

BOROUGH OF CAPE MAY POINT  
CAPE MAY COUNTY, NEW JERSEY

# PUBLIC WORKS BUILDING ADDITION AND RENOVATIONS

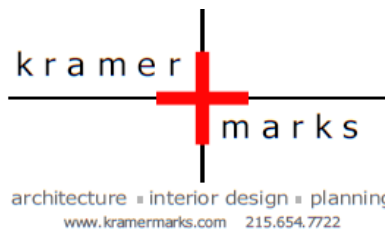
ROBERT MOFFATT  
ANITA VANHEESWYK  
CATHERINE BUSCH

MAYOR  
DEPUTY MAYOR  
COMMISSIONER

CONTRACT DOCUMENTS  
AND  
SPECIFICATIONS

DECEMBER 2023  
Re-Bid MARCH 2023

PREPARED BY:



and

# GPI

GREENMAN-PEDERSEN, INC.  
520 Route 22 East, Suite 200  
Bridgewater, NJ 08807

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## **ADVERTISEMENT**

### **RE-BID PUBLIC WORKS BUILDING ADDITION AND RENOVATIONS BOROUGH OF CAPE MAY POINT**

NOTICE is hereby given that sealed bids for the construction of the above referenced project will be received by the Borough of Cape May Point (The Borough) and opened and read in public at the Cape May Point Borough Hall, 215 Lighthouse Avenue, Cape May Point, New Jersey on **Tuesday, April 9, 2024 at 1:00pm**. A scanned copy of the bid proposals opened will be posted for viewing on the Borough's web page ([www.capemaypoint.org](http://www.capemaypoint.org)) shortly after bid opening.

Work shall consist of constructing an approximately 17.5' x 45.5' addition to the existing Public Works Building, installing an emergency generator, replacing existing siding, roofing panels, windows, and HVAC units, and all related work as indicated on the Construction Documents.

Plans, specifications and bid forms for the proposed work program are available electronically by requesting the documents from Karen Palumbo at [kpalumbo@gpinet.com](mailto:kpalumbo@gpinet.com) or Dale Foster at [dfoster@gpinet.com](mailto:dfoster@gpinet.com) (phone 908.236.9001). A paper copy of the documents will be available for **review only** by appointment at the GPI's offices at 1110 North New Road, Suite 200, Pleasantville, NJ 08232. Only an electronic copy of the documents will be provided. No paper copies of the documents will be provided.

Bids must be made on standard proposal forms included with the contract documents in the manner designated therein and must be enclosed in sealed envelopes bearing the name and address of bidder and name of project on the outside and addressed to:

Borough of Cape May Point  
215 Lighthouse Avenue  
P.O. Box 490  
Cape May Point, New Jersey 08212

and must be accompanied by a Non-Collusion Affidavit, Consent of Surety and certified check or bid bond, payable to The Borough for not less than ten percent (10%) of the total amount of bid, not to exceed \$20,000, and be delivered at the Borough Hall on or before the hour named above.

Bidders are required to comply with the requirements of P.L. 1963, Chapter 150 (Prevailing Wage); N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27 (Affirmative Action); P.L. 1977, Chapter 33, requiring corporate bidders to submit the names and addresses of stockholders owning ten percent (10%) or more of their stock, or partnership owning a ten percent (10%) or greater interest in the partnership; and P.L. 2004, Chapter 57 regarding business registration with the NJ Department of Treasury, Division of Revenue. Bidders are also required to comply with the subcontractor identification requirements of Local Public Contract Law (40A: 11-16).

Under the statutes of the State of New Jersey, state wage rates apply to this contract. The Contractor will be required to pay the wage rate for each classification of labor including appropriate fringe benefits in accordance with State Wage Rate Determinations.

No bid may be withdrawn for a period of sixty (60) days after the date set for the opening thereof. The right is reserved to reject any or all bids or to waive informality in the bidding if it is in the interest of the Borough to do so.

BY ORDER OF:

THE BOROUGH OF CAPE MAY POINT  
ELAINE WALLACE, CLERK

BOROUGH OF CAPE MAY POINT

**PUBLIC WORKS BUILDING ADDITION AND RENOVATIONS**

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## BID DOCUMENT CHECKLIST

The following checklist must be properly completed with the bid package and shall be a part of the bid documents.

**A. Failure to submit the following documents is a mandatory cause for the bid to be rejected: (N.J.S.A. 40A:11-23.2)**

Owner's Checkmark		Bidder's Initials (Each Item)
✓	If applicable, bidder's acknowledgment of receipt of notices, revisions or addenda to an advertisement, specifications or bid documents.	
✓	Stockholder Disclosure Certification pursuant to NJSA 52:25- 24.2	
✓	Disclosure of Subcontractors pursuant to NJSA 40A:11-16	
✓	Bid guarantee as required by NJSA 40A: 11-21 ( <b>Note: Bidder <u>MUST</u> use bid forms included in this bid package</b> )	
✓	Certificate of Surety pursuant to NJSA 40A: 11-22	
✓	Disclosure of Investment Activities in Iran	
✓	Bidders Qualifications	

**B. Failure to submit the following documents may be a cause for the bid to be rejected: (N.J.S.A. 40A:11-23.1)**

Owner's Checkmark		Bidder's Initials (Each Item)
✓	Non-Collusion Affidavit	
✓	Affirmative Action Compliance Notice	
✓	Certificate of Insurance Statement	
✓	Registration Certificate for bidder and all listed subcontractors pursuant to Public Works Contractor Registration Act (PWCRA) P.L. 1999, c.238-N.J.S.A. 34:11-56.48 et seq.-registered at time bids are received-required prior to award	
✓	Copy of Business Registration Certificates for bidder and all listed subcontractors pursuant to NJSA 52:32-44 (must submit prior to award of contract)	
✓	Debarred List Affidavit	

**C. The Bidder has reviewed the following requirements:**

Owner's Checkmark		Bidder's Initials (Each Item)
✓	NJ Initial Project Workforce Report, Construction and Affirmative Action Agreement Construction Contract	

**D. Signature: By initialing each item, the undersigned bidder hereby acknowledges and has submitted the above-referenced documents and has reviewed all requirements referenced herein.**

Name of Bidder: \_\_\_\_\_

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

Printed Name and Title: \_\_\_\_\_

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

BOROUGH OF CAPE MAY POINT

**PUBLIC WORKS BUILDING ADDITION AND RENOVATIONS**

BIDDER'S PROPOSAL

Proposal of \_\_\_\_\_  
(hereafter called "Bidder")

a Corporation doing business as \_\_\_\_\_

a Partnership doing business as \_\_\_\_\_

an Individual doing business as \_\_\_\_\_

To: Borough of Cape May Point  
PO Box 490  
215 Lighthouse Avenue  
Cape May Point, NJ 08212

In compliance with your Invitation to Bid on the **Cape May Point Public Works Building Addition and Renovations** Project and having examined the Project Manual and related documents and having visited the sites of the proposed work; and being familiar with all of the conditions surrounding the construction of the proposed project, including the availability of materials and labor; Bidder hereby proposes to furnish all labor, materials, and supplies, and to complete the work in accordance with the indicated Contract Documents within the time set forth therein, and at the bid amount stated below. The bid amount shall cover all expenses incurred in performing the work required under the Contract Documents of which this proposal is a part.

Bidder hereby agrees to commence work under this Contract on or before a date to be specified in written "Notice to Proceed" of the Owner and to fully complete the project within [One Hundred Eighty (180) consecutive days] thereafter.

- 1. Submit Lump Sum Bid for work listed:

Public Works Building Addition and Renovations

Bidder agrees to perform all Construction work of the indicated Contract for the above mentioned building and provide all the materials and equipment necessary to complete the work described in the Contract Documents for the sum of

\_\_\_\_\_

\_\_\_\_\_ Dollars (\$\_\_\_\_\_).

Insert both written and numerical amounts

- 2. **The Undersigned has enclosed 2 original signed sets of all required Bid Forms.**



3. The Undersigned acknowledges receipt of Addenda numbers: \_\_\_\_ thru \_\_\_\_.
4. The Undersigned understands and agrees that this proposal is effective for acceptance by the Authority for a period of sixty (60) days after receipt of bids.
5. The Undersigned understands and agrees to provide full liability insurance coverage as specified for the duration of the contract term.
6. The Undersigned understands and agrees to comply with and be bound by Instructions to Bidders issued for this work.
7. The Undersigned understands and agrees that this proposal must be prepared on the basis that the Wage Rates included in the project manual apply to the project.
8. Enclosed with this Bid is bid security in the amount of not less than ten (10%) percent of the bidder's proposed Contract Sum nor more than \$20,000.

Respectfully submitted:

\_\_\_\_\_  
(Firm Name)

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

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

Address: \_\_\_\_\_  
\_\_\_\_\_

Dated: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Corporate Seal (If Bidder is a Corporation)

**BID BOND**

"KNOW ALL MEN BY THESE PRESENTS, that we the undersigned, \_\_\_\_\_

\_\_\_\_\_ as PRINCIPAL, and \_\_\_\_\_

\_\_\_\_\_ as SURETY, are hereby held firmly bound unto \_\_\_\_\_

\_\_\_\_\_ as Owner, in the penal sum of \_\_\_\_\_

\_\_\_\_\_

for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

The condition of the above obligation is such that whereas the Principal has submitted to \_\_\_\_\_

\_\_\_\_\_ a certain Bid, attached hereto and hereby made a part thereof to enter into a contract in writing for the \_\_\_\_\_

\_\_\_\_\_

NOW, THEREFORE,

- (a) If said Bid shall be rejected, or in the alternate,
- (b) If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a bond for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid,

then this obligation shall be void, otherwise the same shall remain in force and effect; it being clearly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its Bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice or any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year set forth above.

Witness or Attest: \_\_\_\_\_  
Principal

\_\_\_\_\_  
(Seal) By \_\_\_\_\_

Witness or Attest: \_\_\_\_\_  
Surety

\_\_\_\_\_  
(Seal) By \_\_\_\_\_

PERSON OR AGENT OF THE SURETY WHO WILL RECEIVE NOTICE OF  
NON-PERFORMANCE:

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

TELEPHONE NO.: \_\_\_\_\_

IMPORTANT: Surety companies executing bonds must possess a Certificate of Authority from the Commissioner of the New Jersey Department of Insurance in accordance with N.J.S.A. 17:31-5.

**CERTIFICATE OF SURETY**

The undersigned hereby certify that they are the duly authorized agents of \_\_\_\_\_

\_\_\_\_\_

duly authorized to do business in the State of New Jersey and agree to furnish to the faithful performance of any and all provisions contained in the specifications and contract. The maximum amount that we will be surety for is the full amount of the surety bond.

\_\_\_\_\_  
(Surety Company or Agency)

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

Witness:

\_\_\_\_\_  
The terms of the Surety Company for furnishing the bond are hereby acceptable.

\_\_\_\_\_  
(Name of Bidder)

By: \_\_\_\_\_  
(Title)

**IMPORTANT:** Surety companies executing bonds must possess a Certificate of Authority from the Commissioner of the New Jersey Department of Insurance in accordance with N.J.S.A. 17:31-5.

# ACKNOWLEDGMENT OF RECEIPT OF ADDENDA

The undersigned Bidder hereby acknowledges receipt of the following Addenda:

<u>Addendum Number</u>	<u>Dated</u>	<u>Acknowledge Receipt</u> (initial)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**No addenda were received:**

Acknowledged for: \_\_\_\_\_  
(Name of Bidder)

By: \_\_\_\_\_  
(Signature of Authorized Representative)

Name: \_\_\_\_\_  
(Print or Type)

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

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

# STOCKHOLDER DISCLOSURE CERTIFICATION

This Statement Shall Be Included with Bid Submission

## Name of Business

I certify that the list below contains the names and home addresses of all stockholders holding 10% or more of the issued and outstanding stock of the undersigned.

**OR**

I certify that no one stockholder owns 10% or more of the issued and outstanding stock of the undersigned.

## Check the box that represents the type of business organization:

- Partnership                       Corporation                       Sole Proprietorship  
 Limited Partnership               Limited Liability Corporation       Limited Liability Partnership  
 Subchapter S Corporation

Sign and notarize the form below, and, if necessary, complete the stockholder list below.

### Stockholders:

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

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

Home Address: \_\_\_\_\_

Home Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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

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

Home Address: \_\_\_\_\_

Home Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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

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

Home Address: \_\_\_\_\_

Home Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Subscribed and sworn before me this \_\_\_\_ day of \_\_\_\_\_, 2\_\_.

\_\_\_\_\_  
(Affiant)

(Notary Public)

\_\_\_\_\_  
(Print name & title of affiant)

My Commission expires:

(Corporate Seal)

# BIDDER QUALIFICATIONS

**Firm Name:**

\_\_\_\_\_ (Company Name)

\_\_\_\_\_ (Address)

\_\_\_\_\_ (City, State, Zip Code)

\_\_\_\_\_ (Phone)

\_\_\_\_\_ (Fax #)

\_\_\_\_\_ (E-Mail)

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

**Construction Capabilities:**

(Check all that apply)

General Contracting

Electrical

Plumbing

HVAC

Demolition

Other (specify)

Asbestos Abatement

Paving

\_\_\_\_\_

**For Corporations Only:**

Federal ID Number: \_\_\_\_\_

Name of State(s) in which incorporated: \_\_\_\_\_

Date(s) of incorporation: \_\_\_\_\_

If not incorporated in New Jersey:

1. Attach Certificate of Authority to do Business in New Jersey

2. Certificate Number \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_\_ (President's Name)

\_\_\_\_\_ (Vice President's Name)

\_\_\_\_\_ (Secretary's Name)

\_\_\_\_\_ (Treasurer's Name)

**For Partnerships Only:**

Date of Organization: \_\_\_\_\_

Type of Partnership:

General

Limited

Association

Names and Addresses of all partners: (use additional sheet if necessary)

1. \_\_\_\_\_  
\_\_\_\_\_ (Name) (Address) (City, State, Zip Code)

2. \_\_\_\_\_  
\_\_\_\_\_ (Name) (Address) (City, State, Zip Code)

**General Information:**

Federal ID Number: \_\_\_\_\_ Or SSN: \_\_\_\_\_

Percent of work done by Contractor: \_\_\_\_\_ Number of Permanent Employees: \_\_\_\_\_

Number of years in business: \_\_\_\_\_

Geographical limits of operation: \_\_\_\_\_

If you have done business under a different name, please give name and location:

Has firm ever failed to complete a project or defaulted on a contract? If so, state where and why:

**Date:** Dated this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_.

**Signatures:**

Individual       Partnership       Joint Venture       Corporation

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax Number: \_\_\_\_\_

Federal ID Number: \_\_\_\_\_ SSN: \_\_\_\_\_

Incorporated under the laws of the State of: \_\_\_\_\_

(If a corporation organized in a state other than New Jersey, attach certificate of Authority to do business In the State of New Jersey.)

\_\_\_\_\_  
(Bidder's Signature)

\_\_\_\_\_  
(Corporate Secretary's Signature and Seal)

\_\_\_\_\_  
(Typed or printed name(s))

\_\_\_\_\_  
(Seal)



## DISCLOSURE OF SUBCONTRACTORS

Please list the subcontractors for the specialty trade categories listed below. If you intend to perform the work through your own employees or by yourself rather than through utilization of a subcontractor, write the word "In-House" next to each applicable category and insert the name, and license number where required, of each person in the appropriate spaces. If the contract does not involve a specialty trade listed below, write the word "None" in the appropriate space. For further instructions, see Paragraph 26 herein. **DO NOT LEAVE ANY SPACE BLANK.**

1. Plumbing and Gas Fitting and All Kindred Work:

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
License Number: \_\_\_\_\_

2. Steam Power Plants, Steam and Hot Water Heating and Ventilating Apparatus, and All Kindred Work:

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
License Number: Not Applicable

3. Electrical Work:

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
License Number: \_\_\_\_\_

4. Structural Steel and Ornamental Iron Work:

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
License Number: Not Applicable

# DEBARRED LIST AFFIDAVIT

State of \_\_\_\_\_

County of \_\_\_\_\_ ss:

I, \_\_\_\_\_ of the City/Town/Township/Borough, etc. \_\_\_\_\_ in the County of \_\_\_\_\_ and the State of \_\_\_\_\_ full age, being duly sworn according to law on my oath depose and say that:

I am \_\_\_\_\_ an officer of the firm of \_\_\_\_\_

\_\_\_\_\_ the bidder making the bid for the above named work, and that I executed said bid with full authority to do so; that said bidder at the time of making of this bid is not debarred at the federal level from contracting with a federal government agency as indicated in N.J.S.A. 52:32-44.1 or included on the State of New Jersey, State Treasurer's List of Debarred, Suspended and Disqualified Bidders or the State of New Jersey Department of Labor and Workforce Development, Division of Wage and Hour Compliance Debarred list; and that all statements contained in said bid and in this affidavit are true and correct, and made with the full knowledge that the Borough of Cape May Point as the Owner relies upon the truth of the statements contained in said bid and in the statements contained in this affidavit in awarding the contract for said work.

The undersigned further warrants that should the name of the firm making this bid be debarred at the federal level from contracting with a federal government agency or appear on the State Treasurer's List of Debarred, Suspended and Disqualified Bidders at any time prior to, and during the life of this Contract, including Guarantee Period, that the Local Unit shall be immediately so notified by the signatory of this Eligibility Affidavit.

The undersigned understands that the firm making the bid as Contractor is subject to debarment, suspension and/or disqualification in contracting with the State of New Jersey, if the Contractor, pursuant to N.J.A.C. 12:60-7.1 et seq., commits any of the acts listed therein, and as determined according to applicable law and regulation.

\_\_\_\_\_  
\_\_\_\_\_

Subscribed and sworn to

(Insert Name, Telephone No., email address, and Address of Contractor)

before me this \_\_\_\_\_ day  
of \_\_\_\_\_ 20\_\_.

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

(Insert Name and Title of Affiant)

My Commission expires \_\_\_\_\_, 20\_\_  
(Seal)

# **DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN**

## **PART 1: CERTIFICATION**

**BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX. FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE.**

Pursuant to N.J.S.A. 52:32-55, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the Department of Treasury's Chapter 25 list (N.J.S.A. 51:32-57) as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found on the Division's website at: <http://www.state.nj.us.treasury/purchase/pdf/Chapter25List.pdf>

Bidders **must** review this list prior to completing the below certification. **Failure to complete the certification and return it with the bid will render a bidder's proposal non-responsive and the bid will be rejected.** If the Director finds a person or entity to be in violation of law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party.

### **PLEASE CHECK THE APPROPRIATE BOX:**

**I certify, pursuant to N.J.S.A. 52:32-55, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to the statute and the Chapter 25 List. I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. I will skip Part 2 and sign and complete the Certification below.**

### **OR**

**I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 List. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as non-responsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.**

## **PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN - add additional sheets if necessary.**

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing below:

Name of Entity: \_\_\_\_\_; Relationship to Bidder: \_\_\_\_\_

Description of Activities: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Duration of Engagement: \_\_\_\_\_ Anticipated Cessation Date: \_\_\_\_\_

Bidder/Offeror Contact Name: \_\_\_\_\_; Contact Phone: \_\_\_\_\_

**DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN**

(continued)

BIDDER: \_\_\_\_\_

Certification:

I, being duly sworn upon my oath, hereby represent that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I acknowledge that I am authorized to execute this certification on behalf of the bidder, that the County of Atlantic is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the completion of any contracts with the County to notify the County in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the County of Atlantic, permitting the County to declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): \_\_\_\_\_

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

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

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

**NON-COLLUSION AFFIDAVIT**

STATE OF \_\_\_\_\_ )  
 ) SS.  
COUNTY OF \_\_\_\_\_ )

I, \_\_\_\_\_ of the municipality of \_\_\_\_\_, in the County of \_\_\_\_\_  
\_\_\_\_\_, and the State of \_\_\_\_\_ of full age, being duly sworn according to law on my oath  
depose and say that:

I am \_\_\_\_\_  
of the firm of \_\_\_\_\_

the bidder making the Proposal for the above named project, and that I executed the said Proposal with full  
authority so to do; that said bidder has not, directly or indirectly entered into any agreement, participated in  
any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the  
above named project; and that all statements contained in said Proposal and in this affidavit are true and  
correct, and made with full knowledge that the \_\_\_\_\_ relies upon the truth of  
the statements contained in said Proposal and in the statements contained in this  
affidavit in awarding the Contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such  
contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee,  
except bona fide employees or bona fide established commercial or selling agencies maintained by  
\_\_\_\_\_.  
(Name of Contractor)

(N.J.S.A. 52:34-15).

\_\_\_\_\_  
(Also type or print name of affiant under signature)

Subscribed and sworn to  
before me this \_\_\_\_\_ day of  
\_\_\_\_\_, 20\_\_.

Notary Public of \_\_\_\_\_  
My Commission Expires \_\_\_\_\_, 20\_\_.

# AFFIRMATIVE ACTION COMPLIANCE NOTICE

N.J.S.A. 10:5-31 and N.J.A.C. 17:27

## GOODS AND SERVICES CONTRACTS (INCLUDING PROFESSIONAL SERVICES)

This form is a summary of the successful bidder's requirement to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27-1 et seq.

The successful bidder shall submit to the public agency, after notification of award but prior to execution of this contract, one of the following three documents as forms of evidence:

(a) A photocopy of a valid letter that the contractor is operating under an existing Federally approved or sanctioned affirmative action program (good for one year from the date of the letter);

OR

(b) A photocopy of a Certificate of Employee Information Report approval, issued in accordance with N.J.A.C. 17:27-4;

OR

(c) A photocopy of an Employee Information Report (Form AA302) provided by the Division and distributed to the public agency to be completed by the contractor in accordance with N.J.A.C. 17:27-4.

The successful vendor may obtain the Affirmative Action Employee Information Report (AA302) from the contracting unit during normal business hours.

The successful vendor(s) must submit the copies of the AA302 Report to the Division of Contract Compliance and Equal Employment Opportunity in Public Contracts (Division). The Public Agency copy is submitted to the public agency, and the vendor copy is retained by the vendor.

The undersigned vendor certifies that he/she is aware of the commitment to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27.1 et seq. and agrees to furnish the required forms of evidence.

The undersigned vendor further understands that his/her bid shall be rejected as non-responsive if said contractor fails to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27-1 et seq.

COMPANY: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

PRINT NAME: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

## CERTIFICATE OF INSURANCE STATEMENT

The Bidder fully understands the Borough of Cape May Point insurance requirements as stated in Article XIII of the Agreement and agrees to provide all insurance required by these documents prior to award of contract.

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(Firm Name)

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(Signature)

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(Name and Title)

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(Address)

---

(Date)

**NOTE:**

**FAILURE TO SIGN THIS DOCUMENT MAY RESULT IN THE REJECTION OF YOUR PROPOSAL.**

# **AGREEMENT**

**AGREEMENT** made as of the \_\_\_\_ day of \_\_\_\_\_ in the year 20 (“Agreement”)

**BETWEEN** the **Owner, Borough of Cape May Point**, a Municipal Corporation of the State of New Jersey with a principal office located at: 215 Lighthouse Avenue, Cape May Point, NJ 08212 (“Borough” or “Owner”);

and the **Contractor**: (Name, address);

for the following **Project: Cape May Point Public Works Building Addition and Renovations**, 801 Lighthouse Avenue, Cape May Point, NJ

The **Engineer** for the Project is: Greenman Pedersen, Inc., 520 US Highway 22, Suite 200, Bridgewater, NJ 08807

Pursuant to Cape May Point Board of Commissioners Resolution No. \_\_\_\_\_ dated \_\_\_\_\_, the Borough awarded a contract to Contractor; and in consideration of the mutual covenants and promises therein contained, the Borough and Contractor agree as follows.

## **ARTICLE 1 THE CONTRACT DOCUMENTS**

### **§ 1.1 CONTRACT DOCUMENTS**

The Contract Documents consist of this Agreement, Drawings, Specifications, Addenda issued prior to execution of this Agreement, Bidding Requirements (Notice to Bidders & Bid Specifications and sample forms), Conditions of the Contract (General, Supplementary and other Conditions), Commission **Resolution No.** \_\_\_\_\_ dated \_\_\_\_\_, Contractor’s **Bid Proposal** dated \_\_\_\_\_, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral.

**Priority and Conflicts.** To the extent there is a conflict or inconsistency between the Contract Documents, interpretations will be based on the following order of precedence, with the highest precedence given to the document listed first:

- .1 Modifications, Change Orders;
- .2 Construction Change Directives, Bulletins and other documents issued by the Engineer to amend or clarify the scope of work, approve submittals, and similar documents;
- .3 This Agreement;
- .4 Addenda issued prior to execution of this Agreement;
- .5 Notice to Bidders and Bid Specifications;
- .6 Construction Drawings and Specifications;
- .7 General Conditions;
- .8 Bid Proposal.

### **§ 1.2 EXECUTION OF THE CONTRACT DOCUMENTS**

Execution of the Agreement by the Contractor is a representation that the Contractor has visited the site and studied the Drawings and Specifications, become familiar with the local conditions under which the Work is to be performed, has submitted any discrepancy, error, or omission which it discovered, or reasonably should have discovered, to the Owner and/or Engineer prior thereto and correlated personal observations with requirements of the Contract Documents. Contractor represents and warrants that its investigation of the site was performed in detail and was sufficient to disclose the condition of the Project and the conditions under which the Work is to be performed, including, without limitation (i) site and soil conditions, (ii) anticipated labor supply and costs, (iii) availability and cost of materials, tools, and equipment, (iv) the likelihood or potential for unforeseen conditions, and (v) other similar issues pertinent to the performance of the Work. Contractor waives claims relating to any of the conditions set forth in (i) through and including (iv) of this paragraph.



### **§ 1.3 THE WORK**

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and is defined in more detail elsewhere in this Agreement.

### **§ 1.4 INTENT**

The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor including the full extent of all labor, materials, equipment and services required to ensure the complete and proper construction of the Project as required by, and as reasonably inferable from, the Contract Documents. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all.

### **§ 1.5 THE PROJECT**

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by other Multiple Prime Contractors and/or by the Owner's own forces including persons or entities under separate contracts not administered by the Owner and/or Engineer ("separate contractors").

### **§ 1.6 OWNER**

#### **§ 1.6.1 OWNER'S RIGHT TO STOP THE WORK**

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity. Contractor shall not be entitled for an extension of the Contract Time or delay damages in such event.

#### **§ 1.6.2 OWNER'S RIGHT TO CARRY OUT THE WORK**

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a three (3) day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies in any manner which Owner deems expedient. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the cost of correcting such deficiencies, including Owner's expenses and compensation for the Engineer's additional services made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall Indemnify the Owner for same, and pay the difference to the Owner. The correction of such deficiencies by Owner shall not relieve Contractor of any obligation or liability for the Work and shall not operate to waive any right or claim of Owner.

### **§ 1.7 CONTRACTOR**

**§ 1.7.1 Supervision and Construction Procedures.** The Contractor shall supervise and direct the Work using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instruction concerning these matters.

The Contractor shall have a continuing obligation to carefully study and compare the Contract Documents with each other and with information furnished by the Owner. Before commencing activities, the Contractor shall (1) take field measurements and determine field conditions affecting the Work; (2) carefully compare this and other information known to the Contractor with the Contract Documents; (3) carefully review the shop drawings; and (4) promptly report errors, inconsistencies or omissions discovered to the Engineer. The Contractor shall be liable to the Owner for any damage resulting from any error, inconsistency or omission which it knew or reasonably should have known but failed to report to the Owner and Engineer. No claims for extra work will be allowed on account of minor differences between the actual dimensions and those indicated in the Contract Documents.

The Contractor shall Indemnify the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

**§ 1.7.2** The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent work.

The Owner shall have the right to inspect all materials and work performed during any phase of construction and the Contractor shall provide all reasonable facilities for the safe and convenient means of such inspection. The Contractor shall notify the Engineer of any work requiring inspection three (3) business days prior to commencing work. Unless otherwise authorized, work shall be done only in the presence of the Engineer or an authorized representative. Any work done without proper inspection will be subject to rejections and non-payment. Inspection of the work shall not relieve the Contractor of the obligation to fulfill all conditions of the Contract.

No work shall be closed or covered until it has been duly inspected and approved. Should un-approved work be covered, the Contractor shall, if requested by the Engineer, uncover all work for inspection. The cost of uncovering the work and replacement shall be borne by the Contractor. The cost of inspection shall be borne by the Owner during the normal work week. The costs for inspection services on Saturdays, Sundays, legal holidays, or on weekdays outside the hours of 8:00 A.M. to 4:30 P.M. inclusive shall be borne by the Contractor.

**§ 1.7.3 Maintain Full Work Force.** Contractor shall at all times maintain a full work force at the Project site as appropriate for the stage of the Work and to maintain the Project Schedule.

**§ 1.7.4 Inspections and Testing.** In the event the Owner and/or Engineer questions any Work performed by the Contractor which requires testing to determine if the work was performed in accordance with industry standards and/or the contract documents, the Contractor shall timely arrange for the necessary testing. If the testing concludes that the work is defective or non-compliant with the Contract Documents, the Contractor shall be responsible for all testing costs and remediating the defective work. If the testing concludes that the work was satisfactorily performed by the Contractor, the Owner shall be responsible for associated testing costs.

**§ 1.7.5 Protection of Work and Property.** At all times, the Contractor shall provide adequate protection against inclement weather including, but not limited to, rain, wind, storms, snow, dust, cold and heat, so as to protect all work, materials, apparatus and fixtures from injury or damage. Protection of work shall include removal of snow so that work may proceed in accordance with the applicable schedule. The Contractor shall continuously maintain adequate protection of all its work, the Owner's property and operations, utility facilities, property of users of the facility, and adjacent property, and shall be responsible for all damage, injury or loss arising in connection with this Contract.

**§ 1.7.5.1 Protection from Water Damage.** At all times, the Contractor shall protect the work from damage by water from any source. The Contractor shall provide all pumps and equipment, enclosures, and supervision as necessary to ensure this protection.

**§ 1.7.5.2 Protection of Existing Systems.** The Contractor shall protect any existing systems, equipment, or structures, including portions of the existing structure that is to remain in place either temporarily or permanently, from damage resulting from work performed under the Contract. All such systems, structures, and equipment, unless otherwise indicated, shall remain intact, in serviceable condition, and undisturbed during the performance of the work. In the event that damage to any such systems, structures, or equipment is caused by operations under this Contract, the Contractor shall immediately make repairs and/or replacements to such systems and equipment as directed by the Engineer at no cost to the Owner. The Contractor shall pay the costs incurred by the Owner and/or Engineer in connection with such repairs and replacements.

**§ 1.7.5.3 Protection of Property from Theft and Vandalism.** The Contractor shall protect and secure the property and existing structure from theft of tools, equipment, materials, and supplies, and from vandalism. All such tools, equipment, materials, and supplies, unless otherwise indicated, shall remain in the structure or on the grounds, and undisturbed during the performance of the work. The Contractor shall provide all equipment, enclosures, and supervision as necessary to secure

the structure and grounds. In the event that tools, equipment, materials, and supplies are stolen or otherwise missing, or the structure or grounds are vandalized, the Contractor shall immediately make repairs and/or replacements to such tools, equipment, materials, and supplies systems as directed by the Engineer at no cost to the Owner. The Contractor shall pay the costs incurred by the Owner and/or Engineer in connection with such repairs and replacements.

**§ 1.7.6 Utilities.** The Contractor shall comply with the State of New Jersey notification and utility locator service requirements prior to digging, excavating or otherwise moving earth on this Project. The Contractor shall engage and pay for the services of a qualified agency to assist in locating utilities on site not covered under the New Jersey utility call service.

The Contractor shall contact in writing, all agencies which may have utilities located in the area of work prior to commencement of construction and a copy of such notification shall be forwarded to the Engineer. The Contractor shall send appropriate notices to utility companies, make all necessary arrangements, and perform all other services required for the care and maintenance or relocation and removal of utilities, including, but not limited to, electric cables and wires, gas mains, water pipes, sewer pipes, and all other items of this character depending on whether the Contract Documents indicate such utilities will be continued in service or that the Contract Documents indicate will be discontinued. The Contractor shall be solely responsible for the coordination and scheduling of all utility companies.

Upon completion of the work, the Contractor shall obtain a written statement from the various utility companies stating that all manholes or valve boxes within any newly paved area under this Contract are free of any foreign matter and can be readily opened.

**§ 1.7.7 Snow Removal.** The Contractor shall remove snow or ice from the site as required to provide safe access to the work and for emergency egress.

**§ 1.7.8 Lines and Grades.** Unless otherwise stated in the specifications, the Contractor shall stake out such lines and grades as necessary in order to perform the work. The Contractor shall transfer the line and grade far enough in advance of the immediate work area to detect any errors or omissions that may exist and shall report such errors or omissions to the Engineer immediately. Work done without lines and grade being given, work done beyond the lines and grades shown on the drawings or as given, or any extra work done without a written authorization will be considered unauthorized. Such work will be at the expense of the Contractor and will not be paid for by the Owner. Work so done may be ordered removed and/or replaced by the Engineer at the Contractor's expense.

**§ 1.7.9 Maintenance of Traffic.** The Contractor shall provide for and maintain local vehicular traffic during construction operations wherever feasible. At no time shall any street be closed by barricading or other methods without the prior consent of the Owner. If and when it becomes necessary to close a street to the normal flow of traffic, the Contractor shall notify the Police Department, Fire Department, Office of Emergency Management, Local School Board Transportation Director, and the Engineer, and shall at all times provide ingress and egress for emergency services as provided by the aforesaid departments. Detour routes, if approved by the Engineer, must be adequately and fully marked by the Contractor for the entire length of the detour. The Contractor shall conduct the work with the least possible obstruction to local traffic. The Contractor shall also conduct the work to maintain traffic circulation, access for all users, and parking within the facility, including ingress and egress, in accordance with the Contract Documents.

**§ 1.7.10 Erosion and Sedimentation Control.** The Contractor shall schedule and conduct the Work exercising such precautions as necessary to prevent and/or reasonably minimize the pollution or contamination of stream and other waters with sediment or other harmful materials. Wherever construction exposes work which is subject to erosion, the extent of such exposures in advance of subsequent construction shall be subject to the approval of the Engineer. Erosion control features or other work to be completed within such areas shall follow as soon after exposure as practicable.

Construction of drainage facilities as well as performance of other Contract work which will contribute to the control of siltation shall be carried out in conjunction with earthwork operations, including borrow pit operations, or as soon thereafter as is practicable.

During construction, the Contractor shall shape the top of earthwork so as to affect the drainage of rainwater and to prevent the flow of runoff over the slopes except at locations selected or approved by the Engineer. If and where the Engineer so directs, temporary slope drains shall be constructed to carry the runoff.

The erosion control measures described herein shall be continued until the grass on seeded slopes is sufficiently established to be an effective erosion deterrent.

Unless otherwise approved in writing by the Engineer, construction operations in rivers, streams and impoundments should be restricted to those areas where channel changes are shown on the Contract documents and to those areas which must be entered for the construction of temporary or permanent structures. Rivers, streams and impoundments shall be promptly cleared of all falsework, piling, debris, or other obstructions placed therein or caused by the construction operations.

Excavation from the roadway, channel changes, cofferdams, etc., shall not be deposited in or so near to rivers, streams or impoundments so that it will be washed away by high water or runoff.

Should the project result in more than 5,000 square feet of disturbance, the cut face of earth excavation and/or fill for roadway slopes will be treated to establish a temporary vegetative cover as described in the "Standards for Soil Erosion and Sedimentation Control in New Jersey" immediately after the completion of excavation and/or embankment operations in the same area. All work must also be in accordance with the Cape Atlantic Soil Conservation District. The Contractor shall notify the Cape Atlantic Soil Conservation District in writing at least two (2) business days in advance of any land disturbance activity.

No separate payment will be made to the Contractor for measures provided for erosion and sedimentation control, the cost of which will be included in the Contract Sum.

**§ 1.7.11 Compliance with Laws.** The Contractor shall comply with all laws applicable to the performance of the Work, whether or not specifically referred to in the Contract. Contractor will not look to, or rely upon, Owner or its consultants for a determination of which laws apply and shall confer with its own counsel to resolve all questions in that regard. Contractor shall not rely upon any listing of laws in the Contract Documents as limiting, in any way, the laws governing Contractor's performance. Any such listings are not intended as a limitation on the Contractor's responsibility to comply with all laws that relate to the Project.

Contractor agrees to be bound by, to comply with, and to give all notices required under the provisions of all Federal, State, and local laws, codes, ordinances, regulations and permits applicable to the Contract and performance of the Work. Contractor shall be liable to the Owner for all loss, cost and expense (including without limitation, attorneys fees and court costs related thereto and incurred in enforcing this Article) attributable to any acts or omissions of the Contractor or any subcontractor of any tier, or any employees or agents thereof, resulting from failure to comply with any such provisions and give required notices, including without limitation, any fines, penalties or corrective measures ("Violation Expenses"). Contractor's failure to pay any Violation Expenses when due shall constitute consent for Owner, in its sole discretion, to pay the Violation Expenses and deduct same from any then outstanding payment or any payment thereafter due Contractor.

**§ 1.7.11.1 Compliance with Labor Statutes and Rules.** The Contractor agrees to comply with all the laws of the State of New Jersey regarding labor and compensation and with all labor statutes, rules, regulations, and ordinances applicable. The Contractor agrees that:

- (A) In the hiring of persons for the performance of work under this Contract or any subcontract hereunder, or for the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under this Contract, no Contractor, nor any person acting on behalf of such Contractor or subcontractor, shall, by reason or race, creed, color, national origin, or ancestry, discriminate against any person who is qualified and available to perform the work to which the employment relates.
- (B) No Contractor, subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employees engaged in the performance of work under this Contract or any subcontract hereunder, or engaged in the procurement, manufacture, assembling or furnishing of any such Contract on account of race, creed, color, national origin, or ancestry.

- (C) This Contract may be cancelled or terminated by the contracting public agency, and all money due or to become due hereunder may be forfeited, for any violation of this section occurring after notice of Contractor's prior violation of this section of the Contract.
- (D) The Contractor agrees to comply with all State statutes, rules and regulations dealing with minimum wage rates and failure to do so shall subject the Contractor to forfeiture of the Contract or other penalties imposed by law.
- (E) Contractor is responsible for subcontractor compliance.
- (F) The Contractor shall instruct all personnel to follow all safety regulations of the Occupational Safety and Health Administration (OSHA) and officials of the State of New Jersey Department of Labor and Industry. The Contractor is forewarned that the regulatory agencies could impose a work stoppage if their representatives inspect the Contract work and discover that safety precautions mandated by the agencies have been violated.
- (G) In the case of contracts exceeding \$50,000, the Contractor shall have an Affirmative Action Plan. The form AA-201B and/or others as it may be required by the Affirmative Action Office shall be completed by the Contractor and furnished to the Owner and the Affirmative Action Office no later than three (3) days after the Contractor signs the Contract.

**§ 1.7.11.2 American Goods and Products.** Contractor shall comply with any and all "Buy American" requirements of Federal and State law, including N.J.S.A. 40A:11-18 which provides that only manufactured products of the United States, wherever available, be used; and with any other Buy American provisions, laws or regulations applicable to the Project.

**§ 1.7.11.3 Prevailing Wage Act.** The Contractor shall comply with the requirements of the New Jersey Prevailing Wage Act (NJSA 34:11-56.25 et seq.) and all other applicable provisions of state labor laws.

**§ 1.7.11.4 Compliance with Project Labor Agreement.** The Contractor is responsible for Project compliance with any Project Labor Agreement applicable to the Work, the Contract or the Project.

#### **§ 1.7.12 TAXES**

The Contractor shall pay all taxes that are legally required including without limitation, all social security taxes, unemployment insurance, contributions, or other taxes measured by wages of employees, attributable to, or performing the Work. Contractor's Exemption Purchase Certification, Form ST-13 issued by the State of New Jersey, Division of Taxation, Sales Tax Bureau, shall be completed and presented to suppliers. Contractor certifies that the Form ST-13 will only be presented to suppliers for materials for this Project.

#### **§ 1.7.13 PERMITS, FEES AND NOTICES**

The Contractor shall obtain and pay for the building permit, if necessary for the Work, and other permits and governmental fees, licenses and inspections and utility fees necessary for proper execution and completion of the Work.

The Contractor shall comply with and give notices required by agencies having jurisdiction over the Work. If the Contractor performs Work contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume full responsibility for such Work and shall bear the attributable costs, damages, losses and expenses of every kind, including but not limited to, reasonable attorney's fees. The Contractor shall promptly notify the Owner and Engineer in writing of any known inconsistencies in the Contract Documents with governmental laws, rules and regulations.

The Contractor shall comply with all applicable laws, statutes, building codes, rules and regulations of all governmental, public and quasi-public authorities and agencies having jurisdiction over the Project in effect on the date the Contract Documents are delivered to the Owner. If necessary, the Contractor shall be responsible for securing any waivers therefrom in order to complete the Work. Contractor shall comply with any CDC, DOH, OSHA or other applicable agency or entity rules, guidelines,

regulations, procedures or protocols to prevent or mitigate the spread of infection, including but not limited to COVID-19, including all Executive Orders with regard to same.

The Contractor acknowledges that it has familiarized itself with the nature and location of the work, the configuration and conditions of the site and of any existing structure, and the character of equipment and facilities required for the performance of the work. The Contractor further acknowledges that it has familiarized itself with the character, quality and quantity of surface and subsurface materials and/or obstacles to be encountered during the performance of this Contract. Any extra work occasioned by the Contractor's failure so to familiarize itself as described above shall be performed at no cost to the Owner.

The Contractor shall comply with all regulations of the Uniform Construction Code of the State of New Jersey and any of its amendments as they are made official.

It is the obligation of the Contractor to ascertain for itself all the facts concerning conditions to be found at the location of the Project, to fully examine the Plans and read the Specifications, to consider fully these and all other matters which can in any way affect the work under this Contract and to make the necessary investigations relating thereto, and Contractor agrees to this obligation in the signing of the Contract. Neither the Owner nor its agents assume any responsibility whatsoever with respect to ascertaining for the Contractor such facts concerning physical characteristics at the site of the Project.

It is the obligation of the Contractor to make its own investigations of subsurface conditions prior to submitting its Proposal. Borings, test excavations and other subsurface investigations, if any, made by the Owner or its agents prior to the construction of the Project, the records of which may be available to Contractor, are made for use as a guide for design. Any estimate or estimates of quantities shown on the Plans or in the form of proposal, based on said borings, test excavations and other subsurface investigations, are in no way warranted to indicate the true quantities.

**§ 1.7.14 Concealed or Unknown Conditions.**

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract or (2) unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract, the Contractor shall promptly provide notice to the Owner and the Engineer before conditions are disturbed and in no event later than three (3) business days after first observance of the conditions. The Engineer will promptly investigate such conditions and, if the Engineer determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Engineer determines that the conditions at the site are not materially different from those indicated in the Contract and that no change in the terms of the Contract is justified, the Engineer shall promptly notify the Owner and Contractor in writing, stating the reasons.

The provisions of N.J.S.A. 40A:11-16.7(a) "Differing site conditions" shall be incorporated by reference into this § 1.7.14; and in the event of a conflict between § 1.7.14 and the statute, the provisions of the statute shall control. Any claim made by the Contractor for concealed, unknown, or differing site conditions must be made pursuant to Article 14 of this Agreement.

**§ 1.7.15 CONTRACTOR'S PROJECT MANAGEMENT**

**§ 1.7.15.1 Project Manager / Superintendent.** The Contractor shall employ a competent project manager / superintendent whom shall be English speaking and able to thoroughly understand the Contract Documents, and who shall be in attendance at the Project site at least once a day when work is being performed from commencement of the Work up to and including through completion of all corrective and punchlist items to the Owner's satisfaction. The project manager / superintendent shall be approved by the Owner and shall not be changed except with the prior written consent of the Owner for equal or higher qualified personnel. The project manager / superintendent position shall be a person with a minimum of 10 years of project management experience on renovation and construction of engineered building systems and site work similar in complexity, scope, and construction value as the project subject to this agreement. The Contractor shall submit a resume of the qualifications and experience for the project manager / superintendent covering their most recent experience with project names, owner, scope of work description, dates, construction values, and references for a minimum of three projects (name,

title and contact information). All information shall be submitted to the Owner through the Engineer within 20 days of notice of contract award.

The project manager / superintendent shall represent the Contractor, and communications given shall be as binding as if given to the Contractor. The project manager / superintendent shall adequately supervise work in progress at all times.

**§ 1.7.15.2 USE OF SITE** The Contractor shall coordinate the Contractor's operations with, and secure the approval of, the Engineer before using any portion of the site.

**§ 1.7.15.3** Contractor shall use the site in a manner that will cause minimum interference and maximum safety to the staff and general public. Contractor must have prior approval of the Engineer and Owner for locations of stored materials, access trailer locations, etc. Contractor is not permitted to use any parking spaces designated for Owner's staff, patrons, employees, or visitors, whether inside or outside of the facility without prior approval. Contractor shall review available on-site parking locations and need of off-site parking, staging, and storage prior to submitting bid.

**§ 1.7.15.3.1** Contractor work is limited to weekdays and is subject to regulations and requirements of local ordinances.

**§ 1.7.15.3.2** Contractor shall schedule deliveries so as to minimize time and space requirements for storage of materials and equipment on site. Protection of construction materials and equipment from weather, theft, damage, and all other loss or damage is solely the responsibility of the Contractor.

**§ 1.7.15.3.3** If the project site is located at an operating facility, Contractor will make every effort to minimize the effects of the construction operations on the everyday operations at the site regarding the work of other contractors, as well as the use of the adjacent properties. Contractor will be responsible for the safety of the public and will provide all necessary, barricades, overhead protection, temporary fences, signs, traffic control and rerouting, dust and pollution control, etc., associated with the scope of work, so as to ensure public and worker safety at all times.

**§ 1.7.15.3.4** Contractor shall restore streets, drives, curbs, sidewalks, lawns, fencing, landscaping, and other existing conditions that were disturbed by construction operations to a condition equal to their condition prior to commencement of the Work.

#### **§ 1.7.16 CUTTING AND PATCHING**

Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly.

#### **§ 1.7.17 CLEANING UP**

The Contractor shall keep the premises and surrounding area free from accumulation of debris and trash related to the Work. At the completion of the Work, the Contractor shall remove its tools, construction equipment, machinery and surplus material; and shall properly dispose of waste materials. The premises shall be kept free of trash and other encumbrances on a daily basis.

The Contractor shall clean and provide maintenance on completed construction included in its work, after installation, as frequently as necessary throughout construction. The Contractor shall supervise its construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. The term "clean" shall include the removal of debris from the work area to dumpsters furnished by the Contractor.

The Contractor will be given twenty-four (24) hours' notice to clean up as directed by the Owner or Engineer or as otherwise required by the Contract. If Contractor does not comply, the Owner will arrange for other means to achieve the daily clean up and the Contractor will be back charged.

### **§ 1.7.18 INDEMNIFICATION**

**§ 1.7.18.1** To the fullest extent permitted by law, the Contractor hereby assumes and agrees to indemnify, defend, and hold harmless the Owner, Engineer, and their partners, consultants and/or subsidiaries, and their respective agents, officers and employees (hereinafter "Indemnitees") from and against any and all claims, suits, demands, damages, liabilities, losses, costs and expenses of any kind, and professional fees (including but not limited to attorneys' fees, costs, court costs, litigation expenses, and disbursements) (hereinafter collectively, "Claims"), arising out of or resulting from Contractor's activities, operations, performance, or work under the Contract, regardless of whether or not such Claims arose out of or were related to the active or passive negligence or other fault of the Indemnitees. The Contractor agrees, acknowledges, and understands that the requirement to indemnify, defend, and hold harmless the Indemnitees from and against any and all Claims extends to and includes the Indemnitees' own, but not sole, negligence or fault. The indemnity obligations extend to Claims made by separate contractors and/or subcontractors against the Indemnitee(s) as a result of Contractor's work and/or performance in connection with this Agreement.

**§ 1.7.18.2** Contractor's indemnity obligation includes but is not limited to Claims arising out of or related to: (a) personal or bodily injury; (b) advertising injury; (c) employers' liability damages; (d) damages to real and personal property of any type or kind, (e) professional errors and omissions liability, (f) nonpayment by Contractor, subcontractors, laborers, vendors and materialmen, and (g) all construction or mechanics liens, builders trust fund, or similar claims, asserted, brought, or filed by any person or entity, including Contractor, subcontractors, employees, agents, servant, officers, directors, or representatives, or any other person or entity.

**§ 1.7.18.3** In the event that any Claims are made, asserted or threatened against Indemnitees, the Owner shall have the right to withhold from any payments due or to become due to Contractor, an amount sufficient in the Owner's judgment to protect and indemnify the Indemnitees from and against any and all such Claims; or the Owner, in its discretion, may require the Contractor to furnish a Surety Bond satisfactory to the Owner, guaranteeing such protection, which Bond shall be furnished by the Contractor within five (5) business days after written demand has been made therefore.

**§ 1.7.18.4** Contractor agrees that its obligation to defend commences when a Claim is made against an Indemnitee, even if Contractor disputes its obligation to indemnify them and hold them harmless.

**§ 1.7.18.5** The Indemnitees, in each of their sole discretion, may elect to require Contractor to satisfy its defense obligations through separate counsel of each of their own choosing, in which case the Contractor shall either timely pay the costs of defense directly to the selected counsel upon submission of an invoice, or reimburse the Indemnitees for those costs upon demand.

**§ 1.7.18.6** Notwithstanding any other provision in the Contract, the indemnity obligations of the Contractor under this Article ("Indemnity" or "Indemnification") shall govern and apply wherever indemnification is required in the Contract. The Indemnity obligations shall survive the termination of the Contract and shall be fulfilled at no cost or expense to the Indemnitees.

**§ 1.7.19 Video of Conditions.** The Contractor shall provide clear video tapes taken before and after construction of those areas where contemplated construction activities are in close proximity to private and other properties within the easements duly existing or obtained. Questions about which areas to video will be resolved by the Engineer in his/her sole discretion. The cost of taking, developing, and furnishing copies of these video tapes shall be borne by the Contractor. The "before" construction video tapes must be submitted to the Engineer for review prior to commencement of construction.

## **ARTICLE 2 THE WORK OF THIS CONTRACT**

**§ 2.1 Scope of Work.** In exchange for payment of the Contract Sum, Contractor shall perform all work and furnish all supervision, labor, materials, plant, equipment, loading, hoisting, scaffolding, tools, supplies, transportation, permits, and all other items necessary for the construction and completion of the entire work described in the Contract Documents in strict accordance and full compliance with all Contract Documents to the satisfaction of the Owner ("the Work"). The scope of the Work shall be broadly interpreted and shall include items reasonably inferable from the drawings, specifications, applicable



building codes and Contract Documents to achieve the intended result, including all labor, materials, equipment and services. Contractor shall be solely responsible for: the complete coordination of the Work; all construction means and methods; and the performance, acts, and omissions of all persons performing work including, without limitation, all employees, laborers, materialmen, subcontractors of any tier.

### **ARTICLE 3 DATE OF COMMENCEMENT AND COMPLETION**

**§ 3.1 Contract Time.** The Contractor shall achieve Substantial Completion (all exterior work and no temporary protection measures) by October 25, 2024, and Final Completion by November 22, 2024, subject to adjustments of the Contract Time as permitted in and provided for by the Contract Documents, time being of the essence of the Contract. It is expressly understood that the Contractor believes that the Contract Time is reasonable, taking into consideration all factors which it deems relevant to its performance.

**§ 3.1.1 Date of Commencement.** The date of commencement of the Work shall be the later of the date of this Agreement or the date set forth in a Notice to Proceed issued by the Owner ("Date of Commencement"). Contractor shall commence work on the Date of Commencement.

**§ 3.1.3 Day Definition.** The term "day" as used in the Contract shall mean calendar day unless specifically stated otherwise.

**§ 3.1.4 Substantial Completion.** Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents. The Work will not be considered substantially complete until:

- .1 all paving, grass pavers, and fencing are installed, and the exterior grounds have been restored as designed and scheduled;
- .2 all exterior siding, roofing, doors, windows, and finishes are in place;
- .3 the concrete pad, conduits and gas lines for the generator are in place;
- .4 the Engineer shall have issued a Certificate of Substantial Completion.

**§ 3.1.5** When the Engineer determines that the Work or designated portion thereof is substantially complete, the Engineer will prepare, and shall execute a Certificate of Substantial Completion that shall establish the date of Substantial Completion and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate.

**§ 3.1.6 Final Completion.** Final Completion is the stage in the progress of the Work when the Work or designated portion thereof is completed in accordance with the Contract Documents. The Work will not be considered final complete until:

- .1 all project systems included in the Work are functionally operational as designed and scheduled;
- .2 all casework, equipment and finishes are in place;
- .3 all building keys, properly tagged or indexed, have been received by the Owner;
- .4 all designated or required inspections, certifications, permits, approvals, licenses and other documents from authorities having jurisdiction thereof necessary for the beneficial use and occupancy of the Work are received;
- .5 designated instruction and training of Owner's personnel has been completed or is otherwise scheduled at a mutually agreeable time;
- .6 final cleaning has been performed;
- .7 spare parts and extra materials have been stored where designated by Owner;
- .8 warranties and operating and maintenance manuals have been submitted for review;
- .9 the only remaining Work shall be minor in nature; and
- .10 a Certificate of Occupancy has been issued by the Borough Construction office; and
- .11 the Engineer shall have issued a Certificate of Final Completion.

**§ 3.1.7** When the Engineer determines that the Work or designated portion thereof is substantially complete, the Engineer will prepare, and shall execute a Certificate of Final Completion that shall establish the date of Final Completion and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate.

## **§ 3.2 Progress and Completion**

**§ 3.2.1 Time of the essence.** Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

**§ 3.2.2** The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial and Final Completion within the Contract Time.

## **§ 3.3 Delays and Extensions of Time.**

**§ 3.3.1** The Contractor shall, within ten (10) days, provide written notice to the Owner and Engineer of the discovery or knowledge of any delay, or the reasonable likelihood of a delay, and shall suggest strategies to mitigate the effect of the delay, including overtime work, resequencing, and other remedial methods. Absent timely written notification Contractor shall be deemed to have waived any entitlement to an extension of time. In addition, if Contractor believes it has suffered a delay for which it is entitled to additional time under the terms of the Contract it must make a claim in accordance with applicable provisions of the Contract.

**§ 3.3.2 No damages for delay.** In no event shall the Contractor be entitled to collect damages from the Borough or its consultant(s) (collectively referred to as "the Borough" for purposes of this paragraph) as a result of any Project delay not solely caused by the Borough's negligence, bad faith, active interference, tortious conduct, or unforeseen circumstances un contemplated by the parties which were not otherwise foreseeable (collectively, "the Borough's Misconduct" for purposes of this paragraph). The Contractor is aware that its ability to complete its portion of the Project could be hindered or delayed by the actions or inactions of other contractors or other causes not attributable to the Borough's Misconduct. The Borough shall have the right for any business purpose, to delay, accelerate, or suspend the commencement or execution of the whole or any part of the Work, or vary the sequence or performance thereof, without compensation to the Contractor other than extending the time for completing the Contractor's Work for a period equal to such delay or suspension. The Contractor's sole remedy for delays caused by any reason other than the Borough's Misconduct shall be an extension of time to complete the Project. The Contractor's sole remedy for delays due to the Borough's Misconduct shall be the actual out of pocket expenses incurred by the Contractor directly attributable to the delays caused solely by the Borough's Misconduct.

**§ 3.3.3 Waiver of delay claims against Owner.** Contractor expressly waives and releases Owner with regard to claims for any delay attributable to lack of coordination and cooperation by and between the Contractor, separate contractors, subcontractors, and/or the Engineer. Contractor shall Indemnify Owner with regard to such claims which shall not be a basis for any claim by Contractor for increase in the Contract Sum but shall be settled directly by and between Contractor and those parties, without the involvement of or costs being incurred by the Owner.

**§ 3.3.4** The Contractor agrees that if the Work shall not be completed within the Contract Time the Owner may forthwith or at any time after said date, at its option, with notice to the Contractor, purchase the materials and furnish the labor necessary to complete said work, charging the cost thereof to the Contractor, and the Contractor expressly agrees to pay the Owner the entire cost of completing said work; provided, however, that this provision shall be deemed and taken to be in addition to and not in substitution of the right of the Owner to liquidated damages for delays or failures to perform the Contract by the Contractor, if such liquidated damages are provided for in the Contract. Notwithstanding this or any other provision, Owner shall have no obligation to undertake to perform the Contract Work.

**§ 3.3.5 Liquidated damages for delay.** Inasmuch as the damage and loss to the Owner which will result from a failure by the Contractor to complete the work within the Contract Time including any extensions to the Contract Time granted pursuant to the terms of the Contract, may include interest on monies borrowed for construction, loss from the inability of the Owner to utilize the new work, additional costs, expenses, and damages, and cannot be calculated with any degree of mathematical certainty, then in accordance with NJSA 40A:11-19, the damages to the Owner for delay in the case of such failure or failures on the part of such Contractor shall be liquidated in the sum of one thousand dollars (\$1,000.00) per calendar day for substantial completion and shall be liquidated in the sum of one thousand six hundred dollars (\$1,600.00) per calendar day for final completion.

The Owner may, at its option, recover said damages by deducting the amount thereof from any monies due or that may become due the Contractor, including any retainage under control of the Owner, and if said monies prove to be insufficient to cover said damages, then the Contractor shall pay the amount due.

The surety upon the Performance Bond furnished by the Contractor shall be liable for any such liquidated damages for which the Contractor may be liable, to the extent that the Contractor shall not make payment therefor to the Owner.

**§ 3.3.6** The Contractor shall be responsible for the compensation of Owner’s consultants, employees, and inspectors incurred as a result of Contractor’s failure to meet contractual completion dates. In the Owner’s discretion, deductions shall be made from payments due Contractor for such costs and wages due to such personnel being necessarily employed on the work for the number of days in excess of the Contract Time due to a failure to timely complete the Work.

**ARTICLE 4 CONTRACT SUM**

**§ 4.1** The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor’s performance of the Work under the Contract. The Contract Sum shall be a Stipulated Sum, in accordance with Section 4.2 below. Payment is subject to Engineer’s Certification that performance of the Work is acceptable in accordance with the terms of the Contract and the Resolution of the Borough Commissioners awarding the Contract.

**§ 4.2 Stipulated Sum**

**§ 4.2.1** The Stipulated Sum shall be \_\_\_\_\_ (\$\_\_\_\_\_), subject to additions and deletions as provided in the Contract Documents. The Owner shall pay the Contractor the Stipulated Sum, which payment is for the value of all labor and materials for work completed pursuant to an inspection certification that the Contractor’s performance is acceptable subject to all terms and conditions of the Contract Documents.

**§ 4.2.2** The Stipulated Sum is based on the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

**§ 4.2.3** Unit prices, if any:

*(Identify and state the unit price, and state the quantity limitations, if any, to which the unit price will be applicable.)*

Item	Units and Limitations	Price per Unit (\$0.00)
_____	_____	_____

**§ 4.2.4** Allowances included in the Stipulated Sum, if any:

*(Identify allowance and state exclusions, if any, from the allowance price.)*

Item	Allowance
_____	_____

**§ 4.2.4** Alternatives

**ARTICLE 5 PAYMENTS**

**§ 5.1 Progress Payments**

**§ 5.1.1** Based upon Applications for Payment (“Invoices”) submitted to the Engineer by the Contractor, and upon certification of the Application for Payment and Certificate for Payment by the Engineer and issuance by the Engineer, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

**§ 5.1.1.1 Submission of Invoices.** The parties agree that submission of invoices by Contractor in accordance with this Agreement is the sole responsibility of Contractor. The Borough will make monthly payments to the Contractor for work performed and for materials delivered, as specified.

§ 5.1.2.1 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents and approved in writing by the Engineer. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work and be prepared in such form and supported by such data to substantiate its accuracy as the Engineer may require. This schedule shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.2.2 Applications for Payment (or "Invoices") shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Invoice. Invoices shall be submitted monthly. Invoices submitted with required supporting documentation, as specified below, will be considered for approval and certification at the next-scheduled public meeting of the Borough Commissioners; this is an exception to the twenty (20) day period in New Jersey's Prompt Payment Act, N.J.S.A. 30A-2(a).

§ 5.1.2.3 In order to be considered for approval by the Borough, Invoices must include the following:

- .1 Certified payroll records for each payroll period within ten (10) days of the payment of the wages as required by N.J.S.A. 34:11-56.25, et seq. and N.J.A.C. 12:60-2.1 and 6.1; and
- .2 Evidence of New Jersey's Affirmative Action requirements as set forth in N.J.S.A. 10:5-31 et seq. and N.J. compliance with A.C. 17:27; and
- .3 **Lien Waivers:** A current sworn statement from the Contractor setting forth all Subcontractors and material suppliers with whom the Contractor has subcontracted, the amount of each such subcontract, the amount requested for any subcontractor or material supplier in the Application for Payment, and the amount to be paid to the subcontractor or material supplier from such progress payment. After the first payment is made by Owner to Contractor, Contractor shall provide Owner with a current, duly executed waiver of construction and/or material suppliers' liens from the Contractor, in a form satisfactory to the Owner, establishing receipt of payment or satisfaction of the payment requested by the Contractor in the current Application for Payment.
- .4 After the first payment is made by Owner to Contractor, Contractor shall provide Owner with duly executed waivers of construction liens from all Subcontractors establishing receipt of payment or satisfaction of payment of all amounts paid to Contractor on behalf of such Subcontractor prior to Contractor's submittal of subsequent Applications for Payment.
- .5 Evidence of payments to trade unions and related funds.
- .6 Such other information, documentation, and materials as the Owner may reasonably require.

§ 5.1.2.4 Contractor warrants that upon submittal of an Application for Payment, all Work for which Certificates for Payment have been previously issued and payments received from the Owner are and shall remain, to the best of the Contractor's knowledge, information and belief, free and clear of defects, liens, claims, security interests or other encumbrances adverse to the Owner's interests.

§ 5.1.3 The Contractor shall make payment of all proper charges for materials and labor required in the Work and Indemnify, defend and hold harmless the Owner, Engineer, or their officers, agents and servants and each and every one of them ("Indemnitees"), against and from all suits and costs of every name and description and from all damages to which the Indemnitees may be put, by reason of claims for payment, including liens, arising from the Contract or the Project by an employee of the Contractor, a Subcontractor, supplier, a sub-subcontractor, or anyone directly or indirectly employed by them or anyone for whose acts they may be liable. The Indemnification provisions of § 1.7.13 of this Agreement shall apply to the Contractor's indemnity obligations in regard to such claims.

§ 5.1.3.1 **Liens.** Contractor shall immediately notify Owner of any and all liens filed against the Project and shall provide Owner with a copy of all liens. If any subcontractor, laborer or material man of Contractor, or any person or entity directly or indirectly acting for or through it, files a mechanic's or construction lien or other claim against the Project, the property, or any part thereof, or any improvements thereon or against monies due or to become due from the Owner to Contractor or from Contractor to Subcontractor, for or on account of any work, labor, services, materials, equipment or other items furnished in

connection with the Project, the Contractor agrees to satisfy, remove, or discharge such liens or claims at its own expense by bond, payment or otherwise within ten (10) days of the date of filing thereof. If the Contractor shall fail to do so, Owner shall have the right, in addition to all of the rights and remedies provided by the Contract Documents or law, to satisfy, remove, or discharge such liens or claims by whatever means Owner chooses at the entire expense of the Contractor, including Owner's legal fees incurred as a result of the lien. Owner shall have the right to retain out of any payments due or to become due to Contractor a reasonable amount to protect Owner from any and all loss, damage or expense, including attorney's fees arising out of or relating to any such claim or lien, until the claim or lien has been satisfied or discharged by Contractor.

**§ 5.1.3.2** Notwithstanding any other provision to the contrary, the Owner reserves the right to make payment directly or by joint check to any Subcontractor, supplier, or trade union in such amounts as the Owner determines to protect the Owner's interest from a lien or asserted lien or other claim, and the amount owed the Contractor shall be reduced in the amount of any such payment by the Owner. Exercise of this option shall not create any contract or rights in any Subcontractor or third party against the Owner. Any amount so paid a Subcontractor shall be deducted from any payment due or to become due to Contractor.

In any event, if Owner has reason to believe that labor, material or other obligations incurred in the performance of Contractor's work are not being paid, Owner may take any steps deemed necessary in Owner's sole discretion to satisfy itself that any progress payment shall be utilized to pay such obligations. The provisions of this section are in addition to any other rights and remedies available to Owner under the Contract.

**§ 5.1.4 Retainage.** The Borough shall deduct Retainage from Progress Payments as follows: Retainage of two percent (2%) as required by N.J.S.A. 40A:11-16.2 and -16.3 unless the Contract sum is less than \$100,000 in which case retainage shall be ten percent (10%).

**§ 5.1.5 Payment is not acceptance.** A Certificate for Payment, progress or final payment, or partial or entire use or occupancy of the Project by Owner shall not constitute acceptance of Work not in accordance with the requirements of the Contract. Notwithstanding any payment or payments hereunder, the Contractor shall be liable for all damages sustained by the Borough by reason of any defective or improper work or materials or of any wrongful act by the Contractor, its servants, agents or employees committed or suffered to be done in the performance of this contract and shall also be liable for any damage or injury caused to a third party through any such negligent or wrongful act.

#### **§ 5.1.10 DECISIONS TO WITHHOLD PAYMENT**

**§ 5.1.10.1** The Owner may withhold a Progress Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Progress Payment previously issued, to such extent as may be necessary in the Owner's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions because of:

- .1 defective Work;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors, suppliers, trade unions, or others or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or another contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- .7 persistent failure to carry out the Work in accordance with the Contract; or
- .8 failure to maintain the site in a safe and satisfactory manner in accordance with construction practices as determined by the Owner;
- .9 any labor strike or labor disruption whatsoever which impacts the progress of the Work;
- .10 loss caused by Contractor or its Subcontractors;
- .11 failure of Contractor to correctly and accurately represent the Work performed in a payment request;

- .12 Contractor's failure to use funds previously paid to Contractor to pay Project-related obligations;
- .13 Failure of the Contractor to maintain the scheduled progress or meet intermediate milestones;
- .14 Failure to submit certified payroll records for previous period;
- .15 Failure to submit waivers of mechanic's liens from all subcontractors and material suppliers for the previous Period;
- .16 Failure of the Contractor to submit required schedule updates;
- .17 Failure of the Contractor to keep as-built drawings current;
- .18 Unsatisfactory prosecution of the Work;
- .19 Failure to provide all required documentation with applications for payment;
- .20 Failure to submit current Certificates of Insurance as required by the Contract.

## **§ 5.2 Final Completion and Payment**

**§ 5.2.1** Final payment, constituting the entire unpaid balance of the Contract Sum including retainage, is contingent upon and shall not be made by the Owner to the Contractor until the following have been completed to Owner's satisfaction and submitted to Owner:

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct rejected Work, and to satisfy other requirements, if any, which extend beyond final payment;
- .2 Subcontractor and Supplier Final Releases and Waivers of Lien in a form satisfactory to Owner;
- .3 Engineer has approved Contractor's final Request for Payment and a final Certificate for Payment or Project Certificate for Payment has been issued by the Engineer;
- .4 Supplemental Attachment for Accord Certificate of Insurance – AIA Document G715.
- .5 Affidavit of Payments of Debits and Claims – AIA Document G706.
- .6 Affidavit of Release of Liens – AIA Document G706A.
- .7 Consent of Surety to Final Payment – G707.
- .8 Certification of Paid Wages in accordance with NJ Prevailing Wage Act.
- .9 Two Year Maintenance Bond for fifteen percent (15%) of the final adjusted Contract Sum in the form required by Contract.
- .10 Contractor As-Built drawings in approved digital format.
- .11 Maintenance and Operations Manuals and Instructions, hard copy and digital format.
- .12 Contractor's Affidavit stating that the Work has been constructed in accordance with the Contract Documents.
- .13 Final Certificate of Occupancy.
- .14 Special written guarantees and warranties in addition to the two-year guarantee covered by Maintenance Bond. Guarantees shall be signed and sealed by Officer of the Contracting Firm and shall be notarized.
- .15 Attic stock and spare parts.
- .16 Testing or Inspection Reports required by the Contract Documents.

Based upon the above, the billing date for Contractor's Final Application for Payment shall be deemed to be the date that the Final Invoice including all required documentation listed above and as required elsewhere in the Contract is received by the Owner or Engineer. Thereafter the Final Application will be considered for approval and certification at the next-scheduled public meeting of the Borough Commissioners; this is an exception to the twenty (20) day period in New Jersey's Prompt Payment Act, N.J.S.A. 30A-2(a). Amounts due, approved, and certified for payment by the Borough Commissioners shall be paid during the Borough's subsequent payment cycle.

**§ 5.2.2** Acceptance of Final Payment by the Contractor shall constitute a full waiver and release of claims by Contractor arising out of and/or relating to the Contract and/or the Project.

## **ARTICLE 6 DISPUTE RESOLUTION**

**§ 6.1 Mediation.** Claims, disputes, and other controversies arising out of or related to the Contract and/or the Project are subject to non-binding mediation. As a condition precedent to binding dispute resolution, the parties shall enter into non-binding mediation with a Judge who has retired from the Courts of the State of New Jersey, to be agreed upon by the parties. The parties shall share equally in the costs of mediation. To the extent that mediation is not successful, the filing of a demand

for arbitration or a complaint in litigation shall not take place until forty-five (45) days have passed following the final mediation session.

## **§ 6.2 Binding Dispute Resolution**

For any claim subject to, but not resolved by, mediation, the method of binding dispute resolution shall be, at Owner's sole election, either: litigation in the Superior Court, Cape May County; or binding arbitration, as set forth in the Contract.

**§ 6.2.1 Owner May Elect to Arbitrate or Litigate.** At the sole and exclusive option of the Owner, any and all disputes arising out of or relating to this Contract or the Project shall be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then obtaining. The award rendered by the arbitrator(s) shall be final and judgment may be entered upon it in accordance with applicable law. Upon Owner's election to arbitrate, the Contractor's obligation to arbitrate as provided in this paragraph shall be specifically enforceable under applicable law. The Contractor shall have no right to demand arbitration of any dispute with the Owner without the Owner's written consent. The locale of any arbitration or litigation hereunder shall be Cape May County, New Jersey.

**§ 6.2.1.1 Contractor's Waiver of Litigation.** Contractor acknowledges that, in the event that Owner elects to arbitrate disputes, Contractor agrees to arbitrate all claims, disputes, and other controversies arising out of or related to the Contract or the Project, including all statutory claims, including but not limited to any claims under Prompt Payment or Consumer Fraud statutes. Contractor understands that the rules governing arbitration are different than those in court. Arbitration does not involve a judge or jury and review of an award is limited, but an arbitrator can award the same damages as a court. Contractor understands that, should the Owner elect to arbitrate disputes, the Contractor is giving up the right to a trial in court, either with or without a jury, including with regard to any and all statutory claims. Contractor waives its right to a jury trial and understands that other rights Contractor may have in Court may not be available in arbitration, and understands that the rules and procedures in arbitration may differ from those in a Court. An arbitration award issued by an arbitrator may be entered as a judgment in the Superior Court of New Jersey, Law Division, Cape May County. Contractor consents to personal and exclusive jurisdiction and venue in that Court with regard to any such application.

**§ 6.2.2 Demand for arbitration** shall be filed in writing with the other party to this Agreement and with the American Arbitration Association. In the Owner's sole discretion, arbitration may include, by consolidation or joinder or in any other manner, any party needed in order to settle the entire controversy and provide complete relief in one forum.

**§ 6.2.3 Locale.** Mediation, arbitration, and/or litigation shall be conducted within Cape May County, New Jersey.

**§ 6.2.4 Waiver of Jury Trial.** Contractor hereby waives trial by jury in the event that the Owner elects to litigate a dispute.

**§ 6.2.5 Time Limits On Claims.** No action or proceeding, including mediation, litigation, or arbitration, shall be instituted by the Contractor against the Owner for any dispute arising out of and/or relating to this Contract and/or the Project unless such action or proceeding is commenced within one year after the date when the Contractor's Work is complete, the date the Contractor is terminated, the last date the Contractor supplied labor or materials to the Project, or the date of the issuance of a final Certificate of Occupancy for the Project, whichever comes first. The Contractor waives and releases Owner from all claims and causes of action not commenced in accordance with this Section.

## **§ 6.3 Attorneys Fees**

In the event that Contractor breaches any obligation imposed by the Contract, in addition to all other damages, losses, costs, and relief which the Owner may recover, Owner shall also be entitled to recover from Contractor the Owner's reasonable attorneys' fees (whether or not incurred in connection with an arbitration or litigation) incurred in seeking to enforce or recover upon the Contract by reason of the Contractor's breach.

## **ARTICLE 7 TERMINATION OR SUSPENSION**

### **§ 7.1 Termination for Convenience; Suspension.**

**§ 7.1.1** The Owner may, at any time, at will and without cause, by written notice: (A) terminate the Contract; or, (B) order the Contractor to suspend, delay or interrupt any part of Work for any reason whatsoever for such period of time as the Owner may determine, specifying the affected part of Work and effective day of such suspension, delay or interruption. In case of suspension, the Contractor shall continue to prosecute the part of Work not thereby affected and shall not be entitled to any additional compensation as a result of the suspension, interruption or delay.

**§ 7.1.2** The Work may be suspended or terminated for convenience by the Owner without cause even if the Contractor has properly performed pursuant to the Contract.

**§ 7.1.3** In case of termination for the Owner's convenience, the Contractor's exclusive remedies shall be:

- .1 Reimbursement of all actual expenditures and costs approved by the Owner as having been made or incurred in performing that portion of the Work performed to Owner's satisfaction up to the date of termination; and
- .2 Reimbursement of expenditures made and costs incurred with the Owner's prior written approval in settling or discharging outstanding commitments entered into by the Contractor in performing the Contract.

**§ 7.1.4** Upon a determination that a termination of the Contract, other than a termination for convenience under this Section, was wrongful or improper for any reason, such termination shall be automatically deemed a convenience termination, and the Contractor's remedies for such wrongful termination shall be limited to the recoveries specified under this Section.

**§ 7.1.5** The provisions of N.J.S.A. 40A:11-16.7(b) "Suspension of Work" shall be incorporated by reference into this section; and in the event of a conflict between § 7.1 and the statute, the provisions of the statute shall control. Any claim made by the Contractor related to Owner's suspension or termination must be made pursuant to Article 14 of this Agreement.

## **§ 7.2 Termination for Cause**

**§ 7.2.1** Owner may, without prejudice to any other remedy the Owner may have, terminate the Contract for cause, as set forth here and elsewhere in the Contract Documents, including and not limited to in the occurrence of any of the following events. If Contractor:

- i. Refuses or fails to supply enough properly skilled workers or proper materials or equipment;
- ii. persistently or repeatedly fails or neglects to carry out the Work in accordance with the Contract Documents or otherwise to perform in accordance with this Contract;
- iii. fails after commencement of the Work to proceed continuously with the Work for more than ten (10) consecutive days except as permitted under the Contract;
- iv. fails to make proper and/or timely payment to Subcontractors;
- v. fails to make proper and/or timely payment to any worker or union benefit fund;
- vi. fails to submit accurate Certified Payroll;
- vii. abandons the Work or reduces its labor force to a number insufficient in Engineer's sole discretion, to complete the Work within the scheduled time;
- viii. fails to provide contractually required payment or performance bonds or insurance coverage;
- ix. fails to comply with Project Schedules or achieve Final Completion within thirty (30) days of the Final Completion Date;
- x. fails to pay prevailing wages and/or the proper rate of wages to anyone involved in the Project;
- xi. is the subject of an investigation, claim or complaint by the Department of Labor pertaining to the Project;
- xii. disregards laws, ordinances, rules, regulations or orders of a public authority having jurisdiction including but not limited to the Occupational Safety and Health Agency (OSHA);
- xiii. disregards the instructions of Owner and/or Engineer when such instructions are based on the terms of the Contract;
- xiv. fails to diligently proceed with the Work for a period of seven (7) consecutive days;
- xv. fails to discharge any lien claim within ten (10) days of written demand;
- xvi. fails to provide a conditional or unconditional lien waiver as required under the Contract;



- xvii.** is adjudged bankrupt or insolvent, or makes a general assignment for the benefit of creditors, or a trustee or receiver is appointed for Contractor or any of its property, or files a petition to take advantage of any debtor's act, or to reorganize under bankruptcy or similar laws;
- xviii.** fails, with three (3) days' notice, to resolve any labor dispute, picket, strike, or to otherwise maintain labor harmony;
- xix.** allows insurance required by Contract to expire or fails to provide a bond required by Contract;
- xx.** fails to continue its Work when a claim has been made in accordance with the Contract;
- xxi.** fails to furnish the Owner with satisfactory assurances evidencing the Contractor's ability to complete the Work in compliance with all the requirements of the Contract Documents;
- xxii.** assigns or subcontracts its Work in violation of this Agreement; or
- xxiii.** otherwise does not fully comply with the Contract Documents.

When any of the above reasons exist, the Owner may, without prejudice to any other rights or remedies of Owner and after giving the Contractor three (3) calendar days' written notice (except in cases of emergency in which case no notice shall be required), terminate the services of the Contractor and may: (A) take possession of the site and of all materials, equipment, tools and construction equipment and machinery thereon owned or leased by the Contractor; and/or (B) finish the Work by whatever reasonable method Owner may deem commercially expedient; and/or (C) make payments directly to subcontractors or suppliers. Owner's choice of any remedy shall not operate to waive any other rights or remedies of the Owner provided hereunder, or by law, against the Contractor and/or its surety. Owner at its option may choose more than one remedy or choose one or more particular remedies at different times.

In such event the Contractor shall not be entitled to receive further payment until the Work is finished. If the unpaid balance of the Contract Sum exceeds the expense of finishing the Contractor's Work and other damages incurred by the Owner, such excess shall be paid to the Contractor. If such expense and damages exceed such unpaid balance, the Contractor shall pay the difference to the Owner.

## **ARTICLE 8 SUBCONTRACTS**

**§ 8.1 Approval of Subcontracts.** The Contractor, within 20 days of Contract award, shall furnish in writing to the Owner through the Engineer the names of subcontractors or suppliers for each portion of the Work. The Contractor, prior to engaging any subcontractor, shall furnish the Engineer, in writing, with the name and address of the subcontractor, and the nature and extent of the work to be performed. A list of five (5) completed similar projects by the subcontractor and the name, address and phone number of the Engineer in-charge for each shall also be furnished. The Contractor shall not award any subcontract until the proposed subcontractor has been approved by the Engineer and evidence has been presented to the Owner that the employees of the subcontractor are protected by required insurance including worker's compensation insurance.

**§ 8.2** The Contractor shall require the subcontractors to comply with any and all rules, regulations, laws, statutes and Contract requirements that apply to the Contractor including and not limited to insurance requirements. Contractor agrees that it is fully responsible to the Owner for acts or omissions of its subcontractors and of persons directly or indirectly employed by them.

**§ 8.3 Subcontractors' Insurance.** Contractor shall be responsible to ascertain that subcontractors comply with the insurance requirements of the Contract and specifically, Article 10 of this Agreement. Upon request, Contractor shall provide Owner with copies of subcontractors' certificates of insurance and/or insurance policies required under the Contract.

**§ 8.1** Upon termination of the Contract for any reason, Contractor shall at Owner's written election: (a) remain contractor of record for Project permits, licenses, certifications, authorizations, or the like, unless and until Contractor is replaced as of record; and (b) upon written request of Owner, assign (including executing any documentation related thereto) any and all Project subcontractor agreements to Owner or an entity designated by the Owner.

## ARTICLE 9 WARRANTY

**§ 9.1 WARRANTY** The Contractor warrants to the Owner and Engineer that: (1) materials and equipment furnished under the Contract will be new and of good quality unless otherwise required or permitted by the Contract, free from faults and defects, and will be in conformance with the Contract; (2) the Work will be free from defects not inherent in the quality required or permitted; and (3) the Work will conform to the requirements of the Contract; (4) any applicable manufacturer's warranties will be transferred to the Owner; (5) title to all work, materials and equipment will pass to the Owner. A two (2) year guarantee of the materials, equipment and work shall commence from the date of issuance of a Certificate of Final Completion of the Work (Warranty Period).

**§ 9.2** Contractor shall, at its expense (including, without limitation, payment of all in-and-out-costs, and similar charges) remedy all deficiencies appearing within the Warranty Period and, at its option, repair or replace all defective work as required to accomplish this. All such repair and/or replacement work shall be warranted for the greater of: the remaining time left on the Warranty Period or one year following the date such repair and/or replacement was completed and accepted by Owner. If the Contractor fails to remedy such deficiencies within five (5) business days after written notice from Owner, the Owner may cause such remedies to be performed and charge the expense thereof to the Contractor.

**§ 9.3 Twenty-Third Month Inspection.** During the twenty-third (23rd) month after the date of Final Completion, the Contractor shall meet with the Owner and Engineer on a day mutually agreed upon and determine whether all conditions related to warranties have been satisfied in accordance with the Contract. Should any defects appear at this time, they are to be remedied by the Contractor prior to the expiration of the Warranty Period. Any warranties which are in effect for more than two (2) years after the date of Final Completion shall continue under conditions of the Contract. Nothing contained in this paragraph shall release the Contractor from its obligations under the Contract.

## ARTICLE 10 INSURANCE AND BONDS

**§10.1** The Contractor shall purchase and maintain insurance and provide bonds as set forth in the Bid Specifications and as described below. In the event of a conflict between the requirements of the Bid Specifications and this Agreement, the greater coverage requirement will govern. Contractor shall ascertain that subcontractors comply with the insurance requirements of this Article 10.

**§10.1.1 Worker's Compensation and Employer's Liability Insurance.** Contractor shall carry Worker's Compensation Insurance in accordance with the Statutes of The State of New Jersey. Under Coverage A, Worker's Compensation, such coverage will be Statutory. Under Coverage B, Employers' Liability, coverage will be unlimited as respects employees subject to the New Jersey Workers' Compensation Law, and not less than \$1,000,000 for other employments or exposures.

**§10.1.2 Commercial General Liability Insurance.** Contractor shall carry Commercial General Liability Insurance which covers property damage, bodily injury and products and completed operations. The policy shall include Bidder's Protective Liability Insurance (also known as Contingent Liability Insurance) with the same limits. This form may not be restricted in coverage by any endorsement attached to the policy. Policy Limits shall not be less than:

- \$3,000,000 Each Occurrence
- \$ 100,000 Fire Legal Liability
- \$1,000,000 Personal and Advertising Injury Liability
- \$5,000,000 General Aggregate\*\*
- \$2,000,000 Completed Operations/Products Liability Aggregate

\*\* The General Aggregate shall apply separately for each project of the Contractor.

The Owner and its officers, agents and employees shall be named as an Additional Insureds under Contractor's Policy using ISO Endorsement Form CG2010 Additional Insured- Lessees, or Contractors (Form B). This coverage shall be primary, including defense of the Owner. Contractor is also reminded that the Contract includes a Defense and Hold-Harmless Agreement from the Contractor in favor of the Owner and Engineer. Contractor shall provide this document to the Owner prior to any payment being made.

**§10.1.3 Automobile Liability Insurance.** Coverage shall be provided under the latest Standard ISO Form CA0001 as filed with and approved by the New Jersey Department of Banking and Insurance. Coverage shall be provided for Symbol 1 “Any Auto”, or Symbol 2 “All Owned Autos”, Symbol 8 “Hired Vehicles”, and Symbol 9 “Non-Owned Vehicles”. Should the Contractor neither own nor lease any vehicles, Symbol 8 and Symbol 9 are a minimum requirement. Coverage shall be not less than \$ 1,000,000 CSL (Combined Single Limit) for property damage and bodily injury. The Owner and its officers, agents and employees shall be named as an Additional Insureds. Contractor shall provide this document to the Owner prior to any payment being made.

**§10.1.4 Umbrella Liability Insurance.** Contractor shall carry Umbrella Liability Insurance in a limit not less than \$2,000,000 Each Occurrence and Annual Aggregate. General, Auto, and Employer’s Liability shall all fall under this insurance. Coverage shall be on “follow-form” basis and this Policy shall not be more restrictive than the coverage provided under the above-described primary policies. In the event of exhaustion of Primary Limits, this policy shall drop down and act as primary until the exhaustion of its limits.

**§10.1.5 Builder’s Risk Insurance.** Contractor shall carry Builder’s risk, all risk insurance, in the amount of One Hundred (100%) Percent of the contract price. Said Builder’s Risk or Risk Insurance shall list the Owner as an additional named insured.

**§10.1.6** Such insurance coverage shall be with an insurance company authorized to do business in the State of New Jersey. At the time of presentation of Contractor’s Bid or Proposal for the Project, Contractor shall include either a Certificate of Insurance verifying that the Coverage requested above is in full force and effect or a Consent of Insurance guaranteeing coverage will be in place at the commencement of the project. At the time the Contract is awarded, Contractor’s Certificate of Insurance or Consent of Insurance shall also verify notice of not less than thirty (30) day cancellation of coverage or non-renewal of coverage for any reason, with ten (10) day notice of cancellation for non-payment of premium. Provision of all required insurance documents is a condition precedent to payment to Contractor under the Contract.

**§10.2 Performance, Payment, and Maintenance Bond.** Contractor shall execute and deliver to the Owner a performance, payment, and maintenance bond in the form required by Owner, with such sureties as are acceptable to the Owner.

**§ 10.2.1** Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Contractor’s Work until the date of final payment and termination of any coverage required to be maintained after final payment to the Contractor, and, with respect to the Contractor’s completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

**§ 10.2.2** Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Contractor’s Work. These certificates and the insurance policies required by this Article shall contain a provision that coverages afforded under the policies will not be cancelled or allowed to expire until at least thirty (30) days’ prior written notice has been given to the Borough and Engineer. If any of the foregoing insurance coverages are required to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted with the final application for payment as required elsewhere in the Contract Documents. If any information concerning reduction of coverage is not furnished by the insurer, it shall be furnished by the Contractor to Owner in writing within three (3) business days of request by the Owner. Contractor’s failure to do so constitutes a material breach of contract.

## **ARTICLE 11 CHANGES IN THE WORK**

### **§ 11.1 GENERAL**

**§ 11.1.1** Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 11 and elsewhere in the Contract.

§ 11.1.2 A Change Order shall be based upon agreement among the Owner, Engineer, and Contractor; a Construction Change Directive requires agreement by the Owner, and Engineer and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Engineer alone.

§ 11.1.3 Changes in the Work shall be performed under applicable provisions of the Contract, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

§ 11.1.4 In order to facilitate the review of quotations for extras or credits where the method of adjustment requires an itemized accounting, proposals, except for those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, materials and subcontracts. Labor and materials shall be itemized and where major cost items are subcontracts, they shall also be itemized. In no case shall a change involving over \$500.00 be approved without such itemization. All such documentation of costs shall be supported by quantity takeoffs with cost extensions and totals for labor, material and equipment. The takeoffs shall contain sufficient detail to clearly identify and describe the affected original Contract work, and to demonstrate that it in fact had been properly included as an accurate cost component of the Contractor's bid proposal and the Contract sum. The Contractor is required to promptly respond to requests by the Engineer for all appropriate back-up and supporting information for change orders. In the event the Contractor does not cooperate or withholds such required information, the Owner shall be entitled to withhold all payments until the requests are fully complied with.

## § 11.2 CHANGE ORDERS

§ 11.2.1 A Change Order is a written instrument prepared by the Engineer and signed by the Owner, Contractor and Engineer stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 11.2.2 It shall be the Contractor's responsibility to account for all cost elements and time elements associated with any changed work including any and all cleanup and disposal and shall present same in a request for change order. The Contractor shall not later claim additional costs or additional time that by Contractor's error or omission were not included in an approved change order for the changed work, including claims for delay or extensions of time. Notwithstanding any other provision of the Contract, execution of a Change Order by the Contractor shall constitute a release and waiver of all further or future claims by the Contractor for additional costs or time directly or indirectly associated with the identified change.

## § 11.3 CONSTRUCTION CHANGE DIRECTIVES

§ 11.3.1 A Construction Change Directive is a written order prepared by the Engineer and signed by the Owner, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions in the Work, and changes to the Contract Sum, if any, and Contract Time, if any, being adjusted accordingly.

§ 11.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 11.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 11.3.7.

**§ 11.3.4** Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Engineer in writing within ten (10) days of receipt of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time. Contractor's failure to timely do so shall be deemed acceptance of the method for determining the proposed adjustment.

**§ 11.3.5** A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order. Notwithstanding any other provision of the Contract, execution of a Construction Change Directive by the Contractor shall constitute a release and waiver of all further claims by the Contractor for additional costs or time directly or indirectly associated with the identified change.

**§ 11.3.6** If the Contractor provides timely notice of disagreement with the method for adjustment in the Contract Sum, the Engineer shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 11.3.3.3, the Contractor shall keep and present, in such form as the Engineer may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract, costs for the purposes of this Section 11.3.7 shall be limited to the following:

- .1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
- .2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and
- .5 Additional costs of supervision and field office personnel directly attributable to the change.

**§ 11.3.7** The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Engineer. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

**§ 11.3.8** Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Engineer will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that in the Engineer's professional judgment, to be reasonably justified. The Engineer's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a claim in accordance with the Contract.

**§ 11.3.9** When the Owner and Contractor agree with a determination made by the Engineer concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Engineer will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

#### **§ 11.4 MINOR CHANGES IN THE WORK**

The Engineer has authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract. Such changes will be affected by written order signed by the Engineer and shall be binding on the Owner and Contractor.

**§ 11.5** The provisions of N.J.S.A. 40A:11-16.7(c) and (d) "Change in character of work provisions" and "Changes in quantity" shall be incorporated by reference into this Article 11; and in the event of a conflict between the paragraphs in Article 11 above and the statute, the provisions of the statute shall control. Any claim made by the Contractor related to changes in the work must be made pursuant to Article 14 of this Agreement.

#### **ARTICLE 12 PROTECTION OF PERSONS AND PROPERTY**

**§ 12.1** The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor is solely responsible for Subcontractors, agents or employees of the Contractor or Subcontractors, or any other persons performing portions of the Work and not directly employed by the Owner and for compliance with all applicable safety regulations regarding safety and confined space entry including, but not limited to, those of the Occupational Safety and Health Administration (OSHA), National Safety Council, State of New Jersey, Department of Labor and Industry, etc.

#### **§ 12.2 SAFETY**

**§ 12.2.1** The Contractor shall take precautions for safety of, and shall provide protection to prevent damage, injury, or loss to:

- .1 employees on the Work, Owner and its representatives, inspectors, the traveling public in the vicinity of the site, invitees to the site, and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

**§ 12.2.2** The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss. The Contractor is responsible for determining which laws apply to the Contractor's performance under the Contract. Any reference to laws within the Contract is not intended as a limitation on the Contractor's responsibility to comply with all laws that relate to the Project.

The Contractor will be responsible for providing general safeguarding as well as gaining compliance with the requirements of safety codes and ordinances and coordinating with all Contractors on the Project in accordance with N.J.S.A. 34:5-166 et seq. the State of New Jersey Construction Safety Code. The Contractor shall obtain Material Safety Data Sheets (M.S.D.S.) for all material to be used on site and prior to material being brought on site and shall make them available for inspection as required by law.

The Contractor shall hold an initial safety meeting prior to the start of work and thereafter hold weekly safety meetings with its subcontractors to provide for the safeguarding of persons and property. The Contractor shall record minutes of the meetings and submit copies to the owner on a weekly basis for the record. The Contractor shall provide the Owner, at the initial project meeting, a written safety program and hazard communication program as required by OSHA.

If reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Engineer in writing.

**§ 12.2.3** The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

§ 12.2.4 The Contractor shall promptly remedy damage and loss to property caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable or for which the Contractor is responsible.

§ 12.2.5 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 12.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Engineer.

#### **§ 12.2.7 INJURY OR DAMAGE TO PERSON OR PROPERTY**

In the event of injury or damage to person or property on the Project site, written notice of such injury or damage, whether or not insured, shall be given to the Owner and Engineer within twenty-four (24) hours of the event. The notice shall provide sufficient detail to enable the Owner and Engineer to investigate the matter.

### **ARTICLE 13 CORRECTION OF WORK**

§ 13.1 The Contractor shall promptly correct Work rejected by the Owner or Engineer as failing to conform to the requirements of the Contract. The Contractor shall bear the cost of correcting such rejected Work, including the costs of uncovering, replacement and additional testing.

§ 13.2 In addition to the Contractor's other obligations including warranties under the Contract, the Contractor shall, for a period of two (2) years after the issuance of a Certificate of Final Completion, correct work not conforming to the requirements of the Contract.

§ 13.3 If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner, in its sole discretion, may decide to accept the nonconforming work, in which case an appropriate deduction as determined by the Engineer, will be made against the Contract Sum by change order.

### **ARTICLE 14 CLAIMS AND DISPUTES**

#### **§ 14.1 CLAIMS**

##### **§ 14.1.1 DEFINITION**

A claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract. The term also includes other disputes and matters in question between the Owner and Contractor arising out of and/or relating to the Contract and/or the Project. The responsibility to substantiate claims shall rest with the party making the claim.

##### **§ 14.1.2 NOTICE OF CLAIMS**

Contractor must give written notice to the Owner and Engineer of any claim for increase to the Contract Sum, extra compensation or damages of any kind, or extension of time as soon as possible, and in no event later than ten (10) days after Contractor first learns of the act, omission, occurrence or circumstance on which the claim is based. Claims shall be identified with a title or a caption stating, "Notice of Claim", and shall state in detail the nature of the claim. The purpose of this notice is to give the Owner prompt opportunity: (a) to cancel or revise orders or directions, change plans, mitigate or remedy circumstances giving rise to the claim or to take other action that may be desirable; (b) to monitor and verify the facts and circumstances as they occur; and (c) to verify any costs and expenses claimed by the Contractor contemporaneously as they are incurred. Written notice is required whether or not Owner or Engineer is aware of the facts or circumstances that constitute the basis for the Contractor's claim, and no action or conduct of Owner, Engineer, or any other person will be regarded as a waiver of such notice requirement except a written statement to that effect signed by Owner. Failure of the Contractor to give written notice as required shall be deemed conclusively to be a waiver and release of any claim, and such notice shall be a

condition precedent to the Contractor's right to make any claim arising out of, under, or in connection with the Contract or the performance of the Work. Time is of the essence of this provision.

#### **§ 14.1.3 CONTINUING CONTRACT PERFORMANCE**

Pending final resolution of a claim, except as otherwise agreed in writing, the Contractor shall proceed diligently with performance of the Contract. Contractor shall have no right to suspend all or any part of the work or refuse to comply with any written instruction of the Engineer pending resolution of a dispute providing that the Owner shall continue to make payments of undisputed amounts in accordance with the Contract. Any such suspension or refusal will be considered a material breach of the Contract. Contractor may preserve whatever right, if any, it may have to make a claim by giving notice of a claim as required under the Contract and advising Owner that it is proceeding under protest.

### **ARTICLE 15 CONSTRUCTION SCHEDULE**

**§ 15.1** Time limits stated in the Contract and this section and all dates and deadlines in the Contract, Project Schedule, and performance of the Work are of the essence of the Contract. Contractor understands and agrees that an accurate and approved Schedule is critical to the performance of the Work.

**§ 15.2 Approved Construction Schedule.** Upon award of the Contract the Contractor shall submit a detailed manpower-loaded construction schedule for work of the entire Project to be prepared in accordance with the Specifications. Contractor shall make appropriate revisions as needed in order to obtain the approval of the Engineer within twenty (20) business days of the award of the Contract. ("Approved Construction Schedule"). The Construction Schedule and any Schedule Updates (collectively, "Schedule") can be a bar chart depicting the various construction operations.

**§ 15.3 Schedule Updates.** The Approved Construction Schedule shall be updated at least every 30-calendar day or as often as deemed necessary by the Engineer. The Contractor shall provide Schedule Updates with required advance and cooperative input from each Subcontractor. Upon seven (7) working days of such request by the Engineer, the Contractor shall provide a Schedule Update.

All Schedule Updates must show substantial and final completion date consistent with the dates required by the Contract. Changes in logistics or durations shall not be made, except for good cause, and shall not result in an extension of the time for substantial or final completion except to the extent that the substantial and final completion dates have been extended by written signed Change Order. In the event activities on the critical path fall behind the Schedule, the Contractor shall develop a recovery plan to revise logistics, add manpower resources to reduce durations, expedite procurement or advance start of activities, to get the Project back on Schedule to assure completion in accordance with the substantial and final completion date; The recovery plan shall be appropriately adjusted by the Contractor in order to obtain the approvals of the Engineer.

### **ARTICLE 16 CONSTRUCTION BY OWNER OR BY OTHER CONTRACTORS**

#### **§ 16.1 Owner's Right to Perform Construction with Own Forces and to Award Other Contracts**

**§ 16.1.1** The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, which include persons or entities under separate contracts, and to award other contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation.

**§ 16.1.2** The Contractor shall coordinate and cooperate with the Owner's own forces and separate contractors employed by the Owner. Where the parties cannot agree as to who has precedence in any location the decision shall rest with the Engineer, whose determination shall be final and binding.

#### **§ 16.2 Mutual Responsibility**

**§ 16.2.1** The Contractor shall afford the Owner's own forces, Engineer, and separate contractors' reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract.



§ 16.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner's own forces or separate contractors, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Engineer apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's own forces or other contractors completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 16.2.3 The Contractor shall Indemnify, as defined in § 1.7.13, and reimburse the Owner for costs the Owner incurs, including costs that are payable to a separate contractor or Owner's consultants because of the Contractor's delays, improperly timed activities, or defective construction.

§ 16.2.4 The Contractor shall immediately remedy damage the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or separate contractors and shall Indemnify the Owner for same. This obligation shall be in addition to all other obligations of the Contractor set forth in the Contract.

§ 16.2.5 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.

§ 16.2.6 The Contractor shall not damage or endanger a portion of the Work, or fully or partially completed construction of the Owner's own forces or of separate contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner's own forces or by other contractors except with written consent of the Engineer, Owner and such other contractors; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the other contractors or the Owner the Contractor's consent to cutting or otherwise altering the Work.

### § 16.3 Owner's Right to Clean Up

If a dispute arises regarding the responsibility for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Engineer will allocate the cost among those responsible.

## ARTICLE 17 ADDITIONAL TERMS

§ 17.1 **Severability** If any part of the Contract or its application to any situation is to any extent invalidated or found to be contrary to law, the remainder of the Contract, and the application to other situations of any provision found invalid as to any given situation, shall not be affected thereby.

§ 17.2 **Notice** Any notices required to be given by the terms of this Contract, or by any law or governmental regulation, either by Owner or by the Subcontractor, or which either party may desire to give hereunder, shall be in writing and shall be personally delivered or forwarded by overnight service, express mail, or registered or certified mail return receipt requested, and shall be addressed to the other party at its address as herein stated. The time of the issuance of such notice shall be deemed to be the time when the same was personally delivered or received.

Either party may change the address to which any notice is to be sent by written notice of such change of address to the other party in the manner provided herein. Notice shall be effective on the date of delivery as appearing on the delivery receipt, or in the absence of such receipt, on the date of attempted delivery as reflected in the courier's records.

### § 17.2.1 Notice to Owner:

*Elaine L. Wallace, RCM, CMR*  
*Municipal Clerk*  
*BOROUGH OF CAPE MAY POINT*  
*215 Lighthouse Avenue*  
*P.O. Box 490*

§ 17.2.2 Notice to Contractor:  
(Name, address and other information)

§ 17.3 **Modifications.** The Contract Documents constitute the entire agreement between the Owner and the Contractor, and cannot be amended, modified or changed except if done so in a writing signed by both the Owner and the Contractor ("Modification").

§ 17.4 **Assignment.** The Contract shall not be assigned without written consent of the Owner and its governing body which may be withheld in Owner's sole discretion.

§ 17.5 **Audit.** Contractor shall keep and maintain full, complete and detailed records of all of its costs. Contractor authorizes the Owner, State of New Jersey (State) or its delegate to inspect and audit, during business hours and after 24-hour notice, all records relating to the Project, including by way of example and not by limitation: invoices, data maintained in any form, insurance information, daily reports, scheduling information, communications, financial books and records of account, manpower reports, labor records, photographs, and documentation of payments made to subcontractors and suppliers, and any other matter relating to the Project deemed relevant by Owner. Contractor agrees to provide the Borough and State with any relevant information requested and shall permit the Borough and State access to its premises, upon reasonable notice, during normal business hours for the purpose of inspecting and copying such books, records, accounts, and other material that may be relevant to a matter under investigation for the purpose of determining compliance with this requirement. Contractor shall preserve such records, books and accounts for a period of five (5) years after the Final Completion Date.

Relevant records of private vendors or other person entering into contracts with covered entities are subject to audit or review by the New Jersey Office of the State Comptroller (OSC) pursuant to N.J.S.A. 52:15C-14(d). Such records shall be made available to the OSC upon request. Contractor shall maintain all Project records under this Contract for a period of five (5) years from the date of final payment.

§ 17.6 **Interest.** Payments due and unpaid under the Contract shall not bear interest except to the extent required by law.

§ 17.7 **No Third Party Beneficiaries.** No provision of this Contract shall in any way inure to the benefit of any third party so as to constitute any such person as a third party beneficiary of the Contract or of any of its terms, or otherwise give rise to any cause of action in anyone not a party hereto.

§ 17.8 **No Waiver.** Any law, usage, or custom to the contrary notwithstanding, Owner shall have the right at all times to enforce all terms, conditions and covenants hereof in strict accordance herewith, notwithstanding any conduct or custom on the part of either party in refraining from so doing at any other time or times. The failure of Owner to insist upon the strict performance of any provision of this Contract, or the failure of Owner to exercise any right, option, or remedy hereunder, shall not be construed as a waiver of any such provision, right, option, or remedy, or as a waiver of any breach thereof. No action or failure to act by the Owner shall constitute a waiver of any right it may have under the terms of this Contract.

§ 17.9 **Governing Law.** The Contract shall be governed by and construed in accordance with the Laws of the State of New Jersey.

§ 17.10 **Waiver of Claims for Consequential Damages.** The Contractor waives claims against the Owner and/or its consultants, and their agents and employees, for consequential damages arising out of or relating to this Contract. This waiver includes damages claimed by the Contractor including but not limited to: principal office ("home office") overhead and expenses including but not limited to the compensation of personnel stationed there; for losses of financing, business and reputation; and for lost profits. This waiver is applicable, without limitation, to all consequential damages due to the Owner's termination of the Contract. Nothing contained in this Section shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract.

IN WITNESS WHEREOF, the Owner and Contractor have signed this Agreement in triplicate. One counterpart each has been delivered to Owner, Contractor and Engineer. All portions of the Contract Documents have been signed or identified by Owner and Contractor on their behalf.

This Agreement will be effective on \_\_\_\_\_, 20\_\_.

OWNER: **BOROUGH OF CAPE MAY POINT**

CONTRACTOR:

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

BY \_\_\_\_\_

BY \_\_\_\_\_

[CORPORATE SEAL]

[CORPORATE SEAL]

Attest: \_\_\_\_\_  
Address for giving notices

Attest: \_\_\_\_\_  
Address for giving notices

215 Lighthouse Avenue, P.O. Box 490  
Cape May Point, NJ 08212

License No. \_\_\_\_\_

(If OWNER is a public body, attach evidence of authority to sign and resolution documents authorizing execution Agreement.)

Agent for service of process: \_\_\_\_\_ or other  
(If CONTRACTOR is a Corporation, attach of evidence of authority to sign.)

**EXHIBIT "A"**

**CONSTRUCTION PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS that we, the undersigned,

\_\_\_\_\_ a

as PRINCIPAL, and \_\_\_\_\_ a

corporation organized and existing under the laws of the State of \_\_\_\_\_ and duly authorized to do business in the State of New Jersey, as SURETY, are hereby held and firmly bound unto the BOROUGH OF CAPE MAY POINT hereinafter called Owner, its successors, in the penal sum of

\_\_\_\_\_ Dollars

and \_\_\_\_\_ Cents

(\$ \_\_\_\_\_), for the payment of which well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH that whereas the above named Principal is about to enter into a contract with the Owner, its successor or successors, which said contract, known as "CAPE MAY POINT PUBLIC WORKS BUILDING ADDITION AND RENOVATIONS", is hereby made a part of this bond as if set forth herein at length.

NOW, THEREFORE, if the said Principal shall well and faithfully do and perform the things agreed by \_\_\_\_\_ to be done and performed according to the terms of the said Contract, or any changes or modifications herein made as therein provided, and shall all lawful claims and judgments of subcontractors, materialmen, laborers, persons, firms or corporations for labor performed or materials, provisions, provender or other supplies or teams, fuels, oils, implements or machinery furnished, used or consumed in the carrying forward, performing or completing of said Contract; we agreeing and assenting that this undertaking shall be for the benefit of any firm or corporation having a just claim or judgment against the Principal, as well as for the obligee herein; and shall defend, indemnify and save harmless the Owner, its officers, agents and servants, and each and every one of them against and from all suits, costs, claims and judgments of every kind and description, and from all damages to the Owner, or any of its officers, agents, servants may be put by reason of injury to the person or property of others resulting from the performance of said Contract or through the negligence of the Principal, its agents, servants, employees or subcontractors, or through any act or omission on the part of the said Principal, or his agents, employees or servants, and shall further defend, indemnify and save harmless the Owner, its officers, agents and servants, from all suits, actions, claims and judgments of any kind or character whatsoever, which may be brought, instituted or obtained by any subcontractor, materialmen, or laborer who has performed work or furnished materials in or about the work required to be done pursuant to the said Contract, or by or on account of any claims or amount recovered for any infringement of patent, trademark or copyright; then this obligation shall be void; otherwise the same shall remain in full force and effect, it being expressly understood and agreed that the liability of the Surety for any and all claims and judgments hereunder shall in no event exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that no modifications or omissions, or additions in or to the terms of the said Contract, or in or to the Plans or Specifications therefore, shall in anywise affect the obligations of said Surety on its bond, and the Surety hereby waives notice of same.

IN WITNESS WHEREOF the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

WITNESS OR ATTEST:

\_\_\_\_\_ Principal

\_\_\_\_\_ [SEAL]

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

WITNESS OR ATTEST:

\_\_\_\_\_ Surety

\_\_\_\_\_ [SEAL]

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

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is Partnership, all partners should execute bond.

IMPORTANT: Surety companies executing bonds must possess a Certificate of Authority from the Commissioner of the New Jersey Department of Insurance in accordance with N.J.S.A. 17:31-5.

PERSON OR AGENT OF THE SURETY WHO WILL RECEIVE NOTICE OF NON-PERFORMANCE:

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

TELEPHONE NO.: \_\_\_\_\_

**EXHIBIT "B"**

**CONSTRUCTION PAYMENT BOND**

KNOW ALL MEN BY THESE PRESENTS: That \_\_\_\_\_

\_\_\_\_\_  
Corporation

a Partnership, hereinafter called Principal, and \_\_\_\_\_  
or Individual

\_\_\_\_\_  
hereinafter called Surety, are held and firmly bound unto

BOROUGH OF CAPE MAY POINT

Hereinafter called Owner, in the penal sum of \_\_\_\_\_

\_\_\_\_\_ Dollars, (\$\_\_\_\_\_) in lawful money  
of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors  
and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH that whereas the above named  
Principal is about to enter into a contract with the Owner, its successor or successors, which said contract,  
known as "CAPE MAY POINT PUBLIC WORKS BUILDING ADDITION AND RENOVATIONS", is  
hereby made a part of this bond as if set forth herein at length.

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms,  
subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the work  
provided for in such contract, and any authorized extension or modification thereof, including all amounts  
due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools,  
consumed or used in connection with the construction of such work, and all insurance premiums on said work,  
and for all labor, performed in such work whether by subcontractor or otherwise, then this obligation shall be  
void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no  
charge, extension of time, alteration or addition to the terms of the contract or to the work to be performed  
thereunder or the specifications accompanying the same shall in any wise affect its obligation on this bond,  
and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of  
the contract or to the work or to the specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge  
the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in \_\_\_\_\_ counterparts, each one of which shall be deemed an original, this the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

ATTEST:

\_\_\_\_\_  
(Principal Secretary)

[SEAL]

\_\_\_\_\_  
(Witness to Principal)

\_\_\_\_\_  
(Address)

\_\_\_\_\_

ATTEST:

\_\_\_\_\_  
(Surety Secretary)

[SEAL]

\_\_\_\_\_  
(Witness to Surety)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Principal)

By: \_\_\_\_\_ [s]

\_\_\_\_\_  
(Address)

\_\_\_\_\_

\_\_\_\_\_  
(Surety)

By: \_\_\_\_\_ [s]

\_\_\_\_\_  
(Address)

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is Partnership, all partners should execute bond.

IMPORTANT: Surety companies executing bonds must possess a Certificate of Authority from the Commissioner of the New Jersey Department of Insurance in accordance with N.J.S.A. 17:31-5.

PERSON OR AGENT OF THE SURETY WHO WILL RECEIVE NOTICE OF NON-PAYMENT:

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

TELEPHONE NO.: \_\_\_\_\_

**EXHIBIT "C"**

**MAINTENANCE (WARRANTY) BOND**

KNOW ALL BY THESE PRESENTS, that we, the undersigned, \_\_\_\_\_ Contractor and Principal, and \_\_\_\_\_ a surety organized under the laws of the State of \_\_\_\_\_ and duly authorized to do business in the State of New Jersey, as Surety, are hereby held and firmly bound unto the Borough of Cape May Point ("Borough") as Owner and Obligee, in the penal sum of not less than fifteen percent of the Final Contract amount of \_\_\_\_\_ (\$ \_\_\_\_\_) to which payment well and truly to be made, we hereby jointly and severally bind ourselves, our and each of our heirs, executors, administrators, successors and assigns and severally, firmly by these presents.

WHEREAS, Contractor entered into a Contract dated the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ with the Borough for construction of a project known as \_\_\_\_\_ ("the Contract"); and

WHEREAS, the work under said Contract was finally completed and accepted on the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_;

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that; during the term of this Bond, the Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns, to the Borough for the Contractor's guarantee obligations set forth in the Contract, which is incorporated herein, including all contract documents, by reference; and

THE CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal shall satisfy its warranty and guarantee obligations under the Contract such that the work will be free of any defective materials or workmanship which became apparent during the period of **two** (2) years following final completion and acceptance of the Contract, then this obligation shall be void, otherwise to remain in full force and effect, provided however, any additional warranty or guarantee whether expressed or implied is extended by the Principal or Manufacturer only. It being expressly understood that all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

IN WITNESS WHEREOF, the Principal and Surety have set their hands and seals, and such of them as are corporations having their corporate seals to be hereto affixed and these presents to be signed by their proper corporate officers, the day and year first set forth above.

IN WITNESS WHEREOF the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

WITNESS OR ATTEST:

\_\_\_\_\_  
Principal

\_\_\_\_\_  
[SEAL]

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

WITNESS OR ATTEST:

\_\_\_\_\_  
Surety

\_\_\_\_\_  
[SEAL]

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



IMPORTANT: Surety companies executing bonds must possess a Certificate of Authority from the Commissioner of the New Jersey Department of Insurance in accordance with N.J.S.A. 17:31-5.

PERSON OR AGENT OF THE SURETY WHO WILL RECEIVE NOTICE OF NON-PERFORMANCE:

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

TELEPHONE NO.: \_\_\_\_\_

## EXHIBIT "D"

FORM AA-201  
Revised 11/11

### STATE OF NEW JERSEY

DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT  
CONSTRUCTION EEO COMPLIANCE MONITORING PROGRAM

#### INITIAL PROJECT WORKFORCE REPORT CONSTRUCTION

**Official Use Only**

Assignment \_\_\_\_\_

Code \_\_\_\_\_

For instructions on completing the form, go to: [http://www.state.nj.us/treasury/contract\\_compliance/pdf/aa201ins.pdf](http://www.state.nj.us/treasury/contract_compliance/pdf/aa201ins.pdf)

<b>1. FID NUMBER</b>		<b>2. CONTRACTOR ID NUMBER</b>		<b>5. NAME AND ADDRESS OF PUBLIC AGENCY AWARING CONTRACT</b>									
				Name: _____									
<b>3. NAME AND ADDRESS OF PRIME CONTRACTOR</b>				Address: _____									
(Name) _____				CONTRACT NUMBER    DATE OF AWARD    DOLLAR AMOUNT OF AWARD									
(Street Address) _____				<b>6. NAME AND ADDRESS OF PROJECT</b>									
				Name: _____									
				Address: _____									
				<b>7. PROJECT NUMBER</b>									
				_____									
				<b>8. IS THIS PROJECT COVERED BY A PROJECT LABOR AGREEMENT (PLA)?</b> YES <input type="checkbox"/> NO <input type="checkbox"/>									
<b>4. IS THIS COMPANY MINORITY OWNED [ ] OR WOMAN OWNED [ ]</b>				COUNTY _____									
<b>9. TRADE OR CRAFT</b>		PROJECTED TOTAL EMPLOYEES				PROJECTED MINORITY EMPLOYEES				PROJECTED PHASE - IN DATE		PROJECTED COMPLETION DATE	
		MALE		FEMALE		MALE		FEMALE					
		J	AP	J	AP	J	AP	J	AP				
<b>1. ASBESTOS WORKER</b>													
<b>2. BRICKLAYER OR MASON</b>													
<b>3. CARPENTER</b>													
<b>4. ELECTRICIAN</b>													
<b>5. GLAZIER</b>													
<b>6. HVAC MECHANIC</b>													
<b>7. IRONWORKER</b>													
<b>8. OPERATING ENGINEER</b>													
<b>9. PAINTER</b>													
<b>10. PLUMBER</b>													
<b>11. ROOFER</b>													
<b>12. SHEET METAL WORKER</b>													
<b>13. SPRINKLER FITTER</b>													
<b>14. STEAMFITTER</b>													
<b>15. SURVEYOR</b>													
<b>16. TILER</b>													
<b>17. TRUCK DRIVER</b>													
<b>18. LABORER</b>													
<b>19. OTHER</b>													
<b>20. OTHER</b>													

I hereby certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements are willfully false, I am subject to punishment.

\_\_\_\_\_  
(Signature)

10. (Please Print Your Name) \_\_\_\_\_

(Title) \_\_\_\_\_

(Area Code) \_\_\_\_\_

(Telephone Number) \_\_\_\_\_

(Ext.) \_\_\_\_\_

(Date) \_\_\_\_\_

**INSTRUCTIONS FOR COMPLETING THE INITIAL PROJECT  
WORKFORCE REPORT – CONSTRUCTION (AA201)**

**DO NOT COMPLETE THIS FORM FOR GOODS AND/OR SERVICE CONTRACTS**

1. Enter the Federal Identification Number assigned to the contractor by the Internal Revenue Service, or if a Federal Employer Identification Number has been applied for but not yet issued, or if your business is such that you have not or will not receive a Federal Identification Number, enter the social security number assigned to the single owner or one partner, in the case of a partnership.
2. Note: The Department of Labor & Workforce Development, Construction EEO Monitoring Program will assign a contractor ID number to your company. This number will be your permanently assigned contractor ID number that must be on all correspondence and reports submitted to this office.
3. Enter the prime contractor's name, address and zip code number.
4. Check box if Company is Minority Owned or Woman Owned
5. Enter the complete name and address of the Public Agency awarding the contract. Include the contract number, date of award and dollar amount of the contract.
6. Enter the name and address of the project, including the county in which the project is located.
7. Note: A project contract ID number will be assigned to your firm upon receipt of the completed Initial Project Workforce Report (AA201) for this contract. This number must be indicated on all correspondence and reports submitted to this office relating to this contract.
8. Check "Yes" or "No" to indicate whether a Project Labor Agreement (PLA) was established with the labor organization(s) for this project.
9. Under the Projected Total Number of Employees in each trade or craft and at each level of classification, enter the total composite workforce of the prime contractor and all subcontractors projected to work on the project. Under Projected Employees enter total minority and female employees of the prime contractor and all subcontractors projected to work on the project. Minority employees include Black, Hispanic, American Indian and Asian, (J=Journeyworker, AP=Apprentice). Include projected phase-in and completion dates.
10. Print or type the name of the company official or authorized Equal Employment Opportunity (EEO) official include signature and title, phone number and date the report is submitted.

This report must be submitted to the Public Agency that awards the contract and the Department of Labor & Workforce Development, Construction EEO Compliance Monitoring Program after notification of award, but prior signing the contract.

THE CONTRACTOR IS TO RETAIN A COPY AND SUBMIT COPY TO THE PUBLIC AGENCY AWARDING  
THE CONTRACT AND FORWARD A COPY TO:

NEW JERSEY DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT  
CONSTRUCTION EEO COMPLIANCE MONITORING UNIT  
P.O. BOX 209  
TRENTON, NJ 08625-0209  
(609) 292-9550

## **EXHIBIT "E"**

### **AFFIRMATIVE ACTION AGREEMENT**

#### **CONSTRUCTION CONTRACT**

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such equal employment opportunity shall include, but not be limited to the following: employment, up-grading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer, pursuant to N.J.S.A. 10:5-3 1 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

When hiring or scheduling workers in each construction trade, the contractor or subcontractor agrees to make good faith efforts to employ minority and women workers in each construction trade consistent with the targeted employment goal prescribed by N.J.A.C. 17:27-7.2; provided, however, that the Division may, in its discretion, exempt a contractor or subcontractor from compliance with the good faith procedures prescribed by the following provisions, A, B and C, as long as the Division is satisfied that the contractor or subcontractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Division, that its percentage of active "card carrying" members who are minority and women workers is equal to or greater than the targeted employment goal established in accordance with N.J.A.C. 17:27-7.2. The contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures:

- (A) If the contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor shall, within three business days of the contract award, seek assurances from the union that it will cooperate with the contractor or subcontractor as it fulfills its

affirmative action obligations under this contract and in accordance with the rules promulgated by the Treasurer pursuant to N.J.S.A. 10:5- 31 et. seq., as supplemented and amended from time to time and the Americans with Disabilities Act. If the contractor or subcontractor is unable to obtain said assurances from the construction trade union at least five business days prior to the commencement of construction work, the contractor or subcontractor agrees to afford equal employment opportunities minority and women workers directly, consistent with this chapter. If the contractor's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and women workers consistent with affording equal employment opportunities as specified in this chapter, the contractor or subcontractor agrees to be prepared to provide such opportunities to minority and women workers directly, consistent with this chapter, by complying with the hiring or scheduling procedures prescribed under (B) below; and the contractor or subcontractor further agrees to take said action immediately if it determines that the union is not referring minority and women workers consistent with the equal employment opportunity goals set forth in this chapter.

(B) If good faith efforts to meet targeted employment goals have not or cannot be met for each construction trade by adhering to the procedures of (A) above, or if the contractor does not have a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor agrees to take the following actions:

- (1) To notify the public agency compliance officer, the Division, and minority and women referral organizations listed by the Division pursuant to N.J.A.C. 17:27-5.3, of its workforce needs, and request referral of minority and women workers;
- (2) To notify any minority and women workers who have been listed with it as awaiting available vacancies;
- (3) Prior to commencement of work, to request that the local construction trade union refer minority and women workers to fill job openings, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade;
- (4) To leave standing requests for additional referral to minority and women workers with the local construction trade union, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment Service and other approved referral sources in the area;
- (5) If it is necessary to lay off some of the workers in a given trade on the construction site, layoffs shall be conducted in compliance with the equal employment opportunity and non-discrimination standards set forth in this regulation, as well as with applicable Federal and State court decisions;
- (6) To adhere to the following procedure when minority and women workers apply or are referred to the contractor or subcontractor:

(i) The contactor or subcontractor shall interview the referred minority or women worker.

(ii) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the contractor or subcontractor shall in good faith determine the qualifications of such individuals. The contractor or subcontractor shall hire or schedule those individuals who satisfy appropriate qualification standards in conformity with the equal employment opportunity and non-discrimination principles set forth in this chapter. However, a contractor or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Division. If necessary, the contractor or subcontractor shall hire or schedule minority and women workers who qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of (C) below.

(iii) The name of any interested women or minority individual shall be maintained on a waiting list and shall be considered for employment as described in (i) above, whenever vacancies occur. At the request of the Division, the contractor or subcontractor shall provide evidence of its good faith efforts to employ women and minorities from the list to fill vacancies.

(iv) If, for any reason, said contractor or subcontractor determines that a minority individual or a woman is not qualified or if the individual qualifies as an advanced trainee or apprentice, the contractor or subcontractor shall inform the individual in writing of the reasons for the determination, maintain a copy of the determination in its files, and send a copy to the public agency compliance officer and to the Division.

(7) To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the Division and submitted promptly to the Division upon request.

(C) The contractor or subcontractor agrees that nothing contained in (B) above shall preclude the contractor or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement. However, where the practices of a union or apprenticeship program will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the targeted county employment goal, the contractor or subcontractor shall consider for employment persons referred pursuant to (B) above without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall not be required to employ women and minority advanced trainees and trainees in numbers which result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade. Also, the contractor or subcontractor agrees that, in implementing the procedures of (B) above, it shall, where applicable, employ minority and women workers residing within the geographical jurisdiction of the union.

After notification of award, but prior to signing a construction contract, the contractor shall submit to the public agency compliance officer and the Division an initial project workforce report (Form AA 201) electronically provided to the public agency by the Division, through its website, for distribution to and completion by the contractor, in accordance with N.J.A.C. 17:27-7. The contractor also agrees to submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of this contract to the Division and to the public agency compliance officer.

The contractor agrees to cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the-job and/or off-the-job programs for outreach and training of minorities and women.

(D) The contractor and its subcontractors shall furnish such reports or other documents to the Division of Public Contracts Equal Employment Opportunity Compliance as may be requested by the Division from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Division of Public Contracts Equal Employment Opportunity Compliance for conducting a compliance investigation pursuant to **Subchapter 10 of the Administrative Code (NJAC 17:27)**.

## **EXHIBIT "F"**

### **AFFIRMATIVE ACTION AGREEMENT**

#### **PROCUREMENT, PROFESSIONAL AND SERVICE CONTRACTS**

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such equal employment opportunity shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union of the contractor's commitments under this chapter and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

The contractor or subcontractor agrees to make good faith efforts to meet targeted County employment goals established in accordance with N.J.A.C. 17:27-5.2.

The contractor or subcontractor agrees to inform in writing its appropriate recruitment agencies including, but not limited to, employment agencies, placement bureaus, colleges, universities, and labor unions, that it does not discriminate on the basis of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex, and that it will discontinue the use of any recruitment agency which engages in direct or indirect discriminatory practices.

The contractor or subcontractor agrees to revise any of its testing procedures, if necessary, to assure that all personnel testing conforms with the principles of job-related testing, as established by the statutes and court decisions of the State of New Jersey and as established by applicable Federal law and applicable Federal court decisions.



In conforming with the targeted employment goals, the contractor or subcontractor agrees to review all procedures relating to transfer, upgrading, downgrading and layoff to ensure that all such actions are taken without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex, consistent with the statutes and court decisions of the State of New Jersey, and applicable Federal law and applicable Federal court decisions.

The contractor shall submit to the public agency, after notification of award but prior to execution of a goods and services contract, one of the following three documents:

Letter of Federal Affirmative Action Plan Approval

Certificate of Employee Information Report

Employee Information Report Form AA302 (electronically provided by the Division and distributed to the public agency through the Division's website at [www.state.nj.us/treasury/contract\\_compliance](http://www.state.nj.us/treasury/contract_compliance))

The contractor and its subcontractors shall furnish such reports or other documents to the Division of Public Contracts Equal Employment Opportunity Compliance as may be requested by the office from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Division of Public Contracts Equal Employment Opportunity Compliance for conducting a compliance investigation pursuant to **Subchapter 10 of the Administrative Code at N.J.A.C. - 17:27.**

**STATE OF NEW JERSEY**  
Division of Purchase & Property  
Contract Compliance Audit Unit  
EEO Monitoring Program

**EMPLOYEE INFORMATION REPORT**

**IMPORTANT**-READ INSTRUCTIONS CAREFULLY BEFORE COMPLETING FORM. FAILURE TO PROPERLY COMPLETE THE ENTIRE FORM AND TO SUBMIT THE REQUIRED \$150.00 FEE MAY DELAY ISSUANCE OF YOUR CERTIFICATE. DO NOT SUBMIT EEO-1 REPORT FOR SECTION B, ITEM 11. For instructions on completing the form, go to: [http://www.state.nj.us/treasury/contract\\_compliance/pdf/aa302ins.pdf](http://www.state.nj.us/treasury/contract_compliance/pdf/aa302ins.pdf)

**SECTION A - COMPANY IDENTIFICATION**

1. FID. NO. OR SOCIAL SECURITY	2. TYPE OF BUSINESS <input type="checkbox"/> 1. MFG <input type="checkbox"/> 2. SERVICE <input type="checkbox"/> 3. WHOLESALE <input type="checkbox"/> 4. RETAIL <input type="checkbox"/> 5. OTHER	3. TOTAL NO. EMPLOYEES IN THE ENTIRE COMPANY
4. COMPANY NAME		
5. STREET	CITY	COUNTY STATE ZIP CODE
6. NAME OF PARENT OR AFFILIATED COMPANY (IF NONE, SO INDICATE)		CITY STATE ZIP CODE
7. CHECK ONE: IS THE COMPANY: <input type="checkbox"/> SINGLE-ESTABLISHMENT EMPLOYER <input type="checkbox"/> MULT-ESTABLISHMENT EMPLOYER		
8. IF MULT-ESTABLISHMENT EMPLOYER, STATE THE NUMBER OF ESTABLISHMENTS IN NJ		
9. TOTAL NUMBER OF EMPLOYEES AT ESTABLISHMENT WHICH HAS BEEN AWARDED THE CONTRACT		
10. PUBLIC AGENCY AWARDDING CONTRACT		
	CITY	COUNTY STATE ZIP CODE
<b>Official Use Only</b>	DATE RECEIVED	NAUG. DATE ASSIGNED CERTIFICATION NUMBER

**SECTION B - EMPLOYMENT DATA**

11. Report all permanent, temporary and part-time employees ON YOUR OWN PAYROLL. Enter the appropriate figures on all lines and in all columns. Where there are no employees in a particular category, enter a zero. Include ALL employees, not just those in minority/non-minority categories, in columns 1, 2, & 3. **DO NOT SUBMIT AN EEO-1 REPORT.**

JOB CATEGORIES	ALL EMPLOYEES			PERMANENT MINORITY/NON-MINORITY EMPLOYEE BREAKDOWN										
	COL. 1 TOTAL (Cols. 2 & 3)	COL. 2 MALE	COL. 3 FEMALE	MALE					FEMALE					
				BLACK	HISPANIC	AMER. INDIAN	ASIAN	NON MIN.	BLACK	HISPANIC	AMER. INDIAN	ASIAN	NON MIN.	
Officials/ Managers														
Professionals														
Technicians														
Sales Workers														
Office & Clerical														
Craftworkers (Skilled)														
Operatives (Semi-skilled)														
Laborers (Unskilled)														
Service Workers														
TOTAL														
Total employment From previous Report (if any)														
Temporary & Part-Time Employees	The data below shall NOT be included in the figures for the appropriate categories above.													

12. HOW WAS INFORMATION AS TO RACE OR ETHNIC GROUP IN SECTION B OBTAINED? <input type="checkbox"/> 1. Visual Survey <input type="checkbox"/> 2. Employment Record <input type="checkbox"/> 3. Other (Specify)	14. IS THIS THE FIRST Employee Information Report Submitted? 1. YES <input type="checkbox"/> 2. NO <input type="checkbox"/>	15. IF NO, DATE LAST REPORT SUBMITTED MO. DAY YEAR
13. DATES OF PAYROLL PERIOD USED From: To:		

**SECTION C - SIGNATURE AND IDENTIFICATION**

16. NAME OF PERSON COMPLETING FORM (Print or Type)	SIGNATURE	TITLE	DATE MO DAY YEAR
17. ADDRESS NO. & STREET	CITY	COUNTY	STATE ZIP CODE PHONE (AREA CODE, NO., EXTENSION)

## INSTRUCTIONS FOR COMPLETING THE EMPLOYEE INFORMATION REPORT (FORM AA302)

**IMPORTANT:** READ THE FOLLOWING INSTRUCTIONS CAREFULLY BEFORE COMPLETING THE FORM. PRINT OR TYPE ALL INFORMATION. FAILURE TO PROPERLY COMPLETE THE ENTIRE FORM **AND TO SUBMIT THE REQUIRED \$150.00 NON-REFUNDABLE FEE MAY DELAY ISSUANCE OF YOUR CERTIFICATE** IF YOU HAVE A CURRENT CERTIFICATE OF EMPLOYEE INFORMATION REPORT, DO NOT COMPLETE THIS FORM UNLESS YOU ARE RENEWING A CERTIFICATE THAT IS DUE FOR EXPIRATION. DO NOT COMPLETE THIS FORM FOR CONSTRUCTION CONTRACT AWARDS.

**ITEM 1** - Enter the Federal Identification Number assigned by the Internal Revenue Service, or if a Federal Employer Identification Number has been applied for, or if your business is such that you have not or will not receive a Federal Employer Identification Number, enter the Social Security Number of the owner or of one partner, in the case of a partnership.

**ITEM 2** - Check the box appropriate to your TYPE OF BUSINESS. If you are engaged in more than one type of business check the predominate one. If you are a manufacturer deriving more than 50% of your receipts from your own retail outlets, check "Retail".

**ITEM 3** - Enter the total "number" of employees in the entire company, including part-time employees. This number shall include all facilities in the entire firm or corporation.

**ITEM 4** - Enter the name by which the company is identified. If there is more than one company name, enter the predominate one.

**ITEM 5** - Enter the physical location of the company. Include City, County, State and Zip Code.

**ITEM 6** - Enter the name of any parent or affiliated company including the City, County, State and Zip Code. If there is none, so indicate by entering "None" or N/A.

**ITEM 7** - Check the box appropriate to your type of company establishment. "Single-establishment Employer" shall include an employer whose business is conducted at only one physical location. "Multi-establishment Employer" shall include an employer whose business is conducted at more than one location.

**ITEM 8** - If "Multi-establishment" was entered in item 8, enter the number of establishments within the State of New Jersey.

**ITEM 9** - Enter the total number of employees at the establishment being awarded the contract.

**ITEM 10** - Enter the name of the Public Agency awarding the contract. Include City, County, State and Zip Code. This is not applicable if you are renewing a current Certificate.

**ITEM 11** - Enter the appropriate figures on all lines and in all columns. THIS SHALL ONLY INCLUDE EMPLOYMENT DATA FROM THE FACILITY THAT IS BEING AWARDED THE CONTRACT. DO NOT list the same employee in more than one job category. **DO NOT attach an EEO-1 Report.**

**Racial/Ethnic Groups will be defined:**

**Black:** Not of Hispanic origin. Persons having origin in any of the Black racial groups of Africa.

**Hispanic:** Persons of Mexican, Puerto Rican, Cuban, or Central or South American or other Spanish culture or origin, regardless of race.

**American Indian or Alaskan Native:** Persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.

**Asian or Pacific Islander:** Persons having origin in any of the original peoples of the Far East, Southeast Asia, the Indian Sub-continent or the Pacific Islands. This area includes for example, China, Japan, Korea, the Phillipine Islands and Samoa.

**Non-Minority:** Any Persons not identified in any of the aforementioned Racial/Ethnic Groups.

**ITEM 12** - Check the appropriate box. If the race or ethnic group information was not obtained by 1 or 2, specify by what other means this was done in 3.

**ITEM 13** - Enter the dates of the payroll period used to prepare the employment data presented in Item 12.

**ITEM 14** - If this is the first time an Employee Information Report has been submitted for this company, check block "Yes".

**ITEM 15** - If the answer to Item 14 is "No", enter the date when the last Employee Information Report was submitted by this company.

**ITEM 16** - Print or type the name of the person completing the form. Include the signature, title and date.

**ITEM 17** - Enter the physical location where the form is being completed. Include City, State, Zip Code and Phone Number.

**TYPE OR PRINT IN SHARP BALL POINT PEN**

THE VENDOR IS TO COMPLETE THE EMPLOYEE INFORMATION REPORT FORM (AA302) AND RETAIN A COPY FOR THE VENDOR'S OWN FILES. THE VENDOR SHOULD ALSO SUBMIT A COPY TO THE PUBLIC AGENCY AWARDED THE CONTRACT IF THIS IS YOUR FIRST REPORT; AND FORWARD ONE COPY **WITH A CHECK IN THE AMOUNT OF \$150.00 PAYABLE TO THE TREASURER, STATE OF NEW JERSEY(FEE IS NON-REFUNDABLE)** TO:

**NJ Department of the Treasury  
Division of Purchase & Property  
Contract Compliance Audit Unit  
EEO Monitoring Program  
P.O. Box 206**

Trenton, New Jersey 08625-0206

Telephone No. (609) 292-5473

## Request for Taxpayer Identification Number and Certification

Give form to the  
requester. Do not  
send to the IRS.

Please print or type	Name (See <b>Specific Instructions</b> on page 2.)	
	Business name, if different from above. (See <b>Specific Instructions</b> on page 2.)	
	Check appropriate box: <input type="checkbox"/> Individual/Sole proprietor <input type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Other ▶ .....	
	Address (number, street, and apt. or suite no.)	Requester's name and address (optional)
	City, state, and ZIP code	

<p><b>Part I Taxpayer Identification Number (TIN)</b></p> <p>Enter your TIN in the appropriate box. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 2. For other entities, it is your employer identification number (EIN). If you do not have a number, see <b>How to get a TIN</b> on page 2.</p> <p><b>Note:</b> If the account is in more than one name, see the chart on page 2 for guidelines on whose number to enter.</p> <table style="margin-left: auto; margin-right: auto; border: 1px solid black; text-align: center;"> <tr> <td colspan="9">Social security number</td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td colspan="9">or</td> </tr> <tr> <td colspan="9">Employer identification number</td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>	Social security number																		or									Employer identification number																		<p>List account number(s) here (optional)</p> <hr/> <p><b>Part II For U.S. Payees Exempt From Backup Withholding</b> (See the instructions on page 2.)</p> <p style="text-align: right;">▶</p>
Social security number																																														
or																																														
Employer identification number																																														

**Part III Certification**

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), **and**
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, **and**
- I am a U.S. person (including a U.S. resident alien).

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the Certification, but you must provide your correct TIN. (See the instructions on page 2.)

<b>Sign Here</b>	Signature of U.S. person ▶	Date ▶
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**Purpose of Form**

A person who is required to file an information return with the IRS must get your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

**Use Form W-9 only if you are a U.S. person** (including a resident alien), to give your correct TIN to the person requesting it (the requester) and, when applicable, to:

- Certify the TIN you are giving is correct (or you are waiting for a number to be issued),
- Certify you are not subject to backup withholding, or
- Claim exemption from backup withholding if you are a U.S. exempt payee.

**If you are a foreign person, use the appropriate Form W-8.** See **Pub. 515, Withholding of Tax on Nonresident Aliens and Foreign Corporations.**

**Note:** If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

**What is backup withholding?** Persons making certain payments to you must withhold and pay to the IRS 31% of such payments under certain conditions. This is called "backup withholding." Payments that may be subject to backup withholding include interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

If you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return, payments you receive will not be subject to backup withholding. **Payments you receive will be subject to backup withholding if:**

- You do not furnish your TIN to the requester, or
- You do not certify your TIN when required (see the Part III instructions on page 2 for details), or
- The IRS tells the requester that you furnished an incorrect TIN, or
- The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or

- You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See the Part II instructions and the separate **Instructions for the Requester of Form W-9.**

**Penalties**

**Failure to furnish TIN.** If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

**Civil penalty for false information with respect to withholding.** If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

**Criminal penalty for falsifying information.** Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

**Misuse of TINs.** If the requester discloses or uses TINs in violation of Federal law, the requester may be subject to civil and criminal penalties.

## Specific Instructions

**Name.** If you are an individual, you must generally enter the name shown on your social security card. However, if you have changed your last name, for instance, due to marriage without informing the Social Security Administration of the name change, enter your first name, the last name shown on your social security card, and your new last name.

If the account is in joint names, list first and then circle the name of the person or entity whose number you enter in Part I of the form.

**Sole proprietor.** Enter your **individual** name as shown on your social security card on the "Name" line. You may enter your business, trade, or "doing business as (DBA)" name on the "Business name" line.

**Limited liability company (LLC).** If you are a single-member LLC (including a foreign LLC with a domestic owner) that is disregarded as an entity separate from its owner under Treasury regulations section 301.7701-3, enter the owner's name on the "Name" line. Enter the LLC's name on the "Business name" line.

**Caution:** A disregarded domestic entity that has a foreign owner must use the appropriate Form W-8.

**Other entities.** Enter your business name as shown on required Federal tax documents on the "Name" line. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on the "Business name" line.

### Part I—Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box.

If you are a **resident alien** and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see **How to get a TIN** below.

If you are a **sole proprietor** and you have an EIN, you may enter either your SSN or EIN. However, the IRS prefers that you use your SSN.

If you are an LLC that is **disregarded as an entity** separate from its owner (see **Limited liability company (LLC)** above), and are owned by an individual, enter your SSN (or "pre-LLC" EIN, if desired). If the owner of a disregarded LLC is a corporation, partnership, etc., enter the owner's EIN.

**Note:** See the chart on this page for further clarification of name and TIN combinations.

**How to get a TIN.** If you do not have a TIN, apply for one immediately. To apply for an SSN, get **Form SS-5**, Application for a Social Security Card, from your local Social Security Administration office. Get **Form W-7**, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN or **Form SS-4**, Application for Employer Identification Number, to apply for an EIN. You can get Forms W-7 and SS-4 from the IRS by calling 1-800-TAX-FORM (1-800-829-3676) or from the IRS's Internet Web Site at [www.irs.gov](http://www.irs.gov).

If you do not have a TIN, write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all

such payments until you provide your TIN to the requester.

**Note:** Writing "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

### Part II—For U.S. Payees Exempt From Backup Withholding

Individuals (including sole proprietors) are **not** exempt from backup withholding. Corporations are exempt from backup withholding for certain payments, such as interest and dividends. For more information on exempt payees, see the separate Instructions for the Requester of Form W-9.

If you are exempt from backup withholding, you should still complete this form to avoid possible erroneous backup withholding. Enter your correct TIN in Part I, write "Exempt" in Part II, and sign and date the form.

If you are a nonresident alien or a foreign entity not subject to backup withholding, give the requester the appropriate completed Form W-8.

### Part III—Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if items 1, 3, and 5 below indicate otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required).

**1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983.** You must give your correct TIN, but you do not have to sign the certification.

**2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983.** You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

**3. Real estate transactions.** You must sign the certification. You may cross out item 2 of the certification.

**4. Other payments.** You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

**5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified state tuition program payments, IRA or MSA contributions or distributions, and pension distributions.** You must give your correct TIN, but you do not have to sign the certification.

### Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to give your correct TIN to persons who must file information returns with the IRS to

report interest, dividends, and certain other income paid to you, mortgage interest you paid, the acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA or MSA. The IRS uses the numbers for identification purposes and to help verify the accuracy of your tax return. The IRS may also provide this information to the Department of Justice for civil and criminal litigation, and to cities, states, and the District of Columbia to carry out their tax laws.

You must provide your TIN whether or not you are required to file a tax return. Payers must generally withhold 31% of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to a payer. Certain penalties may also apply.

## What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account)	The actual owner of the account or, if combined funds, the first individual on the account <sup>1</sup>
3. Custodian account of a minor (Uniform Gift to Minors Act)	The minor <sup>1</sup>
4. a. The usual revocable savings trust (grantor is also trustee)	The grantor-trustee <sup>1</sup>
b. So-called trust account that is not a legal or valid trust under state law	The actual owner <sup>1</sup>
5. Sole proprietorship	The owner <sup>3</sup>
For this type of account:	Give name and EIN of:
6. Sole proprietorship	The owner <sup>3</sup>
7. A valid trust, estate, or pension trust	Legal entity <sup>4</sup>
8. Corporate	The corporation
9. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
10. Partnership	The partnership
11. A broker or registered nominee	The broker or nominee
12. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity

<sup>1</sup> List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

<sup>2</sup> Circle the minor's name and furnish the minor's SSN.

<sup>3</sup> You must show your individual name, but you may also enter your business or "DBA" name. You may use either your SSN or EIN (if you have one).

<sup>4</sup> List first and circle the name of the legal trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.)

**Note:** If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.



# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 011000 - SUMMARY

### PART 1 - GENERAL

#### 1.1 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.

#### 1.2 SUMMARY

- A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Phased construction.
4. Work performed by Owner.
5. Multiple Work Packages.
6. Work under Owner's separate contracts.
7. Future work not part of this Project.
8. Owner's product purchase contracts.
9. Owner-furnished/Contractor-installed (OFI) products.
10. Owner-furnished/Owner-installed (OFI) products.
11. Contractor-furnished/Owner-installed (CFI) products.
12. Contractor's use of site and premises.
13. Coordination with occupants.
14. Work restrictions.
15. Specification and Drawing conventions.
16. Miscellaneous provisions.

- B. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.
2. Section 017300 "Execution" for coordination of Owner-installed products.

#### 1.3 DEFINITIONS

- A. Work Package: A group of specifications, drawings, and schedules prepared by the design team to describe a portion of the Project Work for pricing, permitting, and construction.

#### 1.4 PROJECT INFORMATION

- A. Project Identification: Cape May Point Maintenance Building Addition and Renovations.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

1. Project Location: 801 Lighthouse Avenue, Cape May Point, NJ 08212.
- B. Owner: Borough of Cape May Point.
- C. Engineer/Architect: GPI.
  1. Engineer/Architect's Representative: Dale Foster, PE, CME.

### 1.5 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and includes, but is not limited to, the following:
  1. Provide an addition to the existing public works maintenance garage as indicated in the Contract Documents.
  2. Renovating the existing public works maintenance garage as indicated in the Contract Documents.
  3. Performing site improvements about the existing public works maintenance garage as indicated in the Contract Documents.
- B. Type of Contract:
  1. Project will be constructed under a single prime contract.

### 1.6 PHASED CONSTRUCTION

- A. Phase work for continuity of service

### 1.7 CONTRACTOR'S USE OF SITE AND PREMISES

- A. Restricted Use of Site: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.
- B. Limits on Use of Site: Limit use of Project site to Work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
  1. Limits on Use of Site: Confine construction operations to areas of the project scope.
- C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight and secured condition throughout construction period. Repair damage caused by construction operations.
- D. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 1.8 COORDINATION WITH OCCUPANTS

- A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.
  - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
  - 2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

### 1.9 WORK RESTRICTIONS

- A. Comply with restrictions on construction operations.
  - 1. Comply with limitations on use of public streets, work on public streets, rights of way, and other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work to between 8:00 a.m. to 6:00 p.m., Monday through Friday, unless otherwise indicated. Work hours may be modified to meet Project requirements if approved by Owner and authorities having jurisdiction.
  - 1. Hours for Utility Shutdowns: Coordinate with owner.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging for temporary utility services according to requirements indicated:
  - 1. Notify Owner not less than two days in advance of proposed utility interruptions.
  - 2. Obtain Owner's written permission before proceeding with utility interruptions.
- D. Noise, Vibration, Dust, and Odors: Coordinate operations that may result in high levels of noise and vibration, dust, odors, or other disruption to Owner occupancy with Owner.
  - 1. Notify Owner not less than two days in advance of proposed disruptive operations.
  - 2. Obtain Owner's written permission before proceeding with disruptive operations.
- E. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor-air intakes.
- F. Smoking and Controlled Substance Restrictions: Use of tobacco products, alcoholic beverages, and other controlled substances on Owner's property is not permitted.
- G. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.



## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 1.10 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
  2. Text Color: Text used in the Specifications, including units of measure, manufacturer and product names, and other text may appear in multiple colors or underlined as part of a hyperlink; no emphasis is implied by text with these characteristics.
  3. Hypertext: Text used in the Specifications may contain hyperlinks. Hyperlinks may allow for access to linked information that is not residing in the Specifications. Unless otherwise indicated, linked information is not part of the Contract Documents.
  4. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 00 Contracting Requirements: General provisions of the Contract, including General and Supplementary Conditions, apply to all Sections of the Specifications.
- C. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- D. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
  2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings and published as part of the U.S. National CAD Standard.
  3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 012500 - SUBSTITUTION PROCEDURES

### PART 1 - GENERAL

#### 1.1 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.

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
  - 1. Document 002600 "Procurement Substitution Procedures" for requirements for substitution requests prior to award of Contract.
  - 2. Section 012100 "Allowances" for products selected under an allowance.
  - 3. Section 012300 "Alternates" for products selected under an alternate.
  - 4. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

#### 1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents.
  - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
  - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required to meet other Project requirements but may offer advantage to Contractor or Owner.

#### 1.4 ACTION SUBMITTALS

- A. Substitution Requests: Submit documentation identifying product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Substitution Request Form: Use form acceptable to Architect.
  - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.
  - b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
  - c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
  - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
  - e. Samples, where applicable or requested.
  - f. Certificates and qualification data, where applicable or requested.
  - g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
  - h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
  - i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
  - j. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
  - k. Cost information, including a proposal of change, if any, in the Contract Sum.
  - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
  - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
  - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 1.5 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

### 1.6 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

### 1.7 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.

- 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

- a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- b. Requested substitution provides sustainable design characteristics that specified product provided for compliance with LEED requirements.
- c. Requested substitution provides sustainable design characteristics that specified product provided for compliance with IgCC requirements.
- d. Requested substitution provides sustainable design characteristics that specified product provided for compliance with ASHRAE 189.1 requirements.
- e. Requested substitution provides sustainable design characteristics that specified product provided for compliance with Green Globes requirements.
- f. Substitution request is fully documented and properly submitted.
- g. Requested substitution will not adversely affect Contractor's construction schedule.
- h. Requested substitution has received necessary approvals of authorities having jurisdiction.
- i. Requested substitution is compatible with other portions of the Work.
- j. Requested substitution has been coordinated with other portions of the Work.
- k. Requested substitution provides specified warranty.
- l. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

- B. Substitutions for Convenience: Not allowed unless otherwise indicated.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- C. Substitutions for Convenience: Architect will consider requests for substitution if received within 60 days after commencement of the Work. Requests received after that time may be considered or rejected at discretion of Architect.
1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
    - a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
    - b. Requested substitution does not require extensive revisions to the Contract Documents.
    - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    - d. Requested substitution provides sustainable design characteristics that specified product provided for compliance with LEED requirements.
    - e. Requested substitution provides sustainable design characteristics that specified product provided for compliance with IgCC requirements.
    - f. Requested substitution provides sustainable design characteristics that specified product provided for compliance with ASHRAE 189.1 requirements.
    - g. Requested substitution provides sustainable design characteristics that specified product provided for compliance with Green Globes requirements.
    - h. Substitution request is fully documented and properly submitted.
    - i. Requested substitution will not adversely affect Contractor's construction schedule.
    - j. Requested substitution has received necessary approvals of authorities having jurisdiction.
    - k. Requested substitution is compatible with other portions of the Work.
    - l. Requested substitution has been coordinated with other portions of the Work.
    - m. Requested substitution provides specified warranty.
    - n. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

### PART 1 - GENERAL

#### 1.1 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.

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Requirements:
  - 1. Section 012500 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.
  - 2. Section 013100 "Project Management and Coordination" for requirements for forms for contract modifications provided as part of web-based Project management software.

#### 1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710.

#### 1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
  - 1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
  - 2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
    - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
  - c. Include costs of labor and supervision directly attributable to the change.
  - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
  - e. Quotation Form: Use forms acceptable to Architect.
- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.
- 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
  - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
  - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
  - 4. Include costs of labor and supervision directly attributable to the change.
  - 5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
  - 6. Proposal Request Form: Use form acceptable to Architect.

### 1.5 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Section 012100 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
- B. Unit-Price Adjustment: See Section 012200 "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit-price work.

### 1.6 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Change Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

### 1.7 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
  1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

### 1.8 WORK CHANGE DIRECTIVE

- A. Work Change Directive: Architect may issue a Work Change Directive on EJCDC Document C-940. Work Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
  1. Work Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Work Change Directive.
  1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION



# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 012900 - PAYMENT PROCEDURES

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.

#### 1.2 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
  - 1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including Application for Payment forms with Continuation Sheets Submittals Schedule and Contractor's Construction Schedule.
  - 2. Submit the Schedule of Values to Engineer at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.
  - 1. Identification: Include the following Project identification on the Schedule of Values:
    - a. Project name and location.
    - b. Name of Engineer.
    - c. Engineer's project number.
    - d. Contractor's name and address.
    - e. Date of submittal.
  - 2. Submit draft of AIA Document G703 Continuation Sheets.
  - 3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
  - 4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
  - 5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
  - 6. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

7. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
  - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.
8. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

### 1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Engineer and paid for by Owner.
  1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction Work covered by each Application for Payment shall be the period indicated in the Agreement.
- C. Payment Application Forms: Use AIA Document G702 and AIA Document G703 Continuation Sheets as form for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Engineer will return incomplete applications without action.
  1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
  2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Transmittal: Submit 3 signed and notarized original copies of each Application for Payment to Engineer by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
  1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- F. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
  1. List of subcontractors.
  2. Schedule of Values.
  3. Contractor's Construction Schedule (preliminary if not final).

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

4. Schedule of unit prices.
  5. Submittals Schedule.
  6. List of Contractor's staff assignments.
  7. List of Contractor's principal consultants.
  8. Copies of building permits.
  9. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
  10. Initial progress report.
  11. Report of preconstruction conference.
  12. Certificates of insurance and insurance policies.
- G. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
  2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- H. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
  2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
  3. Updated final statement, accounting for final changes to the Contract Sum.
  4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
  5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
  6. AIA Document G707, "Consent of Surety to Final Payment."
  7. Evidence that claims have been settled.
  8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
  9. Final, liquidated damages settlement statement.
- I. Retainage: An amount of 2% of the completed work shall be retained by the Owner for each application.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. Coordination Drawings.
  - 2. Project meetings.
  - 3. Requests for Interpretation (RFIs).
- B. See Division 01 Section "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.

#### 1.2 DEFINITIONS

- A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

#### 1.3 COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications and work of other contracts to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections of the specifications and work of other contracts that depend on each other for proper installation, connection, and operation.
  - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work or work of other contracts depends on installation of other components, before or after its own installation.
  - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
  - 3. Make adequate provisions to accommodate items scheduled for later installation.
  - 4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Preparation of Contractor's Construction Schedule.
  2. Preparation of the Schedule of Values.
  3. Installation and removal of temporary facilities and controls.
  4. Delivery and processing of submittals.
  5. Progress meetings.
  6. Pre-installation conferences.
  7. Project closeout activities.
  8. Startup and adjustment of systems.
  9. Project closeout activities.

### 1.4 PROJECT MEETINGS

- A. General: Project meetings will be scheduled by Engineer on an as-needed basis.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Engineer of scheduled meeting dates and times.
  2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
  3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Engineer, within three (3) days of the meeting.

### 1.5 REQUESTS FOR INTERPRETATION (RFIs)

- A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.
1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
  2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:
1. Project name.
  2. Date.
  3. Name of Contractor.
  4. Name of Engineer.

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5. RFI number, numbered sequentially.
  6. Specification Section number and title and related paragraphs, as appropriate.
  7. Drawing number and detail references, as appropriate.
  8. Field dimensions and conditions, as appropriate.
  9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
  10. Contractor's signature.
  11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
- C. RFIs:
1. Identify each page of attachments with the RFI number and sequential page number.
- D. Engineer's Action: Engineer will review each RFI, determine action required, and return it. Allow seven working days for Engineer's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
    - a. Requests for approval of submittals.
    - b. Requests for approval of substitutions.
    - c. Requests for coordination information already indicated in the Contract Documents.
    - d. Requests for adjustments in the Contract Time or the Contract Sum.
    - e. Requests for interpretation of Engineer's actions on submittals.
    - f. Incomplete RFIs or RFIs with numerous errors.
  2. Engineer's action may include a request for additional information, in which case Engineer's time for response will start again.
  3. Engineer's action on RFIs that may result in a change to the Contract Time, or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."
    - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Engineer in writing within 10 days of receipt of the RFI response.
- E. On receipt of Engineer's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Engineer within seven days if Contractor disagrees with response.
- F. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log at Project Meetings. Include the following:
1. Project name.
  2. Name and address of Contractor.
  3. Name and address of Engineer.
  4. RFI number including RFIs that were dropped and not submitted.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

5. RFI description.
6. Date the RFI was submitted.
7. Date Engineer's response was received.
8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 013300 - SUBMITTAL PROCEDURES

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. See Division 01 Section "Quality Requirements" for submitting test and inspection reports.
- C. See Division 01 Section "Closeout Procedures" for submitting warranties.

#### 1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Engineer's responsive action.
- B. Informational Submittals: Written information that does not require Engineer's responsive action. Submittals may be rejected for not complying with requirements.

#### 1.3 SUBMITTAL PROCEDURES

- A. 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 types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
    - a. Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- B. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Engineer's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
  - 1. Initial Review: Allow 10 working days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Engineer will advise Contractor when a submittal being processed must be delayed for coordination.



## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
  3. Resubmittal Review: Allow 10 working days for review of each resubmittal.
- C. Identification: Place a permanent label or title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
  2. Provide a space approximately 3 by 4 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
- D. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Engineer will return submittals, without review, received from sources other than Contractor.
- E. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- F. Use for Construction: Use only final submittals that are marked with approval notation from Engineer™s action stamp.

### PART 2 - PRODUCTS

#### 2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. Mark each copy of each submittal to show which products and options are applicable.
  2. Include the following information, as applicable:
    - a. Manufacturer's written recommendations.
    - b. Manufacturer's product specifications.
    - c. Manufacturer's installation instructions.
    - d. Compliance with specified referenced standards.
    - e. Testing by recognized testing agency.
  3. PDF format: Submit pdf copies of Product Data, unless otherwise indicated. Architect will return two copies. Mark up and retain one returned copy as a Project Record Document.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

1. PDF format: Submit pdf copies of each submittal. Engineer will return two copies.
- D. Application for Payment: Comply with requirements specified in Division 01 Section "Payment Procedures."
- E. Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."
- F. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design.
1. Number of Copies: Submit three copies of subcontractor list, unless otherwise indicated. Architect will return two copies.

### 2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
1. PDF format: Submit pdf copies of each submittal, unless otherwise indicated. Engineer will not return copies.
  2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
  3. Test and Inspection Reports: Comply with requirements specified in Division 01 Section "Quality Requirements."
- B. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- C. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- D. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- E. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- F. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- G. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- H. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.

### PART 3 - EXECUTION

#### 3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

#### 3.2 ENGINEER'S ACTION

- A. General: Engineer will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Engineer will review each submittal, make marks to indicate corrections or modifications required, and return it. Engineer will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken.
- C. Informational Submittals: Engineer will review each submittal and will not return it or will return it if it does not comply with requirements. Engineer will forward each submittal to appropriate party.
- D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 014000 - QUALITY REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
  - 1. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
  - 2. Requirements for Contractor to provide quality-assurance and -control services required by Engineer, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. See applicable Specification Sections for specific test and inspection requirements.

#### 1.2 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
- D. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- E. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- F. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- G. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
  - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- H. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five (5) previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

### 1.3 CONFLICTING REQUIREMENTS

- A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Engineer for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Engineer for a decision before proceeding.

### 1.4 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Reports: Prepare and submit certified written reports that include the following:
  - 1. Date of issue.
  - 2. Project title and number.
  - 3. Name, address, and telephone number of testing agency.
  - 4. Dates and locations of samples and tests or inspections.
  - 5. Names of individuals making tests and inspections.
  - 6. Description of the Work and test and inspection method.
  - 7. Identification of product and Specification Section.
  - 8. Complete test or inspection data.
  - 9. Test and inspection results and an interpretation of test results.
  - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

C. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

### 1.5 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.

F. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.

1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.

G. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- H. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
1. Engage a qualified testing agency to perform these quality-control services.
  2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
  3. Submit a certified written report, in duplicate, of each quality-control service.
  4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  5. Submit additional copies of each written report directly to authorities having jurisdiction when they so direct.
- I. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."
- J. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- K. Testing Agency Responsibilities: Cooperate with Engineer and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Engineer and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
  3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
  4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
  5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
  6. Do not perform any duties of Contractor.
- L. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
  2. Incidental labor and facilities necessary to facilitate tests and inspections.
  3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
  4. Facilities for storage and field curing of test samples.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

5. Preliminary design mix proposed for use for material mixes that require control by testing agency.
6. Security and protection for samples and for testing and inspecting equipment at Project site.

M. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

### 1.6 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: Conducted by a qualified testing agency as required by authorities having jurisdiction, as indicated in individual Specification Sections, and as follows:

1. Notifying Engineer and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
2. Submitting a certified written report of each test, inspection, and similar quality-control service to Engineer with copy to Contractor and to authorities having jurisdiction.
3. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
4. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
5. Retesting and reinspecting corrected work.

### PART 2 - PRODUCTS (Not Used)

### PART 3 - EXECUTION

#### 3.1 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION



# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. See Division 01 Section "Execution" for progress cleaning requirements.

#### 1.2 USE CHARGES

- A. General: Contractor may use on-site power and water. Hook up to existing services by contractor.

#### 1.3 QUALITY ASSURANCE

- A. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

#### 1.4 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. Provide construction fence around area of work.

#### 2.2 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

### 3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
  - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.

### 3.3 SUPPORT FACILITIES INSTALLATION

- A. Traffic Controls: Comply with requirements of authorities having jurisdiction.
  - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
  - 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- B. Project Identification and Temporary Signs: Provide Project identification and other signs. Install signs where indicated to inform public and individuals seeking entrance to Project. Unauthorized signs are not permitted.
  - 1. Provide temporary, directional signs for construction personnel and visitors.
  - 2. Maintain and touchup signs so they are legible at all times.
- C. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Division 01 Section "Execution" for progress cleaning requirements.
- D. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
  - 1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.
  - 1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
  - 2. Maintain security by limiting number of keys and restricting distribution to authorized personnel.
- B. Security Enclosure and Lockup: Install substantial temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
- C. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- D. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
  - 1. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.

### 3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
  - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
  - 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

2. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

END OF SECTION

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 017300 - EXECUTION

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
1. Construction layout.
  2. Field engineering.
  3. General installation of products.
  4. Progress cleaning.
  5. Starting and adjusting.
  6. Protection of installed construction.
  7. Correction of the Work.

### PART 2 - PRODUCTS (Not Used)

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
1. Before construction, verify the location and points of connection of utility services.
- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
  2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

1. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
2. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
3. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
4. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility and Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

### 3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
- B. Site Improvements: Locate and lay out site improvements, including pavements.

### 3.4 FIELD ENGINEERING

- A. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
- B. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
- C. Certified Survey: On completion of foundation walls, major site improvements, and other work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.

### 3.5 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
  2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
  3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
  4. Recycle discarded material as much as practical. Provide recycling receipts to the Engineer.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
1. Remove liquid spills promptly.
  2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- F. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- G. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- H. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

### 3.6 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

### 3.7 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
  - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION



# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 017700 - CLOSEOUT PROCEDURES

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Inspection procedures.
  - 2. Final cleaning.
- B. See Division 01 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
- C. See Divisions 02 through 49 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

#### 1.2 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
  - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
  - 2. Advise Owner of pending insurance changeover requirements.
  - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  - 5. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, property surveys, and similar final record information.
  - 6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
  - 7. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
  - 8. Complete final cleaning requirements, including touchup painting.
  - 9. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
  - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
  - 2. Results of completed inspection will form the basis of requirements for Final Completion.

### 1.3 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
  - 1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."
  - 2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
  - 3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
  - 4. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
  - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

### 1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
  - 1. Organize list of spaces in sequential order, starting with exterior areas first.
  - 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

## PART 3 - EXECUTION

### 3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
  - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
    - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
    - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
    - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
    - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
    - e. Remove snow and ice to provide safe access to building.
    - f. Clean exposed hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
    - g. Remove debris and surface dust from limited access areas, trenches, equipment vaults, manholes and similar spaces.
    - h. Remove labels that are not permanent.
    - i. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.

END OF SECTION

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 017823 - OPERATION AND MAINTENANCE DATA

### PART 1 - GENERAL

#### 1.1 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.

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
  - 1. Operation and maintenance documentation directory manuals.
  - 2. Emergency manuals.
  - 3. Systems and equipment operation manuals.
  - 4. Systems and equipment maintenance manuals.
  - 5. Product maintenance manuals.
- B. Related Requirements:
  - 1. Section 011200 "Multiple Contract Summary" for coordinating operation and maintenance manuals covering the Work of multiple contracts.
  - 2. Section 013300 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.
  - 3. Section 019113 "General Commissioning Requirements" for verification and compilation of data into operation and maintenance manuals.

#### 1.3 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

#### 1.4 CLOSEOUT SUBMITTALS

- A. Submit operation and maintenance manuals indicated. Provide content for each manual as specified in individual Specification Sections, and as reviewed and approved at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
  - 1. Architect will comment on whether content of operation and maintenance submittals is acceptable.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
- B. Format: Submit operation and maintenance manuals in the following format:
1. Submit electronically and one paper copy to Architect. Enable reviewer comments on draft submittals.
  2. Submit pdf copies.
- C. Initial Manual Submittal: Submit draft copy of each manual at least 30 days before commencing demonstration and training. Architect will comment on whether general scope and content of manual are acceptable.
- D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect will return copy with comments.
1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's comments and prior to commencing demonstration and training.
- E. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

### 1.5 FORMAT OF OPERATION AND MAINTENANCE MANUALS

- A. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
  2. File Names and Bookmarks: Bookmark individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.
- B. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.
1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
  - b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents, and indicate Specification Section number on bottom of spine. Indicate volume number for multiple-volume sets.
2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
  3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment. Enclose title pages and directories in clear plastic sleeves.
  4. Supplementary Text: Prepared on 8-1/2-by-11-inch white bond paper.
  5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
    - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
    - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

### 1.6 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

- A. Organization of Manuals: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
  1. Title page.
  2. Table of contents.
  3. Manual contents.
- B. Title Page: Include the following information:
  1. Subject matter included in manual.
  2. Name and address of Project.
  3. Name and address of Owner.
  4. Date of submittal.
  5. Name and contact information for Contractor.
  6. Name and contact information for Construction Manager.
  7. Name and contact information for Architect.
  8. Name and contact information for Commissioning Authority.

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9. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
  10. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

### 1.7 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY MANUAL

- A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals. List items and their location to facilitate ready access to desired information. Include the following:
1. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
  2. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.
  3. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.

### 1.8 EMERGENCY MANUALS

- A. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- B. Content: Organize manual into a separate section for each of the following:
1. Type of emergency.
  2. Emergency instructions.
  3. Emergency procedures.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- C. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
1. Fire.
  2. Flood.
  3. Gas leak.
  4. Water leak.
  5. Power failure.
  6. Water outage.
  7. System, subsystem, or equipment failure.
  8. Chemical release or spill.
- D. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- E. Emergency Procedures: Include the following, as applicable:
1. Instructions on stopping.
  2. Shutdown instructions for each type of emergency.
  3. Operating instructions for conditions outside normal operating limits.
  4. Required sequences for electric or electronic systems.
  5. Special operating instructions and procedures.

### 1.9 SYSTEMS AND EQUIPMENT OPERATION MANUALS

- A. Systems and Equipment Operation Manual: Assemble a complete set of data indicating operation of each system, subsystem, and piece of equipment not part of a system. Include information required for daily operation and management, operating standards, and routine and special operating procedures.
1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
  2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- B. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
  2. Performance and design criteria if Contractor has delegated design responsibility.
  3. Operating standards.
  4. Operating procedures.
  5. Operating logs.
  6. Wiring diagrams.
  7. Control diagrams.



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8. Piped system diagrams.
9. Precautions against improper use.
10. License requirements including inspection and renewal dates.

C. Descriptions: Include the following:

1. Product name and model number. Use designations for products indicated on Contract Documents.
2. Manufacturer's name.
3. Equipment identification with serial number of each component.
4. Equipment function.
5. Operating characteristics.
6. Limiting conditions.
7. Performance curves.
8. Engineering data and tests.
9. Complete nomenclature and number of replacement parts.

D. Operating Procedures: Include the following, as applicable:

1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
6. Normal shutdown instructions.
7. Seasonal and weekend operating instructions.
8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

E. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

F. Piped Systems: Diagram piping as installed and identify color coding where required for identification.

### 1.10 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

A. Systems and Equipment Maintenance Manuals: Assemble a complete set of data indicating maintenance of each system, subsystem, and piece of equipment not part of a system. Include manufacturers' maintenance documentation, preventive maintenance procedures and frequency, repair procedures, wiring and systems diagrams, lists of spare parts, and warranty information.

1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.

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- B. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranties and bonds as described below.
- C. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- D. Manufacturers' Maintenance Documentation: Include the following information for each component part or piece of equipment:
  - 1. Standard maintenance instructions and bulletins; include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
    - a. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
  - 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
  - 3. Identification and nomenclature of parts and components.
  - 4. List of items recommended to be stocked as spare parts.
- E. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
  - 1. Test and inspection instructions.
  - 2. Troubleshooting guide.
  - 3. Precautions against improper maintenance.
  - 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
  - 5. Aligning, adjusting, and checking instructions.
  - 6. Demonstration and training video recording, if available.
- F. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
  - 1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
  - 2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.

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- G. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- H. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- I. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
  - 1. Include procedures to follow and required notifications for warranty claims.
- J. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.
  - 1. Do not use original project record documents as part of maintenance manuals.

### 1.11 PRODUCT MAINTENANCE MANUALS

- A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- B. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- C. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- D. Product Information: Include the following, as applicable:
  - 1. Product name and model number.
  - 2. Manufacturer's name.
  - 3. Color, pattern, and texture.
  - 4. Material and chemical composition.
  - 5. Reordering information for specially manufactured products.
- E. Maintenance Procedures: Include manufacturer's written recommendations and the following:
  - 1. Inspection procedures.
  - 2. Types of cleaning agents to be used and methods of cleaning.
  - 3. List of cleaning agents and methods of cleaning detrimental to product.
  - 4. Schedule for routine cleaning and maintenance.
  - 5. Repair instructions.

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- F. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- G. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
  - 1. Include procedures to follow and required notifications for warranty claims.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 017839 - PROJECT RECORD DOCUMENTS

### PART 1 - GENERAL

#### 1.1 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.

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for Project Record Documents, including the following:
  - 1. Record Drawings.
  - 2. Record Product Data.
  - 3. Miscellaneous record submittals.
- B. Related Requirements:
  - 1. Section 011200 "Multiple Contract Summary" for coordinating Project Record Documents covering the Work of multiple contracts.
  - 2. Section 017300 "Execution" for final property survey.
  - 3. Section 017700 "Closeout Procedures" for general closeout procedures.
  - 4. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.

#### 1.3 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
  - 1. Number of Copies: Submit one (1) set(s) of marked-up record prints.
  - 2. Number of Copies: Submit copies of Record Drawings as follows:
    - a. Initial Submittal:
      - 1) Submit one (1) paper-copy set(s) of marked-up record prints.
      - 2) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
- B. Record Product Data: Submit annotated PDF electronic files and directories of each submittal.
  - 1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 1.4 RECORD DRAWINGS

- A. Record Prints: Maintain one (1) set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
1. Preparation: Mark record prints to show the actual installation, where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
    - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
    - b. Accurately record information in an acceptable drawing technique.
    - c. Record data as soon as possible after obtaining it.
    - d. Record and check the markup before enclosing concealed installations.
    - e. Cross-reference record prints to corresponding photographic documentation.
  2. Content: Types of items requiring marking include, but are not limited to, the following:
    - a. Dimensional changes to Drawings.
    - b. Revisions to details shown on Drawings.
    - c. Depths of foundations.
    - d. Locations and depths of underground utilities.
    - e. Revisions to routing of piping and conduits.
    - f. Revisions to electrical circuitry.
    - g. Actual equipment locations.
    - h. Duct size and routing.
    - i. Locations of concealed internal utilities.
    - j. Changes made by Change Order or [**Construction**] [**Work**] Change Directive.
    - k. Changes made following Architect's written orders.
    - l. Details not on the original Contract Drawings.
    - m. Field records for variable and concealed conditions.
    - n. Record information on the Work that is shown only schematically.
  3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
  4. Mark record prints with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
  5. Mark important additional information that was either shown schematically or omitted from original Drawings.
  6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 1.5 RECORD PRODUCT DATA

- A. Recording: Maintain one (1) copy of each submittal during the construction period for Project Record Document purposes. Post changes and revisions to Project Record Documents as they occur; do not wait until end of Project.
- B. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
  - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
- C. Format: Submit Record Product Data as annotated PDF electronic file.
  - 1. Include Record Product Data directory organized by Specification Section number and title, electronically linked to each item of Record Product Data.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 017900 - DEMONSTRATION AND TRAINING

### PART 1 - GENERAL

#### 1.1 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.

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
  - 1. Instruction in operation and maintenance of systems, subsystems, and equipment.
  - 2. Demonstration and training video recordings.
- B. Allowances: Furnish demonstration and training instruction time under the demonstration and training allowance as specified in Section 012100 "Allowances."
- C. Unit Price for Instruction Time: Length of instruction time will be measured by actual time spent performing demonstration and training in required location. No payment will be made for time spent assembling educational materials, setting up, or cleaning up. See requirements in Section 012200 "Unit Prices."

#### 1.3 INFORMATIONAL SUBMITTALS

- A. Instruction Program: Submit outline of instructional program for demonstration and training, including a list of training modules and a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.
  - 1. Indicate proposed training modules using manufacturer-produced demonstration and training video recordings for systems, equipment, and products in lieu of video recording of live instructional module.
- B. Attendance Record: For each training module, submit list of participants and length of instruction time.
- C. Evaluations: For each participant and for each training module, submit results and documentation of performance-based test.



## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 1.4 QUALITY ASSURANCE

- A. Facilitator Qualifications: A firm or individual experienced in training or educating maintenance personnel in a training program similar in content and extent to that indicated for this Project, and whose work has resulted in training or education with a record of successful learning performance.
- B. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Section 014000 "Quality Requirements," experienced in operation and maintenance procedures and training.
- C. Videographer Qualifications: A professional videographer who is experienced photographing demonstration and training events similar to those required.
- D. Pre-instruction Conference: Conduct conference at Project site to comply with requirements in Section 013100 "Project Management and Coordination." Review methods and procedures related to demonstration and training including, but not limited to, the following:
  - 1. Inspect and discuss locations and other facilities required for instruction.
  - 2. Review and finalize instruction schedule and verify availability of educational materials, instructors' personnel, audiovisual equipment, and facilities needed to avoid delays.
  - 3. Review required content of instruction.
  - 4. For instruction that must occur outside, review weather and forecasted weather conditions and procedures to follow if conditions are unfavorable.

### 1.5 COORDINATION

- A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations and to ensure availability of Owner's personnel.
- B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.
- C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data have been reviewed and approved by Architect.

### 1.6 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual Specification Sections.

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- B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:
1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
    - a. System, subsystem, and equipment descriptions.
    - b. Performance and design criteria if Contractor is delegated design responsibility.
    - c. Operating standards.
    - d. Regulatory requirements.
    - e. Equipment function.
    - f. Operating characteristics.
    - g. Limiting conditions.
    - h. Performance curves.
  2. Documentation: Review the following items in detail:
    - a. Emergency manuals.
    - b. Systems and equipment operation manuals.
    - c. Systems and equipment maintenance manuals.
    - d. Product maintenance manuals.
    - e. Project Record Documents.
    - f. Identification systems.
    - g. Warranties and bonds.
    - h. Maintenance service agreements and similar continuing commitments.
  3. Emergencies: Include the following, as applicable:
    - a. Instructions on meaning of warnings, trouble indications, and error messages.
    - b. Instructions on stopping.
    - c. Shutdown instructions for each type of emergency.
    - d. Operating instructions for conditions outside of normal operating limits.
    - e. Sequences for electric or electronic systems.
    - f. Special operating instructions and procedures.
  4. Operations: Include the following, as applicable:
    - a. Startup procedures.
    - b. Equipment or system break-in procedures.
    - c. Routine and normal operating instructions.
    - d. Regulation and control procedures.
    - e. Control sequences.
    - f. Safety procedures.
    - g. Instructions on stopping.
    - h. Normal shutdown instructions.
    - i. Operating procedures for emergencies.
    - j. Operating procedures for system, subsystem, or equipment failure.

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- k. Seasonal and weekend operating instructions.
  - l. Required sequences for electric or electronic systems.
  - m. Special operating instructions and procedures.
5. Adjustments: Include the following:
- a. Alignments.
  - b. Checking adjustments.
  - c. Noise and vibration adjustments.
  - d. Economy and efficiency adjustments.
6. Troubleshooting: Include the following:
- a. Diagnostic instructions.
  - b. Test and inspection procedures.
7. Maintenance: Include the following:
- a. Inspection procedures.
  - b. Types of cleaning agents to be used and methods of cleaning.
  - c. List of cleaning agents and methods of cleaning detrimental to product.
  - d. Procedures for routine cleaning.
  - e. Procedures for preventive maintenance.
  - f. Procedures for routine maintenance.
  - g. Instruction on use of special tools.
8. Repairs: Include the following:
- a. Diagnosis instructions.
  - b. Repair instructions.
  - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
  - d. Instructions for identifying parts and components.
  - e. Review of spare parts needed for operation and maintenance.
- 1.7 PREPARATION
- A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Section 017823 "Operation and Maintenance Data."
  - B. Set up instructional equipment at instruction location.
- 1.8 INSTRUCTION
- A. Facilitator: Engage a qualified facilitator to prepare instruction program and training modules, to coordinate instructors, and to coordinate between Contractor and Owner for number of participants, instruction times, and location.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- B. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
  - 1. Architect will furnish an instructor to describe basis of system design, operational requirements, criteria, and regulatory requirements.
  - 2. Owner will furnish an instructor to describe Owner's operational philosophy.
  - 3. Owner will furnish Contractor with names and positions of participants.
- C. Scheduling: Provide instruction at mutually agreed-on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
  - 1. Schedule training with Owner with at least seven days' advance notice.
- D. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.
- E. Cleanup: Collect used and leftover educational materials and give to Owner. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

### 1.9 DEMONSTRATION AND TRAINING VIDEO RECORDINGS

- A. General: Engage a qualified commercial videographer to record demonstration and training video recordings. Record each training module separately. Include classroom instructions and demonstrations, board diagrams, and other visual aids, but not student practice.
  - 1. At beginning of each training module, record each chart containing learning objective and lesson outline.
- B. Digital Video Recordings: Provide high-resolution, digital video in MPEG format, produced by a digital camera with minimum sensor resolution of 12 megapixels and capable of recording in full HD mode with vibration reduction technology.
  - 1. Submit video recordings on CD-ROM or thumb drive.
  - 2. File Hierarchy: Organize folder structure and file locations according to Project Manual table of contents. Provide complete screen-based menu.
  - 3. File Names: Utilize file names based on name of equipment generally described in video segment, as identified in Project specifications.
  - 4. Contractor and Installer Contact File: Using appropriate software, create a file for inclusion on the equipment demonstration and training recording that describes the following for each Contractor involved on the Project, arranged according to Project Manual table of contents:
    - a. Name of Contractor/Installer.
    - b. Business address.
    - c. Business phone number.
    - d. Point of contact.
    - e. Email address.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- C. Recording: Mount camera on tripod before starting recording, unless otherwise necessary to adequately cover area of demonstration and training. Display continuous running time.
  - 1. Film training session(s) in segments not to exceed 15 minutes.
    - a. Produce segments to present a single significant piece of equipment per segment.
    - b. Organize segments with multiple pieces of equipment to follow order of Project Manual table of contents.
    - c. Where a training session on a particular piece of equipment exceeds 15 minutes, stop filming and pause training session. Begin training session again upon commencement of new filming segment.
- D. Light Levels: Verify light levels are adequate to properly light equipment. Verify equipment markings are clearly visible prior to recording.
  - 1. Furnish additional portable lighting as required.
- E. Narration: Describe scenes on video recording by audio narration by microphone while video recording is recorded. Include description of items being viewed.
- F. Transcript: Provide a transcript of the narration. Display images and running time captured from videotape opposite the corresponding narration segment.

### PART 2 - PRODUCTS

### PART 3 - EXECUTION

END OF SECTION

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 020700 - DEMOLITION

### PART 1 - GENERAL

#### 1.1 SUMMARY:

- A. This Section includes the following work:
  - 1. Demolition and removal of building items as indicated on Drawing.

#### 1.2 DEFINITIONS:

- A. Remove: Remove and legally dispose of all items except those indicated on the Drawing to remain.
- B. Existing to Remain: Protect existing construction to remain against damage.

#### 1.3 MATERIALS OWNERSHIP:

- A. Except for items or materials indicated to remain to Owner's property, demolished materials shall become Contractor's property and shall be removed from the site by the Contractor.
- B. Contractor to advise Owner of reusable components prior to removal from site.

#### 1.4 SUBMITTALS:

- A. General: Submit, in writing, provisions to address the following:
  - 1. Proposed dust-control measures.
  - 2. Schedule of demolition activities indicating the following:
    - a. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.
    - b. Interruption of utility services.
    - c. Coordination for shutoff, capping, and continuation of utility services.
    - d. Detailed sequence of selective demolition and removal work to ensure uninterrupted process of Owner's on-site operations.
- B. A video, sufficiently detailed, of existing conditions of adjoining construction and site improvements that might be misconstrued as damage caused by demolition operations.
- C. Certificate of Insurance.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 1.5 QUALITY ASSURANCE:

- A. Demolition Firm Qualifications: Contractor shall be an experienced firm that has successfully completed similar demolition work indicated for this Project, within five (5) years.
- B. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

### 1.6 PROJECT CONDITIONS:

- A. Owner will occupy the building immediately adjacent to the demolition areas. Conduct demolition so that Owner's operations will not be affected. Provide adequate notice to Owner of activities.
- B. Owner assumes no responsibility for actual condition of building components to be demolished.
  - 1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

### 1.7 SCHEDULING:

- A. Arrange demolition schedule so as not to interfere with Owner's operations. Work shall be performed on weekdays only, between 8 a.m. and 6 p.m.
  - 1. Working weekend or after 6:00 p.m. on weekdays is not permitted.

## PART 2 - PRODUCTS

### 2.1 MATERIALS:

- A. Use existing repair materials from demolished material where possible.

## PART 3 - EXECUTION

### 3.1 EXAMINATION:

- A. Verify that interacting utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of demolition required.
- C. Survey the condition of the building to determine that removing any element would result in structural failure or unplanned collapse of any portion of the structure that is indicated to remain.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 3.2 PREPARATION:

- A. Conduct demolition operations and remove debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.
  - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- B. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around demolition and excavation areas.
  - 1. Erect temporary protection, such as walks, fences, railings, where required by authorities having jurisdiction.
  - 2. Erect temporary barriers to protect existing site improvements, appurtenances, and landscaping which are to remain.

### 3.3 POLLUTION CONTROLS:

- A. Use temporary enclosures, and other suitable methods to limit the spread of dust and dirt. Comply with governing environmental protection regulations.
- B. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- C. Clean adjacent structures and improvements of dust, dirt, and debris caused by the demolition operations. Return adjacent areas to condition existing before start of the demolition work.

### 3.4 DEMOLITION:

- A. Demolish and remove existing structure only to the extent as indicated on Demolition Drawing. Use methods required to complete work within limitations of governing regulations and as follows:
  - 1. Proceed with demolition systemically.
  - 2. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
  - 3. Maintain adequate ventilation when using cutting torches.
  - 4. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
  - 5. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent impact or dust generation.



## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

6. Locate demolition equipment throughout the structure and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
7. Dispose of demolished items and materials promptly. On-site storage or sale of removed items is prohibited.

### 3.5 PATCHING AND REPAIRS:

- A. Promptly patch and repair holes in floors and damaged surfaces caused to remaining construction by the demolition operations.
- B. Where repairs to existing surfaces are required, patch to produce surfaces to match existing.
  1. Completely fill holes and depressions in existing masonry walls to remain with an approved masonry patching material, applied according to manufacturer's printed recommendations.
- C. Remove exposed finishes of patched areas and extend finish restoration into adjoining construction to remain in a workman-like manner.

### 3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on site.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

### 3.7 CLEANING:

- A. Clean on completion of demolition operation on a daily basis.

END OF SECTION

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 072100 - THERMAL INSULATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Foam-plastic board insulation.
  - 2. Glass-fiber blanket insulation.
  - 3. Mineral-wool blanket insulation.

#### 1.3 ACTION SUBMITTALS

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

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Product Test Reports:
- B. Research/Evaluation Reports.

### PART 2 - PRODUCTS

#### 2.1 FOAM-PLASTIC BOARD INSULATION

- A. Extruded-Polystyrene Board Insulation: ASTM C 578, of type and minimum compressive strength indicated below, with maximum flame-spread and smoke-developed indexes of 25 and 250, respectively, per ASTM E 84.
  - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    - a. DiversiFoam Products.
    - b. Dow Chemical Company (The).
    - c. Owens Corning.
    - d. Pactiv Building Products.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

2. Type IV, 25 psi.
- B. Foil-Faced, Polyisocyanurate Board Insulation: ASTM C 1289, Type I, Class 1 or 2, with maximum flame-spread and smoke-developed indexes of 25 and 75, respectively, per ASTM E 84.
1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Rmax, Inc.
    - b. Dow Chemical Company (The).
  2. Tape for Insulation Joints: Pressure-sensitive tape of type recommended by insulation board manufacturer.
  3. Flashing for Windows, Doors, and Penetrations: Type recommended by insulation board manufacturer.
- C. Adhesive for Bonding Insulation: Product with demonstrated capability to bond insulation securely to substrates without damaging insulation and substrates.

### 2.2 MINERAL-WOOL BLANKET INSULATION

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Fibrex Insulations Inc.
  2. Owens Corning.
  3. Roxul Inc.
  4. Thermafiber.
- B. Un-faced, Mineral-Wool Blanket Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively, per ASTM E 84; passing ASTM E 136 for combustion characteristics.
- C. Batt Size: Friction fit of sizes to fit stud spacings.

### 2.3 ACCESSORIES

- A. Vapor-Retarder Tape: Pressure-sensitive tape of type recommended by vapor-retarder manufacturer for sealing joints and penetrations in vapor retarder.
- B. Adhesive for Bonding Insulation: Product with demonstrated capability to bond insulation securely to substrates indicated without damaging insulation and substrates.

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Comply with insulation manufacturer's written instructions applicable to products and applications indicated.
- B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.
- C. Extend insulation to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.
- D. Provide sizes to fit applications indicated and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units to produce thickness indicated unless multiple layers are otherwise shown or required to make up total thickness.

### 3.2 INSTALLATION OF BELOW-GRADE INSULATION

- A. On vertical surfaces, set insulation units using manufacturer's recommended adhesive according to manufacturer's written instructions.
  - 1. If not otherwise indicated, extend insulation a minimum of 24 inches below exterior grade line.
- B. On horizontal surfaces, loosely lay insulation units according to manufacturer's written instructions. Stagger end joints and tightly abut insulation units.
  - 1. If not otherwise indicated, extend insulation a minimum of 24 inches in from exterior walls.

### 3.3 INSTALLATION OF CAVITY-WALL INSULATION

- A. Foam-Plastic Board Insulation: Install pads of adhesive spaced approximately 24 inches O.C. both ways on inside face, and as recommended by manufacturer. Fit courses of insulation between wall ties and other obstructions, with edges butted tightly in both directions. Press units firmly against inside substrates.

### 3.4 INSTALLATION OF INSULATION FOR FRAMED CONSTRUCTION

- A. Apply insulation units to substrates by method indicated, complying with manufacturer's written instructions. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- B. Foam-Plastic Board Insulation: Seal joints between units by applying adhesive, mastic, or sealant to edges of each unit to form a tight seal as units are shoved into place. Fill voids in completed installation with adhesive, mastic, or sealant as recommended by insulation manufacturer.
- C. Glass-Fiber or Mineral-Wool Blanket Insulation: Install in cavities formed by framing members according to the following requirements:
  - 1. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill the cavities, provide lengths that will produce a snug fit between ends.
  - 2. Maintain 3-inch clearance of insulation around recessed lighting fixtures not rated for or protected from contact with insulation.
- D. Miscellaneous Voids: Install insulation in miscellaneous voids and cavity spaces where required to prevent gaps in insulation using the following materials:
  - 1. Loose-Fill Insulation: Compact to approximately 40 percent of normal maximum volume equaling a density of approximately 2.5 lb./cu. ft.

END OF SECTION

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 074100 - STANDING SEAM ROOF PANELS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Formed and field-assembled standing-seam metal roof panels and appropriate underlayment material.
- B. Related Sections include the following:
  - 1. Division 7 Section "Sheet Metal Flashing and Trim" for fascia, copings, flashings and other sheet metal work not part of metal roof panel assemblies.
  - 2. Division 7 Section "Manufactured Roof Specialties" for fascia and copings not part of metal roof panel assemblies.
  - 3. Division 7 Section "Joint Sealants" for field-applied sealants not otherwise specified in this Section.

#### 1.3 DEFINITIONS

- A. Metal Roof Panel Assembly: Metal roof panels, attachment system components, miscellaneous metal framing, thermal insulation, and accessories necessary for a complete weathertight roofing system.
- B. Solar Flux: Direct and diffuse radiation from the sun received at ground level over the solar spectrum, expressed in watts per square meter.
- C. Solar Reflectance: Fraction of solar flux reflected by a surface, expressed as a percent or within the range of 0.00 and 1.00.

#### 1.4 PERFORMANCE REQUIREMENTS

- A. Performance standards in these documents are intended to provide the Owner with a standard of quality. Roofing systems supplied by the manufacturer chosen by the bidder must meet/exceed all the stated materials and roof system performance characteristics, referenced code approval (FM and UL) wind uplift and fire resistance criteria, on site quality control, and warranty and post-installation maintenance agreement requirements. The Architect and Owner shall provide sole and final determination as to the acceptance and approval of the Bidders roofing system.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- B. General: Provide metal roof panel assemblies that comply with performance requirements specified as determined by testing manufacturers' standard assemblies similar to those indicated for this Project, by a qualified testing and inspecting agency.
- C. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift resistance Class 120.
- D. Air and Water Infiltration: Provide test results of ASTM test E1646 Standard test method for water penetration of exterior metal roof and siding systems by uniform static air pressure difference and ASTM test E1680 Standard test method or air leakage through exterior metal roof and siding systems.
- E. Provide test results showing specified panel assembly passing ASTM E2140-01 Standard Test Method for Water Penetration of Metal Roof Panel System by Static Water Pressure Head. (Hydrostatic Roof System Test)
- F. Structural Performance: Provide metal roof panel assemblies capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated, based on testing according to procedures listed in ASTM E 1592:
  - 1. Wind Loads: Determine loads based on the following minimum design wind pressures:
    - a. Uniform pressure as indicated on Drawings.
    - b. Wind Speed: 120 mph.
  - 2. Snow Loads: 30 lbf / sq. ft Live Loads: 30 lbf / sq. ft.
  - 3. Deflection Limits: Engineer metal roof panel assemblies to withstand design loads with calculated vertical deflections no greater than 1/180 of the span.
- G. Thermal Movements: Provide metal roof panel assemblies that allow for thermal movements resulting from the following maximum change (+ or - 100 degrees F) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
- H. Metal panel assembly shall be listed with Underwriters' Laboratories as Class A roof systems with regards to their resistance to external flame sources.
- I. Metal panel shall be listed with Underwriters' Laboratories as Class 4 Hail resistant panels.

### 1.5 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of metal roof panel and accessory.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- B. Shop Drawings: Show fabrication and installation layouts of metal roof panels; details of edge conditions, joints, panel profiles, corners, anchorages, trim, flashings, closures, accessories, and special details and should be specific to this project. All drawings to be stamped and sealed by an engineer employed by the metal roof manufacturer and shall be registered in the state of Pennsylvania. Distinguish between factory and field-assembled work.
1. Accessories: Include details of the following items:
    - a. Flashing and trim.
    - b. Gutters.
    - c. Downspouts.
    - d. Roof curbs.
    - e. Pipe penetration flashings
    - f. Snow guards.
  2. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- C. Samples for Initial Selection: For each type of metal roof panel indicated with factory-applied color finishes.
1. Include similar Samples of trim and accessories involving color selection.
- D. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below.
1. Metal Roof Panels: 2 inches long by actual panel width. Include fasteners, clips, closures, and other metal roof panel accessories.
  2. Trim and Closures: 12 inches long. Include fasteners and other exposed accessories.
  3. Vapor Retarders: 6-inch- square Samples.
  4. Accessories: 12-inch long Samples for each type of accessory.
- E. Material Certificates: For thermal insulation signed by manufacturers.
- F. Qualification Data: Installer, Professional Engineer.
- G. Field quality-control inspection reports.
- H. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for the following:
1. Metal Roof Panels: Include reports for air infiltration, water penetration, thermal performance, fire-test-response characteristics, solar reflectance and structural performance.
  2. Insulation and Vapor Retarders: Include reports for thermal resistance, fire-test-response characteristics, water-vapor transmission, and water absorption.



## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- I. Maintenance Data: For metal roof panels to include in maintenance manuals.
- J. Warranties: Special warranties specified in this Section.

### 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and approved by manufacturer, having completed a documented, comprehensive manufacturer's installation training program.
  - 1. Installer's responsibilities include installation of metal roof panel assemblies and providing professional engineering services by metal roof panel manufacturer.
  - 2. Engineering Responsibility: Preparation of data for metal roof panels, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.
- B. Source Limitations: Obtain metal roof panels through one source from a single manufacturer.
- C. Product Options: Drawings indicate size, profiles, and dimensional requirements of metal roof panels and are based on the specific system indicated. Refer to Division 1 Section "Product Requirements."
  - 1. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.
- D. Fire-Resistance Ratings: Where indicated, provide metal roof panels identical to those of assemblies tested for fire resistance per ASTM E 119 by a testing and inspecting agency acceptable to authorities having jurisdiction.
  - 1. Fire-Resistance Ratings: Indicated by design designations from UL's "Fire Resistance Directory" or from the listings of another testing and inspecting agency.
  - 2. Metal roof panels shall be identified with appropriate markings of applicable testing and inspecting agency.
- E. Preliminary Roofing Conference: Before starting roof construction, conduct conference at Project site. Comply with requirements for preinstallation conferences in Division 1 Section "Project Management and Coordination." Review methods and procedures related to roof joist construction and metal roof panels including, but not limited to, the following:
  - 1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, metal roof panel Installer, metal roof panel manufacturer's representative, joist Installer, and installers whose work interfaces with or affects metal roof panels including installers of roof accessories and roof-mounted equipment.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

2. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  3. Review methods and procedures related to metal roof panel installation, including manufacturer's written instructions.
  4. Examine joist conditions for compliance with requirements, including flatness and attachment to structural members.
  5. Review structural loading limitations of joist during and after roofing.
  6. Review flashings, special roof details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect metal roof panels.
  7. Review governing regulations and requirements for insurance, certificates, and testing and inspecting if applicable.
  8. Review temporary protection requirements for metal roof panels during and after installation.
  9. Review roof observation and repair procedures after metal roof panel installation.
- F. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination." Review methods and procedures related to metal roof panel assemblies including, but not limited to, the following:
1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, metal roof panel Installer, metal roof panel manufacturer's representative, deck Installer, and installers whose work interfaces with or affects metal roof panels including installers of roof accessories and roof-mounted equipment.
  2. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  3. Review methods and procedures related to metal roof panel installation, including manufacturer's written instructions.
  4. Examine deck substrate, purlins, and rafter conditions for compliance with requirements, including flatness and attachment to structural members.
  5. Review structural loading limitations of deck and joist during and after roofing.
  6. Review flashings, special roof details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect metal roof panels.
  7. Review governing regulations and requirements for insurance, certificates, and testing and inspecting if applicable.
  8. Review temporary protection requirements for metal roof panel assembly during and after installation.
  9. Review roof observation and repair procedures after metal roof panel installation.
  10. Document proceedings, including corrective measures and actions required, and furnish copy of record to each participant.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver components, sheets, metal roof panels, and other manufactured items so as not to be damaged or deformed. Package metal roof panels for protection during transportation and handling.
- B. Unload, store, and erect metal roof panels in a manner to prevent bending, warping, twisting, and surface damage.
- C. Stack metal roof panels on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal roof panels to ensure dryness. Do not store metal roof panels in contact with other materials that might cause staining, denting, or other surface damage.
- D. Protect strippable protective covering on metal roof panels from exposure to sunlight and high humidity, except to extent necessary for period of metal roof panel installation.

### 1.8 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal roof panels to be performed according to manufacturers' written instructions and warranty requirements.
- B. Field Measurements: Verify locations of roof framing and roof opening dimensions by field measurements before metal roof panel fabrication and indicate measurements on Shop Approval Drawings.
  - 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, either establish framing and opening dimensions and proceed with fabricating metal roof panels without field measurements or allow for field-trimming of panels. Coordinate roof construction to ensure that actual building dimensions, locations of structural members, and openings correspond to established dimensions.

### 1.9 COORDINATION

- A. Coordinate installation of roof curbs, equipment supports, and roof penetrations, which are specified in Division 7 Section "Roof Accessories." Provide roof system manufacturer's curbs.
- B. Roof installer must supply and install roof accessories that are approved, supplied, and warranted by the roofing manufacturer, and according to manufacturer's recommended details.
- C. Coordinate metal panel roof assemblies with rain drainage work, flashing, trim, and construction of decks, joist parapets, walls, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 1.10 WARRANTY

- A. Standard Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal roof panel assemblies that fail in materials or workmanship within specified warranty period.
- Failures include, but are not limited to, the following:
    - Structural failures, including rupturing, cracking, or puncturing.
    - Deterioration of metals, metal finishes, and other materials beyond normal weathering.
  - Warranty Period: One year from date of final Completion.
- B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal roof panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
- Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
    - Color fading more than 5 Hunter units when tested according to ASTM D 2244.
    - Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
    - Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  - 30-year period is for fluoropolymer finish and is maximum included with manufacturers' published data.
  - Finish Warranty Period: 30 years from date of Final Completion.
- C. Special Weathertightness Warranty for Standing-Seam Metal Roof Panels: Manufacturer's standard form in which manufacturer agrees to repair or replace standing-seam metal roof panel assemblies that fail to remain weathertight, including leaks, within specified warranty period. This warranty will include the roof panels, trims, transitions, pipe penetration flashings, curbs and gutters.
- Warranty Period: 30 years from date of Substantial Completion.
- D. Special Weathertightness Warranty for Standing-Seam Metal Roof Panels: Furnish a single manufacturer, thirty (30) year full system warranty, including five (5) year contractor/installer warranty, covering all new components installed above the roof deck, including insulation, fasteners, metal roof, all metal roof trims and transitions, manufacturer supplied curbs, pipe penetration flashings, and all metal wall panels installed with the metal roof.
- Warranty Period: 30 years from date of Substantial Completion.
  - Warranty Limit of Liability: Installed cost of metal roof system including labor and materials.
    - Warranty must include paint adhesion for the full term of the warranty.
    - Warranty must include detailed description of warranty extension options.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- c. Manufacturer will at its own expense, repair or cause to be repaired, any damage found in the above outlined new roof system, as a result of failure of any of the system components after the warranty is provided to the Owner.
- d. Manufacturer will provide local on-site Technical Field Inspectors (non-sales), to visit the project a minimum of two (2) times per week to monitor the installation. Manufacturer will provide field reports to the Owners representative after each visit.
- e. Manufacturer shall provide the Owners representative with a written resume stating qualifications of this inspector.
- f. Bidding Contractor shall certify compliance with the above warranty requirements by including a copy of the Manufacturers written warranty, warranty extensions, maintenance service agreement and a written copy of the qualifications resume for the local Technical Inspector with his/her bid.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Products specified are from companies listed below or approved equivalent. These products listed herein establish the size, pattern, color range and function selected by the Architect for this Project. Manufacturers listed as acceptable alternative manufacturers must still comply with the requirements of the products listed during the submittal process in order to be approved as an equivalent. If the acceptable alternative manufacturers listed are not approved during the Submittal Process due to non-compliance with the written documents, then the Contractor shall submit product specified.
- B. Available Product: Subject to compliance with requirements, manufacturers that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Panels
    - a. R-Mer Span Roof System by The Garland Company, Inc. 3800 East 91st Street, Cleveland, Ohio.
    - b. Metal Panel Tremlock VP Roof System by Tremco Incorporated, 3734 Green Road, Beachwood, Ohio.
    - c. Zip-Rib Roof System by Merchant & Evans, Inc, 300 Connecticut Drive, Burlington, NJ 08016.
  - 2. Underlayment Sheets
    - a. W.R. Grace & Co. -Conn. 62 Whittemore Avenue, Cambridge, Massachusetts 02140.
    - b. Carlisle Coatings & Waterproofing, Inc., 900 Hensley Lane, Wylie, Texas 75098.
  - 3. Roof Insulation Boards

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- a. Firestone Building Products Company, 525 Congressional Boulevard, Carmel, Indiana 46032.
  - b. Carlisle SynTec Systems, Inc., P.O. Box 7000, Carlisle, Pennsylvania 17013.
4. Basis-of-Design Product: The design for each metal roof panel roof system specified is based on the products named. Subject to compliance with requirements, provide either the named products or a comparable product.

### 2.2 PANEL MATERIALS

A. Metallic-Coated Steel Sheet Prepainted with Coil Coating: Steel sheet metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A792-96.

1. Aluminum-Zinc alloy coated (Galvalume) Steel Sheet: 22 gauge Galvalume steel, type AZ55.
2. Surface: Smooth finish.
3. Exposed Finishes: Apply the following coil coating, as specified or indicated on Drawings.
  - a. High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
  - b. (1) Fluoropolymer Two-Coat System: Manufacturer's standard two-coat, thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing with a minimum total dry film thickness of 0.9 mil; not less than 70 percent polyvinylidene fluoride resin.
4. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil.

B. Panel Sealants:

1. Sealant Tape: Pressure-sensitive, 99 percent solids, gray butyl rubber compound sealant tape with release-paper backing. Provide permanently elastic, non-sag, nontoxic, non-staining tape 1 inch wide and 1/16 inch thick minimum containing nylon spacer beads.
2. Joint Sealant: ASTM C 920; elastomeric polyurethane sealant; of type, grade, class, and use classifications required to seal joints in metal roof panels and remain weathertight; and as recommended in writing by metal roof panel manufacturer.
3. Butyl-Rubber-Based, Solvent-Release Sealant containing nylon spacer beads.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 2.3 VAPOR RETARDER MATERIALS

- A. Self-Adhering, SBS Vapor Retarder Sheet: ASTM D1970-00, 0.080 in. thick minimum, consisting of specially high temperature resistant blended SBS modified asphalt above the fiberglass mat, with an SIS modified self-adhesive bitumen blend below the fiberglass reinforcement. The bottom is provided with release-paper backing; cold applied.
  - 1. Products:
    - a. W. R. Grace Ultra Heat Resistant Roofing Underlayment Sheet.
    - b. Carlisle CCW WIP 403HR Heat Resistant Roofing Underlayment Sheet.

### 2.4 UNDERLAYMENT MATERIALS

- A. Self-Adhering, SBS Base Sheet: ASTM D1970-00, .080 in. thick minimum, consisting of specially blended SBS modified asphalt above the fiberglass mat, with an SIS modified self-adhesive bitumen blend below the fiberglass reinforcement. The bottom is provided with release-paper backing; cold applied.
  - 1. Products:
    - a. W. R. Grace Ultra Heat Resistant Roofing Underlayment Sheet.
    - b. Carlisle CCW WIP 403HR Heat Resistant Roofing Underlayment Sheet.
- B. Sheathing Paper: Red-rosin type, minimum 3 lb./100 sq. ft. if necessary.

### 2.5 MISCELLANEOUS MATERIALS

- A. Fasteners: Self-tapping screws, bolts, nuts, self-locking rivets and bolts, end-welded studs, and other suitable fasteners designed to withstand design loads. Provide exposed fasteners with heads matching color of metal roof panels by means of factory-applied coating.
  - 1. Fasteners for Roof Panels: Self-drilling or self-tapping, zinc-plated, hex-head carbon- steel screws, with a stainless-steel cap or zinc-aluminum-alloy head and EPDM sealing washer.
  - 2. Fasteners for Flashing and Trim: Blind fasteners or self-drilling screws with hex washer head.
  - 3. Blind Fasteners: High-strength aluminum or stainless-steel rivets.

### 2.6 STANDING-SEAM METAL ROOF PANELS

- A. Vertical-Rib, Seamed-Joint, Standing-Seam Metal Roof Panels: Factory-formed with vertical ribs at panel edges and flat pan between ribs; designed for sequential installation by mechanically attaching panels to supports using concealed clips located under one side of panels and engaging opposite edge of adjacent panels, and mechanically seaming panels together. Metal roof panel and trims are to utilize hydrostatic details at all trims, transitions, and penetrations.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

1. Basis-of-Design Product: Zip-Rib by Merchant & Evans, Inc.
  2. Material Aluminum-Zinc alloy coated (Galvalume) Steel Sheet, 22 gauge thick.
    - a. Exterior Finish: "Kynar 500/Hylar 5000"
    - b. Color: A chosen from standard colors by Architect and Owner.
  3. Clips: One-piece or two-piece clip to accommodate thermal movement within the metal roof panel.
    - a. Material: .0336 thick, zinc-coated (galvanized) steel sheet.
  4. Joint Type: Bulb
  5. Panel Coverage: 16 inches.
  6. Panel Height 2 ½" inches.
  7. Uplift Rating: UL 90.
- B. If panels will be field roll formed, they must be roll formed on factory owned and operated equipment, the roll former must have a minimum of 12 stands, and all performance and warranty requirements defined elsewhere in this specification must be met.

### 2.7 ACCESSORIES

- A. Roof Panel Accessories: Provide components required for a complete metal roof panel assembly including trim, copings, fasciae, corner units, ridge closures, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal roof panels, unless otherwise indicated.
1. Closures: Provide closures at eaves and ridges, fabricated of same metal as metal roof panels.
  2. Clips: Minimum 0.0336 thick, one-piece or two-piece galvanized steel panel clips designed to withstand negative-load requirements.
  3. Backing Plates: Provide metal backing plates at panel end splices, prefabricated from manufacturer with stainless steel studs.
- B. Flashing and Trim: Formed from 24 gauge thick, zinc-coated (galvanized) steel sheet, prepainted with coil coating. Provide flashing and trim as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers. Finish flashing and trim with same finish system as adjacent metal roof panels. All details will be installed utilizing hydrostatic joinery.
- C. Exterior Metal Gutters: Formed from 24 gauge thick, zinc-coated (galvanized) steel sheet repainted with coil coating. Match profile of gable trim, complete with end pieces, outlet tubes, and other special pieces as required. Fabricate in maximum length possible to minimize joints. Furnish gutter supports per manufacturers' standard, installed without through-fastening of panel. Provide wire ball strainers at outlets. Finish gutters to match metal roof panels or roof fascia and rake trim.



## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- D. Downspouts: Formed from 26 gauge thick, zinc-coated (galvanized) steel sheet prepainted with coil coating; in 10-foot long sections, complete with formed elbows and offsets. Finish downspouts to match metal roof panels as per noted on drawings.
- E. Roof Curbs: Fabricated from aluminum sheet per manufacturer's standard, with integral internal flange for attachment minimizing through fastening. Roof curbs to be supplied by the metal roof manufacturer and to be included with weathertightness warranty.
  - 1. Insulate roof curb with 1-inch- thick, rigid insulation.
- F. Snow Guards: Prefabricated, noncorrosive units designed to be installed without penetrating metal roof panels, and complete with predrilled holes, clamps, or hooks for anchoring.
  - 1. Seam-Mounted, Bar-Type Snow Guards: Aluminum rods or bars held in place by stainless-steel clamps attached to vertical ribs of standing-seam metal roof panels.
    - a. Aluminum Finish: Kynar 500/ hylar 5000 color to match metal roof panels.
    - b. Stainless-Steel Finish: Mill.
    - c. Products:
      - 1) 1) LMCurbs; S-5Z ! SnoFence.
      - 2) 2) Snow Management Systems, a division of Contek, Inc.; Vermont Snowguard.
- G. Pipe Flashing: Premolded, EPDM pipe collar with flexible aluminum ring bonded to base and stainless steel pipe clamp to secure collar to pipe. Pipe penetration flashings to be supplied by the metal roof manufacturer and to be included with weathertightness warranty.

### 2.8 THERMAL INSULATION

- A. Rigid Board Insulation: Insulation board shall be rigid polyisocyanurate foam plastic with a asphalt coated felt facer meeting the requirements of ASTM C 1289, Type II, Class 1.
- B. Long Term Thermal Resistance of Rigid Board Insulation shall be not less than value of 20.0. Long Term R-values shall be determined using a 15 year time-weighted average in accordance with CAN/ULC S770.
- C. Rigid Board Insulation shall have a compressive strength not less than 20 psi as per the requirements of ASTM D1621.
- D. Rigid Board Insulation shall be a standard product with the insulation manufacturer, factory marked or identified with insulation manufacturer's name or trademark and R-value. Identification shall be on individual pieces or individual packages. Insulation, including facings, shall have a flame spread rating and a smoke developed rating in accordance with ASTM E 84.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- E. Rigid Board Insulation Fastener Assemblies shall be a standard FM Global approved product supplied by the insulation manufacturer. Each fastener assembly shall consist of a self-drilling self-tapping fluorocarbon coated steel screw and 3 inch diameter Galvalume coated steel plate washer.
- F. At pool roof do not penetrate to the interior.

### 2.9 FABRICATION

- A. General: Fabricate and finish metal roof panels and accessories at the factory to greatest extent possible, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.
- B. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.
- C. Where indicated, fabricate metal roof panel joints with factory-installed captive gaskets or separator strips that provide a tight seal and prevent metal-to-metal contact, in a manner that will minimize noise from movements within panel assembly.
- D. Sheet Metal Accessories: Fabricate flashing and trim to comply with manufacturers' standard.
  - 1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
  - 2. Conceal fasteners and expansion provisions where possible.
  - 3. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended by metal roof panel manufacturer.
    - a. Size: As recommended by SMACNA's "Architectural Sheet Metal Manual" or metal roof panel manufacturer for application but not less than thickness of metal being secured.

### 2.10 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal roof panel supports, and other conditions affecting performance of work.
  - 1. Examine primary and secondary roof framing to verify that rafters, purlins, angles, channels, and other structural panel support members and anchorages have been installed within alignment tolerances required by metal roof panel manufacturer.
  - 2. Examine solid roof sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal roof panel manufacturer.
  - 3. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of work.
- B. Examine roughing-in for components and systems penetrating metal roof panels to verify actual locations of penetrations relative to seam locations of metal roof panels before metal roof panel installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Clean substrates of substances harmful to insulation, including removing projections capable of interfering with insulation attachment.
- B. Install flashings and other sheet metal to comply with requirements specified in Division 7 Section "Sheet Metal Flashing and Trim."
- C. Install fascia and copings to comply with metal roof manufacturers standard details.
  - 1. Miscellaneous Framing: Install roof decking, subpurlins, eave angles, furring, and other miscellaneous roof panel support members and anchorage according to metal roof panel manufacturer's written recommendations.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 3.3 INSULATION BOARD INSTALLATION

- A. General: Provide and install insulation boards over roof decking covered with vapor barrier sheets and secure to the steel roof decking using FM Approved fluorocarbon coated steel screws and Galvalume plate washers.
1. Install full-sized boards and stagger end joints of insulation boards 12 inches. Only half boards or larger shall be used at perimeters and corners. Small filler boards shall be used in the field of the roof prior to roof boards placement at perimeters and corners.
  2. Butt roof boards tight to adjacent boards, leaving not more than 1/4 inch gaping at junctures. Roof boards shall be cut to fit tightly around all penetrations and at all nailers and curbs.
  3. Secure each insulation board to the roof deck using six (6) fastener assemblies. Place each of four of the fastener assemblies 6 inches in from the edge of insulation board.
  4. Minimize construction traffic on the installed roof boards. Roof boards damaged by traffic shall be removed and replaced. Cost for removal and replacement shall be at the sole cost of the contractor.
  5. Roof boards shall not be exposed to weather resulting in moisture infiltration. Contractor shall not apply more roof boards in one day than can be completely covered with the required roof membrane on that day. Furring channels must be wire-tied to supports in most fire-resistance-rated assemblies. Verify requirements of assemblies and revise below to suit Project.

### 3.4 VAPOR RETARDER INSTALLATION.

- A. Self-Adhering Vapor Retarder Sheet: Install self-adhering sheet underlayment, wrinkle free, on the top surface of the roof deck. Apply primer if required by manufacturer. Comply with temperature restrictions of vapor retarder manufacturer for installation; use primer to adhere sheets to wood roof deck. Apply as per manufacturers recommended instructions, in shingle fashion to shed water, with end laps of not less than 6 inches staggered 24 inches between courses. Overlap side edges not less than 4 inches. Cover vapor retarder sheets within 30 days or follow vapor retarder sheet manufacturer's guidelines.
1. Extend vapor retarder sheets over rake edges and 2 inches downward over the top of the facade.
  2. Extend vapor retarder sheets over roof to wall intersections for a 4 inch vertical distance.
  3. Extend vapor retarder sheets around roof deck penetrating elements for a distance of 4 inches vertically.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 3.5 UNDERLAYMENT INSTALLATION.

- A. Self-Adhering Sheet Underlayment: Install self-adhering sheet underlayment, wrinkle free, on each roof insulation board under metal roof panels. Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation; use primer rather than nails for installing underlayment at low temperatures. Apply as per manufacturers recommended instructions, in shingle fashion to shed water, with end laps of not less than 6 inches staggered 24 inches between courses. Overlap side edges not less than 3-1/2 inches. Extend underlayment into gutter trough. Roll laps with roller. Cover underlayment within 14 days or follow underlayment manufacturer's guidelines.
1. Extend underlayment sheets over rake edges and 4 inches downward over the top of the facade.
  2. Extend underlayment sheets over roof to wall intersections for a 4 inch vertical distance.
  3. Extend underlayment sheets around dormers, chimneys, skylights, and other penetrating elements for a distance of 4 inches vertically.
- B. Sheeting Paper: Install red-rosin sheet over self-adhering sheet before installing metal roof panels.

### 3.6 METAL ROOF PANEL INSTALLATION, GENERAL

- A. General: Provide metal roof panels of full length from eave to ridge, unless otherwise indicated or restricted by shipping limitations. Anchor metal roof panels and other components of the Work securely in place, with provisions for thermal and structural movement. Utilize hydrostatic joinery throughout. No joinery to be dependent on exterior sealants to ensure weathertightness.
1. Field cutting of metal roof panels by torch or abrasive cut-saw is not permitted.
  2. Install panels perpendicular to purlins.
  3. Rigidly fasten eave end of metal roof panels and allow ridge end free movement due to thermal expansion and contraction.
  4. Provide pre-fabbed and pre-drilled metal closures at peaks, rake edges, rake walls and each side of ridge and hip caps.
  5. Flash and seal metal roof panels with weather closures at eaves, rakes, and at perimeter of all openings. Fasten with self-tapping screws.
  6. Locate and space fastenings in uniform vertical and horizontal alignment per shop drawings.
  7. Install ridge and hip caps as metal roof panel work proceeds.
  8. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four-panel lap splice condition.
  9. Lap metal flashing over metal roof panels to allow moisture to run over and off the material.
- B. Fasteners:

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

1. Steel Roof Panels: Use manufacturer's standard corrosion resistant steel fasteners for surfaces exposed to the exterior and galvanized steel fasteners for surfaces exposed to the interior.
- C. Joint Sealers: Install sealants where indicated and where required for weatherproof performance of metal roof panel assemblies. Provide sealants recommended by metal roof panel manufacturer.
  1. Seal metal roof panel end laps with manufacturer's recommended sealant, full width of panel. Seal side joints where recommended by metal roof panel manufacturer.
  2. Prepare joints and apply sealants to comply with requirements in Division 7 Section "Joint Sealants."

### 3.7 FIELD-ASSEMBLED METAL ROOF PANEL INSTALLATION

- A. Standing-Seam Metal Roof Panels: Fasten metal roof panels to roof deck with concealed clips placed on bearing plates at each standing-seam joint at location, spacing, and with fasteners recommended by manufacturer.
  1. Clips: Install clips to supports with self-tapping fasteners.
  2. Bearing Plates: Install bearing plates at locations indicated in manufacturer's written installation instructions.
  3. Snap Joint: Nest standing seams and fasten together by interlocking and completely engaging factory-applied sealant.
  4. Seamed Joint: Form standing seams with manufacturer-approved motorized seamer tool so clip, metal roof panel, and factory-applied sealant are completely engaged.

### 3.8 ACCESSORY INSTALLATION

- A. General: Install accessories with positive anchorage to building and weathertight mounting and provide for thermal expansion. Coordinate installation with flashings and other components.
  1. Install components required for a complete metal roof panel assembly including trim, copings, ridge closures, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
- B. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions. Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.
  1. Install exposed flashing and trim that is without excessive oil canning, buckling, and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to result in waterproof and weather-resistant performance.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim.

C. Exterior Metal Gutters: Join sections with riveted, lapped and sealed joints. Attach gutters to eave with gutter hangers spaced not more than 4 feet o.c. using manufacturer's standard fasteners. Provide end closures and seal watertight with sealant. Provide for thermal expansion.

D. Downspouts: Join sections with 1-1/2-inch telescoping joints. Provide fasteners designed to hold downspouts securely 1 inch away from walls; locate fasteners at top and bottom and at approximately 60 inches o.c. in between.

1. Provide elbows at base of downspouts to direct water away from building.

2. Tie downspouts to underground drainage system indicated.

E. Roof Curbs: Install curbs supplied by metal roof manufacturer, at location indicated on Drawings. Curbs to be of internal flange design.

F. Bar-Type Snow Guards: Attach bar supports to vertical ribs of standing-seam metal roof panels with clamps or set screws. Do not use fasteners that will penetrate metal roof panels.

1. Provide one snow guard at each roof panel. Space as recommended by manufacturer.

G. Pipe Flashing: Form flashing around pipe penetration and metal roof panels. Fasten and seal to metal roof panels with aluminum blind-type clamping fastener.

### 3.9 ERECTION TOLERANCES

A. Installation Tolerances: Shim and align metal roof panel units within installed tolerance of 1/4 inch in 20 feet on slope and location lines as indicated and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

### 3.10 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage an authorized manufacturer's representative to inspect two (2) workdays during each week of the installation of the metal roofing system and perform a pre-final and final inspect of the completed metal roof panel installation, including accessories. Report results in writing.

B. Remove and replace applications of metal roof panels where inspections indicate that they do not comply with specified requirements.

C. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 3.11 CLEANING AND PROTECTION

- A. Remove temporary protective coverings and strippable films, if any, as metal roof panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal roof panel installation, clean finished surfaces as recommended by metal roof panel manufacturer. Maintain in a clean condition during construction.
- B. Replace metal roof panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION



# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 074213 - Metal Wall Specification

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes:
  - 1. Factory-formed: exposed-fastener, metal wall panels.
  - 2. Finish must conform to the "Metal Construction Association Certified Premium Painted™" designation.

#### 1.3 RELATED SECTIONS

- A. Division 6 Section "Rough Carpentry"
- B. Division 7 Section "Sheet Metal Flashing and Trim"
- C. Division 7 Section "Metal Soffit Panels"
- D. Division 7 Section "Gutters"
- E. Division 7 Section "Downspouts"
- F. Division 7 Section "Manufactured Copings"

#### 1.4 PERFORMANCE REQUIREMENTS

- A. General: Provide metal wall panel assemblies that comply with performance requirements specified as determined by testing manufacturers' standard assemblies similar to those indicated for this Project, by a qualified testing and inspecting agency.
- B. System shall meet performance criteria as installed. Either test data or signed and sealed engineering calculations shall document the performance of the panel system to meet design loads required.
- C. Wind Loading: Design and size components to withstand dead and live loads caused by wind pressures as follows: Positive pressure: 26 psf normal to panel.
  - 1. Negative pressure: 34 psf normal to panel.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### D. Maximum Deflection under Design Loads:

1. 1/180 of span or
2. 1/240 of span.

## 1.5 SUBMITTALS

- A. Product Data: Manufacturer's current product specifications and installation instructions.
- B. Shop Drawings: Include small-scale elevations, as required. Show details of trim and flashing conditions, fastening and anchorage methods, weatherproofing techniques, terminations, and penetrations.
- C. Samples:
  1. Selection Samples: Submit actual metal chips with full range of colors available for Architect's selection.
  2. Verification Samples: Submit two samples of each type of metal panel required, not less than 12 inches, and illustrating finished panel profile.
- D. Product Test Reports: Submit copies of test reports or load tables verifying performance capability of panel system:
  1. Metal Wall Panels: Include reports for:
    - a. Fastener test and pull-out calculations
    - b. Load tables
    - c. Maintenance Data

## 1.6 QUALITY ASSURANCE

- A. Installer: Company specializing in the type of work required for this project, with not less than 2 years of documented experience.
- B. Pre-Installation meeting: Convene meeting not less than one week prior to beginning installation between general contractor, installing contractor, owner's representative and manufacturer.

## 1.7 DELIVERY, STORAGE & HANDLING

- A. Do not deliver materials of this section to project site until suitable facilities for storage and protection are available.
- B. Protect materials from damage during transit and at project site. Store under cover but sloped to provide positive drainage. Do not expose materials with strippable protective film to direct sunlight or extreme heat.
- C. Do not allow storage of other materials or allow staging of other work on installed metal panel system.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- D. Upon receipt of delivery of metal panel system, and prior to signing the delivery ticket, the installer is to examine each shipment for damage and for completion of the consignment.

### 1.8 WARRANTY

- A. Special Warranty on Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace sheet metal roofing that shows evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Fluoropolymer Finish Warranty Period: 30 years from date of Substantial Completion.
- B. Special Installer's Warranty: Specified form in which Wall Installer agrees to repair or replace components of custom-fabricated sheet metal wall that fail in materials or workmanship within 5 years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Manufacturer's Qualifications: All panels are to be factory formed and packaged per job requirements.
  - 1. Manufacturer shall have a minimum of ten (10) years' experience in the factory fabrication of metal wall panels.
  - 2. Manufacturer must be certified to ISO 9001:2008 with design.
- B. Specification is based upon the products of ATAS International, Inc. No other manufacturer of metal wall systems shall be accepted as an alternate product without prior written approval. These substitution requests must meet specifications and must be submitted a minimum of ten (10) days prior to date of bid.
- C. Coordinate with insulation requirements as noted by Architect.
- D. Secondary framing members as required for load criteria and wind requirements.

### 2.2 EXPOSED-FASTENER, LAP-SEAM METAL WALL PANELS

- A. Exposed-fastener, Lap seam Metal Wall Panels: Provide Factory-formed, designed to be field assembled by lapping side edges of adjacent panels and mechanically attaching panels to supports using exposed fasteners in side laps. Include accessories required for weather tight installation.
- B. Corrugated-Profile, Exposed-Fastener Metal Wall Panels: Formed with alternating curved ribs spaced at 2.67 inches o.c. across width of panel.
  - 1. Basis-of Design Product: ATAS International, Inc.; Corrugated Panel - BWC374

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

2. Available Manufacturers:
  - a. ATAS International, Inc.
3. Material: Aluminum - .032 thick
  - a. Texture: Smooth
  - b. Finish: KYNAR 5000® PDVF or HYLAR 5000® Finish
  - c. Color: Standard or Premium color to be chosen later
4. Panel Coverage: 37-1/4"
5. Panel Height: 7/8"
6. Panel Application Orientation: Vertical.

### 2.3 FABRICATION

- A. Panels:
  1. Panels to be Factory fabricated in a controlled environment.
  2. Panels to be tension leveled during roll forming process.
  3. Panels to be produced in longest lengths possible, except when modular units are utilized.
- B. Form all components true to shape, accurate in size, square and free from distortion or defects. Cut panels to precise lengths indicated on approved shop drawings or as required by field conditions.
- C. Accessories: Factory fabricates trim and flashing components in standard 12-foot lengths.
  1. Form panel lines, breaks, and angles to be sharp and true, with surfaces free from warp and buckle.
  2. Fabricate wall panels as required to maintain fabrication tolerances and to withstand design loads.
- D. Fabricate metal wall panels in a manner that eliminates condensation on interior side of panel and with joints between panels designed to form weathertight seals.
- E. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- F. Panels, fabrication and installation shall meet the requirements of the Metal Construction Association Preformed Metal Wall Guidelines

### PART 3 - EXECUTION

#### 3.1 PREPARATION

- A. Field Measurements

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

1. Field measurements should be taken by the installer for verification of dimensional correctness in relationship to original plans, prior to providing manufacturer with a bill of material.

### B. Delivery, Storage and Handling

1. Do not deliver materials of this section to project site until suitable facilities for storage and protection are available.
2. Protect materials from damage during transit and at project site. Store under cover, but sloped to provide positive drainage. Do not expose materials with strippable protective film to direct sunlight or extreme heat.
3. Do not allow storage of other materials or allow staging of other work on installed metal panel system.
4. Upon receipt of delivery of metal panel system, and prior to signing the delivery ticket, the installer is to examine each shipment or damage and for completion of the consignment.

### C. Sequencing and Scheduling

1. Installer shall coordinate with general contractor as to scheduled delivery time after receipt of field verified bill of material by manufacturer as it relates to actual project scheduling.

## 3.2 METAL WALL PANEL INSTALLATION, GENERAL

- A. General: Install metal wall panels in orientation, sizes, and locations indicated on Drawings. Install panels perpendicular to girts and subgirts, unless otherwise indicated. Anchor metal wall panels and other components of the Work securely in place, with provisions for thermal and structural movement.

1. Field cutting of metal wall panels by torch is not permitted.
2. Rigidly fasten metal wall panels and allow for thermal expansion and contraction as required by the panel manufacturer. Pre-drill panels as required.
3. Install screw fasteners.
4. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four-panel lap splice condition.
5. Apply elastomeric sealant continuously between metal base channel (sill angle) and concrete, and elsewhere as indicated or, if not indicated, as necessary for waterproofing and material compatibility.
6. Provide weatherproof seals for pipe and conduit penetrating exterior walls.

- B. Fasteners: Use fasteners of size and length as required for compatibility with substrate.

1. Aluminum Wall Panels: Use stainless-steel fasteners or metallic coated fasteners for surfaces exposed to the exterior and aluminum or galvanized steel fasteners for surfaces exposed to the interior.
2. Exposed fasteners shall have a high performance factory applied coating to match paint color.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

3. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by metal wall panel manufacturer.
  4. Coat back side of aluminum wall panels with bituminous coating where wall panels will contact wood, ferrous metal, or cementitious construction.
- C. Joint Sealers: Install gaskets, joint fillers, and sealants where indicated and where required for weatherproof performance of metal wall panel assemblies.
- D. Provide water and air infiltration retarder / barriers as noted within project documents.

### 3.3 ACCESSORY INSTALLATION

- A. General: Install accessories with positive anchorage to building and weathertight mounting and provide for thermal expansion. Coordinate installation with flashings and other components.
1. Install components required for a complete sheet metal roofing assembly including trim, copings, ridge closures, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
  2. Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual" and NRCA Waterproofing Manual. Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.
  3. Panels, fabrication and installation shall meet the requirements of the Metal Construction Association Preformed Metal Wall Guidelines.
- B. Coordinate with installation of:
1. Rough Carpentry, as noted in Section 6
  2. Sheet Metal Flashing and Trim, as noted in Section 7
  3. Metal Soffit Panels, as noted in Section 7
  4. Metal Gutters, as noted in Section 7
  5. Metal Downspouts, as noted in Section 7
  6. Metal Copings, as noted in Section 7

### 3.4 CLEANING AND PROTECTION

- A. Remove temporary protective coverings and strippable films, if any, as metal wall panels are installed. Maintain in a clean condition during construction.
- B. Protection:
1. Provide as required completed work of this section will be without damage or deterioration at date of substantial completion.

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- C. Touch up minor abrasions with matching paint provided by panel manufacturer. Remove and replace panels that cannot be satisfactorily touched up. See Metal Construction Association Technical Bulletin #95-1051.
- D. Sweep and remove chips, shavings and dust from roof on a daily basis during installation period. Leave installed work clean, free from grease, finger marks and stains. Remove all protective masking from material immediately after installation of product.
- E. Upon completion of installation, remove scraps and debris from project site.
- F. After metal wall panel installation, clear weep holes and drainage channels of obstructions, dirt and sealant.

END OF SECTION

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 079000 - JOINT SEALANTS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section includes:
  - 1. Sealants and joint backing.
  - 2. Precompressed foam sealers.
  - 3. Hollow gaskets.

#### 1.2 SUBMITTALS

- A. Section 013300 - Submittal Procedures: Submittal procedures.
- B. Products Data:
  - 1. Submit data for sealant materials, performance, and substrate preparation.
  - 2. Indicate available colors and color match for each sealant type for selection.
- C. Samples: Submit two sets of samples, 3 inches long illustrating sealant colors for selection.
- D. Manufacturer's Installation Instructions: Submit special procedures, surface preparation, and perimeter conditions requiring special attention.
- E. Warranties: Submit certified signed manufacturers' warranties.

#### 1.3 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.
- B. Applicator: Company specializing in performing Work of this section with minimum three years documented experience.

#### 1.4 ENVIRONMENTAL REQUIREMENTS

- A. Section 016000 - Products Requirements.
- B. Maintain temperature and humidity recommended by sealant manufacturer during and after installation.



## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 1.5 COORDINATION

- A. Section 013000 - Administrative Requirements: Coordination and project conditions.
- B. Coordinate Work with sections referencing this section.

### 1.6 WARRANTY

- A. Section 017000 - Execution Requirements: Requirements for warranties.
- B. Provide five year manufacturer's warranty for installed sealants and accessories which fail to achieve airtight seal or watertight seal, exhibit loss of adhesion or cohesion, and sealants which do not cure.
- C. Provide ten year manufacturer's warranty for installed deck drain sealant which fails to achieve airtight seal or watertight seal, exhibits loss of adhesion or cohesion, and does not cure.

## PART 2 - PRODUCTS

### 2.1 JOINT SEALERS

- A. Silicone Sealant Manufacturers:
  - 1. Pecora Corporation.
  - 2. General Electric Silicones.
  - 3. Dow Corning.
  - 4. Tremco Inc.
  - 5. Substitutions: Section 016000 - Products Requirements.
- B. Other Sealant Manufacturers:
  - 1. Pecora Corporation.
  - 2. Sonneborn Building Products.
  - 3. Tremco Inc.
  - 4. Substitutions: Section 016000 - Products Requirements.
- C. Type A - Polyurethane Exterior Joints: ASTM C920, Type M, Grade NS, Class 25; Uses NT, M, A, and O; two component, chemical curing, nonstaining, nonbleeding, capable of continuous water immersion, color as selected:
  - 1. Tremco; Dymeric 511.
  - 2. Pecora; Dynatrol II.
  - 3. Sonneborn; NP 2.
  - 4. Applications: Use for exterior non-traffic bearing joints, except EIFS joints.
    - a. Control, expansion, and soft joints in masonry.
    - b. Joints between concrete and other materials.
    - c. Joints between metal frames and other materials.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- d. Other exterior non-traffic bearing joints for which no other sealant is indicated.
- e. Other traffic bearing joints for which no other sealant is indicated.

### 2.2 ACCESSORIES

- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- C. Joint Backing: Round foam rod compatible with sealant; oversized 30 to 50 percent larger than joint width; recommended by sealant manufacturer to suit application
- D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Section 013000 - Administrative Requirements: Coordination and project conditions.
- B. Verify substrate surfaces and joint openings are ready to receive work.
- C. Verify joint backing and release tapes are compatible with sealant.

### 3.2 PREPARATION

- A. Remove loose materials and foreign matter which might impair adhesion of sealant.
- B. Clean and prime joints.
- C. Perform preparation in accordance with ASTM C1193.
- D. Protect elements surrounding the Work of this section from damage or disfiguration.

### 3.3 INSTALLATION

- A. Perform installation in accordance with ASTM C1193.
- B. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.
- C. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- D. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- E. Tool joints concave, unless indicated otherwise on drawings.
- F. Precompressed Foam Sealant: Do not stretch; avoid joints except at corners, ends, and intersections; install with face 1/8 to 1/4 inch below adjoining surface.
- G. Compression Gaskets: Avoid joints except at ends, corners, and intersections; seal all joints with adhesive; install with face 1/8 to 1/4 inch below adjoining surface.

### 3.4 CLEANING

- A. Section 017000 - Execution Requirements: Final cleaning.
- B. Clean adjacent soiled surfaces.

### 3.5 PROTECTION OF INSTALLED CONSTRUCTION

- A. Section 017000 - Execution Requirements: Protecting installed construction.
- B. Protect sealants until cured.

END OF SECTION

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:

- 1. Standard and custom hollow metal doors and frames.
- 2. Light frames and glazing installed in hollow metal doors.

- B. Related Sections:

- 1. Division 04 Section "Unit Masonry" for embedding anchors for hollow metal work into masonry construction.
- 2. Division 08 Section "Flush Wood Doors".
- 3. Division 08 Section "Glazing" for glass view panels in hollow metal doors.
- 4. Division 08 Section "Door Hardware".
- 5. Division 08 Section "Access Control Hardware".
- 6. Division 09 Sections "Exterior Painting" and "Interior Painting" for field painting hollow metal doors and frames.

- C. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.

- 1. ANSI/SDI A250.8 - Recommended Specifications for Standard Steel Doors and Frames.
- 2. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames, Frames Anchors and Hardware Reinforcing.
- 3. ANSI/SDI A250.6 - Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames.
- 4. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.
- 5. ANSI/SDI A250.11 - Recommended Erection Instructions for Steel Frames.
- 6. ASTM A1008 - Standard Specification for Steel Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
- 7. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- 8. ASTM A924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.

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9. ASTM C 1363 - Standard Test Method for Thermal Performance of Building Assemblies by Means of a Hot Box Apparatus.
10. ANSI/BHMA A156.115 - Hardware Preparation in Steel Doors and Frames.
11. ANSI/SDI 122 - Installation and Troubleshooting Guide for Standard Steel Doors and Frames.
12. ANSI/NFPA 80 - Standard for Fire Doors and Fire Windows; National Fire Protection Association.
13. ANSI/NFPA 105: Standard for the Installation of Smoke Door Assemblies.
14. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; National Fire Protection Association.
15. UL 10C - Positive Pressure Fire Tests of Door Assemblies.
16. UL 1784 - Standard for Air Leakage Tests of Door Assemblies.

### 1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, core descriptions, hardware reinforcements, profiles, anchors, fire-resistance rating, and finishes.
- B. Door hardware supplier is to furnish templates, template reference number and/or physical hardware to the steel door and frame supplier in order to prepare the doors and frames to receive the finish hardware items.
- C. Shop Drawings: Include the following:
  1. Elevations of each door design.
  2. Details of doors, including vertical and horizontal edge details and metal thicknesses.
  3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
  4. Locations of reinforcement and preparations for hardware.
  5. Details of anchorages, joints, field splices, and connections.
  6. Details of accessories.
  7. Details of moldings, removable stops, and glazing.
  8. Details of conduit and preparations for power, signal, and control systems.
- D. Samples for Verification:
  1. Samples are only required by request of the architect and for manufacturers that are not current members of the Steel Door Institute.

### 1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain hollow metal doors and frames through one source from a single manufacturer wherever possible.
- B. Quality Standard: In addition to requirements specified, comply with ANSI/SDI A250.8, latest edition, "Recommended Specifications for Standard Steel Doors and Frames".

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- C. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to UL10C (neutral pressure at 40" above sill) or UL 10C.
  - 1. Oversize Fire-Rated Door Assemblies Construction: For units exceeding sizes of tested assemblies, attach construction label certifying doors are built to standard construction requirements for tested and labeled fire rated door assemblies except for size.
  - 2. Temperature-Rise Limit: Where indicated and at vertical exit enclosures (stairwell openings) and exit passageways, provide doors that have a maximum transmitted temperature end point of not more than 450 deg F above ambient after 30 minutes of standard fire-test exposure.
  - 3. Smoke Control Door Assemblies: Comply with NFPA 105.
    - a. Smoke "S" Label: Doors to bear "S" label, and include smoke and draft control gasketing applied to frame and on meeting stiles of pair doors.
- D. Fire-Rated, Borrowed-Light Frame Assemblies: Assemblies complying with NFPA 80 that are listed and labeled, by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 257. Provide labeled glazing material.
- E. Pre-Submittal Conference: Conduct conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier, Installer, and Contractor to review proper methods and procedures for installing hollow metal doors and frames and to verify installation of electrical knockout boxes and conduit at frames with electrified or access control hardware.

### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver hollow metal work palletized, wrapped, or crated to provide protection during transit and Project site storage. Do not use non-vented plastic.
- B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.
- C. Store hollow metal work under cover at Project site. Place in stacks of five units maximum in a vertical position with heads up, spaced by blocking, on minimum 4-inch high wood blocking. Do not store in a manner that traps excess humidity.
  - 1. Provide minimum 1/4-inch space between each stacked door to permit air circulation. Door and frames to be stacked in a vertical upright position.

### 1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 1.7 COORDINATION

- A. Coordinate installation of anchorages for hollow metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

### 1.8 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.
- B. Warranty includes installation and finishing that may be required due to repair or replacement of defective doors.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. CECO Door Products (C).
  - 2. Curries Company (CU).
  - 3. Steelcraft (S).

### 2.2 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- B. Frame Anchors: ASTM A 653/A 653M, Commercial Steel (CS), Commercial Steel (CS), Type B; with minimum G60 A60 metallic coating.

### 2.3 HOLLOW METAL DOORS

- A. General: Provide 1-3/4 inch doors of design indicated, not less than thickness indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces unless otherwise indicated. Comply with ANSI/SDI A250.8 and ANSI/NAAMM HMMA 867.
- B. Exterior Doors: Face sheets fabricated of commercial quality hot-dipped zinc coated steel that complies with ASTM A 653/A 653M, Coating Designation A60. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:
  - 1. Design: Flush panel.

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2. Level/Model: Level 2 and Physical Performance Level B (Heavy Duty), Minimum 18 gauge (0.042-inch - 1.0-mm) thick steel, Model 2.
  3. Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet. Doors with an inverted top channel to include a steel closure channel, screw attached, with the web of the channel flush with the face sheets of the door. Plastic or composite channel fillers are not acceptable.
  4. Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9" or minimum 14 gauge continuous channel with pierced holes, drilled and tapped.
  5. Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.
- C. Interior Doors: Face sheets fabricated of commercial quality cold rolled steel that complies with ASTM A 1008/A 1008M. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:
1. Design: Flush panel.
    - a. Fire Door Core: As required to provide fire-protection and temperature-rise ratings indicated.
  2. Level/Model: Level 2 and Physical Performance Level B (Heavy Duty), Minimum 18 gauge (0.042-inch - 1.0-mm) thick steel, Model 2.
  3. Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet.
  4. Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9" or minimum 14 gauge continuous channel with pierced holes, drilled and tapped.
  5. Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.
- D. Manufacturers Basis of Design:
1. Curries Company (CU) - Polystyrene Core - 707 Series.
  2. Curries Company (CU) - Energy Efficient - 777 Trio-E Series.
- 2.4 HOLLOW METAL FRAMES
- A. General: Comply with ANSI/SDI A250.8 and with details indicated for type and profile.
- B. Exterior Frames: Fabricated of hot-dipped zinc coated steel that complies with ASTM A 653/A 653M, Coating Designation A60.
1. Fabricate frames with mitered or coped corners. Profile as indicated on drawings.
  2. Manufacturers Basis of Design:
    - a. Curries Company (CU) – Thermal Break TQ Series.



## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- C. Interior Frames: Fabricated from cold-rolled steel sheet that complies with ASTM A 1008/A 1008M.
  - 1. Fabricate frames with mitered or coped corners. Profile as indicated on drawings.
  - 2. Manufacturers Basis of Design:
    - a. Curries Company (CU) - CM Series.
    - b. Curries Company (CU) - M Series.
- D. Fire rated frames: Fabricate frames in accordance with NFPA 80, listed and labeled by a qualified testing agency, for fire-protection ratings indicated.
- E. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 Table 4 with reinforcement plates from same material as frames.

### 2.5 FRAME ANCHORS

- A. Jamb Anchors:
  - 1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, formed from metallic coated material, not less than 0.042 inch thick, with corrugated or perforated straps not less than 2 inches wide by 10 inches long; or wire anchors not less than 0.177 inch thick.
  - 2. Stud Wall Type: Designed to engage stud and not less than 0.042 inch thick.
  - 3. Compression Type for Drywall Slip-on (Knock-Down) Frames: Adjustable compression anchors.
- B. Floor Anchors: Floor anchors to be provided at each jamb, formed from metallic coated material, not less than 0.042 inches thick.
- C. Mortar Guards: Formed from same material as frames, not less than 0.016 inches thick.

### 2.6 LIGHT OPENINGS AND GLAZING

- A. Moldings for Glazed Lites in Doors and Loose Stops for Glazed Lites in Frames: Minimum 20 gauge thick, fabricated from same material as door face sheet in which they are installed.

### 2.7 ACCESSORIES

- A. Grout Guards: Formed from same material as frames, not less than 0.016 inches thick.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 2.8 FABRICATION

- A. Fabricate hollow metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. When shipping limitations so dictate, frames for large openings are to be fabricated in sections for splicing or splining in the field by others.
- B. Tolerances: Fabricate hollow metal work to tolerances indicated in ANSI/SDI A250.8.
- C. Hollow Metal Doors:
  - 1. Exterior Doors: Provide optional weep-hole openings in bottom of exterior doors to permit moisture to escape where specified.
  - 2. Glazed Lites: Factory cut openings in doors with applied trim or kits to fit. Factory install glazing where indicated.
  - 3. Astragals: Provide overlapping astragals as noted in door hardware sets in Division 08 Section "Door Hardware" on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4 inch beyond edge of door on which astragal is mounted.
  - 4. Continuous Hinge Reinforcement: Provide welded continuous 12 gauge strap for continuous hinges specified in hardware sets in Division 08 Section "Door Hardware".
- D. Hollow Metal Frames:
  - 1. Shipping Limitations: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
  - 2. Welded Frames: Weld flush face joints continuously; grind, fill, dress, and make smooth, flush, and invisible.
    - a. Welded frames are to be provided with two steel spreaders temporarily attached to the bottom of both jambs to serve as a brace during shipping and handling. Spreader bars are for bracing only and are not to be used to size the frame opening.
  - 3. High Frequency Hinge Reinforcement: Provide high frequency hinge reinforcements at door openings 48-inches and wider with mortise butt type hinges at top hinge locations.
  - 4. Continuous Hinge Reinforcement: Provide welded continuous 12 gauge straps for continuous hinges specified in hardware sets in Division 08 Section "Door Hardware".
  - 5. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated for removable stops, provide security screws at exterior locations.
  - 6. Mortar Guards: Provide guard boxes at back of hardware mortises in frames at all hinges and strike preps regardless of grouting requirements.
  - 7. Floor Anchors: Weld anchors to bottom of jambs and mullions with at least four spot welds per anchor.
  - 8. Jamb Anchors: Provide number and spacing of anchors as follows:

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- a. Masonry Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
    - 1) Two anchors per jamb up to 60 inches high.
    - 2) Three anchors per jamb from 60 to 90 inches high.
    - 3) Four anchors per jamb from 90 to 120 inches high.
    - 4) Four anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 120 inches high.
  - b. Stud Wall Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
    - 1) Three anchors per jamb up to 60 inches high.
    - 2) Four anchors per jamb from 60 to 90 inches high.
    - 3) Five anchors per jamb from 90 to 96 inches high.
    - 4) Five anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 96 inches high.
    - 5) Two anchors per head for frames above 42 inches wide and mounted in metal stud partitions.
9. Door Silencers: Except on weatherstripped or gasketed doors, drill stops to receive door silencers. Silencers to be supplied by frame manufacturer regardless if specified in Division 08 Section "Door Hardware".
- E. Hardware Preparation: Factory prepare hollow metal work to receive template mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to the Door Hardware Schedule and templates furnished as specified in Division 08 Section "Door Hardware."
1. Locate hardware as indicated, or if not indicated, according to ANSI/SDI A250.8.
  2. Reinforce doors and frames to receive non-template, mortised and surface mounted door hardware.
  3. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.
  4. Coordinate locations of conduit and wiring boxes for electrical connections with Division 26 Sections.

### 2.9 STEEL FINISHES

- A. Prime Finishes: Doors and frames to be cleaned, and chemically treated to insure maximum finish paint adhesion. Surfaces of the door and frame exposed to view to receive a factory applied coat of rust inhibiting shop primer.
1. Shop Primer: Manufacturer's standard, fast-curing, lead and chromate free primer complying with ANSI/SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; and compatible with substrate and field-applied coatings.

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. General Contractor to verify the accuracy of dimensions given to the steel door and frame manufacturer for existing openings or existing frames (strike height, hinge spacing, hinge back set, etc.).
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Remove welded in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.
- B. Prior to installation, adjust and securely brace welded hollow metal frames for square, level, twist, and plumb condition.
- C. Tolerances shall comply with SDI-117 "Manufacturing Tolerances Standard Steel Doors and Frames."
- D. Drill and tap doors and frames to receive non-template, mortised, and surface-mounted door hardware.

### 3.3 INSTALLATION

- A. General: Install hollow metal work plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions.
- B. Hollow Metal Frames: Install hollow metal frames of size and profile indicated. Comply with ANSI/SDI A250.11 and NFPA 80 at fire rated openings.
  - 1. Set frames accurately in position, plumbed, leveled, aligned, and braced securely until permanent anchors are set. After wall construction is complete and frames properly set and secured, remove temporary braces, leaving surfaces smooth and undamaged. Shim as necessary to comply with installation tolerances.
  - 2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with post-installed expansion anchors.
  - 3. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with mortar.
  - 4. Grout Requirements: Do not grout head of frames unless reinforcing has been installed in head of frame. Do not grout vertical or horizontal closed mullion members.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- C. Hollow Metal Doors: Fit hollow metal doors accurately in frames, within clearances specified below. Shim as necessary.
  - 1. Non-Fire-Rated Standard Steel Doors:
    - a. Jamb and Head: 1/8 inch plus or minus 1/16 inch.
    - b. Between Edges of Pairs of Doors: 1/8 inch plus or minus 1/16 inch.
    - c. Between Bottom of Door and Top of Threshold: Maximum 3/8 inch.
    - d. Between Bottom of Door and Top of Finish Floor (No Threshold): Maximum 3/4 inch.
  - 2. Fire-Rated Doors: Install doors with clearances according to NFPA 80.
- D. Field Glazing: Comply with installation requirements in Division 08 Section "Glazing" and with hollow metal manufacturer's written instructions.

### 3.4 ADJUSTING AND CLEANING

- A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow metal work that is warped, bowed, or otherwise unacceptable.
- B. Remove grout and other bonding material from hollow metal work immediately after installation.
- C. Prime-Coat and Painted Finish Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat, or painted finishes, and apply touchup of compatible air drying, rust-inhibitive primer, zinc rich primer (exterior and galvanized openings) or finish paint.

END OF SECTION

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 083300 - ROLLING SERVICE DOORS

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. Insulated rolling service doors.

#### 1.2 REFERENCES

- A. ANSI/DASMA 108 - American National Standards Institute Standard Method For Testing Sectional Garage Doors And Rolling Doors: Determination Of Structural Performance Under Uniform Static Air Pressure Difference.
- B. NFRC 102 - Test Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems.
- C. ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Element.
- D. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
- E. ASTM A 653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- F. ASTM A 666 - Standard Specification for Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
- G. ASTM A 924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
- H. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- I. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).
- J. NEMA MG 1 - Motors and Generators.

#### 1.3 DESIGN / PERFORMANCE REQUIREMENTS

- A. Single-Source Responsibility: Provide doors, tracks, motors, and accessories from one manufacturer for each type of door. Provide secondary components from source acceptable to manufacturer of primary components.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- B. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories, Inc. acceptable to authority having jurisdiction as suitable for purpose specified.

### 1.4 SUBMITTALS

- A. Submit under provisions of Section 013000.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Details of construction and fabrication.
  - 4. Installation instructions.
- C. Shop Drawings: Include detailed plans, elevations, details of framing members, anchoring methods, required clearances, hardware, and accessories. Include relationship with adjacent construction.
- D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches long, representing actual product, color, and patterns.
- F. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- G. Operation and Maintenance Data: Submit lubrication requirements and frequency, and periodic adjustments required.

### 1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in performing Work of this section with a minimum of five (5) years' experience in the fabrication and installation of security closures.
- B. Installer Qualifications: Installer Qualifications: Company specializing in performing Work of this section with minimum three years and approved by manufacturer.

### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Protect materials from exposure to moisture. Do not deliver until after wet work is complete and dry.
- C. Store materials in a dry, warm, ventilated weathertight location.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

### 1.8 COORDINATION

- A. Coordinate Work with other operations and installation of adjacent materials to avoid damage to installed materials.

### 1.9 WARRANTY

- A. Warranty: Manufacturer's limited door and operator system, except the counterbalance spring and finish, to be free from defects in materials and workmanship for 3 years or 20,000 cycles, whichever occurs first.
- B. Warranty: Manufacturer's limited door system warranty for 2 years for all parts and components.
- C. PowderGuard Finish
  - 1. PowderGuard Premium Applied to curtain, guides, bottom bar, headplates: Manufacturer's limited Premium Finish warranty for 2 years.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Overhead Door Corporation or approved equal.
- B. Requests for substitutions will be considered in accordance with provisions of Section 016000.

### 2.2 INSULATED ROLLING SERVICE DOORS

- A. Stormtite Insulated Rolling Service Doors: Overhead Door Corporation Model 625.
  - 1. Curtain: Interlocking roll-formed slats as specified following. End locks shall be attached to each end of alternate slats to prevent lateral movement.
    - a. Flat profile type F-265i for doors up to 40 feet wide.
    - b. Front slat fabricated of:
      - 1) Aluminum .040 inch.
    - c. Back slat fabricated of:



## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- 1) Aluminum .024 inch (.06 mm).
- d. Slat cavity filled with CFC-free foamed-in-place, polyurethane insulation.
  - 1) R-Value: 7.7, U-Value: 0.13.
  - 2) Sound Rating: STC-21.
2. Performance:
  - a. Through Curtain Sound Rating: Sound Rating: STC-28 (STC-30+ with HZ noise generator) as per ASTM E 90.
  - b. Installed System Sound Rating: STC-21 as per ASTM E 90.
  - c. U-factor: 0.91 NFRC test report, maximum U-factor of no higher than 1.00.
  - d. Air Infiltration: Meets ASHRAE 90.1 & IECC 2012/2015 C402.4.3 Air leakage <1.00 cfm/ft<sup>2</sup>.
3. Slats and Hood Finish:
  - a. Aluminum: Slats and hood shall be aluminum finished as follows.
    - 1) Finish: Powder Coat:
      - a) PowderGuard Premium powder coat color as selected by the Architect.
4. Weatherseals:
  - a. Vinyl bottom seal, exterior guide and internal hood seals.
  - b. Interior guide weatherseal.
  - c. Lintel weatherseal.
  - d. Air Infiltration Package, IECC 2012/2015 listed; product to meet C402.4.3 2012 Air leakage <1.00 cfm/ft<sup>2</sup>.
    - 1) Air infiltration perimeter seal package includes: guide cover, guide cap, dual brush exterior guide seal, 4 inch finned lintel brush seal and vinyl bottom seal.
5. Bottom Bar:
  - a. Extruded aluminum angle minimum thickness 1/8 inch bolted back to back to reinforce curtain in the guides.
6. Guides: Three structural steel angles.
7. Brackets:
  - a. Hot rolled prime painted steel to support counterbalance, curtain and hood.
8. Finish; Bottom Bar, Guides, Headplate and Brackets:
  - a. PowderGuard Premium powder coat color as selected by the Architect.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

9. Counterbalance: Helical torsion spring type housed in a steel tube or pipe barrel, supporting the curtain with deflection limited to 0.03 inch per foot of span. Counterbalance is adjustable by means of an adjusting tension wheel.
10. Hood: Provide with internal hood baffle weatherseal.
  - a. Aluminum hood with intermediate supports as required.
11. Electric Motor Operation: Provide UL listed electric operator, size as recommended by manufacturer to move door in either direction at not less than 2/3 foot nor more than 1 foot per second.
  - a. Sensing Edge Protection:
    - 1) Electric sensing edge.
  - b. Operator Controls:
    - 1) Push-button operated control stations with open, close, and stop buttons.
  - c. Special Operation:
    - 1) Radio control operation.
  - d. Motor Voltage: 115/230 single phase, 60 Hz.
12. Wind Load Design:
  - a. Standard wind load shall be 20 PSF.
13. Operation: Design door assembly, including operator, to operate for not less than 20,000 cycles.
14. Locking:
  - a. Interior slide bolt lock for electric operation with interlock switch.
15. Wall Mounting Condition:
  - a. Face-of-wall mounting.
  - b. Between jambs mounting.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Verify opening sizes, tolerances and conditions are acceptable.
- B. Examine conditions of substrates, supports, and other conditions under which this work is to be performed.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### 3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

### 3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Use anchorage devices to securely fasten assembly to wall construction and building framing without distortion or stress.
- C. Securely and rigidly brace components suspended from structure. Secure guides to structural members only.
- D. Fit and align assembly including hardware; level and plumb, to provide smooth operation.
- E. Coordinate installation of electrical service with Section 16150. Complete wiring from disconnect to unit components.
- F. Coordinate installation of sealants and backing materials at frame perimeter as specified in Section 07900.
- G. Install perimeter trim and closures.
- H. Instruct Owner's personnel in proper operating procedures and maintenance schedule.

### 3.4 ADJUSTING

- A. Test for proper operation and adjust as necessary to provide proper operation without binding or distortion.
- B. Adjust hardware and operating assemblies for smooth and noiseless operation.

### 3.5 CLEANING

- A. Clean curtain and components using non-abrasive materials and methods recommended by manufacturer.
- B. Remove labels and visible markings.
- C. Touch-up, repair or replace damaged products before Substantial Completion.

MAINTENANCE BUILDING ADDITION AND RENOVATIONS

3.6 PROTECTION

- A. Protect installed products until completion of project.

END OF SECTION

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 085113 - ALUMINUM WINDOWS

### PART 1 - GENERAL

1.1 Furnish all necessary materials, labor, and equipment for the complete installation of the aluminum windows as shown on the drawings and specified herein.

### 1.2 SUMMARY

A. Section includes: Aluminum Horizontal Sliding Windows, including:

B. Related Sections:

1. Sealants: Refer to Division 7 Joint Treatment Section.

C. Glass and Glazing: Refer to Division 8 Glass and Glazing Section for glass and glazing requirements.

### 1.3 SYSTEM PERFORMANCE

A. All test unit sizes and configurations shall conform to the minimum sizes in accordance with AAMA/WDMA/CSA/I.S.A 440-05, with a performance class of HS-AW, performance grade 40. Windows shall also comply with the following specific performance requirements indicated.

1. Air Infiltration: Completed window systems shall have 0.30 CFM/FT<sup>2</sup> maximum allowable infiltration when tested in accordance with ASTM E 283 at a differential static pressure of 6.24 psf (299 Pa).

2. Water Infiltration: There shall be no uncontrolled water leakage when tested in accordance with ASTM E 331 at a static pressure of 9 psf (431 Pa).

3. Uniform Load Structural: There shall be no damage to fasteners, hardware, accessories, or any other damage that would render the window inoperable when tested in accordance with ASTM E 330 at a differential static pressure of 60.0 psf (2870 Pa) positive and negative.

4. Forced Entry Resistance: Windows shall be tested in accordance with ASTM F 588 and meet the requirements of performance level 10.

5. Deglazing: Windows shall meet all requirements when tested in accordance with ASTM E 987.

6. Thermal Performance: When tested in accordance with AAMA 1503.1-88:

a. Condensation Resistance Factor (CRF): A minimum of 55.

b. Thermal Transmittance U Value: 0.50 BTU/HR/FT<sup>2</sup>/°F or less.

7. Acoustical Performance: When tested in accordance with ASTM E 90 and ASTM E 1332, the Sound Transmission Class (STC), and Outdoor-Indoor Transmission Class (OITC) shall not be less than 33 STC and 28 OITC.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

8. Life Cycle: There shall be no damage to fasteners, hardware, accessories, or any other damage that would render the window inoperable, and air and water infiltration tests shall not exceed the primary performance specified herein when tested in accordance with AAMA 910.

Note: Performance based on lab testing and will vary by configuration and glass type; contact YKK AP engineering for job specific analysis at higher performance levels.

### 1.4 SUBMITTALS

- A. General: Prepare, review, approve, and submit specified submittals in accordance with "Conditions of the Contract" and Division 1 Submittals Sections. Product data, shop drawings, samples, and similar submittals are defined in "Conditions of the Contract."
- B. Product Data: Submit product data for each type of window series specified.
- C. Substitutions: Whenever substitute products are to be considered, supporting technical data, samples, and test reports must be submitted ten (10) working days prior to bid date in order to make a valid comparison.
- D. Shop Drawings: Submit shop drawings showing layout, profiles, and product components, including anchorage, accessories, finish colors and textures.
- E. Samples: Submit verification samples for colors on actual aluminum substrates indicating full color range expected in installed system.
- F. Quality Assurance / Control Submittals:
  1. Test Reports: Submit certified test reports showing compliance with specified performance characteristics and physical properties.

### 1.5 QUALITY ASSURANCE

- A. Qualifications:
  1. Installer Qualifications: Installer experienced (as determined by contractor) to perform work of this section who has specialized in the installation of work similar to that required for this project. If requested by Owner, submit reference list of completed projects.
  2. Manufacturer Qualifications: Manufacturer capable of providing field service representation during construction process.
- B. Mock-Ups (Field Constructed): Install at project site a job mock-up using acceptable products and manufacturer approved installation methods. Obtain Owner's and Architect's acceptance of finish color, and workmanship standard.
- C. Mock-Up Size:

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- D. Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required.
- E. Incorporation: Mock-up may be incorporated into final construction upon Owner's approval.
- F. Pre-Installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions, and manufacturer's warranty requirements.

### 1.6 PRODUCT CONDITIONS/SITE CONDITIONS

- A. Field Measurements: Verify measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

### 1.7 WARRANTY

- A. Project Warranty: Refer to "Conditions of the Contract" for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by an authorized company official.
  - 1. Warranty Period: Manufacturer's one (1) year standard warranty commencing on the substantial date of completion for the project provided that the warranty, in no event, shall start later than six (6) months from the date of shipment by YKK AP America Inc.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Acceptable Manufacturers: YKK AP America Inc. or Approved equal.
- B. Sliding Window: YKK AP YSW 400 T Series Horizontal Sliding Windows.
- C. Window Framing System:
  - 1. AAMA Designation: HS-AW 40.
- D. Description: Overall frame depth to be 4". Fixed and sliding panels shall have overlapped joints, sealed, and dual screw spline joinery for extra strength and weatherability. Sliding panels shall not be removable when in a locked position. Windows including sliding as well as fixed panels, and frames shall be factory fabricated.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- E. Thermal barrier shall consist of 6/6 nylon polyamide glass fiber reinforced pressure extruded bars. Systems employing non-structural thermal barriers are not acceptable.
- F. Configuration: The sliding windows shall be XO, OX, XOX, or OXO.
- G. Glazing: Each panel shall be channel glazed using a marine type of wrap around EPDM glazing gasket; 1/4" monolithic or 1" insulating units; Factory or bench glazed. Glazing thickness as specified in Division 8 glass and glazing section.

### 2.2 MATERIALS

- A. Extrusions: Aluminum Alloy 6063-T5 Temper (ASTM B 221).
- B. Aluminum Sheet:
  - 1. Anodized Finish: ASTM B 209, 5005-H34 Aluminum Alloy, 0.050" (1.27 mm) minimum thickness.
  - 2. Painted Finish: ASTM B 209, 3003-H3 Aluminum Alloy, 0.080" (1.95) mm) minimum thickness.

### 2.3 ACCESSORIES

- A. Manufacturer's Standard Accessories:
- B. Hardware: Standard adjustable acetal roller in stainless steel housing, cast aluminum cam-type sweep lock, and stainless steel keeper.
- C. Fasteners: All fasteners to be AISI 300 series (except for self-drilling which are to be AISI 400 series) stainless steel.
- D. Sealant: Non-skinning type, AAMA 803.3.
- E. Glazing: Marine type wrap around gaskets. EPDM in accordance with ASTM C864. Color Black.

### 2.4 FABRICATION

- A. Fabricate frame using two screws and adhesive backed gaskets at corner joints. Fixed and sliding panels shall have over lapped joints, sealed, and dual screw/spline joinery for extra strength and weatherability. Sliding panels shall not be removable when in a locked position.
- B. Hardware: Drill and cut to template for hardware. Reinforce frames and door stiles to receive hardware in accordance with manufacturer's recommendations.
- C. Fabrication Tolerances:
- D. Material Cuts: Square to 1/32 inch off square, maximum, over largest dimension; proportionate amount of 1/32 inch on other two dimensions.



## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- E. Joints (Between adjacent members in same assembly): Hairline and square to adjacent member.
- F. Variation (In squaring diagonals for doors and fabricated assemblies): 1/16 inch.
- G. Flatness: +/- 1/16 inch off neutral plane.

### 2.5 FINISHES AND COLORS

- A. YKK AP America Anodized Plus® Finish:

CODE	DESCRIPTION
YS1N*	Clear Anodized Plus®
YH3N	Champagne Anodized Plus®
YB1N	Medium Bronze Anodized Plus®
YB5N*	Dark Bronze Anodized Plus®
YK1N*	Black Anodized Plus®
YW3N	White Anodized Plus®
M	Mill Finish

\* Indicates standard finish usually carried as inventory.

Anodized Plus® is an advanced sealing technology that completely seals the anodic film yielding superior durability (See AAMA 612).

- B. Anodized Finishing: Prepare aluminum surfaces for specified finish; apply shop finish in accordance with the following:
- C. Anodic Coating: Electrolytic color coating followed by an organic seal applied in accordance with the requirements of AAMA 612-02. Aluminum extrusions shall be produced from quality controlled billets meeting AA-6063-T5.
  - 1. Exposed Surfaces shall be free of scratches and other serious blemishes.
  - 2. Extrusions shall be given a caustic etch followed by an anodic oxide treatment and then sealed with an organic coating applied with an electrodeposition process.
  - 3. The anodized coating shall comply with all of the requirements of AAMA 612-02: Voluntary Specifications, Performance Requirements and Test Procedures for Combined Coatings of Anodic Oxide and Transparent Organic Coatings on Architectural Aluminum. Testing shall demonstrate the ability of the finish to resist damage from mortar, salt spray, and chemicals commonly found on construction sites, and to resist the loss of color and gloss.
  - 4. Overall coating thickness for finishes shall be a minimum of 0.7 mils.
- D. High Performance Organic Coating Finish:
- E. Fluoropolymer Type: Factory applied two-coat 70% Kynar resin by Arkema or 70% Hylar resin by Solvay Solexis, fluoropolymer based coating system, Polyvinylidene Fluoride (PVF-2), applied in accordance with YKK AP procedures and meeting AAMA 2605 specifications.
- F. Colors: Selected by Architect from the following:

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

1. Standard coating color charts.
  2. Custom coating color charts.
  3. Color Name and Number:
- G. Finishes Testing:
- H. Apply 0.5% solution NaOH, sodium hydroxide, to small area of finished sample area; leave in place for sixty minutes; lightly wipe off NaOH. Do not clean area further.
- I. Submit samples with test area noted on each sample.

### PART 3 - EXECUTION

#### 3.1 MANUFACTURER'S INSTRUCTIONS / RECOMMENDATIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, installation instructions, and product carton instructions. The latest installation manual is available at [www.ykkap.com](http://www.ykkap.com).

#### 3.2 EXAMINATION

- A. Site Verification of Conditions: Verify conditions (which have been previously installed under other sections) are acceptable for product installation in accordance with manufacturer's instructions.
- B. Verify location of perimeter fasteners and block-outs are in accordance with shop drawings.

#### 3.3 PREPARATION

- A. Adjacent Surfaces Protection: Protect adjacent work areas and finish surfaces from damage during product installation.

#### 3.4 INSTALLATION

- A. General: Install manufacturer's system in accordance with shop drawings, and within specified tolerances.
- B. Protect aluminum members in contact with masonry, steel, concrete, or dissimilar materials.
- C. Shim and brace aluminum system before anchoring to structure.
- D. Completed windows must allow water to be wept to the exterior; Verify weep holes are open.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- E. Seal metal to metal window system joints using sealant recommended by system manufacturer.

### 3.5 FIELD QUALITY CONTROL

- A. Manufacturer's Field Services: Upon request, provide manufacturer's field service consisting of site visit for inspection of product installation in accordance with manufacturer's instructions.
- B. Field Test: Conduct field test to determine watertightness of window system. Conduct test in accordance with AAMA 501.2-03.

### 3.6 ADJUSTING AND CLEANING

- A. Adjusting: Adjust sliding windows for operation in accordance with manufacturer's recommendations.
- B. Cleaning: The General Contractor shall clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance and remove construction debris from project site. Legally dispose of debris.
- C. Protection: The General Contractor shall protect the installed product's finish surfaces from damage during construction.

END OF SECTION

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 087100 - DOOR HARDWARE

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes commercial door hardware for the following:
  - 1. Swinging doors.
- B. Door hardware includes, but is not necessarily limited to, the following:
  - 1. Mechanical door hardware.
  - 2. Cylinders specified for doors in other sections.
- C. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
  - 1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
  - 2. ICC/IBC - International Building Code.
  - 3. NFPA 70 - National Electrical Code.
  - 4. NFPA 80 - Fire Doors and Windows.
  - 5. NFPA 101 - Life Safety Code.
  - 6. NFPA 105 - Installation of Smoke Door Assemblies.
  - 7. State Building Codes, Local Amendments.
- D. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:
  - 1. ANSI/BHMA Certified Product Standards - A156 Series.
  - 2. UL10C - Positive Pressure Fire Tests of Door Assemblies.
  - 3. UL 305 - Panic Hardware.

#### 1.2 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
  - 1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
  3. Content: Include the following information:
    - a. Type, style, function, size, label, hand, and finish of each door hardware item.
    - b. Manufacturer of each item.
    - c. Fastenings and other pertinent information.
    - d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
    - e. Explanation of abbreviations, symbols, and codes contained in schedule.
    - f. Mounting locations for door hardware.
    - g. Door and frame sizes and materials.
    - h. Warranty information for each product.
  4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
- C. Shop Drawings: Details of electrified access control hardware indicating the following:
1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:
    - a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
    - b. Complete (risers, point-to-point) access control system block wiring diagrams.
    - c. Wiring instructions for each electronic component scheduled herein.
  2. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.
- D. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.
- E. Informational Submittals:

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

F. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.

### 1.3 QUALITY ASSURANCE

A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

B. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).

C. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

D. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.

F. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.

G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:

1. Function of building, purpose of each area and degree of security required.
2. Plans for existing and future key system expansion.
3. Requirements for key control storage and software.
4. Installation of permanent keys, cylinder cores and software.
5. Address and requirements for delivery of keys.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- H. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
  - 1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
  - 2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
  - 3. Review sequence of operation narratives for each unique access controlled opening.
  - 4. Review and finalize construction schedule and verify availability of materials.
  - 5. Review the required inspecting, testing, commissioning, and demonstration procedures.
- I. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

### 1.5 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

### 1.6 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
  - 1. Structural failures including excessive deflection, cracking, or breakage.
  - 2. Faulty operation of the hardware.
  - 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
  - 4. Electrical component defects and failures within the systems operation.
- C. Warranty Period: Unless otherwise indicated, warranty shall be one year from date of Substantial Completion.

### 1.7 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

## PART 2 - PRODUCTS

### 2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.
- B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:



## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
  - C. Products furnished, but not installed, under this Section include the following. Coordinating, purchasing, delivering, and scheduling remain requirements of this Section.
    1. Permanent cylinders, cores, and keys to be installed by Owner.
  - D. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.
- ### 2.2 HANGING DEVICES
- A. Hinges: ANSI/BHMA A156.1 butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.
    1. Quantity: Provide the following hinge quantity:
      - a. Two Hinges: For doors with heights up to 60 inches. Three Hinges: For doors with heights 61 to 90 inches. Four Hinges: For doors with heights 91 to 120 inches. For doors with heights more than 120 inches provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
    2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
      - a. Widths up to 3'6": 4-1/2" standard or heavy weight as specified.
      - b. Sizes from 3'7" to 4'0": 5" standard or heavy weight as specified.
    3. Hinge Options: Comply with the following:
      - a. Non-removable Pins: With the exception of electric through wire hinges, provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.
    4. Manufacturers:
      - a. Hager Companies (HA) - BB Series, 5 knuckle.
      - b. McKinney (MK) - TA/T4A Series, 5 knuckle.
      - c. dormakaba Best (ST) - F/FBB Series, 5 knuckle.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- B. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 continuous geared hinge. with minimum 0.120-inch thick extruded 6063-T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cut-outs.
1. Manufacturers:
    - a. Hager Companies (HA).
    - b. Pemko (PE).
    - c. Dormakaba Best (ST).

### 2.3 DOOR OPERATING TRIM

- A. Door Push Plates and Pulls: ANSI/BHMA A156.6 door pushes and pull units of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.
1. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.
  2. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.
  3. Manufacturers:
    - a. Rockwood (RO).

### 2.4 CYLINDERS AND KEYING

- A. General: Cylinder manufacturer to have minimum (10) years' experience designing secured master key systems and have on record a published security keying system policy.
- B. Cylinder Types: Original manufacturer cylinders able to supply the following cylinder formats and types:
1. Threaded mortise cylinders with rings and cams to suit hardware application.
  2. Rim cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
  3. Bored or cylindrical lock cylinders with tailpieces as required to suit locks.
  4. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
  5. Keyway: Manufacturer's Standard.
- C. Large Format Interchangeable Cores: Provide removable cores (LFIC) as specified, core insert, removable by use of a special key, and for use with only the core manufacturer's cylinder and door hardware.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- D. Patented Cylinders: ANSI/BHMA A156.5, Grade 1 Certified Products Directory (CPD) listed cylinders employing a utility patented and restricted keyway requiring the use of a patented key. Cylinders are to be protected from unauthorized manufacture and distribution by manufacturer's United States patents. Cylinders are to be factory keyed with owner having the ability for on-site original key cutting.
1. Patented key systems shall not be established with products that have an expired patent. Expired systems shall only be specified and supplied to support existing systems.
  2. Manufacturers:
    - a. Yale Commercial (YA) - Keymark.
- E. Keying System: Each type of lock and cylinders to be factory keyed.
1. Supplier shall conduct a "Keying Conference" to define and document keying system instructions and requirements.
  2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
  3. New System: Key locks to a new key system as directed by the Owner.
- F. Key Quantity: Provide the following minimum number of keys:
1. Change Keys per Cylinder: Two (2)
  2. Master Keys (per Master Key Level/Group): Five (5).
  3. Construction Keys (where required): Ten (10).
  4. Construction Control Keys (where required): Two (2).
  5. Permanent Control Keys (where required): Two (2).
- G. Construction Keying: Provide temporary keyed construction cores.
- H. Key Registration List (Bitting List):
1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
  2. Provide transcript list in writing or electronic file as directed by the Owner.

### 2.5 AUXILIARY LOCKS

- A. Narrow Case Deadlocks and Deadlatches: ANSI/BHMA 156.13 Series 1000 Grade 1 narrow case deadlocks and deadlatches for swinging or sliding door applications. All functions shall be manufactured in a single sized case formed from 12 gauge minimum, corrosion resistant steel (option for fully stainless steel case and components). Provide minimum 2 7/8" throw laminated stainless steel bolt. Bottom rail deadlocks to have 3/8" diameter bolts.
1. Manufacturers:
    - a. Adams Rite Manufacturing (AD) - MS1850S / MS1950 Series.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 2.6 LOCK AND LATCH STRIKES

- A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
  - 1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
  - 2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
  - 3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
  - 4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.
  
- B. Standards: Comply with the following:
  - 1. Strikes for Mortise Locks and Latches: BHMA A156.13.
  - 2. Strikes for Bored Locks and Latches: BHMA A156.2.
  - 3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
  - 4. Dustproof Strikes: BHMA A156.16.

### 2.7 CONVENTIONAL EXIT DEVICES

- A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
  - 1. Exit devices shall have a five-year warranty.
  - 2. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
  - 3. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
  - 4. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.
  - 5. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
  - 6. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
    - a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
    - b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

7. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.
  8. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.
  9. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.
  10. Rail Sizing: Provide exit device rails factory sized for proper door width application.
  11. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.
- B. Conventional Push Rail Exit Devices (Commercial Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Fabricate latch bolts from cast stainless steel, Pullman type, incorporating a deadlocking feature.
1. Manufacturers:
    - a. Corbin Russwin Hardware (RU) - ED4000 / ED5000 Series.
    - b. Von Duprin (VD) - 35A/98 XP Series.
    - c. Yale Commercial (YA) - 6000 Series.

### 2.8 DOOR CLOSERS

- A. All door closers specified herein shall meet or exceed the following criteria:
1. General: Door closers to be from one manufacturer, matching in design and style, with the same type of door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers.
  2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
  3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.
  4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
  5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
  6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.
1. Heavy duty surface mounted door closers shall have a 25-year warranty.
  2. Manufacturers:
    - a. Corbin Russwin Hardware (RU) - DC6000 Series.
    - b. Norton Rixson (NO) - 7500 Series.
    - c. Yale Commercial (YA) - 4400 Series.

### 2.9 ARCHITECTURAL TRIM

#### A. Door Protective Trim

1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.
4. Protection Plates: ANSI/BHMA A156.6 protection plates (kick, armor, or mop), fabricated from the following:
  - a. Stainless Steel: 300 grade, 050-inchthick.
5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
6. Manufacturers:
  - a. Rockwood (RO).

### 2.10 DOOR STOPS AND HOLDERS

- A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of doorstops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
  - 1. Manufacturers:
    - a. Rockwood (RO).
- C. Overhead Door Stops and Holders: ANSI/BHMA A156.8, Grade 1 Certified Products Directory (CPD) listed overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.
  - 1. Manufacturers:
    - a. Norton Rixson (RF).

### 2.11 ARCHITECTURAL SEALS

- A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.
- B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
  - 1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.
- C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
  - 1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of Fire Tests of Door Assemblies.
- D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.
- E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### F. Manufacturers:

1. Pemko (PE).

### 2.12 ELECTRONIC ACCESSORIES

- A. Door Position Switches: Door position magnetic reed contact switches specifically designed for use in commercial door applications. On recessed models the contact and magnetic housing snap-lock into a 1" diameter hole. Surface mounted models include wide gap distance design complete with armored flex cabling. Provide SPDT, N/O switches with optional Rare Earth Magnet installation on steel doors with flush top channels.

#### 1. Manufacturers:

- a. Securitron (SU) - DPS Series.

### 2.13 FABRICATION

- A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

### 2.14 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

## PART 3 - EXECUTION

### 3.3 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.



## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 3.4 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
- B. Wood Doors: Comply with ANSI/DHI A115-W series.

### 3.5 INSTALLATION

- A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
  - 1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
  - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
  - 2. DHI TDH-007-20: Installation Guide for Doors and Hardware.
  - 3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
  - 4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
- C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
- D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
- E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

### 3.6 FIELD QUALITY CONTROL

- A. Field Inspection (Punch Report): Reference Division 01 Sections "Closeout Procedures". Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

1. Organization of List: Include separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.

### 3.7 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

### 3.8 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
- B. Clean adjacent surfaces soiled by door hardware installation.
- C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

### 3.9 DEMONSTRATION

- A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

### 3.10 DOOR HARDWARE SETS

- A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

1. Quantities listed are for each pair of doors, or for each single door.
2. The supplier is responsible for handing and sizing all products.
3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.
4. At existing openings with new hardware, the supplier shall field inspect existing conditions prior to the submittal stage to verify the specified hardware will work as required. Provide alternate solutions and proposals as needed.

- B. Manufacturer's Abbreviations:  
MK - McKinney

MAINTENANCE BUILDING ADDITION AND RENOVATIONS

PE - Pemko  
 YA - Yale  
 AD - Adams Rite  
 RO - Rockwood  
 RF - Rixson  
 NO - Norton  
 SU - Securitron  
 OT - Other

Hardware Sets

Set: 1

Doors: 1,7

3 Hinge, Full Mortise	TA2714	US26D	MK
1 Entry Lock	AU 5404LN 1210 Temp Core-6 pin	626	YA
1 Cylinder Core	K800	626	YA
1 Deadbolt	D112	626	YA
1 Door Closer	CLP7500T	689	NO
2 Kick Plate	K1050 10" CSK BEV	US32D	RO
3 Silencer	608 (or) 609		RO
1 Threshold	278x292AFGPK MSES25SS		PE
1 Rain Guard	346C		PE
2 Sweep (w/drip edge)	3452CNB		PE

Set: 2

Doors: 8

1 Privacy Lock	AU 5402LN	626	YA
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Set: 3

Doors: 9,10

1 Entry Lock	AU 5404LN 1210 Temp Core-6 pin	626	YA
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END OF SECTION

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## SECTION 091110 - NON-LOAD-BEARING STEEL FRAMING

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes non-load-bearing steel framing members for the following applications:
  - 1. Interior framing systems (e.g., supports for partition walls, framed soffits, furring, etc.).

#### 1.2 SUBMITTALS

- A. Product data sheets listing dimensions, load carrying capacity and standards compliance.

#### 1.3 PROJECT CONDITIONS

- A. Environmental Requirements:
  - 1. Verify weather tightness of area receiving suspension system prior to installation.
  - 2. Wet trades work to be thoroughly dry and complete prior to installation.
  - 3. Installation to begin only when temperature and humidity conditions closely approximate interior conditions which will exist when area is complete and occupied.
  - 4. Heating and air conditioning systems to be operating prior to, during, and after installation.

#### 1.4 MAINTENANCE

Furnish additional material equal to two (2) percent of ceiling area.

#### 1.5 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: For fire-resistance-rated assemblies that incorporate non-load-bearing steel framing, 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.

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## PART 2 - PRODUCTS

### 2.1 NON-LOAD-BEARING STEEL FRAMING, GENERAL

#### A. Metal Framing Manufacturers:

1. Current member of SSMA.

#### B. Framing Members, General: Comply with ASTM C 754 for conditions indicated.

1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal, unless otherwise indicated.
2. Protective Coating: ASTM A 653/A 653M, G40, hot-dip galvanized, unless otherwise indicated.

### 2.2 STEEL FRAMING FOR FRAMED ASSEMBLIES

#### A. Framing Materials:

1. Studs and Tracks: ASTM C645; galvanized sheet steel, size as indicated on Drawings 'C' shape with the following minimum base metal thicknesses:
  - a. Studs with Tile Wall Finish: Minimum 30 mils (20 gage).
  - b. Other Studs: Minimum 30 mils (20 gage).
  - c. Studs and tracks with thicknesses equivalent to those specified are permitted, provided structural properties meet or exceed properties of studs with specified thickness.
2. Shaft Wall Studs and Accessories: Manufacturers standard shape for rating indicated.
3. Deep Leg Deflection Track: ASTM C645 top runner with 2 inch deep flanges.
4. Furring, Framing and Accessories: ASTM C645.
5. Anchorage to Substrate: Tie wire, nails, screws, and other metal supports, of type and size to suit application; to rigidly secure materials in place.

### 2.3 AUXILIARY MATERIALS

#### A. General: Provide auxiliary materials that comply with referenced installation standards.

1. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

#### B. Isolation Strip at Exterior Walls: Provide one of the following:

1. Asphalt-Saturated Organic Felt: ASTM D 226, Type I (No.15 asphalt felt), non-perforated.
2. Foam Gasket: Adhesive-backed, closed-cell vinyl foam strips that allows fastener penetration without foam displacement, 1/8 inch thick, in width to suit steel stud size.

# MAINTENANCE BUILDING ADDITION AND RENOVATIONS

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance.
  - 1. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Suspended Assemblies: Coordinate installation of suspension systems with installation of overhead structure to ensure that inserts and other provisions for anchorages to building structure have been installed to receive hangers at spacing required to support the Work and that hangers will develop their full strength.
  - 1. Furnish concrete inserts and other devices indicated to other trades for installation in advance of time needed for coordination and construction.

### 3.3 INSTALLATION, GENERAL

- A. Installation Standard: ASTM C 754, except comply with framing sizes and spacing indicated.
  - 1. Gypsum Plaster Assemblies: Also comply with requirements in ASTM C 841 that apply to framing installation.
  - 2. Portland Cement Plaster Assemblies: Also comply with requirements in ASTM C 1063 that apply to framing installation.
  - 3. Gypsum Board Assemblies: Also comply with requirements in ASTM C 840 that apply to framing installation.
- B. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.
- C. Install bracing at terminations in assemblies.
- D. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.

### 3.4 REPAIR

- A. Remove damaged components, replace with undamaged components. Clean with non-solvent based non-abrasive commercial cleaning solution.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

### 3.5 INSTALLING FRAMED ASSEMBLIES

- A. Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and exterior wall.
- B. Install studs so flanges within framing system point in same direction.
  - 1. Space studs as follows:
    - a. Single-Layer Application: 16 inches o.c., unless otherwise indicated on Drawings.
    - b. Multilayer Application: 16 inches o.c., unless otherwise indicated on Drawings.
    - c. Tile backing panels: 16 inches o.c., unless otherwise indicated on Drawings.
- C. Install tracks (runners) at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts penetrating partitions above ceiling.
  - 1. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.
  - 2. Door Openings: Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.
    - a. Install two studs at each jamb, unless otherwise indicated.
    - b. Install cripple studs at head adjacent to each jamb stud, with a minimum 1/2-inch clearance from jamb stud to allow for installation of control joint in finished assembly.
    - c. Extend jamb studs through suspended ceilings and attach to underside of overhead structure.
  - 3. Other Framed Openings: Frame openings other than door openings the same as required for door openings, unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.
  - 4. Fire-Resistance-Rated Partitions: Install framing to comply with fire-resistance-rated assembly indicated and support closures and to make partitions continuous from floor to underside of solid structure.
    - a. Firestop Track: Where indicated, install to maintain continuity of fire-resistance- rated assembly indicated.
  - 5. Sound-Rated Partitions: Install framing to comply with sound-rated assembly indicated.
  - 6. Curved Partitions:
    - a. Bend track to uniform curve and locate straight lengths so they are tangent to arcs.

## MAINTENANCE BUILDING ADDITION AND RENOVATIONS

- b. Begin and end each arc with a stud, and space intermediate studs equally along arcs. On straight lengths of not less than 2 studs at ends of arcs, place studs 6 inches o.c.
- D. Direct Furring:
- 1. Attach to concrete or masonry with stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches o.c.
- E. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch from the plane formed by faces of adjacent framing.

END OF SECTION