mailto:anthony.peterson@bpca.ny.gov).

(g) Breach of Contract and Damages

In accordance with 9 NYCRR § 252.2(s), any Contractor found to have willfully and intentionally failed to comply with the SDVOB participation goals set forth in this Agreement, shall be found to have breached the Agreement and Contractor shall pay damages as set forth therein.

## **ARTICLE 27 - STANDARD PROVISIONS**

### *27.1 Provision Required by Law Deemed Inserted*

Each and every provision of law and governmental regulation required by law to be inserted in the Contract Documents shall be deemed to be inserted therein and this Agreement shall read and shall be enforced as though so included therein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, this Agreement shall be deemed to be amended to make such insertion or correction. If this Agreement contains any unlawful provision, the same shall be deemed of no effect and shall, upon the application of either party, be deemed stricken from this Agreement without affecting the binding force of the remainder.

### *27.2 Compliance with Laws, Rules and Regulations*

Contractor and each Subcontractor and Materialman shall comply fully with all applicable laws, rules and regulations pertaining to the Project and the Work.

### *27.3 Applicable Law, Forum and Jurisdiction*

This Agreement shall be governed by the laws of the State of New York. All actions or proceedings relating, directly or indirectly, to this Agreement shall be litigated only in courts located within the County of New York. Contractor, any guarantor of the performance of its obligations hereunder (including sureties for Payment and Performance Bonds) (“**Guarantor**”) and their successors and assigns hereby subject themselves to the jurisdiction of any state or federal

court located within such county, waive the personal service of any process upon them in any action or proceeding therein and consent that such process be served by certified or registered mail, return receipt requested, directed to the Contractor and any successor at Contractor's address hereinabove set forth, to Guarantor and any successor at the address set forth in the instrument of guaranty and to any assignee at the address set forth in the instrument of assignment. Such service shall be deemed made as of the date of the return receipt.

#### *27.4 No Third Party Rights*

Nothing in this Agreement shall create or shall give to third parties any claim or right of action against BPCA, Construction Manager, or Architect beyond such as may legally exist irrespective of this Agreement.

#### *27.5 Exculpation; Limitation of Liability*

In no event shall any claim be asserted under this Agreement by Contractor or any Subcontractor or Materialman against any member, officer, employee, lessee, Contractor or agent of BPCA, Construction Manager, or Architect. By execution of this Agreement, Contractor agrees to look solely to BPCA with respect to any claim which may arise. It is hereby understood by and between the parties hereto that BPCA shall only be liable to the extent of monies available to BPCA.

#### *27.6 Protection of Lives and Health*

(a) Contractor's, Subcontractor's and Materialman's attention is specifically called to the rules and regulations, codes and bulletins of the New York State Department of Labor. Attention is also directed to the standards imposed under the Federal Occupational Safety and Health Act of 1970, as amended.

(b) Contractor shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under this Agreement, and shall immediately notify BPCA in writing of any injury which results in hospitalization or death. Contractor shall also complete and submit to BPCA the "Incident Report Form" attached hereto and made a part hereof as Exhibit F within 48 hours of the occurrence of any such injury.

(c) Contractor alone shall be responsible for the safety, efficiency and adequacy of contractor's work, plant, appliances and methods, and for any damage that may result from the failure, or the improper construction, maintenance, or operation of such work, plant, appliances and methods.

#### *27.7 Waiver of Immunity Clause*

Contractor hereby agrees to the provisions of New York Public Authorities Law Section 2875, which require that a person, when called before a grand jury, head of a State department, temporary State commission, or other State agency, the Organized Crime Task Force in the State Department of Law, head of a department or other City agency, which is empowered to compel the attendance of witnesses and examine them under oath, to testify in an investigation concerning

any transaction or contract had with the State, any political subdivision thereof, or with any public department, agency or official of the State, a public authority or with any public department, agency or official of the State or of any political subdivision thereof or of a public authority, that person must sign a waiver of immunity against subsequent criminal prosecution or to answer any relevant questions concerning such transaction or contract. Upon the refusal of any person to comply with such provisions:

(a) such person, and any firm, partnership or corporation of which such person is a member, partner, director or officer shall be disqualified from thereafter selling to or submitting bids to or receiving awards from or entering into any contracts with any public authority or official thereof, for goods, work or services, for a period of five (5) years after such refusal; and

(b) any and all contracts made with any public authority or official thereof, by such person, and by any firm, partnership or corporation of which such person is a member, partner, director or officer may be canceled or terminated by the public authority without incurring any penalty or damages on account of such cancellation or termination, but any monies owing by the public authority for goods delivered or work done prior to the cancellation or termination shall be paid.

#### *27.8 Prohibited Interests*

No official of BPCA who is authorized in such capacity and on behalf of BPCA to negotiate, make, accept, or approve, or take part in negotiating, making, accepting, or approving any Architectural, Engineering, inspection, Purchase Order or any Subcontract in connection with the Work, shall become directly or indirectly interested personally in the Agreement. Contractor is advised that no official or employee of BPCA is permitted to indirectly solicit, accept, or receive gifts whether in the form of money, service, loan, travel, entertainment, hospitality, thing or promise, or in any other form. No officer, employee, architect, attorney, engineer, inspector or Contractor of or for BPCA who is authorized in such capacity and on behalf of BPCA to exercise any legislative, executive, supervisory or other similar functions in connection with the Work, shall become directly or indirectly interested personally in the Agreement, any Purchase Order, Subcontract, insurance contract, or any other contract pertaining to the Work.

#### *27.9 Labor Provisions*

(a) It is hereby agreed that all applicable provision of the Labor Law of the State of New York shall be carried out in the performance of the Work.

(b) Contractor specifically agrees, as required by New York Labor Law Sections 220 and 220-d as amended, that:

(1) no laborer, workman or mechanic, in the employ of Contractor, Subcontractor, Materialman or other person doing or contracting to do the whole or any part of the Work contemplated by the Contract Documents shall be permitted or required to work more than eight (8) hours in any one calendar day or more than five (5) days in any one week, except in the emergencies set forth in the Labor Law.

(2) the wages paid for a legal day's work shall be not less than the prevailing

rate of wages as defined by law;

(3) the minimum hourly rate of wage to be paid shall be not less than that stated in the Contract Documents and as shall be designated by the Industrial Commissioner of the State of New York; and

(4) Contractor shall post at appropriate conspicuous points at the Site, a schedule showing all determined minimum wage rates for the various classes of laborers and mechanics to be engaged in the Work and all deductions, if any, required by law to be made from unpaid wages actually earned by the laborers and mechanics so engaged.

(c) The minimum wage rates, if any, herein specified for apprentices shall apply only to persons working with the tools of the trade which such persons are learning under the direct supervision of journeymen mechanics. Except as otherwise required by law, the number of apprentices in each trade or occupation employed by Contractor or any Subcontractor or Materialman shall not exceed the number permitted by the applicable standards of the New York State Department of Labor, or, in the absence of such standards, the number permitted under the usual practice prevailing between the unions and the employers' association of the respective trades or occupations.

(d) All employees of Contractor and each Subcontractor and Materialman shall be paid in accordance with the provisions of the Labor Law.

(e) Contractor agrees that, in case of underpayment of wages to any worker engaged in the Work by Contractor or any Subcontractor or Materialman, BPCA shall withhold from Contractor out of payments due an amount sufficient to pay such worker the difference between the wages actually paid such worker for the total number of hours worked, and that BPCA may disburse such amount so withheld by BPCA for and on account of Contractor to the employee to whom such amount is due. Contractor further agrees that the amount to be withheld pursuant to this paragraph may be in addition to the percentages to be retained by BPCA pursuant to other provisions of the Contract Documents.

(f) The Labor Law provides that this Agreement may be terminated for cause and no sum paid for any Work done thereunder upon a second conviction for willfully paying less than:

- (1) the stipulated wage scale as set forth in New York Labor Law Section 220, subdivision 3, as amended, or
- (2) less than the stipulated minimum hourly wage scale as specified in Labor Law, Section 220-d, as amended.

(g) Contractor specifically agrees, as required by the New York Labor Law Section 220-e, as amended, that:

(1) in the hiring of employees for the performance of Work under this Agreement or any Subcontract or Purchase Order hereunder, or for the manufacture, sale or distribution of Materials, equipment or supplies hereunder, but limited to operations performed within the territorial limits of the State of New York, no Contractor, Subcontractor, Materialman

or any person acting on behalf of such Contractor or Subcontractor, or Materialman, shall by reason of race, creed, color, sex or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the work to which the employment relates;

(2) no Contractor, Subcontractor, Materialman, or any person on behalf of such Contractor, Subcontractor or Materialman shall, in any manner, discriminate against or intimidate any employee hired for the performance of work under this Agreement on account of race, creed, color, sex or national origin;

(3) there may be deducted from the amount payable to Contractor, by BPCA under this Agreement, a penalty of \$50.00 for each person for each calendar day during which such person was discriminated against or intimidated in violation of the terms of this Agreement; and

(4) this Agreement may be canceled or terminated for cause by BPCA and all monies due or to become due hereunder may be forfeited for a second or any subsequent violation of the terms or conditions of this Section of this Agreement.

(h) Where applicable, Contractor agrees to settle labor disputes in accordance with the provisions of The New York Plan For The Settlement of Jurisdictional Disputes Between The Building And Construction Trades Council Of Greater New York And The Building Trades Employers' Association Of The City of New York.

#### *27.10 Disputes Resolution Procedure*

(a) The provisions of this Article shall constitute Contractor's sole means for challenging any determination, order or other act or omission of BPCA or otherwise asserting against BPCA any claim of whatever nature arising under, or in any way relating to, this Agreement (any such challenge or assertion by Contractor being herein referred to as a "**Dispute(s)**"). Exhaustion of these dispute resolution procedures, including the judicial review set forth below, shall be the parties' sole remedy in connection with any Dispute.

(b) The parties to this Agreement hereby authorize and agree to the resolution of all Disputes arising out of, under or in connection with, this Agreement in accordance with the following and pursuant to the procedures set forth in paragraph (c) of this Section 27.10. With respect to any Dispute which relates in whole or primary part to technical issue(s) under this Agreement including, without limitation, determinations as to the acceptability or fitness of any Work, the meaning or interpretation of the Contract Documents, the question of whether any Work falls within the scope of the Specifications set forth in the Contract Documents, the acceptability of any proposed substitutions, modifications or other submissions under this Agreement, the disapproval of proposed Subcontractors or Materialmen (to the extent such disapproval is related to technical issues), the extension of time to the extent related to a technical matter, the question of whether substantial completion or final completion has been achieved, the parties hereby authorize the General Counsel of BPCA, or his/her designee, (hereinafter referred to as the "**Arbiter**"), acting personally, to render a final and binding decision.

(c) All Disputes shall be initiated through a written submission by either party (such submission to be hereinafter referred to as the "**Dispute Notice**") to the Arbiter within ten (10)



days of the determination, order or other act or omission which is the subject of the Dispute. Within ten (10) days after the submission of such Dispute Notice, the party initiating the Dispute shall provide the Arbiter with all evidence and other pertinent information in support of the party's position and/or claim. Within thirty (30) days from the date of the Dispute Notice, the party against whom the Dispute Notice was filed shall submit any and all materials which it deems pertinent to the Arbiter. Upon submission of a Dispute Notice to the Arbiter, the Arbiter shall render its decision in writing and deliver a copy of same to the parties within a reasonable time not to exceed sixty (60) days after the receipt of all materials. In rendering such decision, the Arbiter may seek such technical or other expertise as it shall deem necessary or appropriate (notifying both parties to the Dispute when he/she so seeks such other information or expertise) and seek any such additional oral and/or written argument or materials from either or both parties to the Dispute as he/she deems fit. The Arbiter shall have the discretion to extend the time for submittals required hereunder. The Arbiter's ability to render and the effect of a decision hereunder shall not be impaired or waived by any negotiations or settlement offers in connection with the matter presented, whether or not the Arbiter participated therein, or by any prior decision of others, or by any termination or cancellation of this Agreement. The decision of the Arbiter shall be final and binding on both parties to this Agreement.

(d) It is expressly understood and agreed that the pendency of a Dispute hereunder shall at no time and in no respect constitute a basis for any modification, limitation or suspension of Contractor's obligation to fully perform in accordance with this Agreement and that Contractor shall remain fully obligated to perform the Work notwithstanding the existence of any such Dispute.

#### *27.11 Additional Provisions Relating to the Prosecution of Claims for Money Damages*

(a) Except as otherwise provided in this Agreement, if Contractor claims or intends to claim compensation or money damages for any damage or loss sustained by reason of any determination, order or other act or omission of BPCA, Contractor shall furnish a written notice to the Arbiter setting forth the nature of the claim and the extent of the damage sustained within ten (10) days of the occurrence of such loss or damages. This written notice shall constitute Contractor's submission to the Arbiter for the purposes of requesting the Arbiter's determination in accordance with Section 27.10 above. Any such claim shall state as fully as then possible all information relating thereto and shall be supported by any then available documentation, including daily records showing all costs incurred. Such information shall be supplemented with any and all further information, including information relating to the quantum of losses or damages sustained, as soon as practicable after the information becomes or reasonably should become known to the Contractor.

(b) Any claim for compensation or monetary damages, the successful prosecution of which necessarily depends upon a technical determination favorable to Contractor, may not proceed unless and until Contractor first obtains such a favorable determination with respect to the technical issue and must be made within ten (10) days of such determination; moreover, Contractor must submit to the Arbiter any documentation or proof in support of the monetary claim within fifteen (15) days of such determination in order to proceed with such a claim. This written notice shall constitute Contractor's submission to the Arbiter for the purposes of requesting the Arbiter's determination in accordance with Section 27.10 above.

(c) Compliance with the provisions hereof shall constitute a condition precedent to the Contractor's submission of a Dispute pursuant to Section 27.10 with respect to any claim for compensation or monetary damages and the Contractor shall be deemed to have waived any claim not submitted in accordance herewith.

(d) Any final determination of the Arbiter with respect to a Dispute initiated pursuant to this Article 27 shall be subject to review solely in the form of a challenge following the decision by the Arbiter in a Court of competent jurisdiction of the State of New York, County of New York, under Article 78 of the New York Civil Practice Law and Rules or a United States Court located in New York City under the procedures and laws applicable in that court, it being understood the review of such Court shall be limited to the question of whether or not the Arbiter's determination is arbitrary, capricious or lacks a rational basis. No evidence or information shall be introduced or relied upon in such proceeding which has not been duly presented to the Arbiter in accordance with this Article 27.

#### *27.12 Limitation on Actions*

(a) Subject to the provisions of Section 27.11, no action or proceeding shall lie or shall be maintained by Contractor against BPCA, Construction Manager, or Architect unless (i) such action or proceeding shall be commenced within six (6) months of the date of the issuance of the Certificate of Substantial Completion to Contractor; or (ii) in the case of an action or proceeding for monies due pursuant to Section 5.7 hereof, or arising exclusively from or pertaining exclusively to work performed after the date of issuance of the Certificate of Substantial Completion, unless such action or proceeding is commenced no later than six (6) months after the issuance of the certificate of final completion to Contractor; or (iii) if this Agreement is terminated by BPCA prior to the issuance of the Certificate of Substantial Completion, unless such action or proceeding is commenced within six (6) months after the date of such termination.

(b) Nothing in this Section 27.12 shall be construed to modify or lengthen a shorter limitations period provided by applicable law.

(c) No action or proceeding shall be commenced by Contractor against BPCA, Construction Manager, or Architect except in the Supreme Court of the State of New York, County of New York.

(d) Nothing in this Section 27.12 shall be construed to suggest that Contractor, under any circumstances, may bring an action or proceeding against Construction Manager, or Architect.

#### *27.13 Waiver of Remedies*

Contractor acknowledges that it can be compensated adequately by money damages for any breach of this Agreement which may be committed by BPCA, Construction Manager, or Architect. Contractor agrees that no default, act or omission of BPCA, Construction Manager, or Architect shall constitute a material breach of contract entitling Contractor to cancel or rescind this Agreement or to suspend or abandon performance thereof, other than the failure of BPCA to make a payment of the Contract Price in accordance with the terms hereof solely because sufficient funds to pay the Contract Price have not been appropriated or will otherwise not be made available to BPCA. Contractor hereby waives any and all rights and remedies to which Contractor might

otherwise be or become entitled to because of any wrongful act or omission of BPCA, Construction Manager, or Architect except as provided in this Section 27.13 and Contractor's right to money damages.

#### *27.14 Modification of Agreement*

No change in or modification, termination or discharge of this Agreement in any form whatsoever shall be valid or enforceable unless it is in writing and signed by the party to be charged therewith or its duly authorized representative, provided, however, that any change in or modification, termination or discharge of this Agreement expressly provided for in this Agreement shall be effective as so provided.

#### *27.15 Signs and Parking*

Contractor agrees that it shall not display on or about the Site any sign, trademark or other advertisement without the approval of BPCA and Construction Manager. Contractor shall not and shall not permit any of its Subcontractors or Materialmen to park any vehicles on the Site.

#### *27.16 Entire Agreement*

The Contract Documents constitute the entire Agreement between the parties and incorporate all prior understandings in connection with the subject matter hereof.

#### *27.17 Rights and Remedies*

The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by BPCA, Construction Manager, or Architect or Contractor including, but not limited to, the making of any payment or permitting Contractor to continue with the performance of the Work shall constitute a waiver of any right or duty afforded any of them under this Agreement, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

#### *27.18 Participation in International Boycott Prohibited*

Contractor agrees, as a material condition of this Agreement, that neither Contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated or is participating or shall participate in an international boycott in violation of the provisions of the United States Export Administration Act of 1969, as amended, or the United States Export Administration Act of 1979, as amended, or the Regulations of the United States Department of Commerce promulgated thereunder. This Agreement shall be rendered forfeit and void by the Comptroller of the State of New York if, subsequent to execution, such person, firm, partnership or corporation has been convicted of a violation of the provisions of either of such federal acts or such Regulations or has been found upon the final determination of the United States Commerce Department or any other appropriate agency of the United States to have violated the provisions of either of such federal acts or such Regulations.

#### *27.19 Compliance with “Buy-American” Statutes*

Contractor and any substantially owned or affiliated person, firm, partnership or corporation agrees to comply with the New York Public Authorities Law, Section 2603-A as amended (affects steel or steel products).

#### *27.20 Permitted Successors*

References to parties and entities herein shall be deemed to include their permitted successors.

#### *27.21 MacBride Fair Employment Principles*

If the amount payable to Contractor under this Agreement is greater than \$15,000, Contractor hereby certifies that it and/or any individual or legal entity in which it holds a 10% or greater ownership interest, and any individual or legal entity that holds a 10% or greater ownership in it, either have no business operations in Northern Ireland; or shall take lawful steps in good faith to conduct any business operations they have in Northern Ireland in accordance with the MacBride Fair Employment Principles relating to nondiscrimination in employment and freedom of workplace opportunity regarding such operations in Northern Ireland, as set forth in New York State Finance Law Article XI Section 165(5), and shall permit independent monitoring of their compliance with such Principles.

#### *27.22 Iran Divestment Act*

By signing this Agreement, each person and each person signing on behalf of any other party certifies, and in the case of a joint bid or partnership each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each person is not on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the State Finance Law.

#### *27.23 Termination for Failure to Disclose Under State Finance Law §139k*

BPCA reserves the right to terminate this Agreement in the event it is found that the certification filed by Contractor pursuant to New York State Finance Law §139-k was intentionally false or intentionally incomplete. Upon such finding, BPCA may exercise its termination right by providing written notification to the Contractor in accordance with the written notification terms of this contract. If a contract is terminated in accordance with State Finance Law §139k(5), BPCA, its subsidiaries and affiliates, will include a statement in BPCA’s procurement record describing the basis for any action taken under the termination provision.

#### *27.24 Labor Peace*

The Contractor and its Subcontractors and Materialmen shall not employ on the Work any labor, materials or means whose employment, or utilization during the course of this Agreement, may tend to or in any way cause or result in strikes, Work stoppages, delays, suspension of Work or similar troubles by workers employed by the Contractor or its Subcontractors, Materialmen, or by any of the trades working in or about the buildings and premises where Work is being performed

under this Agreement, or by other contractors or their subcontractors pursuant to other agreements, or on any other building or premises owned or operated by BPCA, its contractors or affiliates. Any violation by the Contractor of this requirement may be considered as proper and sufficient cause for declaring the Contractor to be in default, and for BPCA to take action against Contractor as set forth in Article 15 of this Agreement, or such other Section of this Agreement as BPCA may deem proper.

#### *27.25 Comptroller's Approval*

If this Agreement is considered an "eligible contract," as defined by New York Code, Rules and Regulations Title 2 Part 206.2, it is subject to the New York State Comptroller's approval, and therefore shall not be valid and enforceable until that approval has been obtained. A contract is considered an "eligible contract," as defined by Title 2 of NYCRR Part 206.2, if it is not a specifically exempt contract, is executed by a state authority on or after March 1, 2010, the aggregate consideration under the contract may reasonably be valued in excess of one million dollars (including all reasonably anticipated renewals and amendments), AND the contract (A) was or shall be awarded on a single-source basis, sole-source basis or pursuant to any other method of procurement that is not a competitive procurement OR (B) shall be paid in whole or in part with monies appropriated by the State, either directly to a state authority or to a state agency that pays the money to a state authority.

#### *27.26 Key Person/Personnel*

The parties understand that in entering into this Agreement, BPCA has relied upon Contractor's representation that [name(s) and title(s)] (hereinafter the "**Key Personnel**") will be directly and consistently involved in supervising the Work and actively engaged in the day-to-day management of the Work, which shall include attending mandatory Project meetings. If the Key Personnel is/are not available as described herein, or if the Key Personnel depart from the firm or severs his/her/their relationship with the Contractor, or for whatever other reason is/are not available to work on the Project, then BPCA shall have the right to terminate this Agreement. The parties also agree that at any time during the course of the Work, BPCA may designate additional or substitute key personnel to perform the Work. Contractor agrees to make the additional or substituted key personnel available under the same conditions set forth herein.

#### *27.27 Form of Agreement Not an Offer*

Notwithstanding anything herein to the contrary, the submission of this form of Agreement by BPCA to Contractor shall not constitute an offer, and execution hereof by Contractor shall not be considered acceptance of an offer. A binding contract between the parties shall exist only if and at such time as both parties have executed this Agreement.

#### *27.28 General Responsibility*

(a) The Contractor shall at all times during the Agreement term remain responsible. The Contractor agrees, if requested by BPCA or its designee, to present evidence of Contractor's continuing legal authority to do business in New York State, integrity, experience, ability, prior performance, and organizational and financial capacity.

(b) BPCA or its designee, in its sole discretion, reserves the right to suspend any or all activities under this Agreement, at any time, when BPCA discovers information that calls into question the responsibility of Contractor. In the event of such suspension, Contractor will be given written notice outlining the particulars of such suspension. Upon issuance of such notice, Contractor must comply with the terms of the suspension order. Activity under the Agreement may resume at such time as BPCA or its designee issues a written notice authorizing a resumption of performance under the Agreement.

(c) Upon written notice to the Contractor, and a reasonable opportunity to be heard with appropriate BPCA officials or staff, the Agreement may be terminated by BPCA or its designee at Contractor's expense where Contractor is determined by BPCA or its designee to be nonresponsible. In such event, BPCA or its designee may complete the contractual requirements in any manner BPCA may deem advisable and pursue available legal or equitable remedies for breach.

#### **27.29. Counterparts**

This Agreement may be executed in any number of counterparts, all of which taken together shall constitute one instrument, but the Agreement shall not be deemed effective unless signed by all parties.

#### **27.30. Section Headings**

Section headings contained in this Agreement are for convenience only and shall not be considered for any purpose in governing, limiting, modifying, construing or affecting the provisions of this Agreement and shall not otherwise be given legal effect.

#### **27.31. Subordination of Terms in the Exhibits**

In the event of a conflict of terms, the terms stated in Sections 1-27 herein, shall take precedence over and shall prevail over any printed, typed, or handwritten terms located in the Exhibits.

**SIGNATURE PAGE FOLLOWS**

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, as of the date first above written.

BATTERY PARK CITY AUTHORITY, d/b/a

HUGH L. CAREY BATTERY PARK CITY AUTHORITY

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

[CONTRACTOR NAME]

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

FEIN #