

PROJECT MANUAL

Homewood North Window Replacements - AMP-20

IFB for Contract No. 600-14-19

GENERAL CONSTRUCTION

Bids Due

July 8, 2019

2:00 pm

Procurement Dept. 100
Ross St.
2nd FL. Suite 200
Pittsburgh, PA 15219

Attn:
Mr. Kim Detrick,
Director of
Procurement

CONSULTANT: Tusick & Associates

Issued: June 3, 2019

Caster D. Binion
Executive Director

Housing Authority of the City of Pittsburgh

Point of Contact: Kim.Detrick@hacp.org
or 412-456-5116 Opt 1



Procurement Department
100 Ross Street, Suite 200
Pittsburgh, PA 15219
Phone: (412) 456-5116
Fax: (412) 456-5007
www.hacp.org

NOTICE TO PROSPECTIVE BIDDERS

June 3, 2019

INVITATION FOR BIDS (IFB)

Homewood North Window Replacements - AMP-20

The HOUSING AUTHORITY OF THE CITY OF PITTSBURGH will receive separate sealed bids for Homewood North Window Replacements - AMP-20; for the following contracts:

GENERAL CONSTRUCTION

Bid documents will be available on **June 3, 2019** . A Pre-Bid Conference will be held on **June 27, 2019** at **9:00 am** , at 10 Albertice Street, Pittsburgh, PA 15208

A site visit of the property will be conducted thereafter. Bidders shall be prepared to review all aspects of the site necessary to prepare a bid. The last day for submission of written questions will be **July 1, 2019 until 2:00p.m.** *Bids will be received at the HACP Procurement*

Department, 100 Ross Street – Suite 200 (2nd Floor), Pittsburgh, PA, 15219 until 2:00 pm on

July 8, 2019 , at which time and place all bids will be publicly opened and read aloud.

The work must be substantially complete within 180 calendar days of the Notice to Proceed.

Point of contact for the Housing Authority is Mr. Kim Detrick at (412) 456-5116 Opt 1.

TO VIEW AND OBTAIN DOCUMENTS

Bid Documents, including the Bid Forms, Project Manual, and Drawings, may be obtained from the Business Opportunities Section of the HACP website, www.hacp.org. Prospective Bidders may register as a vendor on the website and download the documents free of charge. Electronic versions of the Bid Documents may also be obtained in person, Monday through Friday 8:30 a.m. to 4:30 p.m. at the Housing Authority of the City of Pittsburgh's Procurement Department, located at 100 Ross Street, Suite 200, Pittsburgh, PA 15219.

AWARD OF CONTRACT (S):

It is the intention of the Authority to award a contract to the lowest responsive and responsible bidder.

All bids shall remain open for the period specified in the IFB, which in no case shall be less than sixty (60) calendar days from the bid opening.

All bids of \$10,000 or more must be accompanied by a negotiable bid guarantee that shall not be less than 5% of the amount of the bid. No bid guarantee is required for bids under \$10,000. In accordance with 2 CFR 200.318(h) formerly 24 CFR Section 85.36(b)(8), the Authority is permitted to make awards only to responsible bidders possessing the ability to perform successfully under the terms and conditions of the proposed contract. Prior to award of any contract, the Authority shall conduct a pre-contract survey. Consideration will be given to such matters as bidder integrity, compliance with public policy, record of past performance, and financial and technical resources.

All bids must include a completed and signed Form of Agreement (Form 00500) as part of the bid. If the bid is successful and approved by HACP Board of Commissioners (if applicable), HACP will also sign the Form of Agreement thus creating a binding contract.

The successful bidder will be required to furnish an assurance of completion (performance and payment bond) each equal to 100% of the contract price.

The Authority reserves the right to reject any or all bids or to waive any informality in the bidding.

EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS:

The Contractor will be required to comply with all applicable Equal Employment Opportunity requirements for Federally-Assisted Construction Contracts. The Contractor must insure that employees and applicants for employment are not discriminated against because of race, color, religion, sexual preference, handicap or national origin.

A. Section 3 Participation

The work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C 1701u and with HUD's regulations set forth at 24 CFR Part 135 ("Section 3"). The purpose of Section 3 is to ensure that employment and other economic opportunities generated by HUD assistance shall be directed to low and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

Please describe ways the Bidder will assist HACP to comply with HUD's Section 3 requirements for hiring HACP residents and/or local disadvantaged individuals and businesses by reviewing the Section 3 Clause and by completing **Document 00433 – Section 3 Form**.

Section 3 of the Housing and Urban Development Act of 1968, as amended (12 U.S.C. 1701, et seq.) (the “Act”) requires the Housing Authority of the City of Pittsburgh to ensure that employment and other economic and business opportunities generated by financial assistance from the Department of Housing and Urban Development (“HUD”), to the greatest extent feasible, are directed to public housing residents and other low income persons, particularly recipients of government housing assistance, and business concerns that provide economic opportunities to low and very low income persons.

To comply with the Act HACP requires its contractors to provide equal employment opportunity to all employees and applicants for employment without regard to race, color, religion, sex, national origin, disability, veteran’s or marital status, or economic status and to take affirmative action to ensure that both job applicants and existing employees are given fair and equal treatment.

The goal of this policy is to obtain a reasonable level of success in the recruitment, employment, and utilization of HACP residents and other eligible persons and/or businesses by contractors working on contracts partially or wholly funded with HUD monies. HACP shall examine and consider a contractor’s potential for success in providing employment and business opportunities to those covered under Section 3 prior to acting on any proposed contract award. In response to any RFP, RFQ or IFB HACP will require submission of the Section 3 Opportunities Plan and roster of current employees, and certification that the bidder will comply with the requirements of Section 3 either by hiring Section 3 employees to directly perform under the contract or by committing a dollar amount to HACP’s Section 3 program in an amount consistent with the chart below. Below are the HACP Section 3 Guidelines as listed in the HACP Section 3 Program Manual:

RESIDENT HIRING REQUIREMENTS / RESIDENT HIRING SCALE

TOTAL LABOR DOLLARS USE TOTAL CONTRACT AMOUNT FOR SERVICE CONTRACTS	RESIDENT LABOR AS A % OF TOTAL LABOR A. DOLLARS
Labor dollars \$25,000 but less than \$100,000	10% of the labor dollars
\$100,000, but less than \$200,000	9% of the labor dollars
At least \$200,000, but less than \$300,000	8% of the labor dollars
At least \$300,000, but less than \$400,000	7% of the labor dollars
At least \$400,000, but less than \$500,000	6% of the labor dollars
At least \$500,000, but less than \$1 million	5% of the labor dollars
At least \$1 million, but less than \$2 million	4% of the labor dollars
At least \$2 million, but less than \$4 million	3% of the labor dollars
At least \$4 million, but less than \$7 million	2% of the labor dollars
\$7 million or more	½ to 1 % of the labor dollars

****A copy of HACP’s Section 3 Program Manual is available for download at www.hacp.org**

A copy of HUD's Section 3 requirement is provided herein. If you have any questions regarding the Section 3 Requirements or would like to discuss goals and planning for Section 3 Requirements please contact Mr. Lloyd Wilson, Section 3 Coordinator, by e-mail at lloyd.wilson@hacp.org or by contacting him at the Housing Authority of the City of Pittsburgh, Resident Employment Program located at the Bedford Hope Center, 2305 Bedford Ave, Pittsburgh PA 15219, telephone (412) 395-3950, ext. 1048. Proposals must demonstrate how the Offeror intends to meet or exceed the Authority's Section 3 requirements. Proposals submitted without a Section 3 plan may be deemed nonresponsive. Also, please complete **Section 3 Opportunities Plan** and include with your proposal.

Any bid or proposal received from a contractor that does not contain a Section 3 Opportunities Plan or certification and back-up documentation acceptable to HACP shall be deemed non-responsive by HACP.

B. MBE/WBE Participation Plan

HACP MBE and WBE Goals. It is the policy of HACP to ensure that Minority Business Enterprises (MBEs) and Women-owned Businesses (WBEs) are provided maximum opportunity to participate in contracts let by HACP. In accordance with Executive Order 11625, HACP has established a minimum threshold of eighteen percent (18%) of the total dollar amount for MBE utilization in this contract. HACP has established a seven percent (7%) minimum threshold for participation of WBEs, and, HACP strongly encourages and affirmatively promotes the use of MBEs and WBEs in all HACP contracts. For these purposes, an MBE is defined as "any legal entity other than a joint venture, organized to engage in commercial transactions, that is at least fifty-one percent (51%) owned and controlled by one or more minority persons." Also, a minority person is defined as a member of a socially or economically disadvantaged minority group, which includes African-Americans, Hispanic-Americans, Native-Americans, and Asian-Americans. A WBE/MBE is defined as "any legal entity other than a joint venture, organized to engage in commercial transactions, that is at least fifty-one percent (51%) owned and controlled by a female.

Bids or proposals submitted in response to this solicitation MUST include an MBE/WBE participation plan which, at a minimum demonstrates "Best Efforts" have been taken to achieve compliance with MBE/WBE goals. HACP's Procurement Policy defines "Best Efforts" in compliance with MBE/WBE goals to mean that the contractor must certify and document with its bid or proposal that it has contacted in writing at least ten (10) certified MBE and ten (10) certified WBE subcontractors to participate in the proposed contract with or lesser number if the contractor provides documentation that ten (10) certified MBE/WBE contractors could not be identified. Each contractor shall certify as to same under penalty of perjury and shall submit the back-up documentation with its bid or proposal. Any bid or proposal received from a contractor that does not contain such certification and back-up documentation acceptable to HACP may be deemed non-responsive by HACP.

If you have any questions regarding the HACP MBE/WBE goals please contact Mr. Kim Detrick, Director of Procurement, by e-mail at kim.detrick@hacp.org or by contacting him at the Procurement Department/Chief Contracting Officer, Housing Authority of the City of Pittsburgh, 100 Ross Street, Suite 200 Pittsburgh PA 15219, telephone (412) 456-5116 opt.1. Bids or proposals must demonstrate how the Offeror intends to meet or exceed these goals.

The Authority's Minority and Woman Business (MBE/WBE) participation goals are as follows:

- MBE Goal: 18%
- WBE Goal: 7%

Additionally, please be advised that participation credit will be applied in accordance with the following classifications, as follows:

- Broker: 10% of contract face value
- Supplier: 60% of contract face value
- Bona Fide Contractor: 100% of contract face value
- All Professional Service Firms: 100% of contract face value

Vendor definitions for the above classifications are to be referenced in either the respective vendor MBE/WBE certifications or as defined in 49 CFR Part 26.

Please describe ways the Bidder will utilize MBE/WBE businesses to meet the goals above by completing **Document 00434 – MBE/WBE Solicitation & Commitment Record**.

Caster D. Binion
Executive Director
Housing Authority of the City of Pittsburgh



Development & Modernization
100 Ross Street, Suite 200
Pittsburgh, PA 15219
(412) 456-5020
www.hacp.org

SPECIAL PROVISIONS

NOTICE TO ALL PROSPECTIVE BIDDERS

Homewood North Window Replacements - AMP-20

CONTRACT NO. 600-14-19

Each successful bidder(s) shall be required to comply with the following special provisions:

A. Required Documents/Information

After bid opening and determination of the responsive and responsible bidder, but prior to Notice to Proceed each successful bidder for this project shall provide the following documents/information to HACP within ten (10) business days of receiving written notice thereof:

- (1) Insurance
- (2) Payment and Performance Bonds
- (3) Construction Schedule
- (4) Submittal Log and Corresponding Submittals

Please accept these special provisions by completing the information requested below:

Signature of Authorized Officer: _____ Date: _____

Name of Contractor: _____

Address: _____

Telephone Number: _____

Homewood North Window Replacements - AMP-20

IFB CONTRACT NO. 600-14-19

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH
DEVELOPMENT & MODERNIZATION DEPARTMENT

100 Ross Street, Suite 200

Pittsburgh, PA 15219

Phone: (412) 456-5020

Fax: (412) 456-5591

Issued: June 3, 2019

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

Homewood North Window Replacements - AMP-20

HACP Contract No. 600-14-19

**PROJECT MANUAL
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Document 00004	IFB List of Documents

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<i>Pre-Bid Information</i>	Document 00090	Identification of Owner
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<i>Instructions To Bidders</i>	HUD 5369 Document 00130	Instructions to Bidders for Contracts Pre-Bid Conference
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<i>Information Available To Bidders</i>	Document 00210	Project Schedule
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PART TWO: CONTRACT FORMS

<i>Bid Forms</i>	Document 00310 Document 00311	Scope of Work for General Construction Form of Bid for General Construction
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<i>Supplements To Bid Forms</i>	Document 00410 Document 00420 Document 00433 Document 00434 Document 00435 Document 00436 HUD 5369-A HUD-2530 Document 00437 Document 00485	Bid Bond Statement of Bidder's Qualifications Section 3 Opportunities Plan MBE/WBE Solicitation & Commitment Record Bidder Manpower Previous Related Experience Representations, Certifications and Other Statements of Bidders Previous Participation Certificate Special Provisions – Notice to All Prospective Bidders Non-Collusion Affidavit
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<i>Agreement</i>	Document 00500	Form of Agreement
<i>Forms</i>	Document 00590	Contracting Officer Certification
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HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

Homewood North Window Replacements - AMP-20

HACP CONTRACT NO. 600-14-19

INVITATION FOR BIDS LIST OF DOCUMENTS

The HOUSING AUTHORITY OF THE CITY OF PITTSBURGH will receive separate sealed bids for Homewood North Window Replacements - AMP-20, for the following contracts:

GENERAL CONSTRUCTION

A complete **Invitation for Bids (IFB)** consists of the following documents:

THE PROJECT MANUAL, dated June 3, 2019 consisting of:

Bidding Requirements, Contract Forms, Conditions of the Contract, Wage Determination, and the Specifications.

THE PROJECT DRAWINGS, as prepared by Tusick & Associates, dated September 1, 2015.

THE BID PACKAGE, dated June 3, 2019 is accessible on HACP's website and consists of:

Blank bid document forms to be completed by the bidder;

ADDENDA will be issued as required.

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

IDENTIFICATION OF OWNER

The Owner of this project is the Housing Authority of the City of Pittsburgh, a body corporate and politic and created pursuant to the "Housing Authorities Law," an Act passed by the 1937 session of the Legislature of the Commonwealth of Pennsylvania, P.L. 955, approved May 28, 1937, hereinafter variously called the "Housing Authority of the City of Pittsburgh" (HACP), "The Authority," the "Local Housing Authority" (LHA), the "Public Housing Authority" (PHA), or the "Public Housing Authority/Indian Housing Authority" (PHA/IHA).

**Caster D. Binion
Executive Director
Housing Authority of the City of Pittsburgh**

**James D. Harris, Esquire
General Counsel
Housing Authority of the City of Pittsburgh**

**Kim Detrick
Director of Procurement
Housing Authority of the City of Pittsburgh**

**U.S. Department of Housing and
Urban Development**
Office of Public and Indian Housing

**Instructions to Bidders for Contracts
Public and Indian Housing Programs**

Instructions to Bidders for Contracts

Public and Indian Housing Programs

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1. Bid Preparation and Submission

(a) Bidders are expected to examine the specifications, drawings, all instructions, and, if applicable, the construction site (see also the contract clause entitled **Site Investigation and Conditions Affecting the Work** of the *General Conditions of the Contract for Construction*). Failure to do so will be at the bidders' risk.

(b) All bids must be submitted on the forms provided by the Public Housing Agency/Indian Housing Authority (PHA/IHA). Bidders shall furnish all the information required by the solicitation. Bids must be signed and the bidder's name typed or printed on the bid sheet and each continuation sheet which requires the entry of information by the bidder. Erasures or other changes must be initialed by the person signing the bid. Bids signed by an agent shall be accompanied by evidence of that agent's authority. (Bidders should retain a copy of their bid for their records.)

(c) Bidders must submit as part of their bid a completed form HUD-5369-A, "Representations, Certifications, and Other Statements of Bidders."

(d) All bid documents shall be sealed in an envelope which shall be clearly marked with the words "Bid Documents," the Invitation for Bids (IFB) number, any project or other identifying number, the bidder's name, and the date and time for receipt of bids.

(e) If this solicitation requires bidding on all items, failure to do so will disqualify the bid. If bidding on all items is not required, bidders should insert the words "No Bid" in the space provided for any item on which no price is submitted.

(f) Unless expressly authorized elsewhere in this solicitation, alternate bids will not be considered.

(g) Unless expressly authorized elsewhere in this solicitation, bids submitted by telegraph or facsimile (fax) machines will not be considered.

(h) If the proposed contract is for a Mutual Help project (as described in 24 CFR Part 905, Subpart E) that involves Mutual Help contributions of work, material, or equipment, supplemental information regarding the bid advertisement is provided as an attachment to this solicitation.

2. Explanations and Interpretations to Prospective Bidders

(a) Any prospective bidder desiring an explanation or interpretation of the solicitation, specifications, drawings, etc., must request it at least 7 days before the scheduled time for bid opening. Requests may be oral or written. Oral requests must be confirmed in writing. The only oral clarifications that will be provided will be those clearly related to solicitation procedures, i.e., not substantive technical information. No other oral explanation or interpretation will be provided. Any information given a prospective bidder concerning this solicitation will be furnished promptly to all other prospective bidders as a written amendment to the solicitation, if that information is necessary in submitting bids, or if the lack of it would be prejudicial to other prospective bidders.

(b) Any information obtained by, or provided to, a bidder other than by formal amendment to the solicitation shall not constitute a change to the solicitation.

3. Amendments to Invitations for Bids

(a) If this solicitation is amended, then all terms and conditions which are not modified remain unchanged.

(b) Bidders shall acknowledge receipt of any amendment to this solicitation (1) by signing and returning the amendment, (2) by identifying the amendment number and date on the bid form, or (3) by letter, telegram, or facsimile, if those methods are authorized in the solicitation. The PHA/IHA must receive acknowledgement by the time and at the place specified for receipt of bids. Bids which fail to acknowledge the bidder's receipt of any amendment will result in the rejection of the bid if the amendment(s) contained information which substantively changed the PHA's/IHA's requirements.

(c) Amendments will be on file in the offices of the PHA/IHA and the Architect at least 7 days before bid opening.

4. Responsibility of Prospective Contractor

(a) The PHA/IHA will award contracts only to responsible prospective contractors who have the ability to perform successfully under the terms and conditions of the proposed contract. In determining the responsibility of a bidder, the PHA/IHA will consider such matters as the bidder's:

- (1) Integrity;
- (2) Compliance with public policy;
- (3) Record of past performance; and
- (4) Financial and technical resources (including construction and technical equipment).

(b) Before a bid is considered for award, the bidder may be requested by the PHA/IHA to submit a statement or other documentation regarding any of the items in paragraph (a) above. Failure by the bidder to provide such additional information shall render the bidder nonresponsible and ineligible for award.

5. Late Submissions, Modifications, and Withdrawal of Bids

(a) Any bid received at the place designated in the solicitation after the exact time specified for receipt will not be considered unless it is received before award is made and it:

(1) Was sent by registered or certified mail not later than the fifth calendar day before the date specified for receipt of offers (e.g., an offer submitted in response to a solicitation requiring receipt of offers by the 20th of the month must have been mailed by the 15th);

(2) Was sent by mail, or if authorized by the solicitation, was sent by telegram or via facsimile, and it is determined by the PHA/IHA that the late receipt was due solely to mishandling by the PHA/IHA after receipt at the PHA/IHA; or

(3) Was sent by U.S. Postal Service Express Mail Next Day Service - Post Office to Addressee, not later than 5:00 p.m. at the place of mailing two working days prior to the date specified for receipt of proposals. The term "working days" excludes weekends and observed holidays.

(b) Any modification or withdrawal of a bid is subject to the same conditions as in paragraph (a) of this provision.

(c) The only acceptable evidence to establish the date of mailing of a late bid, modification, or withdrawal sent either by registered or certified mail is the U.S. or Canadian Postal Service postmark both on the envelope or wrapper and on the original receipt from the U.S. or Canadian Postal Service. Both postmarks must show a legible date or the bid, modification, or withdrawal shall be processed as if mailed late. "Postmark" means a printed, stamped, or otherwise placed impression (exclusive of a postage meter machine impression) that is readily identifiable without further action as having been supplied and affixed by employees of the U.S. or Canadian Postal Service on the date of mailing. Therefore, bidders should request the postal clerk to place a hand cancellation bull's-eye postmark on both the receipt and the envelope or wrapper.

(d) The only acceptable evidence to establish the time of receipt at the PHA/IHA is the time/date stamp of PHA/IHA on the proposal wrapper or other documentary evidence of receipt maintained by the PHA/IHA.

(e) The only acceptable evidence to establish the date of mailing of a late bid, modification, or withdrawal sent by Express Mail Next Day Service-Post Office to Addressee is the date entered by the post office receiving clerk on the "Express Mail Next Day Service-Post Office to Addressee" label and the postmark on both the envelope or wrapper and on the original receipt from the U.S. Postal Service. "Postmark" has the same meaning as defined in paragraph (c) of this provision, excluding postmarks of the Canadian Postal Service. Therefore, bidders should request the postal clerk to place a legible hand cancellation bull's eye postmark on both the receipt and Failure by a bidder to acknowledge receipt of the envelope or wrapper.

(f) Notwithstanding paragraph (a) of this provision, a late modification of an otherwise successful bid that makes its terms more favorable to the PHA/IHA will be considered at any time it is received and may be accepted.

(g) Bids may be withdrawn by written notice, or if authorized by this solicitation, by telegram (including mailgram) or facsimile machine transmission received at any time before the exact time set for opening of bids; provided that written confirmation of telegraphic or facsimile withdrawals over the signature of the bidder is mailed and postmarked prior to the specified bid opening time. A bid may be withdrawn in person by a bidder or its authorized representative if, before the exact time set for opening of bids, the identity of the person requesting withdrawal is established and the person signs a receipt for the bid.

6. Bid Opening

All bids received by the date and time of receipt specified in the solicitation will be publicly opened and read. The time and place of opening will be as specified in the solicitation. Bidders and other interested persons may be present.

7. Service of Protest

(a) Definitions. As used in this provision:

"Interested party" means an actual or prospective bidder whose direct economic interest would be affected by the award of the contract.

"Protest" means a written objection by an interested party to this solicitation or to a proposed or actual award of a contract pursuant to this solicitation.

(b) Protests shall be served on the Contracting Officer by obtaining written and dated acknowledgement from —

Contracting Officer
Legal Department
Housing Authority of the City of Pittsburgh
200 Ross Street, 7th Floor
Pittsburgh, PA 15219

[Contracting Officer designate the official or location where a protest may be served on the Contracting Officer]

(c) All protests shall be resolved in accordance with the PHA's/IHA's protest policy and procedures, copies of which are maintained at the PHA/IHA.

8. Contract Award

(a) The PHA/IHA will evaluate bids in response to this solicitation without discussions and will award a contract to the responsible bidder whose bid, conforming to the solicitation, will be most advantageous to the PHA/IHA considering only price and any price-related factors specified in the solicitation.

(b) If the apparent low bid received in response to this solicitation exceeds the PHA's/IHA's available funding for the proposed contract work, the PHA/IHA may either accept separately priced items (see 8(e) below) or use the following procedure to determine contract award. The PHA/IHA shall apply in turn to each bid (proceeding in order from the apparent low bid to the high bid) each of the separately priced bid deductible items, if any, in their priority order set forth in this solicitation. If upon the application of the first deductible item to all initial bids, a new low bid is within the PHA's/IHA's available funding, then award shall be made to that bidder. If no bid is within the available funding amount, then the PHA/IHA shall apply the second deductible item. The PHA/IHA shall continue this process until an evaluated low bid, if any, is within the PHA's/IHA's available funding. If upon the application of all deductibles, no bid is within the PHA's/IHA's available funding, or if the solicitation does not request separately priced deductibles, the PHA/IHA shall follow its written policy and procedures in making any award under this solicitation.

(c) In the case of tie low bids, award shall be made in accordance with the PHA's/IHA's written policy and procedures.

(d) The PHA/IHA may reject any and all bids, accept other than the lowest bid (e.g., the apparent low bid is unreasonably low), and waive informalities or minor irregularities in bids received, in accordance with the PHA's/IHA's written policy and procedures.

(e) Unless precluded elsewhere in the solicitation, the PHA/IHA may accept any item or combination of items bid.

(f) The PHA/IHA may reject any bid as nonresponsive if it is materially unbalanced as to the prices for the various items of work to be performed. A bid is materially unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated for other work.

(g) A written award shall be furnished to the successful bidder within the period for acceptance specified in the bid and shall result in a binding contract without further action by either party.

9. Bid Guarantee (applicable to construction and equipment contracts exceeding \$25,000)

All bids must be accompanied by a negotiable bid guarantee which shall not be less than five percent (5%) of the amount of the bid. The bid guarantee may be a certified check, bank draft, U.S. Government Bonds at par value, or a bid bond secured by a surety company acceptable to the U.S. Government and authorized to do business in the state where the work is to be performed. In the case where the work under the contract will be performed on an Indian reservation area, the bid guarantee may also be an irrevocable Letter of Credit (see provision 10, Assurance of Completion, below). Certified checks and bank drafts must be made payable to the order of the PHA/IHA. The bid guarantee shall insure the execution of the contract and the furnishing of a method of assurance of completion by the successful bidder as required by the solicitation. Failure to submit a bid guarantee with the bid shall result in the rejection of the bid. Bid guarantees submitted by unsuccessful bidders will be returned as soon as practicable after bid opening.

10. Assurance of Completion

(a) Unless otherwise provided in State law, the successful bidder shall furnish an assurance of completion prior to the execution of any contract under this solicitation. This assurance may be [Contracting Officer check applicable items] —

☒ (1) a performance and payment bond in a penal sum of 100 percent of the contract price; or, as may be required or permitted by State law;

☐ (2) separate performance and payment bonds, each for 50 percent or more of the contract price;

☐ (3) a 20 percent cash escrow;

☐ (4) a 25 percent irrevocable letter of credit; or,

☐ (5) an irrevocable letter of credit for 10 percent of the total contract price with a monitoring and disbursements agreement with the IHA (applicable only to contracts awarded by an IHA under the Indian Housing Program).

(b) Bonds must be obtained from guarantee or surety companies acceptable to the U.S. Government and authorized to do business in the state where the work is to be performed. Individual sureties will not be considered. U.S. Treasury Circular Number 570, published annually in the Federal Register, lists companies approved to act as sureties on bonds securing Government contracts, the maximum underwriting limits on each contract bonded, and the States in which the company is licensed to do business. Use of companies listed in this circular is mandatory. Copies of the circular may be downloaded on the U.S. Department of Treasury website <http://www.fms.treas.gov/c570/index.html>, or ordered for a minimum fee by contacting the Government Printing Office at (202) 512-2168.

(c) Each bond shall clearly state the rate of premium and the total amount of premium charged. The current power of attorney for the person who signs for the surety company must be attached to the bond. The effective date of the power of attorney shall not precede the date of the bond. The effective date of the bond shall be on or after the execution date of the contract.

(d) Failure by the successful bidder to obtain the required assurance of completion within the time specified, or within such extended period as the PHA/IHA may grant based upon reasons determined adequate by the PHA/IHA, shall render the bidder ineligible for award. The PHA/IHA may then either award the contract to the next lowest responsible bidder or solicit new bids. The PHA/IHA may retain the ineligible bidder's bid guarantee.

11. Preconstruction Conference (applicable to construction contracts)

After award of a contract under this solicitation and prior to the start of work, the successful bidder will be required to attend a preconstruction conference with representatives of the PHA/IHA and its architect/engineer, and other interested parties convened by the PHA/IHA. The conference will serve to acquaint the participants with the general plan of the construction operation and all other requirements of the contract (e.g., Equal Employment Opportunity, Labor Standards). The PHA/IHA will provide the successful bidder with the date, time, and place of the conference.

12. Indian Preference Requirements (applicable only if this solicitation is for a contract to be performed on a project for an Indian Housing Authority)

(a) HUD has determined that the contract awarded under this solicitation is subject to the requirements of section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e(b)). Section 7(b) requires that any contract or subcontract entered into for the benefit of Indians shall require that, to the greatest extent feasible

(1) Preferences and opportunities for training and employment (other than core crew positions; see paragraph (h) below) in connection with the administration of such contracts or subcontracts be given to qualified "Indians." The Act defines "Indians" to mean persons who are members of an Indian tribe and defines "Indian tribe" to mean any Indian tribe, band, nation, or other organized group or community, including any Alaska Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act, which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians; and,

(2) Preference in the award of contracts or subcontracts in connection with the administration of contracts be given to Indian organizations and to Indian-owned economic enterprises, as defined in section 3 of the Indian Financing Act of 1974 (25 U.S.C. 1452). That Act defines "economic enterprise" to mean any Indian-owned commercial, industrial, or business activity established or organized for the purpose of profit, except that the Indian ownership must constitute not less than 51 percent of the enterprise; "Indian organization" to mean the governing body of any Indian tribe or entity established or recognized by such governing body; "Indian" to mean any person who is a member of any tribe, band, group, pueblo, or community which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs and any "Native" as defined in the Alaska Native Claims Settlement Act; and Indian "tribe" to mean any Indian tribe, band, group, pueblo, or community including Native villages and Native groups (including

corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs.

(b) (1) The successful Contractor under this solicitation shall comply with the requirements of this provision in awarding all subcontracts under the contract and in providing training and employment opportunities.

(2) A finding by the IHA that the contractor, either (i) awarded a subcontract without using the procedure required by the IHA, (ii) falsely represented that subcontracts would be awarded to Indian enterprises or organizations; or, (iii) failed to comply with the contractor's employment and training preference bid statement shall be grounds for termination of the contract or for the assessment of penalties or other remedies.

(c) If specified elsewhere in this solicitation, the IHA may restrict the solicitation to qualified Indian-owned enterprises and Indian organizations. If two or more (or a greater number as specified elsewhere in the solicitation) qualified Indian-owned enterprises or organizations submit responsive bids, award shall be made to the qualified enterprise or organization with the lowest responsive bid. If fewer than the minimum required number of qualified Indian-owned enterprises or organizations submit responsive bids, the IHA shall reject all bids and readvertise the solicitation in accordance with paragraph (d) below.

(d) If the IHA prefers not to restrict the solicitation as described in paragraph (c) above, or if after having restricted a solicitation an insufficient number of qualified Indian enterprises or organizations submit bids, the IHA may advertise for bids from non-Indian as well as Indian-owned enterprises and Indian organizations. Award shall be made to the qualified Indian enterprise or organization with the lowest responsive bid if that bid is -

(1) Within the maximum HUD-approved budget amount established for the specific project or activity for which bids are being solicited; and

(2) No more than the percentage specified in 24 CFR 905.175(c) higher than the total bid price of the lowest responsive bid from any qualified bidder. If no responsive bid by a qualified Indian-owned economic enterprise or organization is within the stated range of the total bid price of the lowest responsive bid from any qualified enterprise, award shall be made to the bidder with the lowest bid.

(e) Bidders seeking to qualify for preference in contracting or subcontracting shall submit proof of Indian ownership with their bids. Proof of Indian ownership shall include but not be limited to:

(1) Certification by a tribe or other evidence that the bidder is an Indian. The IHA shall accept the certification of a tribe that an individual is a member.

(2) Evidence such as stock ownership, structure, management, control, financing and salary or profit sharing arrangements of the enterprise.

(f) (1) All bidders must submit with their bids a statement describing how they will provide Indian preference in the award of subcontracts. The specific requirements of that statement and the factors to be used by the IHA in determining the statement's adequacy are included as an attachment to this solicitation. Any bid that fails to include the required statement shall be rejected as nonresponsive. The IHA may require that comparable statements be provided by subcontractors to the successful Contractor, and may require the Contractor to reject any bid or proposal by a subcontractor that fails to include the statement.

(2) Bidders and prospective subcontractors shall submit a certification (supported by credible evidence) to the IHA in any instance where the bidder or subcontractor believes it is infeasible to provide Indian preference in subcontracting. The acceptance or rejection by the IHA of the certification shall be final. Rejection shall disqualify the bid from further consideration.

(g) All bidders must submit with their bids a statement detailing their employment and training opportunities and their plans to provide preference to Indians in implementing the contract; and the number or percentage of Indians anticipated to be employed and trained. Comparable statements from all proposed subcontractors must be submitted. The criteria to be used by the IHA in determining the statement(s)'s adequacy are included as an attachment to this solicitation. Any bid that fails to include the required statement(s), or that includes a statement that does not meet minimum standards required by the IHA shall be rejected as nonresponsive.

(h) Core crew employees. A core crew employee is an individual who is a bona fide employee of the contractor at the time the bid is submitted; or an individual who was not employed by the bidder at the time the bid was submitted, but who is regularly employed by the bidder in a supervisory or other key skilled position when work is available. Bidders shall submit with their bids a list of all core crew employees.

(i) Preference in contracting, subcontracting, employment, and training shall apply not only on-site, on the reservation, or within the IHA's jurisdiction, but also to contracts with firms that operate outside these areas (e.g., employment in modular or manufactured housing construction facilities).

(j) Bidders should contact the IHA to determine if any additional local preference requirements are applicable to this solicitation.

(k) The IHA [] does [X] does not [Contracting Officer check applicable box] maintain lists of Indian-owned economic enterprises and Indian organizations by specialty (e.g., plumbing, electrical, foundations), which are available to bidders to assist them in meeting their responsibility to provide preference in connection with the administration of contracts and subcontracts.

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

Homewood North Window Replacements - AMP-20

HACP CONTRACT NO. 600-14-19

**NOTICE OF
PRE-BID CONFERENCE**

A Pre-Bid Conference will be held on June 27, 2019.

- A Pre-Bid Conference will be held on June 27, 2019 at 9:00 am, at the 10 Albertice Street, Pittsburgh, PA 15208. A site visit of the property will be conducted thereafter. Bidders shall be prepared to review all aspects of the site necessary to prepare a bid.
- Representatives of the Authority, the engineer and other interested parties will be in attendance.

All bidders are urged to attend.

- Bidders are responsible for examining the construction site. (Refer to "Instructions to Bidders for Contracts," Document HUD 5369, Clause 1, "Bid Preparation and Submission.") Notwithstanding the above, lack of attendance will not be a basis for rejecting a bid.
- Bidders are urged to examine the drawings and specifications prior to the Pre-Bid Conference.
- Nothing at the Pre-Bid Conference will change the terms of the IFB unless a subsequent Addendum is issued. (Refer to "Instructions to Bidders for Contracts," Document HUD 5369, Clause 2, "Explanations and Interpretations to Prospective Bidders.")

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

Homewood North Window Replacements - AMP-20

HACP CONTRACT NO. 600-14-19

PROJECT SCHEDULE

NO LATER THAN
June 3, 2019

Invitation for Bids issued

June 27, 2019
9:00 am

Pre-Bid Conference (Followed by Site Visit)

July 1, 2019
2:00 pm

Last day to submit written questions

July 8, 2019
2:00 pm

Bids due

August 1, 2019
(estimated)

Notice of Award

August, 2019
(estimated)

Execution of Contracts

August, 2019
(estimated)

Pre-Construction Conference

September, 2019

Construction Start

180 calendar days from
the effective date of the
Notice to Proceed.

All work required under this contract shall be complete

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

Homewood North Window Replacements - AMP-20

HACP CONTRACT NO. 600-14-19

***SCOPE OF WORK FOR
GENERAL CONSTRUCTION***

The Contract for General Construction shall consist of the following component parts:

1. THE AGREEMENT

(Bound in the Project Manual)

THE BID	Document 00310 - Scope of Work for General Construction Document 00311 - Form of Bid for General Construction
THE FORM OF AGREEMENT	Document 00500 - Form of Agreement Document 00590 - Contracting Officer Certification
CONDITIONS OF THE CONTRACT	Document HUD - 5370 General Conditions HACP Document - Supplemental General Conditions Document 00830 - Wage Determination Schedule

2. PRIMARY SPECIFICATIONS FOR THE GENERAL CONSTRUCTION CONTRACT

(Bound in the Project Manual)

All Work contained in the Primary Specifications listed below is the Work of the Contractor for this General Construction Contract unless specifically indicated otherwise.

Any Reference in the Primary Specifications to the "Contractor," the "Prime Contractor," or the "General Contractor" shall be interpreted as meaning the Contractor for this General Construction Contract.

The General Contractor shall coordinate the schedule and activities of work performed by this and all other Prime Contracts, as identified by (G)-General, (P)-Plumbing, (H)-HVAC, and (E)-Electrical.

It is the contractual responsibility of the Contractor for General Construction to familiarize himself with the work of the other prime contractors so that the Project as a whole can proceed in an orderly fashion. Failure to familiarize work by other trades would not be an excuse for corrective measures at no cost to the City of Pittsburgh Housing Authority.

For example, the General Contractor shall coordinate installation of general construction work with the requirements of the Plumbing, Mechanical, and Electrical Contractors.

Reference Standard for Incidental Work: Incidental work, as used in this paragraph, is work which is not a basic part of other Prime Contracts but which is required by reference.

For example, the General Contractor is required by his Primary Specifications to install and repair all general work. In the event that the Plumbing Contractor disturbs the general work, the patching, repair shall be done and follow the same Specification requirements of the appropriate Specification Section by the Plumbing Contractor even if that specification section may not be part of the Plumbing Contractor's Primary Specification. The same applies to all trades where incidental work occurs.

TECHNICAL SPECIFICATIONS MAY BE FOUND AT PART FOUR
OF THE PROJECT MANUAL

PLEASE ALSO REFER TO DRAWINGS

3. PRIMARY DRAWINGS FOR THE GENERAL CONSTRUCTION CONTRACT
(Contained in the set of Project Drawings issued simultaneously with this Project Manual)

All Work contained in the Primary Drawings listed below is the Work of this Contractor unless specifically indicated otherwise.

Any Reference to the "Contractor," the "Prime Contractor," or the "General Contractor" shall be interpreted as meaning the Contractor for this General Construction Contract.

The Primary Drawings for this contract consist of all Tusick & Associates construction documents drawings, **dated** September 1, 2015 and specifications contained in this project manual.

In case of drawing conflict with specifications, it is understood that the specification shall supersede the drawings.

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

Homewood North Window Replacements - AMP-20

HACP Contract No. 600-14-19

FORM OF BID

GENERAL CONSTRUCTION

Contract No.: 600-14-19

TO: HOUSING AUTHORITY
CITY OF PITTSBURGH
(Hereinafter called the "Authority")
100 Ross Street, Suite 200
Pittsburgh, PA 15219

BIDDER:

(Bidder Name)

(Business Address)

(Telephone)

1. The undersigned Bidder, having visited the site, having become familiar with local conditions affecting the cost of the work, **including all City of Pittsburgh current code requirements**, and having become familiar with the Invitation for Bids (the IFB) issued by the Authority, which consists of the following:

- Project Manual, dated June 3, 2019 containing Bidding Requirements, Contract Forms, Conditions of the Contract, and Specifications
- Project Drawings, dated September 1, 2015
- Addenda (if any) as enumerated in this Form of Bid

hereby proposes to provide all supervision, technical personnel, labor, materials, machinery, tools, appurtenances, equipment and services required to construct and complete the General Construction Work as described in Document 00310 "Scope of Work for General Construction" and as indicated in the Drawings and Specifications, for the following Firm Fixed Price:

(Insert Bid Price in words) Dollars (\$ _____)
(Insert Bid Price in Figures)

2. Bid security [☐ is [☐ is not submitted with this bid.
(Check one)

Bid Security is in amount of:

_____ % of the bid OR _____ Dollars (\$ _____)

Bid Security is in the form of:

<input type="checkbox"/>	Certified Check	<input type="checkbox"/>	Bank Draft
<input type="checkbox"/>	U.S. Govt. Bond	<input type="checkbox"/>	Bid Bond (Document 00410)

3. The Bidder hereby acknowledges receipt of the following Addenda, if any, as issued by the Authority:

Total number of Addenda _____ (if none, so state)

Addendum No. _____ dated _____ Addendum No. _____ dated _____

Addendum No. _____ dated _____ Addendum No. _____ dated _____

Addendum No. _____ dated _____ Addendum No. _____ dated _____

Addendum No. _____ dated _____ Addendum No. _____ dated _____

Addendum No. _____ dated _____ Addendum No. _____ dated _____

Addendum No. _____ dated _____ Addendum No. _____ dated _____

4. The Bidder attaches hereto the Special Provisions (Document 00021);
5. The Bidder attaches hereto the Statement of Bidder's Qualifications (Document 00420);
6. The Bidder attaches hereto the Section 3 Opportunities Plan (Document 00433), MBE/WBE Solicitation and Commitment Record (Document 00434), Bidder Manpower Plan (Document 00435), and Previous Related Experience (Document 00436);
7. The Bidder attaches hereto the Bidder's Representations, Certifications and Other Statements of Bidders (Document HUD 5369-A), Previous Participation Certificate (Document HUD-2530);
8. The Bidder attaches hereto the Bidder's Special Provisions – Notice to All Prospective Bidders (Document 00437), Non-Collusion Affidavit (Document 00485);
9. The Bidder attaches hereto the completed Form of Agreement (Document 00500);
10. The Bidder attaches hereto the Supplemental General Conditions (HACP Document).

PROPRIETORSHIP SIGNATURE PAGE

SHEET - FB-I

(To be used when the Bidder is an individual doing business as a Sole Proprietorship.)

THE BIDDER CERTIFIES THAT THE BIDDER IS:

- ☐ An individual doing business in his/her own name
☐ An individual doing business under a fictitious or assumed name
(Complete Proprietorship Fictitious Name Disclosure below)

SIGNED, SEALED AND DELIVERED

this _____ day of _____ 20 _____.

	_____ (Printed or Typed Name)	Principal	_____ (Printed or Typed Name)
Witness	{		{
	_____ (Signature and Date)		_____ (Signature and Date)

PROPRIETORSHIP FICTITIOUS NAME DISCLOSURE

(To be used when the Bidder is an individual doing business under a fictitious or assumed name.)

_____ is an individual trading under a fictitious or
(Proprietor's Name)

assumed name of _____ and ☐ has ☐ has not registered under
(Fictitious or Assumed Name Used as Bidder's Name) (Check one)

the Fictitious Names Act of Pennsylvania, namely the Act of May 24, 1945, P.L. 967, as amended, 54 P.S. sec. 281.1 et seq.

	_____ (Printed or Typed Name)	Principal	_____ (Printed or Typed Name)
Witness	{		{
	_____ (Signature and Date)		_____ (Signature and Date)

PARTNERSHIP SIGNATURE PAGE

SHEET - FB-P-1

(To be used when the Bidder is an individual doing business as a Partnership.)

THE BIDDER CERTIFIES THAT THE BIDDER IS:

- ☐ A General Partnership (Attach completed Sheet FB-P-3)
 - ☐ Doing business under Partnership Name
 - ☐ Doing business under a fictitious or assumed name
(Complete Partnership Fictitious Name Disclosure Sheet FB-P-2)
- ☐ A Limited Partnership (Attach completed Sheet FB-P-3)
 - ☐ Doing business under Partnership Name
 - ☐ Doing business under a fictitious or assumed name
(Complete Partnership Fictitious Name Disclosure Sheet FB-P-2)

SIGNED, SEALED AND DELIVERED

this _____ day of _____ 20 _____.

<i>Witness</i>	_____ (Printed or Typed Name)	<i>Partner *</i>	_____ (Printed or Typed Name)
{		{	
	_____ (Signature and Date)		_____ (Signature and Date)
<i>Witness</i>	_____ (Printed or Typed Name)	<i>Partner *</i>	_____ (Printed or Typed Name)
{		{	
	_____ (Signature and Date)		_____ (Signature and Date)

- * If the Bidder is a partnership, the Bid and Contract must be signed in the name of the partnership by at least two general partners, and the names and addresses of all the partners must be listed on the certificate on Sheet FB-P-3.

PARTNERSHIP FICTITIOUS NAME DISCLOSURE

(To be used when the Bidder is a partnership doing business under a fictitious or assumed name.)

SHEET FB-P-2

_____ is a partnership trading under a fictitious or
(Partnership's Name)

assumed name of _____ and ☐ **has** ☐ **has not** registered under
(Fictitious or Assumed Name Used as Bidder's Name) *(Check one)*

the Fictitious Names Act of Pennsylvania, namely the Act of May 24, 1945,P.L.967, as amended, 54 P.S.sec.281.1 et seq.

<i>Witness</i>	_____ <i>(Printed or Typed Name)</i>	<i>Partner*</i>	_____ <i>(Printed or Typed Name)</i>
	{		{
	_____ <i>(Signature and Date)</i>		_____ <i>(Signature and Date)</i>

PARTNERSHIP CERTIFICATE
(To be used when the Bidder is a partnership.)

SHEET FB-P-3

I, as partner of _____,
(Name of Partnership)
certify that the following are the names and addresses of all the partners of said partnership.

Name: _____ Name: _____

Address: _____ Address: _____

City: _____ City: _____

Name: _____ Name: _____

Address: _____ Address: _____

City: _____ City: _____

Name: _____ Name: _____

Address: _____ Address: _____

City: _____ City: _____

Name: _____ Name: _____

Address: _____ Address: _____

City: _____ City: _____

(Use additional sheets as required.)

<i>Witness</i>	_____	<i>Partner*</i>	_____
	<i>(Printed or Typed Name)</i>		<i>(Printed or Typed Name)</i>
	{		{
	_____		_____
	<i>(Signature and Date)</i>		<i>(Signature and Date)</i>

CORPORATION SIGNATURE PAGE

(To be used when the bidder is a corporation.)

SHEET FB-C-1

THE BIDDER CERTIFIES THAT THE BIDDER IS:

- ☐ A corporation doing business in its own name
☐ A corporation doing business under a fictitious or assumed name
(Complete Corporation Fictitious Name Disclosure FB-C-2)

SIGNED, SEALED AND DELIVERED

this _____ day of _____ 20 _____.

(CORPORATE
SEAL)

(Corporate Name)

(Printed or Typed Name)

(Printed or Typed Name)

Witness

{

President
V.P. **

{

(Signature and Date)

(Signature and Date)

(Corporate Title)

(Corporate Title)

** If the bidder is a corporation, the Bid and the Contract must be executed in the Corporation's correct corporate name by its President or Vice President and attested to by its Secretary or Assistant Secretary or Treasurer or Assistant Treasurer, and the Certification of Corporate Principal (Doc. 00625) must be executed by the Secretary or Assistant Secretary.

CORPORATION FICTITIOUS NAME DISCLOSURE
(To be used when the Bidder is a corporation doing business under a fictitious or assumed name.)

SHEET FB-C-2

_____ is a corporation trading under a fictitious or
(Corporation's Name)

assumed name of _____ and ☐ **has** ☐ **has not** registered under
(Fictitious or Assumed Name Used as Bidder's Name) (Check one)

the Fictitious Names Act of Pennsylvania, namely the Act of May 24, 1945, P.L. 967, as amended, 54 P.S. sec. 281.1 et seq.

<i>Witness</i>	<div style="text-align: center;">_____ <i>(Printed or Typed Name)</i></div>		<div style="text-align: center;">_____ <i>(Printed or Typed Name)</i></div>
	<i>President</i>		
	<i>V.P. **</i>		
	{	{	
	_____ <i>(Signature and Date)</i>		_____ <i>(Signature and Date)</i>

****** If the bidder is a corporation, the Bid and the Contract must be executed in the Corporation's correct corporate name by its President or Vice President and attested to by its Secretary or Assistant Secretary or Treasurer or Assistant Treasurer, and the Certification of Corporate Principal (Doc. 00625) must be executed by the Secretary or Assistant Secretary.

CORPORATION CERTIFICATE
(To be used when the bidder is a corporation)

SHEET FB-C-3

_____ is a corporation organized and existing
(Corporate name used as Bidder name)

under the laws of the state of _____ with its principal place of business at:

_____, _____, _____
(Street Address) (City) (State)

and, if a non-Pennsylvania corporation ☐ **has** ☐ **has not** *(check one)* been granted a certificate of authority to do business in Pennsylvania as required by the Pennsylvania Business Corporation Law, approved May 5, 1933, P.L. 364, as amended, 15 P.S. sec.2005 et seq.

I, _____, certify that I am the ☐ **Secretary** ☐ **Assistant Secretary** of the
(check one)
Corporation named a Bidder herein; that _____ who signed
this Bid on behalf of the Corporation was then _____ of said Corporation that
*(President/V.P.) ***

I know his signature and his signature thereto is genuine; and that said Bid was duly signed, sealed and attested in behalf of said Corporation by authority of its governing body.

*(CORPORATE
SEAL)*

(Signature and Date)

****** If the bidder is a corporation, the Bid and the Contract must be executed in the Corporation's correct corporate name by its President or Vice President and its Secretary or Assistant Secretary or Treasurer or Assistant Treasurer, and the above Certificate must be executed by the Secretary or Assistant Secretary

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we,

_____, as Principal, and
(Insert name and address of Bidder exactly as it appears on Form of Bid)

_____, as Sureties, are
held and firmly bound unto the Housing Authority of the City of Pittsburgh, its certain attorney, successors, or assigns
(the Obligee, hereinafter called the "Authority") in the penal sum of

_____ Dollars (\$ _____)

lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our
heirs, personal representatives, successors, and assigns, jointly and severally, firmly by these presents:

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas, the Principal simultaneously submits to
the Authority the accompanying bid, dated

_____, 20_____ (the "Bid"), for construction of
(Insert date of bid)

(Insert name of project exactly as it appears on Form of Bid)
pursuant to specifications, drawings and other related documents constituting the Invitation for Bids (the "IFB").

NOW, THEREFORE, if the Principal shall not withdraw said bid within the period specified therein after the
opening of the same, or, if no period be specified, within sixty (60) days after the said opening, and shall within the
period specified therefore, or, if no period be specified within ten (10) days after the prescribed forms are presented to
him for signature, enter into a written contract with the Authority in accordance with the bid as accepted, and give
bonds with good and sufficient surety or sureties, as may be required for the faithful performance and proper
fulfillment of such contract and for the payment of labor and materialmen or in the event of the withdrawal of said bid
within the period specified, or the failure to enter into such contract and give such bonds within the time specified, if
the Principal shall pay the Authority the difference between the amount specified in said bid and the amount for which
the Authority may procure the required work or supplies or both, if the latter amount be in excess of the former, then
the above obligation shall be void and of no effect, otherwise to remain in full force and virtue.

SIGNED, SEALED AND DELIVERED IN _____ ORIGINAL COUNTERPARTS

this _____ day of _____ 20_____.

IF THE PRINCIPAL IS AN INDIVIDUAL, SIGN HERE

_____ (Printed or Typed Name)	_____ (Printed or Typed Name)
<i>Witness</i>	<i>Principal</i>
{	{
_____ (Signature and Date)	_____ (Signature and Date)

SURETY SIGN HERE

(SURETY
SEAL)

_____ (Printed or Typed Name)	_____ (Printed or Typed Name)
<i>Attest</i>	<i>Surety***</i>
{	{
_____ (Signature and Date)	_____ (Signature and Date)

*** Power of attorney must be attached to this Bid Bond.

SIGNED, SEALED AND DELIVERED IN _____ ORIGINAL COUNTERPARTS

this _____ day of _____ 20_____.

IF THE PRINCIPAL IS A PARTNERSHIP, SIGN HERE

	_____ (Printed or Typed Name)		_____ (Printed or Typed Name)
<i>Witness</i>	{	<i>Partner*</i>	{
	_____ (Signature and Date)		_____ (Signature and Date)
	_____ (Printed or Typed Name)		_____ (Printed or Typed Name)
<i>Witness</i>	{	<i>Partner*</i>	{
	_____ (Signature and Date)		_____ (Signature and Date)

* If the Bidder is a partnership, the Bond must be signed in the name of the partnership by at least two general partners, whose names and addresses must be listed on the certificate on page BF-3-P of the Bid.

SURETY SIGN HERE

	_____ (Printed or Typed Name)		_____ (Printed or Typed Name)
<i>Attest</i>	{	<i>Surety***</i>	{
	_____ (Signature and Date)		_____ (Signature and Date)

*** Power of attorney must be attached to this Bid Bond.

SIGNED, SEALED AND DELIVERED IN _____ ORIGINAL COUNTERPARTS

this _____ day of _____ 20_____.

IF THE PRINCIPAL IS A CORPORATION, SIGN HERE

(CORPORATE
SEAL)

(Corporate Name)

(Printed or Typed Name)

(Printed or Typed Name)

Attest

{

President
V.P. **

{

(Signature and Date)

(Signature and Date)

(Corporate Title)

(Corporate Title)

** If the bidder is a corporation, the Bond must be executed in the Corporation's correct corporate name by its President or Vice President and attested to by its Secretary or Assistant Secretary or Treasurer or Assistant Treasurer, and the Certification of Corporate Principal below must be executed by the Secretary or Assistant Secretary.

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the
[] **Secretary** [] **Assistant Secretary** of the Corporation named a Bidder herein; that
(check one)

_____ who signed this Bid on behalf of the

Corporation was then _____ of said Corporation that I know his
signature and his signature thereto is genuine; and that said Bid was duly signed, sealed and attested
in behalf of said Corporation by authority of its governing body.

(CORPORATE
SEAL)

(Signature and Date)

SURETY SIGN HERE

(SURETY
SEAL)

(Printed or Typed Name)

(Printed or Typed Name)

Attest

{

*Surety****

{

(Signature and Date)

(Signature and Date)

*** Power of attorney must be attached to this Bid Bond.

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

STATEMENT OF BIDDER'S QUALIFICATIONS

Homewood North Window Replacements - AMP-20

(Bidder's Name)

(Project Name)

(Address)

600-14-19

(HACP Project No.)

Names of not more than two principals to contact:

Name: _____

Name: _____

Title: _____

Title: _____

Telephone: _____

Telephone: _____

AUTHORIZATION:

Excerpt from HUD 7460.8-REV-1 AND 24 CFR 85.36(b)(8) & 24 CFR 905.160(a)(3):

"The evaluation of a contractor's ability to perform a contract is known as determining the contractor's responsibility. Has **shall** make awards only to **responsible** contractors possessing the ability to perform successfully under the terms and conditions of a proposed contract. Consideration **shall** be given to such matters as **contractor integrity, compliance with public policy, record of past performance, and financial and technical resources**.

"The award of a contract to an offeror **shall** not be made solely on the basis of the lowest evaluated price without considering the firm's ability to perform the required work. Some of the specific factors to consider include (1) whether the contractor performed satisfactorily on other HA Contracts, (2) is the contractor suspended or debarred from Federal Contracts, and (3) have other HAs has satisfactory performance from this contractor.

"A pre-award survey may entail an on-site inspection of the offeror's facilities, including a review of financial statements, record keeping, production capacity, or similar factors that impact on the ability to perform the contract.

"Recent unsatisfactory performance regarding either quality or timeliness of delivery is an example of a problem which the Contracting Officer **shall** consider and resolve as to its impact on the current procurement prior to making an affirmative determination of responsibility.

ORGANIZATION

THE BIDDER IS:

- ☐ An individual doing business in his/her own name
- ☐ An individual doing business under a fictitious or assumed name

- ☐ A General Partnership
 - ☐ Doing business under Partnership Name
 - ☐ Doing business under a fictitious or assumed name

- ☐ A Limited Partnership
 - ☐ Doing business under Partnership Name
 - ☐ Doing business under a fictitious or assumed name

- ☐ A corporation doing business in its own name
- ☐ A corporation doing business under a fictitious or assumed name

How many years has the bidder been in business as a Contractor? _____

How many years has the bidder been in business under its present business name? _____

Under what other or former names has the bidder operated?

PAST PERFORMANCE

CLAIMS AND SUITS. (If the answer to any of the questions below is yes, please attach explanation.)

☐ Yes ☐ No Has the Bidder ever failed to complete any work awarded to it?

☐ Yes ☐ No Are there any judgments, claims, arbitration proceedings or suits pending or outstanding against the bidder or its officers?

☐ Yes ☐ No Has the bidder filed any law suits or requested arbitration with regard to construction contracts within the last five years?

☐ Yes ☐ No Within the last five years, has any officer or principal of the bidder ever been an officer or principal of another organization when it failed to complete a construction contract? (If answer is yes, please attach details.)

State average annual amount of construction work performed during the past five years:
\$ _____

State total worth of work in progress and under contract: \$ _____

On a separate sheet, list major construction projects the bidder has in progress, giving the name of project, owner, architect, contract amount, percent complete and scheduled completion date.

On a separate sheet, list the major projects the bidder has completed in the past five years, giving the name of project, owner, architect, contract amount, date of completion and percentage of the cost of the work performed with your own forces.

FINANCIAL RESOURCES

Financial Statement.

Attach a financial statement (audited if available), including the bidder's latest balance sheet and income statement showing the following items:

Current Assets (e.g. cash, joint venture accounts, accounts receivable, notes receivable, accrued income, deposits, materials inventory and prepaid expenses);
Net Fixed Assets;
Other Assets;
Current Liabilities (e.g. accounts payable, notes payable, accrued expenses, provision for income taxes, advances, accrued salaries and accrued payroll taxes);
Other Liabilities (e.g. capital, capital stock, authorized and outstanding shares par values, earned surplus and retained earnings).

Name and address of firm preparing attached financial statement, and date thereof:

☐ **Yes** ☐ **No** Is the attached financial statement for the identical organization named on page one?

If not, explain the relationship and financial responsibility of the organization whose financial statement is provided (e.g., parent-subsiary).

☐ **Yes** ☐ **No** Will the organization whose financial statement is attached act as guarantor of the contract for construction?

TECHNICAL RESOURCES

Licensing:

List jurisdictions and trade categories in which the bidder is legally qualified to do business, and indicate registration or license numbers, if applicable.

Experiences:

List the categories of work that the bidder normally performs with its own forces.

On a separate sheet, list the construction experience and present commitments of the key individuals of the bidder.

REFERENCES

List Trade References (use separate sheet if necessary):

List Bank References (use separate sheet if necessary):

List previous HUD/USDA-FmHA projects and Section 8 Contracts (formerly Schedule A on HUD-2530). Applicable to construction contracts exceeding \$50,000. List each principals name, previous project, principal's participation role and interest, and disclose defaults, mortgage relief, assignments and foreclosures. **Note that having a Master Schedule on file with HUD will not meet this requirement.**

Certifications: I (meaning the individual who signs as well as the corporations, partnerships or other parties listed above who certify) hereby apply to HUD or USDA-FmHA, as the case may be, for approval to participate as a principal in the role and project listed above based upon my following previous participation record of this Certification.

I certify that all the statements made by me are true, complete and correct to the best of my knowledge and belief and are made in good faith, including the data contained in Schedule A and Exhibits, signed by me and attached to this form.

Warning: HUD and/or the Authority will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. (18 U.S.C. 1001, 1012; 31 U.S.C. 3729, 3802)

I further certify that:

1. The list of previous HUD/USDA-FmHA projects and Section 8 Contracts contains a listing of every assisted or insured project of HUD, which I have been or am now a principal.
2. For the period beginning 10 years prior to the date of this certification, and except as shown by me on the certification.
 - a. No mortgage on a project listed by me has ever been in default, assigned to the Government or foreclosed, nor has mortgage relief by the mortgagee been given;
 - b. I have not experienced default or noncompliance under any Conventional Contract or Turnkey Contract of Sale in connection with a public housing project;
 - c. To the best of my knowledge, there are no unresolved findings raised as a result of HUD audits, management reviews or other Governmental investigations concerning me or my projects;
 - d. There has not been a suspension or termination of payments under any HUD assistance contract in which I have had a legal or beneficial interest;
 - e. I have not been convicted of a felony and am not presently, to my knowledge, the subject of a complaint or indictment charging a felony. (A felony is defined as any offense punishable by imprisonment for a term exceeding one year, but does not include any offense classified as a misdemeanor under the laws of a State and punishable by imprisonment of two years or less);
 - f. I have not been suspended, debarred or otherwise restricted by any Department or Agency of the Federal Government or of a State Government from doing business with such Department or Agency.

- g. I have not defaulted on an obligation covered by a surety or performance bond and have not been the subject of a claim under an employee fidelity bond.
3. All the names of the parties, known to me to be principals in this project(s) in which I propose to participate, are listed above.
4. I am not a HUD/FmHA employee or a member of a HUD/FmHA employee's immediate household as defined in Standards of Ethical Conduct for Employees of the Executive Branch in 5 C.F.R. Part 2635 (57 FR 35006) and HUD's Standard of Conduct in 24 C.F.R. Part O and USDA's Standard of Conduct in 7 C.F.R. Part 9 Subpart B.
5. I am not a Housing Authority of the City of Pittsburgh employee or a member of an Authority employee's immediate family.
6. I am not a principal participant in an assisted or insured project as of this date on which construction has stopped for a period in excess of 20 days or which has been substantially completed for more than 90 days and documents for closing, including final cost certification have not been filed with HUD or FmHA.
7. To my knowledge I have not been found by HUD or FmHA to be in noncompliance with any applicable civil rights law.
8. I am not a Member of Congress or a Resident Commissioner nor otherwise prohibited or limited by law from contracting with the Government of the United States of America.
9. Statements above (if any) to which I cannot certify have been deleted by striking through the words with a pen. I have initialed each deletion (if any) and have attached a true and accurate signed statement (if applicable) to explain the facts and circumstances which I think helps to qualify me as a responsible principal for participation in this project.

(Signature and Date)

(Typed or Printed Name)

(Title)

(Company Name)

Subscribed and sworn to before me

this _____ day of _____, 20

My Commission expires _____, 20

All section 3 covered contracts shall include the following clause (referred to as the section 3 clause):

- A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
- B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.
- C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.
- D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.
- E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.
- F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.
- G. With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self- Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).

Housing Authority City of Pittsburgh
Development and Modernization Department
 Bidder's Section 3 Participation Form

A. Bidder's Section 3 Hiring Plan

Job Category	Total Estimated Positions Needed for Project	No. Positions Occupied by Permanent Employees*	Number of Positions Not Occupied	Number of Positions Available for Section 3 Residents
Trade:				
Journeyman				
Helper				
Apprentices				
Trainees				
Laborer				
Others				

* Please submit a list of current employees to be assigned to this project including Dates of Hire

B. Bidder's Section 3 Subcontracting Plan

SUB - CONTRACTOR'S NAME**	SUB - CONTRACTORS ADDRESS	PHONE NUMBER	FEDERAL TAX ID NO./ SS#	DESCRIPTION OF WORK	Sub - Contract Amount

** If the Bidder has not identified a Section 3 subcontractor, please indicate if there will be any Section 3 subcontracting opportunity and describe scope of work_____

Company Name

Project Name

Project Number

Name and Title of Person Completing this Form

Signature and Date

PLACE HOLDER FOR
ROSTER OF CURRENT EMPLOYEES

**Pursuant to Housing Authority of the City of Pittsburgh Section 3 Program Manual, Part I,
Section A - Section 3 Policy Statement (in part):**

“HACP shall examine and consider a contractor’s potential for success in providing employment and business opportunities to those covered under Section 3 prior to acting on any proposed contract award. In response to any RFP, RFQ or IFB HACP will require submission of the Section 3 Opportunities Plan and roster of current employees, and certification that the bidder will comply with the requirements of Section 3.”

Section 3 Participation

With respect to work performed in connection with Section 3 covered Indian housing assistance, Section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of Section 3 and Section 7(b) agree to comply with Section 3 to the maximum extent feasible, but not in derogation of compliance with Section 7(b).

RESIDENT HIRING REQUIREMENTS / RESIDENT HIRING SCALE

TOTAL LABOR DOLLARS USE TOTAL CONTRACT AMOUNT FOR SERVICE CONTRACTS	RESIDENT LABOR AS A % OF TOTAL LABOR DOLLARS
Labor dollars \$25,000 but less than \$100,000	10% of the labor dollars
\$100,000, but less than \$200,000	9% of the labor dollars
At least \$200,000, but less than \$300,000	8% of the labor dollars
At least \$300,000, but less than \$400,000	7% of the labor dollars
At least \$400,000, but less than \$500,000	6% of the labor dollars
At least \$500,000, but less than \$1 million	5% of the labor dollars
At least \$1 million, but less than \$2 million	4% of the labor dollars
At least \$2 million, but less than \$4 million	3% of the labor dollars
At least \$4 million, but less than \$7 million	2% of the labor dollars
\$7 million or more	½ to 1 % of the labor dollars

A copy of HACP's Section 3 Program Manual is available for download at www.HACP.org.



SECTION 3 OPPORTUNITIES PLAN

Business Opportunities and Employment Training for Housing Authority of the City of Pittsburgh Low Income Public Housing Residents (LIPH) and Area Residents of Low and Very Low Income Status (ARLIS)

PRIME CONTRACTOR'S NAME: _____
SPECIFICATION OR RFP/IFB/RFQ NUMBER: _____
SPECIFICATION OR RFP/IFB/RFQ TITLE: _____

The Contractor hereby agrees to comply with all the provisions of Section 3 as set forth in 24 CFR 135.1 et seq. and the HACP Section 3 Policy and Program requirements. The Contractor hereby submits this document to identify employment opportunities for HACP residents (LIPH) and **Area Residents of Low and Very Low Income Status (ARLIS)** during the term of the contract between the Contractor and the HACP.

The preference of HACP is to ensure that as many HACP residents as possible are employed. In an effort to further that requirement, HACP has created a preference tier structure as outlined in the HACP Section 3 Policy and Program Manual which can be reviewed by visiting the "Vendor Services" section of www.hacp.org. Contractors are required to comply with Section 3 by first considering Tier I – Hiring. If the Contractor cannot meet its Section 3 requirement in Tier I and needs to move to Tier II or Tier III, that Contractor must document this inability to comply with the preference and the need to move to a lower tier. (Such inability **must** be documented for moves within tiers). The Contractor agrees to meet its Section 3 requirement following the Preferential Tier Structure as indicated by the selection below (check one or more tiers below):

[] Tier I – HIRING

The Contractor affirms that the jobs identified shall be for meaningful employment that may or may not be related to the scope of services covered under Contract/Purchase Order # _____. The Contractor has committed to employ _____ resident(s) in order to comply with its Section 3 requirements. A prime contractor may satisfy the HACP Resident Hiring Requirements through his/her subcontractors. **Contact the HACP Resident Employment Program for resident referrals at 412-395-3950, Ext 1048.**

When Tier I is selected, the Contractor shall complete the following table as instructed below:

- (1) Indicate each job title for all phases of this contract
- (2) The number of positions that will be needed in each category
- (3) How many of those positions are currently filled
- (4) The number currently filled by low and very low-income HACP residents
- (5) The number currently filled by City of Pittsburgh neighborhood area residents
- (6) How many positions need to be filled

Indicate your requirement for the number of positions you intend to fill with:

- (7) Low income HACP Residents (LIPH) and/or
- (8) Low and very low income City of Pittsburgh Neighborhood Area Residents (ARLIS)



SECTION 3 OPPORTUNITIES PLAN

Section 3 Labor Utilization Assessment and Plan							
SPEC or RFP TITLE:					SPEC or RFP NUMBER:		
JOB TITLE (1)	NUMBER OF POSITIONS					HIRING REQUIREMENT	
	# NEEDED (2)	CURRENTLY FILLED			TO BE FILLED (6)	LIPH (7)	ARLIS (8)
		TOTAL (3)	LIPH (4)	ARLIS (5)			

LIPH – HACP low income public housing resident

ARLIS - Area Residents of Low/Very Low Income Status – (Area is the Pittsburgh metropolitan area)

In the event the value of Section 3 resident hiring is less than the amount identified in the Resident Hiring Scale, vendors must contribute to the HACP Education Fund an amount not less than the difference between the value of Section 3 hiring and the amount identified in the Resident Hiring Scale, which funds shall be used to provide other economic opportunities.

Therefore, if it is anticipated that any position listed above shall be for less than the full term of the contract period, you must indicate on the lines below, the anticipated term for each position:



SECTION 3 OPPORTUNITIES PLAN

[] Tier II – CONTRACTING

The contractor has identified _____ HACP resident-owned business(es) or _____ Section 3 business(es) which is/are 51 percent or more owned by Section 3 residents or 30 percent or more of their permanent full-time workforce are Section 3 residents. This will satisfy the contractor's Section 3 requirement covered under Contract/Purchase Order # _____.

In a one (1) page letter on your firm's letterhead:

- 1) Indicate the requirements, expressed in terms of percentage, of planned contracting dollars for the use of Section 3 business concerns as subcontractors.
- 2) A statement of the total dollar amount to be contracted, total dollar amount to be contracted to Section 3 business concerns for building trades, and total dollar amount to be contracted to Section 3 business concerns for other than building trades work (maintenance, repair, modernization, and development).
- 3) A description of the method used to develop the requirements above and the efforts to be undertaken by the contractor to meet those requirements.

[] Tier III - OTHER ECONOMIC OPPORTUNITIES

Firms may provide other economic opportunities to train and employ Section 3 residents or make a direct cash contribution to the HACP Education Fund. HACP has established the following minimum threshold requirements for provision of training or contribution to the HACP fund that provides other economic opportunities:

- a) Contractor incurs the cost of providing skilled training for residents in an amount commensurate with the sliding scale set forth in the Resident Hiring Scale; or,
- b) Contractor makes a contribution to the HACP Education Fund at Clean Slate E3 to provide assistance to residents to obtain training. The level of contribution would be commensurate with the sliding scale set forth in the Resident Hiring Scale.

Contractor shall provide, in a letter on firm letterhead:

- 1) Indication of the skilled training to be provided, the number of persons to be trained, the training provider, the cost of training, and the trainee recruitment plan; or,
- 2) Provide the amount of planned contribution to be made in relation to percentage of the contract labor hours costs. (Contribution checks should be made payable to: Clean Slate E3 Education Fund and mailed to Clean Slate E3, C/O Housing Authority of the City of Pittsburgh, Finance Department, 200 Ross Street, 9th Floor, Pittsburgh, PA 15219.

[] Tier IV – No New Hire Opportunity

If awarded this contract, the contractor will be able to fulfill the requirements of the IFB/RFP/RFQ with the existing work force. No new hires will be employed as a result of this award. If this position changes and hiring opportunities become necessary, the HACP Resident Employment Program will be notified.



SECTION 3 OPPORTUNITIES PLAN

By signing below, the Contractor hereby agrees to comply with the selected Section 3 requirements indicated above. To the extent that the completion of this form is contingent upon future information, for example price negotiations, request for specific services, etc., the undersigned hereby affirms and agrees to fully adhere to the spirit and intent of the HACP Section 3 Policy.

Furthermore, the undersigned acknowledges and affirms responsibility for completion and submission of this form as part of the response documentation for this Invitation for Bid or Request for Proposal. Failure to submit this form may jeopardize the responsiveness of your submission.

Company Name: _____

Name: _____

Title: _____

Signature: _____ Date: _____

Witness Name: _____

Witness Signature: _____ Date: _____

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH
MBE/WBE SOLICITATION AND COMMITMENT RECORD

SOLICITATION AND COMMITMENT STATEMENT MINORITY (MBE) AND FEMALE (WBE) OWNED BUSINESS ENTERPRISES					
BID NUMBER	NAME OF BIDDER	ADDRESS		PHONE	
List below All MBE/WBE's that were solicited - whether or not a commitment was obtained -- Copy this form as necessary					
_____ MBE _____ WBE	TYPE OF SUBCONTRACT WORK OR MATERIALS	<u>DATE SOLICITED</u> BY PHONE BY MAIL		<u>COMMITMENT MADE</u> YES NO <small>(IF YES, GIVE DATE)</small>	
COMPANY NAME					
ADDRESS		QUOTE RECEIVED			
CONTACT PERSON PHONE		YES	NO		
		AMOUNT COMMITTED			
				DOLLAR AMOUNT \$	
				PERCENT OF TOTAL BID %	
_____ MBE _____ WBE	TYPE OF SUBCONTRACT WORK OR MATERIALS	<u>DATE SOLICITED</u> BY PHONE BY MAIL		<u>COMMITMENT MADE</u> YES NO <small>(IF YES, GIVE DATE)</small>	
COMPANY NAME					
ADDRESS		QUOTE RECEIVED			
CONTACT PERSON PHONE		YES	NO		
		AMOUNT COMMITTED			
				DOLLAR AMOUNT \$	
				PERCENT OF TOTAL BID %	
_____ MBE _____ WBE	TYPE OF SUBCONTRACT WORK OR MATERIALS	<u>DATE SOLICITED</u> BY PHONE BY MAIL		<u>COMMITMENT MADE</u> YES NO <small>(IF YES, GIVE DATE)</small>	
COMPANY NAME					
ADDRESS		QUOTE RECEIVED			
CONTACT PERSON PHONE		YES	NO		
		AMOUNT COMMITTED			
				DOLLAR AMOUNT \$	
				PERCENT OF TOTAL BID %	

Prepared by: _____ Title: _____ Phone: _____

NOTE: Certification and letters of intent for each MBE/WBE commitment must accompany this document.

MBE/WBE Participation Plan

I. SMALL BUSINESS PARTICIPATION

Is the Bidder a Small Business as defined by the size and standards in 13 CFR 121?

Yes _____ No _____

II. MINORITY BUSINESS PARTICIPATION

Is the Bidder classified as a Minority Business Enterprise?

Yes _____ No _____

If “No”, are any Subcontractors classified as Minority Business enterprises?

Yes _____ No _____

If “Yes”, please fill in the following chart:

Consulting Firm(s) (MBE)	\$ Value Contract	% of Fee

III. WOMEN-OWNED BUSINESS PARTICIPATION

Is the Bidder classified as a Woman-Owned Business Enterprise?

Yes _____ No _____

If “No”, are any Subcontractors classified as Women-Owned Business Enterprises?

Yes _____ No _____

If “Yes”, please fill in the following chart:

Consulting Firm(s) (WBE)	\$ Value Contract	% of Fee

****All MBE/WBE firms must be certified.**

In order for the MBE/WBE participation plan to be complete, copies of MBE/WBE certification must be included for all firms listed.

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH
MBE/WBE SOLICITATION AND COMMITMENT STATEMENT
ADDITIONAL INFORMATION SHEET

The bidder presents the following as additional and supplemental
information to its MBE/WBE Solicitation and
Commitment Statement.

Prepared by:

Title:

Phone:

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH
MBE/WBE EXHIBIT

MBE/WBE COMMITMENT WAIVER REQUEST FORM

BIDDER'S FIRM: _____
ADDRESS: _____
TELEPHONE: _____
CONTACT PERSON: _____
PROPOSAL AND BID FOR: _____

Waiver of the MBE/WBE participation requirement is requested for the following reasons:

Prepared by: _____ Title: _____ Phone: _____

NOTE: The fully completed MBE/WBE Solicitation and Commitment Statement must accompany this waiver request.

**Notice of Requirement for Affirmative Action
to Ensure Equal Employment Opportunity
(Executive Order 11625)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals for minority and female participation at the Housing Authority of the City of Pittsburgh are pursuant to the Mayor's promulgated Executive Order, and the action of the Housing Authority Board. Expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, these goals are seventeen percent (18%) of the total cost of the contract to be expended for minority participation and six percent (7%) for women participation. These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in Section 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in Section 41 CFR Part 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in Section 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification, within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation, to:

LaVaris Ross, Labor Relations Specialist
U.S. Department of Housing and Urban Development
Office of Labor Relations
City Crescent Building
10 S. Howard Street, 5th Floor
Baltimore, MD 21201

The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is within the Commonwealth of Pennsylvania, County of Allegheny, City of Pittsburgh.



Development & Modernization
100 Ross Street, Suite 200
Pittsburgh, PA 15219
(412) 456-5020
www.hacp.org

NOTICE TO ALL PROSPECTIVE BIDDERS

REQUEST FOR MANPOWER PLAN Homewood North Window Replacements - AMP-20

HACP CONTRACT No. 600-14-19

Each bid must include a separate **Manpower Plan and Major Equipment List** for this Invitation for Bids. The Manpower Plan must include (1) the names of the bidder's personnel to be assigned to the Project, (2) trade/position, (3) Social Security Number or Driver's License Number and (4) Employee Date of Hire.

In the event you are bidding on multiple HACP construction work, each bid must include a separate Manpower Plan and Major Equipment List that clearly demonstrates that the bidder has the capacity and will not use the same personnel and equipment on more than one HACP construction work that are being executed simultaneously within the next 180 days.

HACP will use this information to determine whether the bidder has the capacity to perform the work.

Please acknowledge receipt of this Notice by completing the information below and the attached and including copies in your bid.

Bidder's Name: _____

Name of the Person Signing the Bid: _____

Signature of the Person Signing the Bid: _____

Bid Due Date: _____



Development & Modernization
100 Ross Street, Suite 200
Pittsburgh, PA 15219
(412) 456-5020
www.hacp.org

Bidder's Planned Manpower

Provide Employee Name, Trade/Position, Social Security Number or Driver's License Number and Date of Hire for each employee:
(use additional sheets if necessary).

Name	Position	Social Security No. or Driver's License No.		Date of Hire



Development & Modernization
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www.hacp.org

SPECIAL PROVISIONS
FOR INVITATION FOR BIDS (IFB)

REQUEST FOR INFORMATION

Each bidder must submit the following information to assist the Owner to determine if the Bidder has the capacity to perform the required work under this **Project Name:** _____ **IFB No.** _____.

Bidder's Capacity

Provide information demonstrating the Bidder's ability to provide the resources necessary for the timely and efficient implementation of the construction work. Due to the nature of this procurement, capacity will also be evaluated based on the Bidder's ability to complete the work on time and within budget, therefore, please describe the Bidder's Capacity as follows:

1. Manpower Plan and Major Equipment List (Please complete **Form 00435-1 & 2**).
2. List a maximum of three-(3) current or completed *Housing Authority of the City of Pittsburgh* related projects, the **Initial Contract Value**, **Change Orders**, if any, and **Final Contract Value**. If the project was not completed within budget and on time, please explain the circumstances and/or justification for the change order(s): Please attach a separate sheet if you do not have sufficient space.

<u>Project #</u>	<u>Initial Contract Value</u>	<u>Change Order(s)</u>	<u>Final Contract Value</u>
-------------------------	--------------------------------------	-------------------------------	------------------------------------

- a.
- b.
- c.

Justification for Change Orders/Schedule: _____

3. List at least three-(3) other Owners including one current or completed project plus the following information:

<u>Vendor's Name & Contact #</u>	<u>Initial Contract Value</u>	<u>Change Order(s)</u>	<u>Final Contract Value</u>
---	--------------------------------------	-------------------------------	------------------------------------

- a.
- b.
- c.

Justification for Change Orders/Schedule: _____

The Bidder hereby certifies that the information provided above is accurate/correct and provision of false information can be a basis for the rejection of this bid:

Bidder's Name: _____ Bidder's Signature: _____
Date: _____



Development & Modernization
100 Ross Street, Suite 200
Pittsburgh, PA 15219
(412) 456-5020
www.hacp.org

NOTICE TO ALL PROSPECTIVE BIDDERS

**Previous Related Experience
for**

Homewood North Window Replacements - AMP-20

HACP CONTRACT NO. 600-14-19

The bidder shall list three (3) firms, governmental units, or persons for whom the bidder has previously performed work of the nature requested under this IFB. Bidder shall list as references all housing authorities, including HACP, for whom the bidder has previously performed work of the nature requested under this IFB. HACP reserves the right to contact such persons at anytime prior to award and the bidder agrees that HACP may rely on information provided by such persons to determine the bidder's responsibility.

In addition to the references, all bidders will provide the last three jobs they performed, contact information from the job and all change orders related to the job and the reason for each.

All bidders will provide information on the most recent HACP job to include all change order information and the reason for each. The most recent HACP job can be one of the 3 last jobs performed if that is the case.

Reference 1			
Project:			
Contact:			
Contact Telephone Number:			
Contract Amount:			
Change Orders			
Number	Total \$ Value per Change	Description of Change	Reason for Change
1			
2			
3			
4			
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10			



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HACP CONTRACT NO. 600-14-19

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In addition to the references, all bidders will provide the last three jobs they performed, contact information from the job and all change orders related to the job and the reason for each.

All bidders will provide information on the most recent HACP job to include all change order information and the reason for each. The most recent HACP job can be one of the 3 last jobs performed if that is the case.

Reference 2			
Project:			
Contact:			
Contact Telephone Number:			
Contract Amount:			
Change Orders			
Number	Total \$ Value per Change	Description of Change	Reason for Change
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4			
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HACP CONTRACT NO. 600-14-19

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In addition to the references, all bidders will provide the last three jobs they performed, contact information from the job and all change orders related to the job and the reason for each.

All bidders will provide information on the most recent HACP job to include all change order information and the reason for each. The most recent HACP job can be one of the 3 last jobs performed if that is the case.

Reference 3			
Project:			
Contact:			
Contact Telephone Number:			
Contract Amount:			
Change Orders			
Number	Total \$ Value per Change	Description of Change	Reason for Change
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HACP CONTRACT NO. 600-14-19

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In addition to the references, all bidders will provide the last three jobs they performed, contact information from the job and all change orders related to the job and the reason for each.

All bidders will provide information on the most recent HACP job to include all change order information and the reason for each. The most recent HACP job can be one of the 3 last jobs performed if that is the case.

Reference 4			
Project:			
Contact:			
Contact Telephone Number:			
Contract Amount:			
Change Orders			
Number	Total \$ Value per Change	Description of Change	Reason for Change
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**Previous Related Experience
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HACP CONTRACT NO. 600-14-19

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In addition to the references, all bidders will provide the last three jobs they performed, contact information from the job and all change orders related to the job and the reason for each.

All bidders will provide information on the most recent HACP job to include all change order information and the reason for each. The most recent HACP job can be one of the 3 last jobs performed if that is the case.

Reference 5			
Project:			
Contact:			
Contact Telephone Number:			
Contract Amount:			
Change Orders			
Number	Total \$ Value per Change	Description of Change	Reason for Change
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**Previous Related Experience
for
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HACP CONTRACT NO. 600-14-19

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In addition to the references, all bidders will provide the last three jobs they performed, contact information from the job and all change orders related to the job and the reason for each.

All bidders will provide information on the most recent HACP job to include all change order information and the reason for each. The most recent HACP job can be one of the 3 last jobs performed if that is the case.

Reference 6			
Project:			
Contact:			
Contact Telephone Number:			
Contract Amount:			
Change Orders			
Number	Total \$ Value per Change	Description of Change	Reason for Change
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In addition to the references, all bidders will provide the last three jobs they performed, contact information from the job and all change orders related to the job and the reason for each.

All bidders will provide information on the most recent HACP job to include all change order information and the reason for each. The most recent HACP job can be one of the 3 last jobs performed if that is the case.

Reference 7			
Project:			
Contact:			
Contact Telephone Number:			
Contract Amount:			
Change Orders			
Number	Total \$ Value per Change	Description of Change	Reason for Change
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***All contractors MUST submit 3 references and most recent HACP Job if applicable.**

**U.S. Department of Housing
and Urban Development**
Office of Public and Indian Housing

**Representations, Certifications,
and Other Statements of Bidders**
Public and Indian Housing Programs

Representations, Certifications, and Other Statements of Bidders

Public and Indian Housing Programs

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1. Certificate of Independent Price Determination

(a) The bidder certifies that--

(1) The prices in this bid have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other bidder or competitor relating to (i) those prices, (ii) the intention to submit a bid, or (iii) the methods or factors used to calculate the prices offered;

(2) The prices in this bid have not been and will not be knowingly disclosed by the bidder, directly or indirectly, to any other bidder or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a competitive proposal solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the bidder to induce any other concern to submit or not to submit a bid for the purpose of restricting competition.

(b) Each signature on the bid is considered to be a certification by the signatory that the signatory--

(1) Is the person in the bidder's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above.

[insert full name of person(s) in the bidder's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the bidder's organization];

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above.

(c) If the bidder deletes or modifies subparagraph (a)2 above, the bidder must furnish with its bid a signed statement setting forth in detail the circumstances of the disclosure.

☒ [Contracting Officer check if following paragraph is applicable]

(d) Non-collusive affidavit. (applicable to contracts for construction and equipment exceeding \$50,000)

(1) Each bidder shall execute, in the form provided by the PHA/IHA, an affidavit to the effect that he/she has not colluded with any other person, firm or corporation in regard to any bid submitted in response to this solicitation. If the successful bidder did not submit the affidavit with his/her bid, he/she must submit it within three (3) working days of bid opening. Failure to submit the affidavit by that date may render the bid nonresponsive. No contract award will be made without a properly executed affidavit.

(2) A fully executed "Non-collusive Affidavit" [] is, [] is not included with the bid.

2. Contingent Fee Representation and Agreement

(a) Definitions. As used in this provision:

"Bona fide employee" means a person, employed by a bidder and subject to the bidder's supervision and control as to time, place, and manner of performance, who neither exerts, nor proposes to exert improper influence to solicit or obtain contracts nor holds out as being able to obtain any contract(s) through improper influence.

"Improper influence" means any influence that induces or tends to induce a PHA/IHA employee or officer to give consideration or to act regarding a PHA/IHA contract on any basis other than the merits of the matter.

(b) The bidder represents and certifies as part of its bid that, except for full-time bona fide employees working solely for the bidder, the bidder:

(1) [] has, [] has not employed or retained any person or company to solicit or obtain this contract; and

(2) [] has, [] has not paid or agreed to pay to any person or company employed or retained to solicit or obtain this contract any commission, percentage, brokerage, or other fee contingent upon or resulting from the award of this contract.

(c) If the answer to either (a)(1) or (a)(2) above is affirmative, the bidder shall make an immediate and full written disclosure to the PHA/IHA Contracting Officer.

(d) Any misrepresentation by the bidder shall give the PHA/IHA the right to (1) terminate the contract; (2) at its discretion, deduct from contract payments the amount of any commission, percentage, brokerage, or other contingent fee; or (3) take other remedy pursuant to the contract.

3. Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions (applicable to contracts exceeding \$100,000)

(a) The definitions and prohibitions contained in Section 1352 of title 31, United States Code, are hereby incorporated by reference in paragraph (b) of this certification.

(b) The bidder, by signing its bid, hereby certifies to the best of his or her knowledge and belief as of December 23, 1989 that:

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of a contract resulting from this solicitation;

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the bidder shall complete and submit, with its bid, OMB standard form LLL, "Disclosure of Lobbying Activities;" and

(3) He or she will include the language of this certification in all subcontracts at any tier and require that all recipients of subcontract awards in excess of \$100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

(d) Indian tribes (except those chartered by States) and Indian organizations as defined in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) are exempt from the requirements of this provision.

4. Organizational Conflicts of Interest Certification

The bidder certifies that to the best of its knowledge and belief and except as otherwise disclosed, he or she does not have any organizational conflict of interest which is defined as a situation in which the nature of work to be performed under this proposed contract and the bidder's organizational, financial, contractual, or other interests may, without some restriction on future activities:

(a) Result in an unfair competitive advantage to the bidder; or,
(b) Impair the bidder's objectivity in performing the contract work.
[] In the absence of any actual or apparent conflict, I hereby certify that to the best of my knowledge and belief, no actual or apparent conflict of interest exists with regard to my possible performance of this procurement.

5. Bidder's Certification of Eligibility

(a) By the submission of this bid, the bidder certifies that to the best of its knowledge and belief, neither it, nor any person or firm which has an interest in the bidder's firm, nor any of the bidder's subcontractors, is ineligible to:

(1) Be awarded contracts by any agency of the United States Government, HUD, or the State in which this contract is to be performed; or,

(2) Participate in HUD programs pursuant to 24 CFR Part 24.

(b) The certification in paragraph (a) above is a material representation of fact upon which reliance was placed when making award. If it is later determined that the bidder knowingly rendered an erroneous certification, the contract may be terminated for default, and the bidder may be debarred or suspended from participation in HUD programs and other Federal contract programs.

6. Minimum Bid Acceptance Period

(a) "Acceptance period," as used in this provision, means the number of calendar days available to the PHA/IHA for awarding a contract from the date specified in this solicitation for receipt of bids.

(b) This provision supersedes any language pertaining to the acceptance period that may appear elsewhere in this solicitation.

(c) The PHA/IHA requires a minimum acceptance period of [Contracting Officer insert time period] calendar days.

(d) In the space provided immediately below, bidders may specify a longer acceptance period than the PHA's/IHA's minimum requirement. The bidder allows the following acceptance period: calendar days.

(e) A bid allowing less than the PHA's/IHA's minimum acceptance period will be rejected.

(f) The bidder agrees to execute all that it has undertaken to do, in compliance with its bid, if that bid is accepted in writing within (1) the acceptance period stated in paragraph (c) above or (2) any longer acceptance period stated in paragraph (d) above.

7. Small, Minority, Women-Owned Business Concern Representation

The bidder represents and certifies as part of its bid/ offer that it --

(a) [] is, [] is not a small business concern. "Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding, and qualified as a small business under the criteria and size standards in 13 CFR 121.

(b) [] is, [] is not a women-owned business enterprise. "Women-owned business enterprise," as used in this provision, means a business that is at least 51 percent owned by a woman or women who are U.S. citizens and who also control and operate the business.

(c) [] is, [] is not a minority business enterprise. "Minority business enterprise," as used in this provision, means a business which is at least 51 percent owned or controlled by one or more minority group members or, in the case of a publicly owned business, at least 51 percent of its voting stock is owned by one or more minority group members, and whose management and daily operations are controlled by one or more such individuals. For the purpose of this definition, minority group members are:

(Check the block applicable to you)

[] Black Americans	[] Asian Pacific Americans
[] Hispanic Americans	[] Asian Indian Americans
[] Native Americans	[] Hasidic Jewish Americans

8. Indian-Owned Economic Enterprise and Indian Organization Representation (applicable only if this solicitation is for a contract to be performed on a project for an Indian Housing Authority)

The bidder represents and certifies that it:

(a) [] is, [] is not an Indian-owned economic enterprise. "Economic enterprise," as used in this provision, means any commercial, industrial, or business activity established or organized for the purpose of profit, which is at least 51 percent Indian owned. "Indian," as used in this provision, means any person who is a member of any tribe, band, group, pueblo, or community which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs and any "Native" as defined in the Alaska Native Claims Settlement Act.

(b) [] is, [] is not an Indian organization. "Indian organization," as used in this provision, means the governing body of any Indian tribe or entity established or recognized by such governing body. Indian "tribe" means any Indian tribe, band, group, pueblo, or

community including Native villages and Native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs.

9. Certification of Eligibility Under the Davis-Bacon Act (applicable to construction contracts exceeding \$2,000)

(a) By the submission of this bid, the bidder certifies that neither it nor any person or firm who has an interest in the bidder's firm is a person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of the contract resulting from this solicitation shall be subcontracted to any person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(c) The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U.S.C. 1001.

10. Certification of Nonsegregated Facilities (applicable to contracts exceeding \$10,000)

(a) The bidder's attention is called to the clause entitled **Equal Employment Opportunity** of the General Conditions of the Contract for Construction.

(b) "Segregated facilities," as used in this provision, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin because of habit, local custom, or otherwise.

(c) By the submission of this bid, the bidder certifies that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The bidder agrees that a breach of this certification is a violation of the Equal Employment Opportunity clause in the contract.

(d) The bidder further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) prior to entering into subcontracts which exceed \$10,000 and are not exempt from the requirements of the Equal Employment Opportunity clause, it will:

(1) Obtain identical certifications from the proposed subcontractors;

(2) Retain the certifications in its files; and

(3) Forward the following notice to the proposed subcontractors (except if the proposed subcontractors have submitted identical certifications for specific time periods):

Notice to Prospective Subcontractors of Requirement for Certifications of Nonsegregated Facilities

A Certification of Nonsegregated Facilities must be submitted before the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Employment Opportunity clause of the prime contract. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).

Note: The penalty for making false statements in bids is prescribed in 18 U.S.C. 1001.

11. Clean Air and Water Certification (applicable to contracts exceeding \$100,000)

The bidder certifies that:

(a) Any facility to be used in the performance of this contract [] is, [] is not listed on the Environmental Protection Agency List of Violating Facilities:

(b) The bidder will immediately notify the PHA/IHA Contracting Officer, before award, of the receipt of any communication from the Administrator, or a designee, of the Environmental Protection Agency, indicating that any facility that the bidder proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities; and,

(c) The bidder will include a certification substantially the same as this certification, including this paragraph (c), in every nonexempt subcontract.

12. Previous Participation Certificate (applicable to construction and equipment contracts exceeding \$50,000)

(a) The bidder shall complete and submit with his/her bid the Form HUD-2530, "Previous Participation Certificate." If the successful bidder does not submit the certificate with his/her bid, he/she must submit it within three (3) working days of bid opening. Failure to submit the certificate by that date may render the bid nonresponsive. No contract award will be made without a properly executed certificate.

(b) A fully executed "Previous Participation Certificate" [] is, [] is not included with the bid.

13. Bidder's Signature

The bidder hereby certifies that the information contained in these certifications and representations is accurate, complete, and current.

(Signature and Date)

(Typed or Printed Name)

(Title)

(Company Name)

(Company Address)

Previous Participation Certification

OMB Approval No. 2502-0118
(Exp. 05/31/2019)

US Department of Housing and Urban Development Office of Housing/Federal Housing Commissioner

US Department of Agriculture Farmers Home Administration

Part I to be completed by Controlling Participant of Covered Projects (See instructions) Reason for submission:		For HUD HQ/FmHA use only	
1. Agency name and City where the application is filed		2. Project Name, Project Number, City and Zip Code	
3. Loan or Contract amount \$	4. Number of Units or Beds	5. Section of Act	6. Type of Project (check one) <input type="checkbox"/> Existing <input type="checkbox"/> Rehabilitation <input type="checkbox"/> Proposed (New)

7. List all proposed Controlling Participants and attach organization chart for all organizations

Name and address of Principals and Affiliates (Name: Last, First, Middle Initial) proposing to participate	8 Role of Each Principal in Project	9. SSN or IRS Employer Number

Certifications: The controlling participants(s) listed above hereby apply to HUD or USDA FmHA, as the case maybe, for approval to participate as controlling participant(s) in the role(s) and project listed above. The controlling participant(s) each certify that all the statements made on this form are true, complete and correct to the best of their knowledge and belief and are made in good faith, including any Exhibits attached to this form.

Warning: HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. The controlling participants(s) further certify that to the best of their knowledge and belief:

- Schedule A contains a listing, for the last ten years, of every project assisted or insured by HUD, USDA FmHA and/or State and local government housing finance agencies in which the controlling participant(s) have participated or are now participating.
- For the period beginning 10 years prior to the date of this certification, and except as shown on the certification:
 - No mortgage on a project listed has ever been in default, assigned to the Government or foreclosed, nor has it received mortgage relief from the mortgagee;
 - The controlling participants have no defaults or noncompliance under any Conventional Contract or Turnkey Contract of Sale in connection with a public housing project;
 - There are no known unresolved findings as a result of HUD audits, management reviews or other Governmental investigations concerning the controlling participants or their projects;
 - There has not been a suspension or termination of payments under any HUD assistance contract due to the controlling participant's fault or negligence;
 - The controlling participants have not been convicted of a felony and are not presently the subject of a complaint or indictment charging a felony. (A felony is defined as any offense punishable by imprisonment for a term exceeding one year, but does not include any offense classified as a misdemeanor under the laws of a State and punishable by imprisonment of two years or less);
 - The controlling participants have not been suspended, debarred or otherwise restricted by any Department or Agency of the Federal Government or of a State Government from doing business with such Department or Agency;
 - The controlling participants have not defaulted on an obligation covered by a surety or performance bond and have not been the subject of a claim under an employee fidelity bond;
- All the names of the controlling participants who propose to participate in this project are listed above.
- None of the controlling participants is a HUD/FmHA employee or a member of a HUD/FmHA employee's immediate household as defined in Standards of Ethical Conduct for Employees of the Executive Branch in 5 C.F.R. Part 2635 (57 FR 35006) and HUD's Standard of Conduct in 24 C.F.R. Part 0 and USDA's Standard of Conduct in 7 C.F.R. Part 0 Subpart B.
- None of the controlling participants is a participant in an assisted or insured project as of this date on which construction has stopped for a period in excess of 20 days or which has been substantially completed for more than 90 days and documents for closing, including final cost certification, have not been filed with HUD or FmHA.
- None of the controlling participants have been found by HUD or FmHA to be in noncompliance with any applicable fair housing and civil rights requirements in 24 CFR 5.105(a). (If any controlling participants have been found to be in noncompliance with any requirements, attach a signed statement explaining the relevant facts, circumstances, and resolution, if any).
- None of the controlling participants is a Member of Congress or a Resident Commissioner nor otherwise prohibited or limited by law from contracting with the Government of the United States of America.
- Statements above (if any) to which the controlling participant(s) cannot certify have been deleted by striking through the words with a pen, and the controlling participant(s) have initialed each deletion (if any) and have attached a true and accurate signed statement (if applicable) to explain the facts and circumstances.

Name of Controlling Participant	Signature of Controlling Participant	Certification Date (mm/dd/yyyy)	Area Code and Tel. No.
This form prepared by (print name)		Area Code and Tel. No.	

Previous Participation Certification

OMB Approval No. 2502-0118

(Exp. 05/31/2019)

Schedule A: List of Previous Projects and Section 8 Contracts. Below is a complete list of the controlling participants' previous participation projects and participation history in multifamily Housing programs of HUD/FmHA, State and local Housing Finance Agencies. **Note:** Read and follow the instruction sheet carefully. Make full disclosure. Add extra sheets if you need more space. Double check for accuracy. If no previous projects, write by your name, **"No previous participation, First Experience"**.

1. Controlling Participants' Name (Last, First)	2. List of previous projects (Project name, project ID and, Govt. agency involved)	3. List Participants' Role(s) (indicate dates participated, and if fee or identity of interest participant)	4. Status of loan (current, defaulted, assigned, foreclosed)	5. Was the Project ever in default during your participation Yes No If yes, explain		6. Last MOR rating and Physical Insp. Score and date

Part II- For HUD Internal Processing Only

Received and checked by me for accuracy and completeness; recommend approval or refer to Headquarters after checking appropriate box.

Date (mm/dd/yyyy)	Tel No. and area code	<input type="checkbox"/> A. No adverse information; form HUD-2530 approval recommended. <input type="checkbox"/> B. Name match in system	<input type="checkbox"/> C. Disclosure or Certification problem <input type="checkbox"/> D. Other (attach memorandum)
Staff	Processing and Control		
Signature of authorized reviewer		Signature of authorized reviewer	Approved <input type="checkbox"/> Yes <input type="checkbox"/> No
			Date (mm/dd/yyyy)

Instructions for Completing the Previous Participation Certificate, form HUD-2530

Carefully read these instructions and the applicable regulations. A copy of those regulations published at 24 C.F.R. part 200, subpart H, can be obtained on-line at www.gpo.gov and from the Account Executive at any HUD Office. Type or print neatly in ink when filling out this form. Mark answers in all blocks of the form. If the form is not filled completely, it will delay approval of your application.

Attach extra sheets as you need them. Be sure to indicate "Continued on Attachments" wherever appropriate. Sign each additional page that you attach if it refers to you or your record. **Carefully read the certification before you sign it.** Any questions regarding the form or how to complete it can be answered by your HUD Account Executive.

Purpose: This form provides HUD with a certified report of all previous participation in HUD programs by those parties making application. The information requested in this form is used by HUD to determine if you meet the standards established to ensure that all controlling participants in HUD projects will honor their legal, financial and contractual obligations and are acceptable risks from the underwriting standpoint of an insurer, lender or governmental agency. HUD requires that you certify your record of previous participation in HUD/USDA-FmHA, State and Local Housing Finance Agency projects by completing and signing this form, before your project application or participation can be approved.

HUD approval of your certification is a necessary precondition for your participation in the project and in the capacity that you propose. If you do not file this certification, do not furnish the information requested accurately, or do not meet established standards, HUD will not approve your certification.

Note that approval of your certification does not obligate HUD to approve your project application, and it does not satisfy all other HUD program requirements relative to your qualifications.

Who Must Sign and File Form HUD-2530: Form HUD-2530 must be completed and signed by all Controlling Participants of Covered Projects, as such terms are defined in 24 CFR 200.212, and as further clarified by the Processing Guide referenced in 24 CFR 200.210(b) and made available on the HUD website at: http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/mfh/prevparticipation.

Where and When Form HUD-2530 Must Be Filed: The original of this form must be submitted to the HUD Office where your project application will be processed at the same time you file your initial project application. This form must be filed with applications for projects listed in 24 CFR 200.214 and for the Triggering Events listed at 24 CFR 200.218.

Review of Adverse Determination: If approval of your participation in a HUD project is denied, withheld, or conditionally granted on the basis of your record of previous participation, you will be notified by the HUD Office. You may request reconsideration in accordance with 24 CFR 200.222 and further clarified by the Processing Guide. Request must be made in writing within 30 days from your receipt of the notice of determination.

Specific Line Instructions are set forth in the Processing Guide.

The Department of Housing and Urban Development (HUD) is authorized to collect this information by law (42 U.S.C. 3535(d) and 24 C.F.R. 200.217) and by regulation at 24 CFR 200.210. This information is needed so that principals applying to participate in multifamily programs can become HUD-approved controlling participants. The information you provide will enable HUD to evaluate your record with respect to established standards of performance, responsibility and eligibility. Without prior approval, a controlling participant may not participate in a proposed or existing multifamily or healthcare project. HUD uses this information to evaluate whether or not controlling participants pose an unsatisfactory underwriting risk. The information is used to evaluate the potential controlling participants and approve only individuals and organizations that will honor their legal, financial and contractual obligations.

Privacy Act Statement: The Housing and Community Development Act of 1987, 42 U.S.C. 3543 requires persons applying for a Federally-insured or guaranteed loan to furnish his/her Social Security Number (SSN). HUD must have your SSN for identification of your records. HUD may use your SSN for automated processing of your records and to make requests for information about you and your previous records with other public agencies and private sector sources. HUD may disclose certain information to Federal, State and local agencies when relevant to civil, criminal, or regulatory investigations and prosecutions. It will not be otherwise disclosed or released outside of HUD, except as required and permitted by law. You must provide all of the information requested in this application, including your SSN.

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. This agency may not collect this information, and you are not required to complete this form, unless it displays a currently valid OMB control number.

A response is mandatory. Failure to provide any of the information will result in your disapproval of participation in this HUD program.

SPECIAL PROVISIONS

NOTICE TO ALL PROSPECTIVE BIDDERS **Homewood North Window Replacements - AMP-20**

Documents Required for Payment
HACP Contract No.: 600-14-19

Pursuant to Sections 27, 38, 40 and 46 of the General Conditions for this Contract, each contractor must submit the following required documents with each Payment Estimate (“PE”) in order for HACP to process a PE as follows:

- A. Periodic Estimate – HUD 51001**
- B. Schedule of Stored Materials – HUD 51003** (if applicable)
- C. Summary of Stored Materials – HUD 51004** (if applicable)
- D. Schedule of Change Orders – HUD 51002** (if applicable)
- E. Progress Payment Certification**
- F. Current/Approved Certified Payrolls** (submitted to HACP’s Davis-Bacon Wage Clerk).
- G. MBE/WBE Utilization Report**
- H. Section 3 Summary Report**

Signature of Authorized Officer: _____ Date: _____

THIS DOCUMENT MUST BE SIGNED.

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

**NON-COLLUSION
AFFIDAVIT**

State of _____

County of _____

_____, being first duly sworn, deposes and says:
(Printed or Typed Name)

That he/she is
(Proprietor, General Partner, President or Vice President)

of _____; and having submitted the foregoing Bid for
(Bidder Name)

Homewood North Window Replacements
- AMP-20

(Project Name)

600-14-19 _____;
(HACP Contract No.)

and is the party making the foregoing Bid, and that such Bid is genuine and not collusive or sham; that said Bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any Bidder or person, to put in a sham bid, or to refrain from bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any person, to fix the bid price of affiant or of any bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any bidder, or to secure any advantage against the Housing Authority of the City of Pittsburgh or any person interested in the proposed contract; and that all statements in said Bid are true.

(Signature and Date)

Subscribed and sworn to before me

this _____ day of _____, 20__

My Commission expires _____, 20__

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

FORM OF AGREEMENT

THIS AGREEMENT, made this ____ day of _____ in the year Two Thousand ____ (20) by and between:

- ☐ An individual doing business in his/her own name
- ☐ An individual doing business under a fictitious or assumed name
- ☐ A partnership
- ☐ A Corporation

(Hereinafter called the Contractor)

AND

The Housing Authority of the City of Pittsburgh (hereinafter called the Authority)
200 Ross Street
Pittsburgh, PA 15219

WITNESSETH: That the Contractor and the Authority, for the consideration stated herein, mutually agree as follows:

ARTICLE 1, STATEMENT OF WORK

The Contractor shall provide all labor, materials and equipment, and services necessary to perform and complete all work required in accordance with Tusick & Associates drawings for Homewood North Window Replacements - AMP-20
dated September 1, 2015 and Project Manual dated June 3, 2019 regarding:

CONTRACT NO. 600-14-19

and addenda thereto numbered _____, all as prepared by _____, which said specifications, drawings, and addenda are incorporated herein by reference and are a part hereof.

The work shall begin at the time stipulated in the NOTICE TO PROCEED and in no event exceeding 180 consecutive calendar days from notice to proceed.

ARTICLE 2, THE CONTRACT PRICE

The Authority shall pay the contractor for the performance of the Contract in current fund, subject to additions and deductions as provided in the specifications.

_____ (\$ _____)

ARTICLE 3, CONTRACT DOCUMENTS

The Contract shall consist of the following component parts:

- a. This Agreement
- b. Project Manual (including all component parts) dated June 3, 2019.
- c. Project Drawings issued by Tusick & Associates dated September 1, 2015.

This Agreement, together with the other documents enumerated in this Article 3 which said other documents are as fully a part of the Contract as if hereto attached or herein repeated, form the Contract. In the event that any provision in any component part of this Contract conflicts with any provision of any other component part, the provision of the component part first enumerated in this ARTICLE 3, shall govern, except as subsequent parts may establish more specific criteria or language in which case these criteria and language shall govern. The various provisions in Addenda shall be construed in the order of preference of the component part of the Contract which each modified.

SIGNED, SEALED AND DELIVERED IN _____ ORIGINAL COUNTERPARTS

this _____ day of _____ 20____.

IF THE PRINCIPAL IS AN INDIVIDUAL, SIGN HERE

By signing this Form of Agreement, if the Housing Authority accepts and signs Contract No. 600-14-19 this contract shall be binding on both parties.

(Printed or Typed Name)

(Printed or Typed Name)

Witness

{

Principal

{

(Signature and Date)

(Signature and Date)

IF THE PRINCIPAL IS A PARTNERSHIP, SIGN HERE

By signing this Form of Agreement, if the Housing Authority accepts and signs Contract No. 600-14-19
this contract shall be binding on both parties.

<hr/>	<hr/>
<i>(Printed or Typed Name)</i>	<i>(Printed or Typed Name)</i>
<i>Witness</i>	<i>Partner*</i>
{	{
<hr/>	<hr/>
<i>(Signature and Date)</i>	<i>(Signature and Date)</i>

<hr/>	<hr/>
<i>(Printed or Typed Name)</i>	<i>(Printed or Typed Name)</i>
<i>Witness</i>	<i>Partner*</i>
{	{
<hr/>	<hr/>
<i>(Signature and Date)</i>	<i>(Signature and Date)</i>

- * If the Bidder is a partnership, the Form of Agreement must be signed in the name of the partnership by at least two general partners, whose names and addresses must be listed on the certificate on page BF-3-P of the Bid.

IF THE PRINCIPAL IS A CORPORATION, SIGN HERE

By signing this Form of Agreement, if the Housing Authority accepts and signs Contract No. 600-14-19 this contract shall be binding on both parties.

(CORPORATE
SEAL)

(Corporate Name)

(Printed or Typed Name)

(Printed or Typed Name)

Witness

{

President
V.P. **

{

(Signature and Date)

(Signature and Date)

(Corporate Title)

(Corporate Title)

** If the bidder is a corporation, the Form of Agreement must be executed in the Corporation's correct corporate name by its President or Vice President and attested to by its Secretary or Assistant Secretary or Treasurer or Assistant Treasurer, and the Certification of Corporate Principal (Doc. 00625) must be executed by the Secretary or Assistant Secretary.

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the
Secretary/Assistant Secretary of the Corporation named a Bidder herein; that
(Circle one)

_____ who signed this Bid on behalf of the

Corporation was then _____ of said Corporation that I know his
signature and his signature thereto is genuine; and that said Bid was duly signed, sealed and
attested in behalf of said Corporation by authority of its governing body.

(CORPORATE
SEAL)

(Signature and Date)

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

Secretary

Kim Detrick, Chief Contracting Officer

Attest

Principal

{

{

(Signature and Date)

(Signature and Date)

Manikandan Muthiah, Director of Construction and Modernization

Approved as to

Contents and Costs {

(Signature and Date)

Associate Counsel

Approved as to

Form

{

(Signature and Date)

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

CONTRACTING OFFICER CERTIFICATION

I _____ certify that I am the Recording Secretary of the Housing Authority of the City of Pittsburgh; that _____, who signed this Contract on behalf of the Housing Authority, was then Contracting Officer of said Authority; that the said Contract was duly signed for and on behalf of the Housing Authority of the City of Pittsburgh.

Secretary (SEAL)

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

PERFORMANCE BOND

THIS BOND IS ISSUED SIMULTANEOUSLY WITH PAYMENT BOND IN FAVOR OF THE
AUTHORITY CONDITIONED ON THE FULL AND FAITHFUL PERFORMANCE OF THE CONTRACT.

KNOW ALL MEN BY THESE PRESENTS, that we,

_____, as Principal, and
(Insert name and address of contractor exactly as it appears on Form of Agreement)

_____, as Sureties, are
held and firmly bound unto the **Housing Authority of the City of Pittsburgh**, its certain attorney, successors, or assigns
(the Obligee, hereinafter called the "Authority") in the penal sum of

_____ Dollars (\$ _____)

lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our
heirs, personal representatives, successors, and assigns, jointly and severally, firmly by these presents:

WHEREAS, the Principal heretofore has submitted to the said Authority a certain bid, dated

_____, 20 _____ (the "Bid"), for construction of
(Insert date of bid)

(Insert name of project exactly as it appears on Form of Agreement)
pursuant to specifications, drawings and other related documents constituting the Invitation for Bids (the "IFB"); and

WHEREAS, the said Authority is a "Contracting body" under provisions of Act No. 385 of the General Assembly
of the Commonwealth of Pennsylvania, approved by the Governor on December 20, 1967, known and cited as the
"Public Works Contractors' Bond Law of 1967" (8 P.S. 191-202) (the "Act"); and

WHEREAS, the Act, in Section 3 (a), requires that, before an award shall be made to the Principal shall furnish this
Bond to the said Authority, with this Bond to become binding upon the award of a Contract to the Principal by the said
Authority in accordance with the Bid; and

WHEREAS, it also is a condition of the IFB that this Bond shall be furnished by the Principal to the said Authority;
and

WHEREAS, Under the Invitation for Bids, it is provided, inter alia, that if the Principal shall furnish this Bond to
the said Authority, and if the said Authority shall make an award to the Principal in accordance with the Bid, then the
Principal and the said Authority shall enter into a contract with respect to performance of such work (the "Contract"), the
Form of Agreement for which is set forth in the IFB.

NOW, therefore, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the principal shall faithfully perform the Contract on his part as of the time and in the manner therein provided and satisfy all claims and demands incurred in or for the same, or growing out of the same, or for injury or damages to persons or property in the performance thereof, and shall fully indemnify and save harmless the said Authority from any and all cost and damage which the said Authority may suffer by reason of the principal's failure to do so, and shall fully reimburse and repay the said Authority any and all outlay and expense which it incurs by reason of any such default, then this obligation shall be null and void, otherwise it shall remain in full force and virtue.

It is further understood and agreed that the principal shall guarantee for a period of one (1) year from completion date of the contract against defects in workmanship or materials in accordance with the terms of the Contract.

The said surety, for value received, hereby stipulates and agrees that no change, 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 obligations 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.

SIGNED, SEALED AND DELIVERED IN _____ ORIGINAL COUNTERPARTS
(2 required by Authority)

this _____ day of _____ 20____.

IF THE PRINCIPAL IS AN INDIVIDUAL, SIGN HERE

	_____ (Printed or Typed Name)		_____ (Printed or Typed Name)
<i>Witness</i>		<i>Principal</i>	
{		{	
	_____ (Signature and Date)		_____ (Signature and Date)

IF THE PRINCIPAL IS A PARTNERSHIP, SIGN HERE

	<hr/> <i>(Printed or Typed Name)</i>		<hr/> <i>(Printed or Typed Name)</i>
<i>Witness</i>		<i>Partner*</i>	
	{		{
	<hr/> <i>(Signature and Date)</i>		<hr/> <i>(Signature and Date)</i>

	<hr/> <i>(Printed or Typed Name)</i>		<hr/> <i>(Printed or Typed Name)</i>
<i>Witness</i>		<i>Partner*</i>	
	{		{
	<hr/> <i>(Signature and Date)</i>		<hr/> <i>(Signature and Date)</i>

* If the Bidder is a partnership, the Bond must be signed in the name of the partnership by at least two general partners, whose names and addresses must be listed on the certificate on page BF-3-P of the Bid.

IF THE PRINCIPAL IS A CORPORATION, SIGN HERE

*(CORPORATE
SEAL)*

(Corporate Name)

(Printed or Typed Name)

(Printed or Typed Name)

Witness

President

*V.P.***

{

{

(Signature and Date)

(Signature and Date)

(Corporate Title)

(Corporate Title)

** If the bidder is a corporation, the Bond must be executed in the Corporation's correct corporate name by its President or Vice President and attested to by its Secretary or Assistant Secretary or Treasurer or Assistant Treasurer, and the Certification of Corporate Principal below must be executed by the Secretary or Assistant Secretary.

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the
Secretary/Assistant Secretary of the Corporation named a Bidder herein; that
(Circle one)

_____ who signed this Bid on behalf of the

Corporation was then _____ of said Corporation that I know his signature and his
signature thereto is genuine; and that said Bid was duly signed, sealed and attested in behalf of said Corporation by
authority of its governing body.

(CORPORATE
SEAL)

(Signature and Date)

SURETY SIGN HERE

(SURETY
SEAL)

(Printed or Typed Name)

(Printed or Typed Name)

Attest
{

(Signature and Date)

Surety ***
{

(Signature and Date)

***Power of attorney must be attached to this Bid Bond.

The rate of premium charged is \$ _____ per thousand.
(To be filled in by Surety)

The total amount of premium charged is \$ _____
(To be filled in by Surety)

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

PAYMENT BOND
(Labor and Materialmen's Bond)

THIS BOND IS ISSUED SIMULTANEOUSLY WITH PERFORMANCE BOND IN FAVOR OF THE
AUTHORITY CONDITIONED ON THE FULL AND FAITHFUL PERFORMANCE OF THE CONTRACT.

KNOW ALL MEN BY THESE PRESENTS, that we,

_____, as Principal, and
(Insert name and address of Contractor exactly as it appears on Form of Agreement)

_____, as Sureties, are
held and firmly bound unto the **Housing Authority of the City of Pittsburgh**, its certain attorney, successors, or assigns
(the Obligee, hereinafter called the "Authority") in the penal sum of

_____ Dollars (\$_____)

lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our
heirs, personal representatives, successors, and assigns, jointly and severally, firmly by these presents:

WHEREAS, the Principal heretofore has submitted to the said Obligee a certain bid, dated

_____, 20_____ (the "Bid"), for construction of
(Insert date of bid)

(Insert name of project exactly as it appears on Form of Agreement)

pursuant to specifications, drawings and other related documents constituting the Invitation for Bids (the "IFB"); and

WHEREAS, the said Authority is a "Contracting body" under provisions of Act No. 385 of the General Assembly
of the Commonwealth of Pennsylvania, approved by the Governor on December 20, 1967, known and cited as the
"Public Works Contractors' Bond Law of 1967" (8 P.S. 191-202) (the "Act"); and

WHEREAS, the Act, in Section 3 (a), requires that, before an award shall be made to the Principal shall furnish this
Bond to the said Authority, with this Bond to become binding upon the award of a Contract to the Principal by the said
Authority in accordance with the Bid; and

WHEREAS, it also is a condition of the IFB that this Bond shall be furnished by the Principal to the said Authority;
and

WHEREAS, Under the Invitation for Bids, it is provided, inter alia, that if the Principal shall furnish this Bond to the said Authority, and if the said Authority shall make an award to the Principal in accordance with the Bid, then the Principal and the said Authority shall enter into a contract with respect to performance of such work (the "Contract"), the Form of Agreement for which is set forth in the IFB.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH that if said principal and all subcontractors to whom any portion of the work provided for in said contract is sublet and all assignees of said principal and of such subcontractors shall promptly make payment for all material furnished, labor supplied or performed, rental for equipment employed, and services rendered by public utilities in or in connection with the prosecution of the work, whether or not the said material, labor, equipment or services enter into and become component parts of the work or improvement contemplated in said contract, or in any amendment or extension of or addition to said Contract, then the above obligation shall be void; otherwise to remain in full force and effect. PROVIDED, however, that this bond is subject to the following conditions and limitations.

(a) All persons who have performed labor, rendered services or furnished materials or machinery, shall have direct right of action against the principal and surety on this bond, which right of action shall be asserted in proceedings instituted in the State in which such labor was performed, services rendered or materials furnished (or where labor has been performed, services rendered or materials furnished under said Contract is more than one State, then in any such State). Insofar as permitted by the laws of such State, such right of action shall be asserted in a proceeding instituting such action and any or all other persons having claims hereunder, and any other person having a claim hereunder shall have the right to be made a party to such proceeding (but not later than one year after the complete performance of said Contract and final settlement thereof) and to have such claim adjudicated in such action and judgment rendered thereon.

(b) The surety shall not be liable hereunder for any damages or compensation recoverable under any workmen's compensation or employer's liability statute.

(c) In no event shall the surety be liable for a greater sum than the penalty of this bond, or subject to any suit, action or proceeding thereon that is instituted later than one year after the complete performance of said contract and final settlement thereof.

(d) As used herein: The term "person" refers to any individual, firm or corporation who have furnished materials or machinery or public utility services to be used on or incorporated in the work or the prosecution thereof provided for in said Contract or in any amendment or extension of or addition to said Contract, and/or to any person engaged in the prosecution of the work provided for in said Contract or in any amendment or extension of or addition to said Contract, who is an agent, servant or employee of the principal, or of any subcontractor, or of any assignee of said principal or of any subcontractor and also anyone so engaged who performs the work of a laborer or of a mechanic regardless of any contractual relationship between the principal, or any sub-contractor, or any assignee of said principal or of said subcontractor, and such laborer or mechanic, but shall not include office employees not regularly stationed at the site of the work.

The said surety, for value received, hereby stipulates and agrees that no change, 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 obligations 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.

SIGNED, SEALED AND DELIVERED IN _____ ORIGINAL COUNTERPARTS
(2 required by Authority)

this _____ day of _____ 20_____.

IF THE PRINCIPAL IS AN INDIVIDUAL, SIGN HERE

	_____ (Printed or Typed Name)		_____ (Printed or Typed Name)
<i>Witness</i>		<i>Principal</i>	
{		{	
	_____ (Signature and Date)		_____ (Signature and Date)

IF THE PRINCIPAL IS A PARTNERSHIP, SIGN HERE

	<hr/>		<hr/>
	<i>(Printed or Typed Name)</i>		<i>(Printed or Typed Name)</i>
<i>Witness</i>		<i>Partner*</i>	
	{		{
	<hr/>		<hr/>
	<i>(Signature and Date)</i>		<i>(Signature and Date)</i>
	<hr/>		<hr/>
	<i>(Printed or Typed Name)</i>		<i>(Printed or Typed Name)</i>
<i>Witness</i>		<i>Partner*</i>	
	{		{
	<hr/>		<hr/>
	<i>(Signature and Date)</i>		<i>(Signature and Date)</i>

* If the Bidder is a partnership, the Bond must be signed in the name of the partnership by at least two general partners, whose names and addresses must be listed on the certificate on page BF-3-P of the Bid.

IF THE PRINCIPAL IS A CORPORATION, SIGN HERE

(CORPORATE
SEAL)

(Corporate Name)

Witness

(Printed or Typed Name)

(Printed or Typed Name)

President
V.P.**

{

{

(Signature and Date)

(Signature and Date)

(Corporate Title)

(Corporate Title)

** If the bidder is a corporation, the Bond must be executed in the Corporation's correct corporate name by its President or Vice President and attested to by its Secretary or Assistant Secretary or Treasurer or Assistant Treasurer, and the Certification of Corporate Principal (Doc. 00625) must be executed by the Secretary or Assistant Secretary.

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the
Secretary/Assistant Secretary of the Corporation named a Bidder herein; that
(Circle one)

_____ who signed this Bid on behalf of the

Corporation was then _____ of said Corporation that I know his
signature and his signature thereto is genuine; and that said Bid was duly signed, sealed and
attested in behalf of said Corporation by authority of its governing body.

(CORPORATE
SEAL)

(Signature and Date)

SURETY SIGN HERE

(SURETY
SEAL)

	<hr/>		<hr/>
	(Printed or Typed Name)		(Printed or Typed Name)
Attest		Surety	
	{		{
	<hr/>		<hr/>
	(Signature and Date)		(Signature and Date)

The rate of premium charged is \$ _____ per thousand.
(To be filled in by Surety)

The total amount of premium charged is \$ _____
(To be filled in by Surety)

General Conditions for Construction Contracts - Public Housing Programs

U.S. Department of Housing and Urban Development
Office of Public and Indian Housing
OMB Approval No. 2577-0157 (exp. 3/31/2020)

Applicability. This form is applicable to any construction/development contract greater than \$150,000.

This form includes those clauses required by OMB's common rule on grantee procurement, implemented at HUD in 2 CFR 200, and those requirements set forth in Section 3 of the Housing and Urban Development Act of 1968 and its amendment by the Housing and Community Development Act of 1992, implemented by HUD at 24 CFR Part 135. The form is required for construction contracts awarded by Public Housing Agencies (PHAs).

The form is used by Housing Authorities in solicitations to provide necessary contract clauses. If the form were not used, HAs would be unable to enforce their contracts.

Public reporting burden for this collection of information is estimated to average 1.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Responses to the collection of information are required to obtain a benefit or to retain a benefit.

The information requested does not lend itself to confidentiality.

HUD may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB number.

Clause		Page	Clause		Page
1.	Definitions	2	Administrative Requirements		
2.	Contractor's Responsibility for Work	2	25.	Contract Period	9
3.	Architect's Duties, Responsibilities and Authority	2	26.	Order of Precedence	9
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5.	Preconstruction Conference and Notice to Proceed	3	29.	Changes	10
6.	Construction Progress Schedule	3	30.	Suspension of Work	11
7.	Site Investigation and Conditions Affecting the Work	3	31.	Disputes	11
8.	Differing Site Conditions	4	32.	Default	11
9.	Specifications and Drawings for Construction	4	33.	Liquidated	12
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1. Definitions

- (a) "Architect" means the person or other entity engaged by the PHA to perform architectural, engineering, design, and other services related to the work as provided for in the contract. When a PHA uses an engineer to act in this capacity, the terms "architect" and "engineer" shall be synonymous. The Architect shall serve as a technical representative of the Contracting Officer. The Architect's authority is as set forth elsewhere in this contract.
- (b) "Contract" means the contract entered into between the PHA and the Contractor. It includes the forms of Bid, the Bid Bond, the Performance and Payment Bond or Bonds or other assurance of completion, the Certifications, Representations, and Other Statements of Bidders (form HUD-5370), these General Conditions of the Contract for Construction (form HUD-5370), the applicable wage rate determinations from the U.S. Department of Labor, any special conditions included elsewhere in the contract, the specifications, and drawings. It includes all formal changes to any of those documents by addendum, change order, or other modification.
- (c) "Contracting Officer" means the person delegated the authority by the PHA to enter into, administer, and/or terminate this contract and designated as such in writing to the Contractor. The term includes any successor Contracting Officer and any duly authorized representative of the Contracting Officer also designated in writing. The Contracting Officer shall be deemed the authorized agent of the PHA in all dealings with the Contractor.
- (d) "Contractor" means the person or other entity entering into the contract with the PHA to perform all of the work required under the contract.
- (e) "Drawings" means the drawings enumerated in the schedule of drawings contained in the Specifications and as described in the contract clause entitled Specifications and Drawings for Construction herein.
- (f) "HUD" means the United States of America acting through the Department of Housing and Urban Development including the Secretary, or any other person designated to act on its behalf. HUD has agreed, subject to the provisions of an Annual Contributions Contract (ACC), to provide financial assistance to the PHA, which includes assistance in financing the work to be performed under this contract. As defined elsewhere in these General Conditions or the contract documents, the determination of HUD may be required to authorize changes in the work or for release of funds to the PHA for payment to the Contractor. Notwithstanding HUD's role, nothing in this contract shall be construed to create any contractual relationship between the Contractor and HUD.
- (g) "Project" means the entire project, whether construction or rehabilitation, the work for which is provided for in whole or in part under this contract.
- (h) "PHA" means the Public Housing Agency organized under applicable state laws which is a party to this contract.
- (i) "Specifications" means the written description of the technical requirements for construction and includes the criteria and tests for determining whether the requirements are met.
- (l) "Work" means materials, workmanship, and manufacture and fabrication of components.
- (a) The Contractor shall furnish all necessary labor, materials, tools, equipment, and transportation necessary for performance of the work. The Contractor shall also furnish all necessary water, heat, light, and power not made available to the Contractor by the PHA pursuant to the clause entitled Availability and Use of Utility Services herein.
- (b) The Contractor shall perform on the site, and with its own organization, work equivalent to at least ☒ (12 percent unless otherwise indicated) of the total amount of work to be performed under the order. This percentage may be reduced by a supplemental agreement to this order if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the PHA.
- (c) At all times during performance of this contract and until the work is completed and accepted, the Contractor shall directly superintend the work or assign and have on the work site a competent superintendent who is satisfactory to the Contracting Officer and has authority to act for the Contractor.
- (d) The Contractor shall be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence, and shall take proper safety and health precautions to protect the work, the workers, the public, and the property of others. The Contractor shall hold and save the PHA, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.
- (e) The Contractor shall lay out the work from base lines and bench marks indicated on the drawings and be responsible for all lines, levels, and measurements of all work executed under the contract. The Contractor shall verify the figures before laying out the work and will be held responsible for any error resulting from its failure to do so.
- (f) The Contractor shall confine all operations (including storage of materials) on PHA premises to areas authorized or approved by the Contracting Officer.
- (g) The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. After completing the work and before final inspection, the Contractor shall (1) remove from the premises all scaffolding, equipment, tools, and materials (including rejected materials) that are not the property of the PHA and all rubbish caused by its work; (2) leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer; (3) perform all specified tests; and, (4) deliver the installation in complete and operating condition.
- (h) The Contractor's responsibility will terminate when all work has been completed, the final inspection made, and the work accepted by the Contracting Officer. The Contractor will then be released from further obligation except as required by the warranties specified elsewhere in the contract.

3. Architect's Duties, Responsibilities, and Authority

- (a) The Architect for this contract, and any successor, shall be designated in writing by the Contracting Officer.

2. Contractor's Responsibility for Work

- (b) The Architect shall serve as the Contracting Officer's technical representative with respect to architectural, engineering, and design matters related to the work performed under the contract. The Architect may provide direction on contract performance. Such direction shall be within the scope of the contract and may not be of a nature which: (1) institutes additional work outside the scope of the contract; (2) constitutes a change as defined in the Changes clause herein; (3) causes an increase or decrease in the cost of the contract; (4) alters the Construction Progress Schedule; or (5) changes any of the other express terms or conditions of the contract.
- (c) The Architect's duties and responsibilities may include but shall not be limited to:
- (1) Making periodic visits to the work site, and on the basis of his/her on-site inspections, issuing written reports to the PHA which shall include all observed deficiencies. The Architect shall file a copy of the report with the Contractor's designated representative at the site;
 - (2) Making modifications in drawings and technical specifications and assisting the Contracting Officer in the preparation of change orders and other contract modifications for issuance by the Contracting Officer;
 - (3) Reviewing and making recommendations with respect to - (i) the Contractor's construction progress schedules; (ii) the Contractor's shop and detailed drawings; (iii) the machinery, mechanical and other equipment and materials or other articles proposed for use by the Contractor; and, (iv) the Contractor's price breakdown and progress payment estimates; and,
 - (4) Assisting in inspections, signing Certificates of Completion, and making recommendations with respect to acceptance of work completed under the contract.

4. Other Contracts

The PHA may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with PHA employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by PHA employees

Construction Requirements

5. Pre-construction Conference and Notice to Proceed

- (a) Within ten calendar days of contract execution, and prior to the commencement of work, the Contractor shall attend a preconstruction conference with representatives of the PHA, its Architect, and other interested parties convened by the PHA. The conference will serve to acquaint the participants with the general plan of the construction operation and all other requirements of the contract. The PHA will provide the Contractor with the date, time, and place of the conference.
- (b) The contractor shall begin work upon receipt of a written Notice to Proceed from the Contracting Officer or designee. The Contractor shall not begin work prior to receiving such notice.

6. Construction Progress Schedule

- (a) The Contractor shall, within five days after the work commences on the contract or another period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring labor, materials, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments or take other remedies under the contract until the Contractor submits the required schedule.
- (b) The Contractor shall enter the actual progress on the chart as required by the Contracting Officer, and immediately deliver three copies of the annotated schedule to the Contracting Officer. If the Contracting Officer determines, upon the basis of inspection conducted pursuant to the clause entitled Inspection and Acceptance of Construction, herein that the Contractor is not meeting the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the PHA. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.
- (c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the Contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the Default clause of this contract.

7. Site Investigation and Conditions Affecting the Work

- (a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to, (1) conditions bearing upon transportation, disposal, handling, and storage of materials; (2) the availability of labor, water, electric power, and roads; (3) uncertainties of weather, river stages, tides, or similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is

reasonably ascertainable from an inspection of the site, including all exploratory work done by the PHA, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the PHA.

- (b) The PHA assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the PHA. Nor does the PHA assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

8. Differing Site Conditions

- (a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or (2) unknown physical conditions at the site(s), of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.
- (b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. Work shall not proceed at the affected site, except at the Contractor's risk, until the Contracting Officer has provided written instructions to the Contractor. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, the Contractor shall file a claim in writing to the PHA within ten days after receipt of such instructions and, in any event, before proceeding with the work. An equitable adjustment in the contract price, the delivery schedule, or both shall be made under this clause and the contract modified in writing accordingly.
- (c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required; provided, that the time prescribed in (a) above for giving written notice may be extended by the Contracting Officer.
- (d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.

9. Specifications and Drawings for Construction

- (a) The Contractor shall keep on the work site a copy of the drawings and specifications and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy in the figures, in the drawings, or in the specifications, the matter shall be

promptly submitted to the Contracting Officer, who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at its own risk and expense. The Contracting Officer shall furnish from time to time such detailed drawings and other information as considered necessary, unless otherwise provided.

- (b) Wherever in the specifications or upon the drawings the words "directed", "required", "ordered", "designated", "prescribed", or words of like import are used, it shall be understood that the "direction", "requirement", "order", "designation", or "prescription", of the Contracting Officer is intended and similarly the words "approved", "acceptable", "satisfactory", or words of like import shall mean "approved by", or "acceptable to", or "satisfactory to" the Contracting Officer, unless otherwise expressly stated.
- (c) Where "as shown" "as indicated", "as detailed", or of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word "provided" as used herein shall be understood to mean "provide complete in place" that is "furnished and installed".
- (d) "Shop drawings" means drawings, submitted to the PHA by the Contractor, subcontractor, or any lower tier subcontractor, showing in detail (1) the proposed fabrication and assembly of structural elements and (2) the installation (i.e., form, fit, and attachment details) of materials of equipment. It includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the Contractor to explain in detail specific portions of the work required by the contract. The PHA may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.
- (e) If this contract requires shop drawings, the Contractor shall coordinate all such drawings, and review them for accuracy, completeness, and compliance with other contract requirements and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate an approval or disapproval of the shop drawings and if not approved as submitted shall indicate the PHA's reasons therefore. Any work done before such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (f) below.
- (f) If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Architect approves any such variation and the Contracting Officer concurs, the Contracting Officer shall issue an appropriate modification to the contract, except that, if the variation is minor or does not involve a change in price or in time of performance, a modification need not be issued.
- (g) It shall be the responsibility of the Contractor to make timely requests of the PHA for such large scale and full size drawings, color schemes, and other additional information, not already in his possession, which shall be

required in the planning and production of the work. Such requests may be submitted as the need arises, but each such request shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay.

- (h) The Contractor shall submit to the Contracting Officer for approval four copies (unless otherwise indicated) of all shop drawings as called for under the various headings of these specifications. Three sets (unless otherwise indicated) of all shop drawings, will be retained by the PHA and one set will be returned to the Contractor. As required by the Contracting Officer, the Contractor, upon completing the work under this contract, shall furnish a complete set of all shop drawings as finally approved. These drawings shall show all changes and revisions made up to the time the work is completed and accepted.
- (i) This clause shall be included in all subcontracts at any tier. It shall be the responsibility of the Contractor to ensure that all shop drawings prepared by subcontractors are submitted to the Contracting Officer.

10. As-Built Drawings

- (a) "As-built drawings," as used in this clause, means drawings submitted by the Contractor or subcontractor at any tier to show the construction of a particular structure or work as actually completed under the contract. "As-built drawings" shall be synonymous with "Record drawings."
- (b) As required by the Contracting Officer, the Contractor shall provide the Contracting Officer accurate information to be used in the preparation of permanent as-built drawings. For this purpose, the Contractor shall record on one set of contract drawings all changes from the installations originally indicated, and record final locations of underground lines by depth from finish grade and by accurate horizontal offset distances to permanent surface improvements such as buildings, curbs, or edges of walks.
- (c) This clause shall be included in all subcontracts at any tier. It shall be the responsibility of the Contractor to ensure that all as-built drawings prepared by subcontractors are submitted to the Contracting Officer.

11. Material and Workmanship

- (a) All equipment, material, and articles furnished under this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. References in the contract to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of, and as approved by the Contracting Officer, is equal to that named in the specifications, unless otherwise specifically provided in this contract.
- (b) Approval of equipment and materials.
 - (1) The Contractor shall obtain the Contracting Officer's approval of the machinery and mechanical and other equipment to be incorporated into the work. When requesting approval, the Contractor shall furnish to the Contracting Officer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the

machinery and mechanical and other equipment. When required by this contract or by the Contracting Officer, the Contractor shall also obtain the Contracting Officer's approval of the material or articles which the Contractor contemplates incorporating into the work. When requesting approval, the Contractor shall provide full information concerning the material or articles. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.

- (2) When required by the specifications or the Contracting Officer, the Contractor shall submit appropriately marked samples (and certificates related to them) for approval at the Contractor's expense, with all shipping charges prepaid. The Contractor shall label, or otherwise properly mark on the container, the material or product represented, its place of origin, the name of the producer, the Contractor's name, and the identification of the construction project for which the material or product is intended to be used.
- (3) Certificates shall be submitted in triplicate, describing each sample submitted for approval and certifying that the material, equipment or accessory complies with contract requirements. The certificates shall include the name and brand of the product, name of manufacturer, and the location where produced.
- (4) Approval of a sample shall not constitute a waiver of the PHA right to demand full compliance with contract requirements. Materials, equipment and accessories may be rejected for cause even though samples have been approved.
- (5) Wherever materials are required to comply with recognized standards or specifications, such specifications shall be accepted as establishing the technical qualities and testing methods, but shall not govern the number of tests required to be made nor modify other contract requirements. The Contracting Officer may require laboratory test reports on items submitted for approval or may approve materials on the basis of data submitted in certificates with samples. Check tests will be made on materials delivered for use only as frequently as the Contracting Officer determines necessary to insure compliance of materials with the specifications. The Contractor will assume all costs of retesting materials which fail to meet contract requirements and/or testing materials offered in substitution for those found deficient.
- (6) After approval, samples will be kept in the Project office until completion of work. They may be built into the work after a substantial quantity of the materials they represent has been built in and accepted.
- (c) Requirements concerning lead-based paint. The Contractor shall comply with the requirements concerning lead-based paint contained in the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. 4821-4846) as implemented by 24 CFR Part 35.

12. Permits and Codes

- (a) The Contractor shall give all notices and comply with all applicable laws, ordinances, codes, rules and regulations. Notwithstanding the requirement of the Contractor to comply with the drawings and specifications in the contract, all work installed shall comply with all applicable codes and regulations as amended by any

waivers. Before installing the work, the Contractor shall examine the drawings and the specifications for compliance with applicable codes and regulations bearing on the work and shall immediately report any discrepancy it may discover to the Contracting Officer. Where the requirements of the drawings and specifications fail to comply with the applicable code or regulation, the Contracting Officer shall modify the contract by change order pursuant to the clause entitled Changes herein to conform to the code or regulation.

- (b) The Contractor shall secure and pay for all permits, fees, and licenses necessary for the proper execution and completion of the work. Where the PHA can arrange for the issuance of all or part of these permits, fees and licenses, without cost to the Contractor, the contract amount shall be reduced accordingly.

13. Health, Safety, and Accident Prevention

- (a) In performing this contract, the Contractor shall:
- (1) Ensure that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his/her health and/or safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation;
 - (2) Protect the lives, health, and safety of other persons;
 - (3) Prevent damage to property, materials, supplies, and equipment; and,
 - (4) Avoid work interruptions.
- (b) For these purposes, the Contractor shall:
- (1) Comply with regulations and standards issued by the Secretary of Labor at 29 CFR Part 1926. Failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act (Public Law 91-54, 83 Stat. 96), 40 U.S.C. 3701 et seq.; and
 - (2) Include the terms of this clause in every subcontract so that such terms will be binding on each subcontractor.
- (c) The Contractor shall maintain an accurate record of exposure data on all accidents incident to work performed under this contract resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment, and shall report this data in the manner prescribed by 29 CFR Part 1904.
- (d) The Contracting Officer shall notify the Contractor of any noncompliance with these requirements and of the corrective action required. This notice, when delivered to the Contractor or the Contractor's representative at the site of the work, shall be deemed sufficient notice of the noncompliance and corrective action required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to take corrective action promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not base any claim or request for equitable adjustment for additional time or money on any stop order issued under these circumstances.
- (e) The Contractor shall be responsible for its subcontractors' compliance with the provisions of this clause. The Contractor shall take such action with respect to any subcontract as the PHA, the Secretary of Housing and Urban Development, or the Secretary of Labor shall direct as a means of enforcing such provisions.

14. Temporary Heating

The Contractor shall provide and pay for temporary heating, covering, and enclosures necessary to properly protect all work and materials against damage by dampness and cold, to dry out the work, and to facilitate the completion of the work. Any permanent heating equipment used shall be turned over to the PHA in the condition and at the time required by the specifications.

15. Availability and Use of Utility Services

- (a) The PHA shall make all reasonably required amounts of utilities available to the Contractor from existing outlets and supplies, as specified in the contract. Unless otherwise provided in the contract, the amount of each utility service consumed shall be charged to or paid for by the Contractor at prevailing rates charged to the PHA or, where the utility is produced by the PHA, at reasonable rates determined by the Contracting Officer. The Contractor shall carefully conserve any utilities furnished without charge.
- (b) The Contractor, at its expense and in a manner satisfactory to the Contracting Officer, shall install and maintain all necessary temporary connections and distribution lines, and all meters required to measure the amount of each utility used for the purpose of determining charges. Before final acceptance of the work by the PHA, the Contractor shall remove all the temporary connections, distribution lines, meters, and associated paraphernalia.

16. Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements

- (a) The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed under this contract, and which do not unreasonably interfere with the work required under this contract.
- (b) The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during performance of this contract, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.
- (c) The Contractor shall protect from damage all existing improvements and utilities (1) at or near the work site and (2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. Prior to disturbing the ground at the construction site, the Contractor shall ensure that all underground utility lines are clearly marked.
- (d) The Contractor shall shore up, brace, underpin, secure, and protect as necessary all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be affected by the excavations or other operations connected with the construction of the project.
- (e) Any equipment temporarily removed as a result of work under this contract shall be protected, cleaned, and replaced in the same condition as at the time of award of this contract.

- (f) New work which connects to existing work shall correspond in all respects with that to which it connects and/or be similar to existing work unless otherwise required by the specifications.
- (g) No structural members shall be altered or in any way weakened without the written authorization of the Contracting Officer, unless such work is clearly specified in the plans or specifications.
- (h) If the removal of the existing work exposes discolored or unfinished surfaces, or work out of alignment, such surfaces shall be refinished, or the material replaced as necessary to make the continuous work uniform and harmonious. This, however, shall not be construed to require the refinishing or reconstruction of dissimilar finishes previously exposed, or finished surfaces in good condition, but in different planes or on different levels when brought together by the removal of intervening work, unless such refinishing or reconstruction is specified in the plans or specifications.
- (i) The Contractor shall give all required notices to any adjoining or adjacent property owner or other party before the commencement of any work.
- (j) The Contractor shall indemnify and save harmless the PHA from any damages on account of settlement or the loss of lateral support of adjoining property, any damages from changes in topography affecting drainage, and from all loss or expense and all damages for which the PHA may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.
- (k) The Contractor shall repair any damage to vegetation, structures, equipment, utilities, or improvements, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

17. Temporary Buildings and Transportation of Materials

- (a) Temporary buildings (e.g., storage sheds, shops, offices, sanitary facilities) and utilities may be erected by the Contractor only with the approval of the Contracting Officer and shall be built with labor and materials furnished by the Contractor without expense to the PHA. The temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work. With the written consent of the Contracting Officer, the buildings and utilities may be abandoned and need not be removed.
- (b) The Contractor shall, as directed by the Contracting Officer, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the Contracting Officer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any federal, state, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

18. Clean Air and Water

The contractor shall comply with the Clean Air Act, as amended, 42 USC 7401 et seq., the Federal Water Pollution Control Water Act, as amended, 33 U.S.C. 1251 et seq., and standards issued pursuant thereto in the facilities in which this contract is to be performed.

19. Energy Efficiency

The Contractor shall comply with mandatory standards and policies relating to energy efficiency which are contained in the energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub.L. 94-163) for the State in which the work under the contract is performed.

20. Inspection and Acceptance of Construction

- (a) Definitions. As used in this clause -
 - (1) "Acceptance" means the act of an authorized representative of the PHA by which the PHA approves and assumes ownership of the work performed under this contract. Acceptance may be partial or complete.
 - (2) "Inspection" means examining and testing the work performed under the contract (including, when appropriate, raw materials, equipment, components, and intermediate assemblies) to determine whether it conforms to contract requirements.
 - (3) "Testing" means that element of inspection that determines the properties or elements, including functional operation of materials, equipment, or their components, by the application of established scientific principles and procedures.
- (b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. All work is subject to PHA inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract.
- (c) PHA inspections and tests are for the sole benefit of the PHA and do not: (1) relieve the Contractor of responsibility for providing adequate quality control measures; (2) relieve the Contractor of responsibility for loss or damage of the material before acceptance; (3) constitute or imply acceptance; or, (4) affect the continuing rights of the PHA after acceptance of the completed work under paragraph (j) below.
- (d) The presence or absence of the PHA inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specifications without the Contracting Officer's written authorization. All instructions and approvals with respect to the work shall be given to the Contractor by the Contracting Officer.
- (e) The Contractor shall promptly furnish, without additional charge, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. The PHA may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes reinspection or retest necessary. The PHA shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.

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- (f) The PHA may conduct routine inspections of the construction site on a daily basis.
 - (g) The Contractor shall, without charge, replace or correct work found by the PHA not to conform to contract requirements, unless the PHA decides that it is in its interest to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.
 - (h) If the Contractor does not promptly replace or correct rejected work, the PHA may (1) by contract or otherwise, replace or correct the work and charge the cost to the Contractor, or (2) terminate for default the Contractor's right to proceed.
 - (i) If any work requiring inspection is covered up without approval of the PHA, it must, if requested by the Contracting Officer, be uncovered at the expense of the Contractor. If at any time before final acceptance of the entire work, the PHA considers it necessary or advisable, to examine work already completed by removing or tearing it out, the Contractor, shall on request, promptly furnish all necessary facilities, labor, and material. If such work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray all the expenses of the examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the contract, the Contracting Officer shall make an equitable adjustment to cover the cost of the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.
 - (j) The Contractor shall notify the Contracting Officer, in writing, as to the date when in its opinion all or a designated portion of the work will be substantially completed and ready for inspection. If the Architect determines that the state of preparedness is as represented, the PHA will promptly arrange for the inspection. Unless otherwise specified in the contract, the PHA shall accept, as soon as practicable after completion and inspection, all work required by the contract or that portion of the work the Contracting Officer determines and designates can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the PHA's right under any warranty or guarantee.

21. Use and Possession Prior to Completion

- (a) The PHA shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Contracting Officer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the PHA intends to take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The PHA's possession or use shall not be deemed an acceptance of any work under the contract.
- (b) While the PHA has such possession or use, the Contractor shall be relieved of the responsibility for (1) the loss of or damage to the work resulting from the PHA's possession or use, notwithstanding the terms of the clause entitled Permits and Codes herein; (2) all maintenance costs on the areas occupied; and, (3) furnishing heat, light, power, and water used in the areas

occupied without proper remuneration therefore. If prior possession or use by the PHA delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment shall be made in the contract price or the time of completion, and the contract shall be modified in writing accordingly.

22. Warranty of Title

The Contractor warrants good title to all materials, supplies, and equipment incorporated in the work and agrees to deliver the premises together with all improvements thereon free from any claims, liens or charges, and agrees further that neither it nor any other person, firm or corporation shall have any right to a lien upon the premises or anything appurtenant thereto.

23. Warranty of Construction

- (a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (j) of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or workmanship performed by the Contractor or any subcontractor or supplier at any tier. This warranty shall continue for a period of _____ (one year unless otherwise indicated) from the date of final acceptance of the work. If the PHA takes possession of any part of the work before final acceptance, this warranty shall continue for a period of (one year unless otherwise indicated) from the date that the PHA takes possession.
- (b) The Contractor shall remedy, at the Contractor's expense, any failure to conform, or any defect. In addition, the Contractor shall remedy, at the Contractor's expense, any damage to PHA-owned or controlled real or personal property when the damage is the result of—
 - (1) The Contractor's failure to conform to contract requirements; or
 - (2) Any defects of equipment, material, workmanship or design furnished by the Contractor.
- (c) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for (one year unless otherwise indicated) from the date of repair or replacement.
- (d) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect or damage.
- (e) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the PHA shall have the right to replace, repair or otherwise remedy the failure, defect, or damage at the Contractor's expense.
- (f) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall:
 - (1) Obtain all warranties that would be given in normal commercial practice;
 - (2) Require all warranties to be executed in writing, for the benefit of the PHA; and,
 - (3) Enforce all warranties for the benefit of the PHA.
- (g) In the event the Contractor's warranty under paragraph (a) of this clause has expired, the PHA may bring suit at its own expense to enforce a subcontractor's, manufacturer's or supplier's warranty.

- (h) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defect of material or design furnished by the PHA nor for the repair of any damage that results from any defect in PHA furnished material or design.
- (i) Notwithstanding any provisions herein to the contrary, the establishment of the time periods in paragraphs (a) and (c) above relate only to the specific obligation of the Contractor to correct the work, and have no relationship to the time within which its obligation to comply with the contract may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to its obligation other than specifically to correct the work.
- (j) This warranty shall not limit the PHA's rights under the Inspection and Acceptance of Construction clause of this contract with respect to latent defects, gross mistakes or fraud.

24. Prohibition Against Liens

The Contractor is prohibited from placing a lien on the PHA's property. This prohibition shall apply to all subcontractors at any tier and all materials suppliers.

Administrative Requirements

25. Contract Period

this contract within 180 calendar days of the effective date of the contract, or within the time schedule established in the notice to proceed issued by the Contracting Officer.

26. Order of Provisions

In the event of a conflict between these General Conditions and the Specifications, the General Conditions shall prevail. In the event of a conflict between the contract and any applicable state or local law or regulation, the state or local law or regulation shall prevail; provided that such state or local law or regulation does not conflict with, or is less restrictive than applicable federal law, regulation, or Executive Order. In the event of such a conflict, applicable federal law, regulation, and Executive Order shall prevail.

27. Payments

- (a) The PHA shall pay the Contractor the price as provided in this contract.
- (b) The PHA shall make progress payments approximately every 30 days as the work proceeds, on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer. The PHA may, subject to written determination and approval of the Contracting Officer, make more frequent payments to contractors which are qualified small businesses.
- (c) Before the first progress payment under this contract, the Contractor shall furnish, in such detail as requested by the Contracting Officer, a breakdown of the total contract price showing the amount included therein for each principal category of the work, which shall substantiate the payment amount requested in order to provide a

basis for determining progress payments. The breakdown shall be approved by the Contracting Officer and must be acceptable to HUD. If the contract covers more than one project, the Contractor shall furnish a separate breakdown for each. The values and quantities employed in making up this breakdown are for determining the amount of progress payments and shall not be construed as a basis for additions to or deductions from the contract price. The Contractor shall prorate its overhead and profit over the construction period of the contract.

- (d) The Contractor shall submit, on forms provided by the PHA, periodic estimates showing the value of the work performed during each period based upon the approved

submitted not later than 45 days in advance of the date set for payment and are subject to correction and revision as required. The estimates must be approved by the Contracting Officer with the concurrence of the Architect prior to payment. If the contract covers more than one project, the Contractor shall furnish a separate progress payment estimate for each.

- (e) Along with each request for progress payments and the required estimates, the Contractor shall furnish the following certification, or payment shall not be made: I hereby certify, to the best of my knowledge and belief, that:

- (1) The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the contract;
- (2) Payments to subcontractors and suppliers have been made from previous payments received under the contract, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with subcontract agreements; and,
- (3) This request for progress payments does not include any amounts which the prime contractor intends to withhold or retain from a subcontractor or supplier in accordance with the terms and conditions of the subcontract.

Name: _____

Title: _____

Date: _____

- (f) Except as otherwise provided in State law, the PHA shall retain ten (10) percent of the amount of progress payments until completion and acceptance of all work under the contract; except, that if upon completion of 50 percent of the work, the Contracting Officer, after consulting with the Architect, determines that the Contractor's performance and progress are satisfactory, the PHA may make the remaining payments in full for the work subsequently completed. If the Contracting Officer subsequently determines that the Contractor's performance and progress are unsatisfactory, the PHA shall reinstate the ten (10) percent (or other percentage as provided in State law) retainage until such time as the Contracting Officer determines that performance and progress are satisfactory.
- (g) The Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration when computing progress payments.

Material delivered to the Contractor at locations other than the site may also be taken into consideration if the Contractor furnishes satisfactory evidence that (1) it has acquired title to such material; (2) the material is properly stored in a bonded warehouse, storage yard, or similar suitable place as may be approved by the Contracting Officer; (3) the material is insured to cover its full value; and (4) the material will be used to perform this contract. Before any progress payment which includes delivered material is made, the Contractor shall furnish such documentation as the Contracting Officer may require to assure the protection of the PHA's interest in such materials. The Contractor shall remain responsible for such stored material notwithstanding the transfer of title to the PHA.

- (h) All material and work covered by progress payments made shall, at the time of payment become the sole property of the PHA, but this shall not be construed as (1) relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or, (2) waiving the right of the PHA to require the fulfillment of all of the terms of the contract. In the event the work of the Contractor has been damaged by other contractors or persons other than employees of the PHA in the course of their employment, the Contractor shall restore such damaged work without cost to the PHA and to seek redress for its damage only from those who directly caused it.
- (i) The PHA shall make the final payment due the Contractor under this contract after (1) completion and final acceptance of all work; and (2) presentation of release of all claims against the PHA arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. Each such exception shall embrace no more than one claim, the basis and scope of which shall be clearly defined. The amounts for such excepted claims shall not be included in the request for final payment. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned.
- (j) Prior to making any payment, the Contracting Officer may require the Contractor to furnish receipts or other evidence of payment from all persons performing work and supplying material to the Contractor, if the Contracting Officer determines such evidence is necessary to substantiate claimed costs.
- (k) The PHA shall not; (1) determine or adjust any claims for payment or disputes arising there under between the Contractor and its subcontractors or material suppliers; or, (2) withhold any moneys for the protection of the subcontractors or material suppliers. The failure or refusal of the PHA to withhold moneys from the Contractor shall in nowise impair the obligations of any surety or sureties under any bonds furnished under this contract.

28. Contract Modifications

- (a) Only the Contracting Officer has authority to modify any term or condition of this contract. Any contract modification shall be authorized in writing.
- (b) The Contracting Officer may modify the contract unilaterally (1) pursuant to a specific authorization stated in a contract clause (e.g., Changes); or (2) for administrative matters which do not change the rights or

responsibilities of the parties (e.g., change in the PHA address). All other contract modifications shall be in the form of supplemental agreements signed by the Contractor and the Contracting Officer.

- (c) When a proposed modification requires the approval of HUD prior to its issuance (e.g., a change order that exceeds the PHA's approved threshold), such modification shall not be effective until the required approval is received by the PHA.

29. Changes

- (a) The Contracting Officer may, at any time, without notice to the sureties, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract including changes:
 - (1) In the specifications (including drawings and designs);
 - (2) In the method or manner of performance of the work;
 - (3) PHA-furnished facilities, equipment, materials, services, or site; or,
 - (4) Directing the acceleration in the performance of the work.
- (b) Any other written order or oral order (which, as used in this paragraph (b), includes direction, instruction, interpretation, or determination) from the Contracting Officer that causes a change shall be treated as a change order under this clause; provided, that the Contractor gives the Contracting Officer written notice stating (1) the date, circumstances and source of the order and (2) that the Contractor regards the order as a change order.
- (c) Except as provided in this clause, no order, statement or conduct of the Contracting Officer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment.
- (d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for the performance of any part of the work under this contract, whether or not changed by any such order, the Contracting Officer shall make an equitable adjustment and modify the contract in writing. However, except for a adjustment based on defective specifications, no proposal for any change under paragraph (b) above shall be allowed for any costs incurred more than 20 days (5 days for oral orders) before the Contractor gives written notice as required. In the case of defective specifications for which the PHA is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with the defective specifications.
- (e) The Contractor must assert its right to an adjustment under this clause within 30 days after (1) receipt of a written change order under paragraph (a) of this clause, or (2) the furnishing of a written notice under paragraph (b) of this clause, by submitting a written statement describing the general nature and the amount of the proposal. If the facts justify it, the Contracting Officer may extend the period for submission. The proposal may be included in the notice required under paragraph (b) above. No proposal by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.
- (f) The Contractor's written proposal for equitable adjustment shall be submitted in the form of a lump sum proposal supported with an itemized breakdown of all increases and decreases in the contract in at least the following details:

- (1) Direct Costs. Materials (list individual items, the quantity and unit cost of each, and the aggregate cost); Transportation and delivery costs associated with materials; Labor breakdowns by hours or unit costs (identified with specific work to be performed); Construction equipment exclusively necessary for the change; Costs of preparation and/ or revision to shop drawings resulting from the change; Worker's Compensation and Public Liability Insurance; Employment taxes under FICA and FUTA; and, Bond Costs when size of change warrants revision.
- (2) Indirect Costs. Indirect costs may include overhead, general and administrative expenses, and fringe benefits not normally treated as direct costs.
- (3) Profit. The amount of profit shall be negotiated and may vary according to the nature, extent, and complexity of the work required by the change. The allowability of the direct and indirect costs shall be determined in accordance with the Contract Cost Principles and Procedures for Commercial Firms in Part 31 of the Federal Acquisition Regulation (48 CFR 1-31), as implemented by HUD Handbook 2210.18, in effect on the date of this contract. The Contractor shall not be allowed a profit on the profit received by any subcontractor. Equitable adjustments for deleted work shall include a credit for profit and may include a credit for indirect costs. On proposals covering both increases and decreases in the amount of the contract, the application of indirect costs and profit shall be on the net-change in direct costs for the Contractor or subcontractor performing the work.
- (g) The Contractor shall include in the proposal its request for time extension (if any), and shall include sufficient information and dates to demonstrate whether and to what extent the change will delay the completion of the contract in its entirety.
- (h) The Contracting Officer shall act on proposals within 30 days after their receipt, or notify the Contractor of the date when such action will be taken.
- (i) Failure to reach an agreement on any proposal shall be a dispute under the clause entitled Disputes herein. Nothing in this clause, however, shall excuse the Contractor from proceeding with the contract as changed.
- (j) Except in an emergency endangering life or property, no change shall be made by the Contractor without a prior order from the Contracting Officer.

30. Suspension of Work

- (a) The Contracting Officer may order the Contractor in writing to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of the PHA.
- (b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer's failure to act within the time specified (or within a reasonable time if not specified) in this contract an adjustment shall be made for any increase in the cost of performance of the contract (excluding profit) necessarily caused by such unreasonable suspension, delay, or interruption and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have

been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor or for which any equitable adjustment is provided for or excluded under any other provision of this contract.

- (c) A claim under this clause shall not be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order); and, (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

31. Disputes

- (a) "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to the contract. A claim arising under the contract, unlike a claim relating to the contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim. The submission may be converted to a claim by complying with the requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.
- (b) Except for disputes arising under the clauses entitled Labor Standards - Davis Bacon and Related Acts, herein, all disputes arising under or relating to this contract, including any claims for damages for the alleged breach thereof which are not disposed of by agreement, shall be resolved under this clause.
- (c) All claims by the Contractor shall be made in writing and submitted to the Contracting Officer for a written decision. A claim by the PHA against the Contractor shall be subject to a written decision by the Contracting Officer.
- (d) The Contracting Officer shall, within 60 (unless otherwise indicated) days after receipt of the request, decide the claim or notify the Contractor of the date by which the decision will be made.
- (e) The Contracting Officer's decision shall be final unless the Contractor (1) appeals in writing to a higher level in the PHA in accordance with the PHA's policy and procedures, (2) refers the appeal to an independent mediator or arbitrator, or (3) files suit in a court of competent jurisdiction. Such appeal must be made within (30 unless otherwise indicated) days after receipt of the Contracting Officer's decision.
- (f) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under or relating to the contract, and comply with any decision of the Contracting Officer.

32. Default

- (a) If the Contractor refuses or fails to prosecute the work, or any separable part thereof, with the diligence that will insure its completion within the time specified in this contract, or any extension thereof, or fails to complete said work within this time, the Contracting Officer may, by written notice to the Contractor, terminate the right to

proceed with the work (or separable part of the work) that has been delayed. In this event, the PHA may take over the work and complete it, by contract or otherwise, and may take possession of and use any materials, equipment, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the PHA resulting from the Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the PHA in completing the work.

- (b) The Contractor's right to proceed shall not be terminated or the Contractor charged with damages under this clause if—
- (1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include (i) acts of God, or of the public enemy, (ii) acts of the PHA or other governmental entity in either its sovereign or contractual capacity, (iii) acts of another contractor in the performance of a contract with the PHA, (iv) fires, (v) floods, (vi) epidemics, (vii) quarantine restrictions, (viii) strikes, (ix) freight embargoes, (x) unusually severe weather, or (xi) delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors or suppliers; and
 - (2) The Contractor, within days (10 days unless otherwise indicated) from the beginning of such delay (unless extended by the Contracting Officer) notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of the delay. If, in the judgment of the Contracting Officer, the findings of fact warrant such action, time for completing the work shall be extended by written modification to the contract. The findings of the Contracting Officer shall be reduced to a written decision which shall be subject to the provisions of the Disputes clause of this contract.
- (c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been for convenience of the PHA.

33. Liquidated Damages

- (a) If the Contractor fails to complete the work within the time specified in the contract, or any extension, as specified in the clause entitled Default of this contract, the Contractor shall pay to the PHA as liquidated damages, the sum of \$ 300.00 [Contracting Officer insert amount] for each day of delay. If different completion dates are specified in the contract for separate parts or stages of the work, the amount of liquidated damages shall be assessed on those parts or stages which are delayed. To the extent that the Contractor's delay or nonperformance is excused under another clause in this contract, liquidated damages shall not be due the PHA. The Contractor remains liable for damages caused other than by delay.
- (b) If the PHA terminates the Contractor's right to proceed, the resulting damage will consist of liquidated damages until such reasonable time as may be required for final

completion of the work together with any increased costs occasioned the PHA in completing the work.

- (c) If the PHA does not terminate the Contractor's right to proceed, the resulting damage will consist of liquidated damages until the work is completed or accepted.

34. Termination for Convenience

- (a) The Contracting Officer may terminate this contract in whole, or in part, whenever the Contracting Officer determines that such termination is in the best interest of the PHA. Any such termination shall be effected by delivery to the Contractor of a Notice of Termination specifying the extent to which the performance of the work under the contract is terminated, and the date upon which such termination becomes effective.
- (b) If the performance of the work is terminated, either in whole or in part, the PHA shall be liable to the Contractor for reasonable and proper costs resulting from such termination upon the receipt by the PHA of a properly presented claim setting out in detail: (1) the total cost of the work performed to date of termination less the total amount of contract payments made to the Contractor; (2) the cost (including reasonable profit) of settling and paying claims under subcontracts and material orders for work performed and materials and supplies delivered to the site, payment for which has not been made by the PHA to the Contractor or by the Contractor to the subcontractor or supplier; (3) the cost of preserving and protecting the work already performed until the PHA or assignee takes possession thereof or assumes responsibility therefore; (4) the actual or estimated cost of legal and accounting services reasonably necessary to prepare and present the termination claim to the PHA; and (5) an amount constituting a reasonable profit on the value of the work performed by the Contractor.
- (c) The Contracting Officer will act on the Contractor's claim within days (60 days unless otherwise indicated) of receipt of the Contractor's claim.
- (d) Any disputes with regard to this clause are expressly made subject to the provisions of the Disputes clause of this contract.

35. Assignment of Contract

The Contractor shall not assign or transfer any interest in this contract; except that claims for monies due or to become due from the PHA under the contract may be assigned to a bank, trust company, or other financial institution. Such assignments of claims shall only be made with the written concurrence of the Contracting Officer. If the Contractor is a partnership, this contract shall inure to the benefit of the surviving or remaining member(s) of such partnership as approved by the Contracting Officer.

36. Insurance

- (a) Before commencing work, the Contractor and each subcontractor shall furnish the PHA with certificates of insurance showing the following insurance is in force and will insure all operations under the Contract:
- (1) Workers' Compensation, in accordance with state or Territorial Workers' Compensation laws.
 - (2) Commercial General Liability with a combined single limit for bodily injury and property damage of not less than \$ 1MILLION [Contracting Officer insert amount]

per occurrence to protect the Contractor and each subcontractor against claims for bodily injury or death and damage to the property of others. This shall cover the use of all equipment, hoists, and vehicles on the site(s) not covered by Automobile Liability under (3) below. If the Contractor has a "claims made" policy, then the following additional requirements apply: the policy must provide a "retroactive date" which must be on or before the execution date of the Contract; and the extended reporting period may not be less than five years following the completion date of the Contract.

- (3) Automobile Liability on owned and non-owned motor vehicles used on the site(s) or in connection therewith for a combined single limit for bodily injury and property damage of not less than \$ **1MILLION** [Contracting Officer insert amount] per occurrence.
- (b) Before commencing work, the Contractor shall furnish the PHA with a certificate of insurance evidencing that Builder's Risk (fire and extended coverage) Insurance on all work in place and/or materials stored at the building site(s), including foundations and building equipment, is in force. The Builder's Risk Insurance shall be for the benefit of the Contractor and the PHA as their interests may appear and each shall be named in the policy or policies as an insured. The Contractor in installing equipment supplied by the PHA shall carry insurance on such equipment from the time the Contractor takes possession thereof until the Contract work is accepted by the PHA. The Builder's Risk Insurance need not be carried on excavations, piers, footings, or foundations until such time as work on the superstructure is started. It need not be carried on landscape work. Policies shall furnish coverage at all times for the full cash value of all completed construction, as well as materials in place and/or stored at the site(s), whether or not partial payment has been made by the PHA. The Contractor may terminate this insurance on buildings as of the date taken over for occupancy by the PHA. The Contractor is not required to carry Builder's Risk Insurance for modernization work which does not involve structural alterations or additions and where the PHA's existing fire and extended coverage policy can be endorsed to include such work.
- (c) All insurance shall be carried with companies which are financially responsible and admitted to do business in the State in which the project is located. If any such insurance is due to expire during the construction period, the Contractor (including subcontractors, as applicable) shall not permit the coverage to lapse and shall furnish evidence of coverage to the Contracting Officer. All certificates of insurance, as evidence of coverage, shall provide that no coverage may be canceled or non-renewed by the insurance company until at least 30 days prior written notice has been given to the Contracting Officer.

37. Subcontracts

- (a) Definitions. As used in this contract -
- (1) "Subcontract" means any contract, purchase order, or other purchase agreement, including modifications and change orders to the foregoing, entered into by a subcontractor to furnish supplies, materials, equipment, and services for the performance of the prime contract or a subcontract.

(2) "Subcontractor" means any supplier, vendor, or firm that furnishes supplies, materials, equipment, or services to or for the Contractor or another subcontractor.

- (b) The Contractor shall not enter into any subcontract with any subcontractor who has been temporarily denied participation in a HUD program or who has been suspended or debarred from participating in contracting programs by any agency of the United States Government or of the state in which the work under this contract is to be performed.
- (c) The Contractor shall be as fully responsible for the acts or omissions of its subcontractors, and of persons either directly or indirectly employed by them as for the acts or omissions of persons directly employed by the Contractor.
- (d) The Contractor shall insert appropriate clauses in all subcontracts to bind subcontractors to the terms and conditions of this contract insofar as they are applicable to the work of subcontractors.
- (e) Nothing contained in this contract shall create any contractual relationship between any subcontractor and the PHA or between the subcontractor and HUD.

38. Subcontracting with Small and Minority Firms, Women's Business Enterprise, and Labor Surplus Area Firms

The Contractor shall take the following steps to ensure that, whenever possible, subcontracts are awarded to small business firms, minority firms, women's business enterprises, and labor surplus area firms:

- (a) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
- (b) Ensuring that small and minority businesses and women's business enterprises are solicited whenever they are potential sources;
- (c) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses and women's business enterprises;
- (d) Establishing delivery schedules, where the requirements of the contract permit, which encourage participation by small and minority businesses and women's business enterprises; and
- (e) Using the services and assistance of the U.S. Small Business Administration, the Minority Business Development Agency of the U.S. Department of Commerce, and State and local governmental small business agencies.

39. Equal Employment Opportunity

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

- (a) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, or handicap.
- (b) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, national origin, or handicap. Such action shall include, but not be limited to, (1) employment, (2) upgrading, (3) demotion, (4) transfer, (5) recruitment or recruitment advertising, (6) layoff or termination, (7) rates of pay or other forms of compensation, and (8) selection for training, including apprenticeship.

- (c) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.
- (d) The Contractor shall, 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 race, color, religion, sex, national origin, or handicap.
- (e) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.
- (f) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.
- (g) The Contractor shall furnish all information and reports required by Executive Order 11246, as amended, Section 503 of the Rehabilitation Act of 1973, as amended, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto. The Contractor shall permit access to its books, records, and accounts by the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (h) In the event of a determination that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part, and the Contractor may be declared ineligible for further Government contracts, or Federally assisted construction contracts under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended, the rules, regulations, and orders of the Secretary of Labor, or as otherwise provided by law.
- (i) The Contractor shall include the terms and conditions of this clause in every subcontract or purchase order unless exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor. The Contractor shall take such action with respect to any subcontract or purchase order as the Secretary of Housing and Urban Development or the Secretary of Labor may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.
- (j) Compliance with the requirements of this clause shall be to the maximum extent consistent with, but not in derogation of, compliance with section 7(b) of the Indian Self-Determination and Education Assistance Act and the Indian Preference clause of this contract.

40. Employment, Training, and Contracting Opportunities for Low-Income Persons, Section 3 of the Housing and Urban Development Act of 1968.

- (a) The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
- (b) The parties to this contract agree to comply with HUD's regulations in 24 CFR Part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the Part 135 regulations.
- (c) The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.
- (d) The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR Part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR Part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR Part 135.
- (e) The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR Part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR Part 135.
- (f) Noncompliance with HUD's regulations in 24 CFR Part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.
- (g) With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).

41. Interest of Members of Congress

No member of or delegate to the Congress of the United States of America shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

42. Interest of Members, Officers, or Employees and Former Members, Officers, or Employees

No member, officer, or employee of the PHA, no member of the governing body of the locality in which the project is situated, no member of the governing body of the locality in which the PHA was activated, and no other public official of such locality or localities who exercises any functions or responsibilities with respect to the project, shall, during his or her tenure, or for one year thereafter, have any interest, direct or indirect, in this contract or the proceeds thereof.

43. Limitations on Payments made to Influence Certain Federal Financial Transactions

- (a) The Contractor agrees to comply with Section 1352 of Title 31, United States Code which prohibits the use of Federal appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.
- (b) The Contractor further agrees to comply with the requirement of the Act to furnish a disclosure (OMB Standard Form LLL, Disclosure of Lobbying Activities) if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.

44. Royalties and Patents

The Contractor shall pay all royalties and license fees. It shall defend all suits or claims for infringement of any patent rights and shall save the PHA harmless from loss on account thereof; except that the PHA shall be responsible for all such loss when a particular design, process or the product of a particular manufacturer or manufacturers is specified and the Contractor has no reason to believe that the specified design, process, or product is an infringement. If, however, the Contractor has reason to believe that any design, process or product specified is an infringement of a patent, the Contractor shall promptly notify the Contracting Officer. Failure to give such notice shall make the Contractor responsible for resultant loss.

45. Examination and Retention of Contractor's Records

- (a) The PHA, HUD, or Comptroller General of the United States, or any of their duly authorized representatives shall, until 3 years after final payment under this contract, have access to and the right to examine any of the Contractor's directly pertinent books, documents, papers, or other records involving transactions related to this contract for the purpose of making audit, examination, excerpts, and transcriptions.
- (b) The Contractor agrees to include in first-tier subcontracts under this contract a clause substantially the same as paragraph (a) above. "Subcontract," as used in this clause, excludes purchase orders not exceeding \$10,000.
- (c) The periods of access and examination in paragraphs (a) and (b) above for records relating to (1) appeals under the Disputes clause of this contract, (2) litigation or settlement of claims arising from the performance of this contract, or (3) costs and expenses of this contract to which the PHA, HUD, or Comptroller General or any of their duly authorized representatives has taken exception shall continue until disposition of such appeals, litigation, claims, or exceptions.

46. Labor Standards - Davis-Bacon and Related Acts

If the total amount of this contract exceeds \$2,000, the Federal labor standards set forth in the clause below shall apply to the development or construction work to be performed under the contract.

- (a) Minimum Wages.
 - (1) All laborers and mechanics employed under this contract in the development or construction of the project(s) involved will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the regular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits in the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall

be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

- (2) (i) Any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when all the following criteria have been met: (A) The work to be performed by the classification requested is not performed by a classification in the wage determination; and (B) The classification is utilized in the area by the construction industry; and (C) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (ii) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employee Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary.
- (iii) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator of the Wage and Hour Division for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary.
- (iv) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (a)(2)(ii) or (iii) of this clause shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in classification.
- (3) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- (4) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the

amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program; provided, that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

- (b) Withholding of funds. HUD or its designee shall, upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime Contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working in the construction or development of the project, all or part of the wages required by the contract, HUD or its designee may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the Contractor, disburse such amounts withheld for and on account of the Contractor or subcontractor to the respective employees to whom they are due.
- (c) Payrolls and basic records.
- (1) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working in the construction or development of the project. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever the Secretary of Labor has found, under 29 CFR 5.5(a)(1)(iv), that the wages of any laborer or mechanic include the amount of costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

- (2) (i) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Contracting Officer for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under subparagraph (c)(1) of this clause. This information may be submitted in any form desired. Optional Form WH-347 (Federal Stock Number 029-005-00014-1) is available for this purpose and may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The Contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1214-0149.)
- (ii) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (A) That the payroll for the payroll period contains the information required to be maintained under paragraph (c) (1) of this clause and that such information is correct and complete;
- (B) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3; and
- (C) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (iii) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirements for submission of the "Statement of Compliance" required by subparagraph (c)(2)(ii) of this clause.
- (iv) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.
- (3) The Contractor or subcontractor shall make the records required under subparagraph (c)(1) available for inspection, copying, or transcription by authorized representatives of HUD or its designee, the Contracting Officer, or the Department of Labor and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to

make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

- (d) (1) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship and Training, Employer and Labor Services (OATELS), or with a State Apprenticeship Agency recognized by OATELS, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by OATELS or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in this paragraph, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator of the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event OATELS, or a State Apprenticeship Agency recognized by OATELS, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (2) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under

the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed in the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate in the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate in the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate in the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (3) Equal employment opportunity. The utilization of apprentices, trainees, and journeymen under this clause shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.
- (e) Compliance with Copeland Act requirements. The Contractor shall comply with the requirements of 29 CFR Part 3, which are hereby incorporated by reference in this contract.
- (f) Contract termination; debarment. A breach of this contract clause may be grounds for termination of the contract and for debarment as a Contractor and a subcontractor as provided in 29 CFR 5.12.
- (g) Compliance with Davis-Bacon and related Act requirements. All rulings and interpretations of the Davis-Bacon and related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.
- (h) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this clause shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the PHA, HUD, the U.S. Department of Labor, or the employees or their representatives.
- (i) Certification of eligibility.
 - (1) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

- (2) No part of this contract shall be subcontracted to any person or firm ineligible for award of a United States Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
 - (3) The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U.S.C. 1001.
- (j) Contract Work Hours and Safety Standards Act. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.
- (1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics, including watchmen and guards, shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.
 - (2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the provisions set forth in subparagraph (j)(1) of this clause, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic (including watchmen and guards) employed in violation of the provisions set forth in subparagraph (j)(1) of this clause, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by provisions set forth in subparagraph (j)(1) of this clause.
 - (3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any Federal contract with the same prime Contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the provisions set forth in subparagraph (j)(2) of this clause.
- (k) Subcontracts. The Contractor or subcontractor shall insert in any subcontracts all the provisions contained in this clause, and such other clauses as HUD or its designee may by appropriate instructions require, and also a clause requiring the subcontractors to include these provisions in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all these provisions.

47. Non-Federal Prevailing Wage Rates

- (a) Any prevailing wage rate (including basic hourly rate and any fringe benefits), determined under State or tribal law to be prevailing, with respect to any employee in any trade or position employed under the contract, is inapplicable to the contract and shall not be enforced against the Contractor or any subcontractor, with respect to employees engaged under the contract whenever such non-Federal prevailing wage rate exceeds:
 - (1) The applicable wage rate determined by the Secretary of Labor pursuant to the Davis-Bacon Act (40 U.S.C. 3141 et seq.) to be prevailing in the locality with respect to such trade;
- (b) An applicable apprentice wage rate based thereon specified in an apprenticeship program registered with the U.S. Department of Labor (DOL) or a DOL-recognized State Apprenticeship Agency; or
- (c) An applicable trainee wage rate based thereon specified in a DOL-certified trainee program.

48. Procurement of Recovered Materials.

- (a) In accordance with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, the Contractor shall procure items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition. The Contractor shall procure items designated in the EPA guidelines that contain the highest percentage of recovered materials practicable unless the Contractor determines that such items: (1) are not reasonably available in a reasonable period of time; (2) fail to meet reasonable performance standards, which shall be determined on the basis of the guidelines of the National Institute of Standards and Technology, if applicable to the item; or (3) are only available at an unreasonable price.
- (b) Paragraph (a) of this clause shall apply to items purchased under this contract where: (1) the Contractor purchases in excess of \$10,000 of the item under this contract; or (2) during the preceding Federal fiscal year, the Contractor: (i) purchased any amount of the items for use under a contract that was funded with Federal appropriations and was with a Federal agency or a State agency or agency of a political subdivision of a State; and (ii) purchased a total of in excess of \$10,000 of the item both under and outside that contract.



Development & Modernization
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(412) 456-5020
www.hacp.org

Homewood North Window Replacements - AMP-20

HACP Contract No. 600-14-19

SUPPLEMENTAL GENERAL CONDITIONS

SUPPLEMENTAL GENERAL CONDITIONS

To the extent that there is a conflict between the terms of the General Conditions and the terms of the Supplemental General Conditions, the terms of the Supplemental General Conditions shall govern to the extent of such conflict.

If HUD 5370 applies:

Section 31(e) of the General Conditions shall be deleted in its entirety and replaced by the following:

31(e). Forum. The Chief Contracting Officer's decision shall be final unless, within thirty (30) days of receipt of the Contracting Officer's decision, the Contractor files suit in a court of competent jurisdiction.

If HUD 5370-EZ applies:

Section 3(d) of the General Conditions shall be deleted in its entirety and replaced by the following:

31(d). Forum. The Contracting Officer's decision shall be final unless, within thirty (30) days of receipt of the Chief Contracting Officer's decision, the Contractor files suit in a court of competent jurisdiction.

If HUD 5370-C applies:

Section 1 Item 7(d) of the General Conditions shall be deleted in its entirety and replaced by the following:

Section 1 Item 7(d). Forum. The Chief Contracting Officer's decision shall be final unless, within thirty (30) days of receipt of the Contracting Officer's decision, the Contractor files suit in a court of competent jurisdiction.

HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

Date: _____

Signature: _____
Chief Contracting Officer

=====

Vendor Name(Insert vendor company name above) _____

Date: _____

Signature: _____

Title: _____

THE HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

Homewood North Window Replacements - AMP-20

HACP Contract No. 600-14-19

WAGE DETERMINATION SCHEDULE

The construction covered by this contract is subject to the requirements of Clause 47 **Labor Standards - Davis-Bacon and Related Acts** of the General Conditions of the Contract for Construction. In accordance with 47 (a)(1) the wage determination of the Secretary of Labor is attached.

General Decision Number: PA190012 01/11/2019 PA12

Superseded General Decision Number: PA20180033

State: Pennsylvania

Construction Type: Residential

County: Allegheny County in Pennsylvania.

RESIDENTIAL CONSTRUCTION PROJECTS (consisting of single family homes and apartments up to and including 4 stories)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/04/2019
1	01/11/2019

BRPA0009-039 12/01/2018

	Rates	Fringes
BRICKLAYER.....	\$ 32.35	22.21

CARP0142-004 06/01/2018

	Rates	Fringes
CARPENTER (cluding Drywall Hanging and Asphalt Roofing).....	\$ 28.02	12.59

CARP1759-007 06/01/2017

	Rates	Fringes
SOFT FLOOR LAYER.....	\$ 33.01	16.45

ELEC0005-013 12/21/2018

General Decision Number: PA190012 01/11/2019 PA12

Superseded General Decision Number: PA20180033

State: Pennsylvania

Construction Type: Residential

County: Allegheny County in Pennsylvania.

RESIDENTIAL CONSTRUCTION PROJECTS (consisting of single family homes and apartments up to and including 4 stories)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

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CARP1759-007 06/01/2017

	Rates	Fringes
SOFT FLOOR LAYER.....	\$ 33.01	16.45

ELEC0005-013 12/21/2018

	Rates	Fringes
ELECTRICIAN.....	\$ 24.34	15.53

* ELEV0006-004 01/01/2019

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 48.73	33.705+A+B

FOOTNOTE:

A. Employer contributes 8% of regular hourly rate as vacation pay credit for employees with more than 5 years of service, and 6% for 6 months to 5 years of service.

B. Eight Paid Holidays (provided employee has worked 5 consecutive days before and the working day after the holiday): New Years's Day; Memorial Day; Independence Day; Labor Day; Veteran's Day; Thanksgiving Day and the Friday after Thanksgiving Day, and Christmas Day.

IRON0003-006 06/01/2018

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 34.49	30.71

PLUM0027-005 06/01/2017

	Rates	Fringes
PLUMBER.....	\$ 39.20	21.27

SHEE0012-006 07/01/2013

	Rates	Fringes
Sheet metal worker Excluding HVAC Duct Work....	\$ 16.61	8.46

SUPA2003-001 10/31/2003

	Rates	Fringes
Drywall Finishers.....	\$ 15.08	3.40
Laborers, Unskilled.....	\$ 12.70	2.12
PAINTER (Brush and Roller).....	\$ 15.90	4.35
PLASTERER.....	\$ 18.20	5.16
Power equipment operators: (Backhoe).....	\$ 17.34	4.06
Roofer (Excluding Asphalt Roofing).....	\$ 18.70	5.19
Sheet Metal Worker (HVAC Duct Only).....	\$ 16.00	3.08

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that

no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana, 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate, OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor

200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

PART 4: TECHNICAL SPECIFICATIONS

Homewood North Window Replacements - AMP-20

IFB CONTRACT NO. 600-14-19

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SECTION 011000 SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
1. Work covered by the Contract Documents.
 2. Type of the Contracts.
 3. Work under other contracts.
 4. Use of premises.
 5. Owner's occupancy requirements.
 6. Work restrictions.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Task Order #12 - Window Replacement at the Homewood North Housing Community
1. Project Location: 10 Albertice Street, Homewood North Housing Community, Pittsburgh, PA 15208
- B. Owner: Housing Authority of the City of Pittsburgh (HACP).
1. Owner's Contact: Sidney Kaikai, Sidney.Kaikai@hacp.org
 2. Voice: 412-456-5020 x6029
- C. Architect: Tusick & Associates Architects, Inc.; 53 Windsor Road, Pittsburgh, PA 15215
1. Architect's Contact: Susan Tusick, R.A., stusick@tusickarchitects.com
 2. Voice: 412-781-8896
- D. The Work generally consists of window replacement and all items affected by the replacement of the existing window such J-Channels, vinyl siding, bay/box window roofing and trim associated with each different type of window installation. Demolition work generally consists of removing existing window and depositing of debris. Buildings will remain occupied during the entire construction project. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent remaining structures and plants.

1.3 TYPE OF CONTRACTS

- A. Project will be constructed under a single General Construction Contract.

1.4 WORK UNDER OTHER CONTRACTS

- A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate the Work of this Contract with work performed under separate contracts.

- B. Concurrent Work: Owner may awarded separate contract(s) for construction operations at the premises. Those operations will be conducted simultaneously with work under this Contract and should not interfere with the construction operations at the Project site.

1.5 USE OF PREMISES

- A. General: Contractor shall have limited use of premises for construction operations as indicated on Drawings by the Contract limits.
- B. Use of Site: Limit use of premises to the Project site only, within the Contract limits indicated. Do not disturb portions of premises beyond the Project site.
 - 1. Owner Occupancy: Owner will occupy the premises during the entire construction period.
 - 2. Use by the public of Owner's facilities will be ongoing.
 - 3. Driveways and Entrances: Keep driveways, roadways and entrances serving premises clear and available to Owner, Owner's employees, and the public at all times. Do not use these areas outside the Project site limits for parking or storage of materials.
- C. Use of Existing Facilities: Use of existing buildings, parking area and ground outside the Project Site will not be permitted. Maintain existing building entrances, parking lots, driveways and roadways in good condition throughout construction period. Repair damage caused by construction operations. Protect adjacent buildings and their occupants during construction period.

1.6 OWNER'S OCCUPANCY REQUIREMENTS

- A. Full Owner Occupancy: Owner will occupy premises during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits, unless otherwise indicated.
 - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used portions of the facility. 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 5 days' notice to Owner of activities that will affect Owner's operations.
 - 3. Some of the work of this project requires access to Owners' apartments for proper completion. Prior and/or repeated notices may be necessary to gain access to private dwellings. Delay of the work will not be permitted due to failure of access. Take action to prevent any access delays.

1.7 WORK RESTRICTIONS

- A. On-Site Work Hours: Work shall be generally performed inside the existing building during normal business working hours of 8 a.m. to 5 p.m., Monday through Friday, except as otherwise indicated.
 - 1. Weekend Hours: Only permitted if Owner and tenant agree to permit access to work area. If requesting weekend access – work hours shall remain between 8 a.m. to 5 p.m.
 - 2. Hours for Utility Shutdowns on Premises: Not permitted.
 - a. Utilities on Project site may incur momentary shutdowns based on Contractors requirements.

- B. Existing Utility Interruptions: Do not interrupt utilities serving portion of facility occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
1. Notify Architect, Owner's Representative, and Owner not less than two days in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without Owner's Representative's or Owner's written permission.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

**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 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.3 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 the following:
 - a. Application for Payment forms with Continuation Sheets.
 - b. Contractor's Construction Schedule.
2. Submit the Schedule of Values per General Conditions Forms to Architect at earliest possible date but no later than ten days before the date scheduled for submittal of initial Applications for Payment.

- B. Format and Content: Use the Contract Documents 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 Architect.
 - c. Architect's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
2. Submit draft of the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division.
 - b. Description of the Work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Orders (numbers) that affect value.
 - g. Dollar value.
 - 1) Percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.

3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Provide several line items for principal subcontract amounts, where appropriate. Include separate line items under required principal subcontracts for operation and maintenance manuals, punch list activities, Project Record Documents in the amount of 5 percent of the Contract Sum.
4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
5. 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.
6. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment as items become completed.

1.4 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect 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: Progress payments shall be submitted to Architect by the 5th day of the month. The period covered by each Application for Payment is one month, ending on the last day of the month previous the submission.
- C. Payment Application Forms: Use Applications for Payment forms provided by PHA and in accordance with the HUD General Conditions and as specified herein.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
- E. Transmittal: Submit 3 signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
- F. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from every entity who is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment. Include waivers of mechanic's liens from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.
 1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 2. When an application shows completion of an item, submit final or full waivers.
 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 4. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.
 5. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.

- G. 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).
 4. Products list.
 5. List of Contractor's staff assignments.
 6. List of Contractor's principal consultants.
 7. Copies of building permits.
 8. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 9. Initial progress report.
 10. Report of preconstruction conference.
 11. Certificates of insurance and insurance policies.
 12. Performance and payment bonds.
 13. Data needed to acquire Owner's insurance.
- H. 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.
- I. 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. Evidence that claims have been settled.
 7. 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.
 8. Final, liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

SECTION 013100
PROJECT MEETINGS 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. Administrative and supervisory personnel.
 - 2. Preconstruction project meeting.
 - 3. Requests for Interpretation (RFIs).

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 to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.

1.4 PROJECT MEETINGS

- A. Preconstruction Conference: HACP will schedule a preconstruction conference before starting construction, at a time convenient to Owner, and Contractor, but no later than 15 days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
 - 1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Critical work sequencing and long-lead items.
 - c. Designation of key personnel and their duties.
 - d. Procedures for processing field decisions and Change Orders.
 - e. Procedures for RFIs.
 - f. Procedures for testing and inspecting.
 - g. Procedures for processing Applications for Payment.
 - h. Submittal procedures.
 - i. Use of the premises.
 - j. Work restrictions.
 - k. Owner's occupancy requirements.
 - l. Responsibility for temporary facilities and controls.
 - m. Construction waste management and recycling.

- n. Parking availability.
 - o. Office, work, and storage areas.
 - p. Equipment deliveries and priorities.
 - q. Security.
 - r. Progress cleaning.
 - s. Working hours.
 - t. Identify exactly which trees require trimming.
3. Minutes: Architect will record and distribute meeting minutes.

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.
 - 3. Follow guidelines noted in the "Contractor's Handbook" when providing RFIs.
 - 4. Do not communicate directly with Architect. Submit RFIs correspondence through HACP.
- B. Required 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 Architect.
 - 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.
 - a. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.
- C. Hard-Copy RFIs: Identify each page of attachments with the RFI number and sequential page number.
- D. HACP's Action: HACP will review and forward each RFI request to Architect for additional review, determine action required, and return it. Allow seven working days for HACP review and another seven working days for Architect'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 Architect's actions on submittals.
 - f. Incomplete RFIs or RFIs with numerous errors.
- 2. HACP's action may include a request for additional information, in which case Architect's time for response will start again.
 - 3. HACP'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."

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 013200
CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Contractor's Construction Progress Schedule (Gantt Chart).
 - 2. Field condition reports.
 - 3. Special reports.

1.2 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
- B. Cost Loading: The allocation of the Schedule of Values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum, unless otherwise approved by Architect.
- C. Gantt Chart: Horizontal bar chart used for planning and scheduling a construction project where activities are arranged chronologically based on milestones and have starting and ending dates.
- D. Milestone: A key or critical point in time for reference or measurement.
- E. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.3 SUBMITTALS

- A. Contractor's Construction Progress Schedule: Submit three opaque copies of initial schedule, large enough to show entire schedule for entire construction period in accordance with HACP requirements.
- B. Field Condition Reports: Submit four copies at time of discovery of differing conditions in accordance with HACP requirements.
- C. Special Reports: Submit four copies at time of unusual event in accordance with HACP requirements.

1.4 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Construction Progress Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.

1. Secure time commitments for performing critical elements of the Work from parties involved.
 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.
- C. If any contractor fails to submit schedule information to the General Contractor in a timely manner as specified in the contract documents, General Contractor shall immediately notify the Housing Authority of this fact in writing. Failure of any contractor to submit required information in a timely manner shall be a default in accordance with the terms of the contract.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION PROGRESS SCHEDULE

- A. Comply with the requirements of the HUD General Conditions for submissions of Progress Schedule. Include start and completion dates and other activities such as acquiring labor, materials and equipment.
- B. Submit Schedule to the Contracting Officer to indicate progression of the work. Failure to provide Construction Schedule and periodic updates may result in withheld approvals of progress payments.
 1. Submit Construction Progress Schedule 5 days after start of the work.
- C. Procedures: Comply with procedures contained in Associated General Contractors of America (AGC) "Construction Planning & Scheduling" for horizontal Gantt Chart construction schedules.
- D. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Final Completion.
 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- E. Activities: Treat each separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
 1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
 2. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule.
 3. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
- F. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
 1. Work under More Than One Contract: Include a separate activity for each contract.
 2. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
 3. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Coordination with existing construction.
 - b. Limitations of continued occupancies.
 - c. Uninterruptible services.

- d. Use of premises restrictions.
 - e. Environmental control.
4. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
- a. Subcontract awards.
 - b. Submittals.
 - c. Installation.
 - d. Tests and inspections.
 - e. Curing.
 - f. Placement into final use and operation.
- G. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.

2.2 REPORTS

- A. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.
- B. Special Reports: Submit directly to Owner within one day of an occurrence. Distribute copies of report to parties affected by the occurrence.
- C. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION PROGRESS SCHEDULE

- A. Scheduling: Provide planning, evaluation, and reporting of the Work using the horizontal Gantt Chart schedule. Within 5 calendar days of execution of the Contract Agreement by HAGP submit the proposed Construction Schedule.
- B. Contractor's Construction Progress Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule immediately after changes have been made.
 - 1. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 - 2. As the Work progresses, indicate Actual Completion percentage for each activity.
- C. Distribution: Distribute copies of approved schedule to Architect, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 - 1. When revisions are made, distribute updated schedules to the same parties. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

**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.

1.2 SUBMITTAL PROCEDURES

- A. General: Electronic copies of CAD Drawings of the Contract Drawings will not be provided by Architect for Contractor's use in preparing submittals.
- B. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect'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 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 - 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 - 3. Resubmittal Review: Allow 15 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 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
 - 3. Include the following information on label for processing and recording action taken:
 - a. Project name and date.
 - b. Name and address of Architect.
 - c. Name and address of Contractor.
 - d. Name and address of subcontractor.
 - e. Name and address of supplier.
 - f. Name of manufacturer.
 - g. Number and title of appropriate Specification Section.
 - h. Drawing number and detail references, as appropriate.
 - i. Location(s) where product is to be installed, as appropriate.
 - j. Other necessary identification.
- D. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.
- E. Additional Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
 - 1. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Architect.

2. If additional copies are submitted for maintenance manuals, they will not be marked with action taken and will be returned.
- F. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form.
- G. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 3. Resubmit submittals until they are marked "Approved or Approved as Noted on Architect's action stamp."
- H. Use for Construction: Use only final submittals with mark indicating "Approved or Approved as Noted on Architect's action stamp."

PART 2 - PRODUCTS

2.1 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. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options meet the requirements specified.
 3. Submit Product Data before or concurrent with Samples.
 4. Number of Copies: Submit five 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.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Dimensions.
 - c. Notation of dimensions established by field measurement.
 - d. Fabrication and installation drawings.
 - e. Roughing-in and setting diagrams.
 - f. Templates and patterns.
 - g. Compliance with specified standards.
 - h. Notation of coordination requirements.
 - i. Relationship to adjoining construction clearly indicated.
 - j. Seal and signature of professional engineer if specified.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 40 inches.

3. Number of Copies: Submit three copies where copies are required for operation and maintenance manuals. Architect will retain one copy; remainder will be returned. Mark up and retain one returned copy as a Project Record Drawing.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
 1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of appropriate Specification Section.
 3. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit two sets of Samples. Architect will retain one Sample sets; remainder will be returned.
- E. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation" for construction schedule submittals and updates.
- F. Application for Payment: Comply with requirements specified in Division 01 Section "Payment Procedures."
- G. Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."

2.2 INFORMATIONAL SUBMITTALS

- A. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- B. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
- C. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- D. 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.

- E. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- F. 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.

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 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
 - 1. Approved.
 - 2. Approved As Noted
 - 3. Not Approved
 - 4. Revise And Resubmit
- C. Corrections or comments made to the submittal do not relieve the Contractor from compliance with the requirements of the Contract Documents. This stamp indicates only a review for conformance with the design concepts of the project and compliance with the information given in the Contract Documents. The Contractor is solely responsible for: confirming and correlating all quantities and dimensions including field confirmed dimensions, selecting fabrication processes and techniques of construction; coordinating the work of all trades; and conforming with all applicable codes. This review does not authorize any additional cost for labor or material.
- D. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- E. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- F. Submittals not required by the Contract Documents will not be reviewed and will be discarded.

END OF SECTION 013300

**SECTION 014500
PROJECT QUALITY CONTROL**

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. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.

1.2 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 Architect for a decision before proceeding.

1.3 SUBMITTALS

- A. 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.

1.4 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. 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.
- E. 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 Architect for a decision before proceeding.
- F. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
 1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
 2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
 3. Demonstrate the proposed range of aesthetic effects and workmanship.
 4. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
 - a. Allow seven days for initial review and each re-review of each mockup.
 5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 6. Demolish and remove mockups when directed, unless otherwise indicated.

1.5 QUALITY CONTROL

- A. Contractor's Responsibilities: Where quality-control services are indicated as Contractor's responsibility, Contractor will engage a qualified testing agency to perform these services.
 1. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.
- B. 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.
- C. 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.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Prepare a record of tests and inspections. Include the following:
 1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.

3. Date test or inspection results were transmitted to Architect.
4. Identification of testing agency or special inspector conducting test or inspection.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
- 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 014500

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. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, utilities, and materials.

1.2 USE CHARGES

- A. General: Cost or use charges for temporary facilities shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, occupants of Project, testing agencies, and authorities having jurisdiction.
- B. Sewer Service: Owner's existing sewer service is available for use without metering and without payment of use charges.
- C. Water Service: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- D. Electric Power Service: Electricity from Owner's existing electrical power service is available for use without metering and without payment of use charges.
- E. Heating and Cooling: Is not available from Owner. Product installations with special temperature requirements will be Contractor's responsibility to provide heating and/or cooling and maintain as required.

1.3 SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

1.4 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.5 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Temporary use of Existing Facilities is not permitted without written approval by the Owner and the Architect.

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

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Portable Chain-Link Fencing: Minimum 2-inch, 9-gage, galvanized steel, chain-link fabric fencing; minimum 6 feet high with galvanized steel pipe posts; minimum 2-3/8-inch-OD line posts and 2-7/8-inch-OD corner and pull posts, with 1-5/8-inch-OD top and bottom rails. Provide concrete bases for supporting posts, if required.

2.2 EQUIPMENT

- A. Portable Sanitary Facility: Standalone unit providing sanitary unit compartment that drains sanitizing liquid into a sub-compartment and includes toilet seat, toilet paper, and hand sanitizer.
- B. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- C. Heating Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
 - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Provide each material ready for use when needed to avoid delay. Do not remove until materials 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. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
 - 1. Connect temporary sewers to municipal system as directed by authorities having jurisdiction.
- C. Water Service: Use of Owner's existing water service facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.

1. Where installations below outlet might be damaged by spillage or leakage, provide drip pan of suitable size to minimize water damage. Drain accumulated water promptly from pans.
- D. 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.
- E. Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
- F. Electric Power Service: Use of Owner's existing electric power service will be permitted. Provide power distribution equipment / system of sufficient size, capacity, and power characteristics required for construction operations.
 1. Connect temporary service to Owner's existing power source, as directed by Owner's Representative.
- G. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
- H. Telephone Service: Each Contractor and subcontractor shall be equipped with a cell phone. Provide list of cell phone numbers for Contractor and Subcontractors at the site.

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. Parking: Use designated areas of Owner's existing parking areas for construction personnel. Discuss location of designated parking at Pre-Construction Meeting.
- C. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
 2. Remove snow and ice as required to minimize accumulations.
- D. Temporary Signs: Provide temporary, directional signs as required to inform construction personnel and visitors seeking entrance to Project. Unauthorized signs are not permitted.
 1. Maintain and touchup signs so they are legible at all times.
- E. 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.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- B. Stormwater Control: Comply with authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- C. 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.
- D. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- E. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
 - 1. Prohibit smoking in hazardous fire-exposure and construction areas.
 - 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 - 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
 - 4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

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.
- C. 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.
 - 2. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns.
 - 3. 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 015000

**SECTION 015639
TREE PROTECTION AND TRIMMING**

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the protection and trimming of existing trees that interfere with, or are affected by, execution of the Work, whether temporary or permanent construction.

1.2 DEFINITIONS

- A. Tree Protection Zone: Area surrounding individual trees or groups of trees to remain during construction, and defined by the drip line of individual trees or the perimeter drip line of groups of trees, unless otherwise indicated.

1.3 QUALITY ASSURANCE

- A. Tree Service Firm Qualifications: An experienced tree service firm that has successfully completed tree protection and trimming work similar to that required for this Project and that will assign an experienced, qualified arborist to Project site during execution of tree protection and trimming.
- B. Tree Pruning Standard: Comply with ANSI A300 (Part 1), "Tree, Shrub, and Other Woody Plant Maintenance--Standard Practices (Pruning)."
- C. Preconstruction Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."
 - 1. Before tree protection and trimming operations begin, meet with representatives of authorities having jurisdiction, Owner, Architect, consultants, and other concerned entities to review tree protection and trimming procedures and responsibilities.

PART 2 - PRODUCTS – Not used.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.
- B. Do not store construction materials, debris, or excavated material inside tree protection zones. Do not permit vehicles or foot traffic within tree protection zones; prevent soil compaction over root systems.
- C. Maintain tree protection zones free of weeds and trash.
- D. Do not allow fires within tree protection zones.

3.2 TREE PRUNING

- A. Prune trees to remain that are affected by temporary and permanent construction.
- B. Pruning Standards: Prune trees according to ANSI A300 (Part 1) as follows:
 - 1. Type of Pruning: Cleaning, thinning, and raising.
- C. Cut branches with sharp pruning instruments; do not break or chop.
- D. Chip removed tree branches and use as organic mulch to spread over areas inside tree protection zones and within drip line of trees to remain and other zone identified by Architect. Stockpile excess in areas approved by Architect.

3.3 DISPOSAL OF WASTE MATERIALS

- A. Burning is not permitted.
- B. Disposal: Remove excess material and tree branch mulch from Owner's property.

END OF SECTION 015639

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. General installation of products.
 - 2. Progress cleaning.
 - 3. Protection of installed construction.
 - 4. 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.
 - 1. Before beginning work, investigate and verify the existence and location of utilities and other construction affecting the Work.
 - 2. Before construction, verify the location and points of connection of utility services.
- B. 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.
 - 1. Record observations.
 - 2. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

- D. Tools and Equipment: Do not use tools or equipment that produces harmful noise levels.
- E. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 - 1. Allow for building movement, including thermal expansion and contraction.
 - 2. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- F. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- G. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.3 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 (27 deg C).
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Roof Area: Remove debris from roof around drains and in corners. Remove roof drain covers, clean drains thoroughly and reinstall drain covers.
- D. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
- E. Installed Work: Keep installed work clean. Clean installed adjacent surfaces according to written instructions of installed product manufacturer 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.
- F. 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.
- G. 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.

3.4 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.

3.5 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
 - 1. Repairing includes replacing defective workmanship, cleaning and refinishing damaged surfaces and touching up with matching materials.
 - 2. Repair work must meet Owner's approval and workmanship must meet standards established in the construction documents.
- B. Restore permanent services used during construction to their specified condition.

END OF SECTION 017300

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. Manufacturer's Window Warranty.
 - 3. Final cleaning.

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. 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.
 - 3. Complete final cleaning requirements, including touchup painting.
 - 4. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- 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.

- 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.
- C. Manufacturer's Window Warranty: Window manufacturer's representative to visit project site and verify that work performed meets warranty requirements and present owner with Warranty specified in Division 06 Section Fiberglass Windows.

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 and proceeding from lowest floor to highest floor.
 - 2. Organize list in sequential order of individual buildings in numerical order coordinating to their standard street address number.
 - 3. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 - 4. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.

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. Clean exposed exterior surfaces to a dirt-free condition, free of stains, films, and similar foreign substances.
 - f. Clean newly installed windows on both sides – interiors and exteriors. Remove fingerprints and any excess caulking material from adjacent surfaces and vinyl siding.
 - g. 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.
 - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 - h. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 017700

SECTION 024119 SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Demolition and removal of selected portions of building elements.
2. Identification of demolition as indicated on the Drawings.
3. Photographs and/or video of existing conditions.

B. Related Sections include the following:

1. Division 01 Section "Summary" for use of premises and Owner-occupancy requirements.
2. Division 01 Section "Temporary Facilities and Controls" for temporary construction and environmental-protection measures for selective demolition operations.
3. Division 01 Section "Execution" for cutting and patching procedures.

1.2 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Detach items from existing construction and deliver them to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.
- D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.3 SUBMITTALS

A. Qualification Data: For demolition firm.

B. Schedule of Selective Demolition Activities: Indicate the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
 - a. List each building and date work is to begin and be completed in that building. No window may be removed without installed its replacement within the same workday. Schedule work accordingly.
2. Interruption of utility services. Indicate how long utility services will be interrupted.
3. Coordination for shutoff, capping, and continuation of utility services.
4. Means of protection for items to remain and items in path of waste removal from building.

1.4 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Standards: Comply with ANSI A10.6 and NFPA 241.

1.5 PROJECT CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
 - 1. Comply with requirements specified in Division 01 Section "Summary."
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 - 1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Contractor.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection facilities in service during selective demolition operations.

1.6 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped.

- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- E. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or preconstruction videotapes and view provided existing condition photographs.
- F. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.
 - 1. Comply with requirements for existing services/systems interruptions specified in Division 01 Section "Summary."

3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
 - 5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Division 01 Section "Temporary Facilities and Controls."

3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Proceed with selective demolition systematically, from higher to lower level within each building and each unit of that building. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.

2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
4. 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.
5. Maintain adequate ventilation when using cutting torches.
6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
9. Dispose of demolished items and materials promptly.

B. Removed and Salvaged Items:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area designated by Owner.
5. Protect items from damage during transport and storage.

C. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

- D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Concrete: Demolish in small sections. Cut concrete to a depth of at least 3/4 inch at junctures with construction to remain, using power-driven saw. Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement, and then remove remainder of concrete indicated for selective demolition. Neatly trim openings to dimensions indicated.
- B. Windows: Remove no more existing windows than can be replaced in one day of new window installation. Verify that new window sizes are on site and available for installation prior to removing existing windows.

1. Work in one building and the units within that building before proceeding to another building in the complex
- C. Roofing: Remove no more existing roofing than can be covered in one day by new roofing and so that building interior remains watertight and weathertight.
 1. Remove indicated existing roofing system above bay/box windows as required and/or indicated for proper installation of new windows.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
 1. Do not allow demolished materials to accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- 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 adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

3.8 SELECTIVE DEMOLITION SCHEDULE

- A. As indicated on the Drawings.

END OF SECTION 024119

**SECTION 034850
MISCELLANEOUS PRECAST CONCRETE**

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes architectural precast concrete window sills.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of material used in manufactured products indicated.
- B. Installation Instructions: Setting diagrams, templates, instructions and directions as required for installation.
- C. Certifications: Manufacturer's certification from APA, PCI, or applicable municipal certifications.
- D. Action Submittal:
 - 1. Design Mixtures: For each concrete mixture.
 - 2. Shop Drawings: Show in-place location, manufacturing details, plans, elevations, anchorages, reinforcement, connection details and methods, dimensions, finishes, relationships to adjacent materials, and erection and placement.

1.3 QUALITY ASSURANCE

- A. American Concrete Institute: ACI 318 – Building Code Requirements for Reinforced Concrete.
- B. Comply with the following sections of ASTM A 36/A 36M – Standard Specification for Carbon Structural Steel.
- C. ASTM A 123/A 123M - Standard Specification for Zinc (Hot-Dipped Galvanized) Coatings on Iron and Steel Products.
- D. ASTM C 150 - Standard Specification for Portland Cement.
- E. Precast/Prestressed Concrete Institute: PCI MNL-117 - Manual for Quality Control for Plants and Production of Architectural Precast Concrete Products.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle precast in strict compliance with manufacturer's instructions and recommendations and industry standards. Protect from damage.
- B. Lift and support units only at designated lifting points as shown on approved Shop Drawings.
- C. Provide anchorage items to be embedded in or attached to other construction without delaying the Work. Provide setting diagrams, templates, instructions and directions as required for installation.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Portland Cement: Complying with ASTM C 150, Type I or III, white or gray Colors to achieve desired finish colors. Use only one brand, type, and color from the same mill. Gray cement may be used for non-exposed backup mixes.
- B. Normal-Weight Aggregate: ASTM C 33, graded, 1-1/2-inch nominal maximum aggregate size.
- C. Reinforcing Bars: ASTM A 615/A 615M, Grade 40 or 60 (Grade 420), deformed.
- D. Galvanized Reinforcing Bars: Complying with ASTM A 767/A 767M, hot-dip galvanized; use where concrete cover is less than 1-1/2 inches.
- E. Water: ASTM C 94/C 94M.

2.2 ADMIXTURES

- A. Air-Entraining Admixture: ASTM C 260.

2.3 RELATED MATERIALS

- A. Steel Connection Materials: Hot-dip galvanize steel exposed to weather in final assembly complying with ASTM A 123/A 123M or ASTM A 153/A 153.
- B. Hot-dip galvanize setting bolts or projecting steel in masonry applications complying with ASTM A 153/A 153.
- C. Bearing Pads: Elastomeric pads complying with ASTM D 412.
- D. Cement Grout: Cement complying with ASTM C 150, ASTM C 404; proportions 1:2:5 by volume, minimum water for placement and hydration.
- E. Non-Shrink Grout: Comply with ASTM C 1107.

2.4 MIXES

- A. Design mixes for each type of concrete product specified - by an independent testing agency or by an architectural precast manufacturing plant at precast manufacturer's option.
 - 1. Concrete Density: Normal weight.
 - 2. Compressive Strength: 5,000 psi when tested in accordance with ASTM C39/C 39M.
 - 3. Maximum water cement ratio 0.40 at point of placement.
 - 4. Add air-entrainment admixture to result in air content at point of placement complying with ACI 533R requirements.
 - 5. Water absorption maximum 6% (by weight) when tested in accordance with ASTM C 642.

2.5 MANUFACTURING

- A. Fabricate precast concrete units with manufacturing and testing procedures, quality control recommendations, and dimensional tolerances as specified in PCI MNL-117 or ACI 533R, unless more stringent requirements are shown or specified.
- B. Reinforcement: Comply with CRSI Manual of Standard Practice, PCI MNL-117, or ACI 533R recommendations. Reinforce architectural precast concrete units to resist handling, transportation, and erection stresses, and to comply with specified performance criteria.
- C. Cast-in Items: Provide embedded anchors, inserts, steel shapes, and lifting devices as shown on reviewed Shop Drawings. Window connections are best made by field drilled inserts. Firmly hold cast items in place by jigs, strongbacks, or other approved means.
- D. Cure concrete in accordance with PCI MNL-117 or ACI 533R requirements.
- E. Manufacturing Tolerances: Fabricate to tolerances listed in PCI MNL-117 or ACI 533R.
- F. Finish exposed surfaces smooth and free of pockets, sand streaks, honeycomb, with uniform color and texture.
 - 1. Bugholes greater than 1/4 inch in diameter are NOT acceptable.
 - 2. Honed smooth finish using mechanical abrasion, followed by filling and rubbing procedures.
 - 3. Back Surfaces of units to be smooth steel trowel finish.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Field Dimensions: Furnish field dimensions to manufacturer as required.
- C. Examine substrates and conditions for compliance with requirements for installation, tolerances, true and level bearing surfaces, and other conditions affecting performance of architectural precast concrete units.

3.2 PLACEMENT AND INSTALLATION

- A. Lift and handle precast using lift points and embeds as shown on approved shop drawing.
- B. Erect level, plumb, and true to line. Do not allow cumulative dimensional errors to develop.
- C. Adjustments such as shimming which would place additional stress on units shall not be permitted.
- D. Adhere to dimensional tolerances in accordance with PCI recommendations.
- E. Rubbed Finish: Apply the following rubbed finish, defined in ACI 301 (ACI 301M), to smooth-formed finished as-cast concrete where indicated:

1. Grout-Cleaned Finish: Wet concrete surfaces and apply grout of a consistency of thick paint to coat surfaces and fill small holes. Mix one part portland cement to one and one-half parts fine sand with a 1:1 mixture of bonding admixture and water. Add white portland cement in amounts determined by trial patches so color of dry grout will match adjacent surfaces. Scrub grout into voids and remove excess grout. When grout whitens, rub surface with clean burlap and keep surface damp by fog spray for at least 36 hours.

3.3 CLEANINGS AND REPAIRS

- A. Clean exposed surfaces of units after erection if soiled or stained.
- B. Wash and rinse according to architectural precast concrete manufacturer's recommendations. Protect other work from damage while cleaning.
- C. Remove and replace precast concrete sills that does not comply with requirements in this Section. Replace broken, cracked or chipped sills.

END OF SECTION 034850

**SECTION 055000
METAL FABRICATIONS**

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Steel framing and supports for applications where framing and supports are not specified in other Sections.

B. Related Sections include the following:

1. Division 03 Section "Miscellaneous Precast Concrete" for installing anchor bolts, steel pipe sleeves, wedge-type inserts and other items indicated to be cast into concrete.

1.2 PERFORMANCE REQUIREMENTS

A. Thermal Movements: Provide exterior metal fabrications that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, 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.

1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

1.3 SUBMITTALS

A. Product Data: For the following: Paint products and Grout.

B. Shop Drawings: Show fabrication and installation details for metal fabrications.

1. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.
2. Provide templates for anchors and bolts specified for installation under other Sections.
3. 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. Welding certificates.

1.4 QUALITY ASSURANCE

A. Welding: Qualify procedures and personnel according to the following:

1. AWS D1.1, "Structural Welding Code--Steel."
2. AWS D1.3, "Structural Welding Code--Sheet Steel."

1.5 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication and indicate measurements on Shop Drawings.
 - 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating metal fabrications without field measurements. Coordinate wall and other contiguous construction to ensure that actual dimensions correspond to established dimensions.
 - 2. Provide allowance for trimming and fitting at site.

1.6 COORDINATION

- A. Coordinate installation of anchorages for metal fabrications. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

PART 2 - PRODUCTS

2.1 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth, flat surfaces, unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

2.2 FERROUS METALS

- A. Ductile Iron Cast Shapes: ASTM A 48/A 48M or A 126.
- B. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

2.3 FASTENERS

- A. General: Unless otherwise indicated, provide Type 304 stainless-steel fasteners for exterior use. Provide stainless-steel fasteners for fastening stainless steel, and aluminum. Select fasteners for type, grade, and class required.
- B. Steel Bolts and Nuts: Regular hexagon-head bolts, ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with hex nuts, ASTM A 563 (ASTM A 563M); and, where indicated, flat washers.
- C. Anchor Bolts: ASTM F 1554, Grade 36.
 - 1. Provide hot-dip or mechanically deposited, zinc-coated anchor bolts where item being fastened is indicated to be galvanized.
- D. Anchors, General: Anchors capable of sustaining, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing according to ASTM E 488/E 488M, conducted by a qualified independent testing agency.

- E. Expansion Anchors: Anchor bolt and sleeve assembly with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.
 - 1. Material for Anchors in Interior Locations: Carbon-steel components zinc-plated to comply with ASTM B 633, Class Fe/Zn 5.
 - 2. Material for Anchors in Exterior Locations: Alloy Group 1 (A1) stainless-steel bolts complying with ASTM F 593 (ASTM F 738M) and nuts complying with ASTM F 594 (ASTM F 836M).

2.4 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- B. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.
- C. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.

2.5 FABRICATION, GENERAL

- A. Shop Assembly: Preassemble items in the shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.
- B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch (1 mm), unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- C. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
- D. Form exposed work true to line and level with accurate angles and surfaces and straight edges.
- E. Weld corners and seams continuously to comply with the following:
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove welding flux immediately.
 - 4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.
- F. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) screws or bolts, unless otherwise indicated. Locate joints where least conspicuous.
- G. Fabricate seams and other connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

- H. Cut, reinforce, drill, and tap metal fabrications as indicated to receive finish hardware, screws, and similar items.
- I. Provide for anchorage of type indicated; coordinate with supporting structure. Space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.
 - 1. Where units are indicated to be cast into concrete or built into masonry, equip with integrally welded steel strap anchors, 1/8 by 1-1/2 inches (3.2 by 38 mm), with a minimum 6-inch (150-mm) embedment and 2-inch (50-mm) hook, not less than 8 inches (200 mm) from ends and corners of units and 24 inches (600 mm) o.c., unless otherwise indicated.

2.6 MISCELLANEOUS FRAMING AND SUPPORTS

- A. General: Provide steel framing and supports not specified in other Sections as needed to complete the Work.
- B. Fabricate units from steel shapes, plates, and bars of welded construction, unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction retained by framing and supports. Cut, drill, and tap units to receive hardware, hangers, and similar items.
- C. Galvanize miscellaneous framing and supports at exterior locations.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Cutting, Fitting, and Placement: Perform cutting and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack.
- B. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.
- C. Field Welding: Comply with the following requirements:
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove welding flux immediately.
 - 4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.
- D. Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction. Provide threaded fasteners for use with concrete and masonry inserts, toggle bolts, through bolts, lag bolts, wood screws, and other connectors.

END OF SECTION 055000

SECTION 061053
MISCELLANEOUS CARPENTRY – SILL AND LEDGER FRAMING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Wood blocking, cants, and nailers.
 - 2. Wood framing members for sill and ledger framing.
 - 3. Wood furring and grounds.
- B. Related Sections:
 - 1. Division 3 Section 034850 Miscellaneous Precast Concrete for items to be supported by sill and ledger framing.
 - 2. Division 5 Section 055000 Metal Fabrications for fasteners not specified herein.

1.2 DEFINITIONS

- A. Rough Carpentry: Carpentry work not specified in other Sections and not exposed, unless otherwise indicated.
- B. Exposed Framing: Dimension lumber not concealed by other construction.
- C. Lumber grading agencies, and the abbreviations used to reference them, include the following:
 - 1. AITC: American Institute of Timber Construction
 - 2. NELMA: Northeastern Lumber Manufacturers Association.
 - 3. NLGA: National Lumber Grades Authority.
 - 4. SPIB: Southern Pine Inspection Bureau.

1.3 SUBMITTALS

- A. Product Data:
 - 1. For fire-retardant treatments, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5664. Concealed wood requires fire treatment.
 - 2. Include copies of warranties from chemical treatment manufacturers for each type of treatment.
 - 3. For grading of lumber used for sill and ledger framing.

1.4 QUALITY ASSURANCE

- A. Source Limitations for Treated Wood: Obtain each type of treated wood product through one source from a single producer.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber, plywood, and other panels; place spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review and the Forest Stewardship Council's (FSC) Principles and Criteria.
 - 1. Factory mark each piece of lumber with grade stamp of grading agency.
 - 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
 - 3. Provide dressed lumber, S4S, unless otherwise indicated.
 - 4. Provide dry lumber with 19 percent maximum moisture content at time of dressing for 2-inch nominal (38-mm actual) thickness or less, unless otherwise indicated.
 - 5. Provide in sizes required to match existing wall thicknesses.

2.2 MISCELLANEOUS LUMBER

- A. General: Provide lumber for support or attachment of other construction, including blocking, furring, cants or nailers.
- B. For items of dimension lumber size, provide Construction, Stud, or No.2 grade lumber with 19 percent maximum moisture content.

2.3 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
 - 1. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide Type 304 stainless steel fasteners or fasteners with hot-dip zinc coating complying with ASTM A 153.
 - 2. Fasteners to be selected as to not corrode when in contact with wood preservatives or additives.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: NES NER-272.
- D. Wood Screws: ASME B18.6.1.
- E. Screws for Fastening to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.
- F. Lag Bolts: ASME B18.2.L

- G. Bolts: Steel bolts complying with ASTM A307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.
- H. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.
 - 1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- B. Do not use materials with defects that impair quality of rough carpentry or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- C. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - 1. CABO NER-272 for power-driven fasteners.
 - 2. Published requirements of metal framing anchor manufacturer.
- D. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; pre-drill as required.
- E. Use finishing nails for exposed work, unless otherwise indicated. Countersink nail heads and fill holes with wood filler.
- F. Use fire-retardant treated wood at concealed locations and concealed cavities.

3.2 SILL AND LEDGER FRAMING

- A. Install and attach ledger framing in accordance with BC 2009/2012 Section 1604.8.3 using high-strength alternative to lag screws and through-bolts.
- B. Securely attach ledgers to structural wood members; provide connections conforming to Table R502.2.2.1 (IRC 2012 Table R507.2).
- C. Do not support ledgers on stone or masonry veneer.
- D. Support sill with minimum 2-inch nominal lumber band constructed with ½-inch lag screws or bolts with washers in accordance with Table R502.2.2.1 (IRC 2012 Table R507.2).

3.3 WOOD GROUND, SLEEPER, BLOCKING, AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated. Build anchor bolts into masonry during installation of masonry work. Where possible, secure anchor bolts to formwork before concrete placement.

END OF SECTION 061053

SECTION 061600 SHEATHING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following: Roof sheathing.
- B. Related Sections include the following:
 - 1. Division 6 Section "Miscellaneous Carpentry" for lumber used structural supports.

1.2 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
 - 1. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
 - 2. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

1.3 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: For assemblies with fire-resistance ratings, provide materials and construction 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 GA-600, "Fire Resistance Design Manual."

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Stack plywood and other panels flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 FIRE-RETARDANT-TREATED PLYWOOD

- A. General: Comply with performance requirements in AWP C27.
 - 1. Use treatment that does not promote corrosion of metal fasteners.
 - 2. Use Exterior type for exterior locations and where indicated.
 - 3. Use Interior Type A, unless otherwise indicated.
- B. Kiln-dry material after treatment to a maximum moisture content of 15 percent. Do not use material that is warped or does not comply with requirements for untreated material.

- C. Identify fire-retardant-treated plywood with appropriate classification marking of UL, U.S. Testing, Timber Products Inspection, or another testing and inspecting agency acceptable to authorities having jurisdiction.
- D. Plywood Roof / Parapet Wall and/or Wall Sheathing: Exterior, Structural I or Exposure 1, Structural I sheathing.
 - 1. Span Rating: Not less than 16/0.
 - 2. Nominal Thickness: Not less than 1/2 inch (13 mm).

2.2 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
 - 1. For sheathing provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: NES NER-272.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction, unless otherwise indicated.
- C. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections. Install fasteners without splitting wood.
- D. Coordinate roof sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.
- E. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.
- F. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

END OF SECTION 061600

SECTION 062023
INTERIOR FINISH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Prefinished interior standing and running trim (White).
2. At Contractor's option Simulated Wood Trim specified as exterior trim may be used on the interior if volume of material order provides greater cost efficiency.

B. Related Sections include the following:

1. Division 06 Section "Miscellaneous Carpentry – Sill and Ledger Framing" for wood furring, blocking, shims, and hanging strips required for installing woodwork and concealed within other construction before woodwork installation.
2. Division 06 Section "Simulated Wood Trim" for installation of exterior trim.

1.2 DEFINITIONS

A. Interior finish carpentry includes wood furring, blocking, shims, and hanging strips for installing woodwork items unless concealed within other construction before woodwork installation.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Show location of each unique item, dimensioned plans and elevations.

C. Samples for Verification:

1. Trim Board: 6 inch-length in width indicated or 3 inch minimum width. Pre-finish in standard white factory applied paint.

1.4 QUALITY ASSURANCE

A. Fabricator Qualifications: Shop that employs skilled workers who fabricate products similar to those required for this Project and whose products have a 5 past years record of successful in-service performance.

B. Quality Standard: Unless otherwise indicated, comply with AWI's "Architectural Woodwork Quality Standards" for grades of interior architectural woodwork indicated for construction, finishes, installation, and other requirements.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver woodwork until painting and similar operations that could damage woodwork have been completed in installation areas. If woodwork must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Project Conditions" Article.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide materials that comply with requirements of AWI's quality standard for each type of woodwork and quality grade specified, unless otherwise indicated.
- B. Wood Products: Comply with the following:
 - 1. Hardboard: AHA A135.4.
 - 2. Provide species and grades listed for materials to be paint finished.
 - a. Grade: Comply with WWPA G-5 standard grading rules.
 - b. Species: Aspen, Douglas Fir-Larch, Douglas Fir South, Engelmann Spruce-Lodgepole, Pine, Engelmann Spruce, Hem-Fir, Idaho White Pine, Lodgepole Pine, Mountain Hemlock, Mountain Hemlock-Hem-Fir, or Ponderosa Pine-Sugar Pine, (Ponderosa Pine-Lodgepole Pine).
- C. Style: Square with slightly smoothed round edge.
- D. Sizes:
 - 1. Top Rail: 1/2 inch thick by 3-1/2 inches high by 12 feet long.
 - 2. Sides Trim and Bottom Sill: 1/2 inch thick by 2-1/2 inches high by 12 feet long.
- E. Adhesive: Liquid Nails or equal and 23 gauge headless.
- F. Corners: Square with top rail and bottom sill extending over side trim.

2.2 MISCELLANEOUS MATERIALS

- A. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.
- B. Adhesives, General: Do not use adhesives that contain urea formaldehyde.
- C. VOC Limits for Installation Adhesives and Glues: Use installation adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
 - 1. Wood Glues: 30 g/L.
 - 2. Contact Adhesive: 250 g/L.

2.3 FABRICATION, GENERAL

- A. Interior Woodwork Grade: Unless otherwise indicated, provide Premium-grade interior woodwork fabrication methods complying with referenced quality standard.
- B. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas.
- C. Fabricate woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:

PART 3 - EXECUTION

3.1 PREPARATION

- A. Before installation, condition woodwork to average prevailing humidity conditions in installation areas.
- B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

3.2 INSTALLATION

- A. Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch in 96 inches.
- B. Scribe and cut woodwork to fit adjoining work, refinish cut surfaces, repair damaged finish at cuts.
- C. Anchor woodwork to blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails for exposed fastening, countersunk and filled flush with woodwork and matching final finish if transparent finish is indicated.
- D. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length available) to greatest extent possible. Do not use pieces less than 48 inches long, except where window is shorter than 48 inches use single piece entire width/length of window.
 - 1. Install standing and running trim with no more variation from a straight line than 1/8 inch in 96 inches.

3.3 ADJUSTING AND CLEANING

- A. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean woodwork on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 062023

**SECTION 064055
SIMULATED WOOD TRIM**

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Simulated wood trimboards including but not limited to the following:
 - 1. Window trim.
 - 2. Provide where needed for complete finished appearance as approved by the Owner.

1.2 RELATED SECTIONS

- A. Section 079200 – Joint Sealants.
- B. Section 084600 – Fiberglass Windows.

1.3 REFERENCES

- A. ASTM D 792 – Density and Specific Gravity of Plastics by Displacement.
- B. ASTM D 570 – Water Absorption of Plastics.
- C. ASTM D 638 – Tensile Property of Plastics.
- D. ASTM D 790 – Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- E. ASTM D 792 - Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement.
- F. ASTM D 1761- Mechanical Fasteners in Wood.
- G. ASTM D 696 – Coefficient of Linear Thermal Expansion of Plastics Between -30 deg C and 30 deg C with a Vitreous Silica Dilatometer.
- H. ASTM E 84 – Surface Burning Characteristics of Building Materials
- I. ASTM 3679 – Standard Specification for Rigid Poly Vinyl Chloride (PVC) Siding.

1.4 SUBMITTALS

- A. 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. Installation methods, including nailing patterns.
- B. Verification Samples: For each finish profile specified, two samples, minimum size 6 inches (150 mm) long, representing actual product and patterns finish.

- C. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A minimum of 5 years in the manufacture of PVC products.
- B. Installer Qualifications: A minimum of 3 years in the installation of PVC products.

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.

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 WARRANTY

- A. Warranted to the original Owner under normal and proper use to be free of manufacturing defects for a period of 20 years.

PART 2 PRODUCTS

2.1 MATERIAL

- A. General: Cellular PVC, homogenous and free of voids, holes, cracks, and foreign inclusions and other defects. Edges square and top and bottom surfaces flat with no convex or concave deviation. Provide in color white and with smooth finish on both sides.
- B. Physical Properties: Cellular PVC material with a small-cell microstructure of 0.60 grams/cm³ in accordance with ASTM D 792 with the following physical and performance properties:
 - 1. Mechanical:
 - a. Tensile Strength: 1261 psi when tested in accordance with ASTM D 638.
 - b. Tensile Modulus: 79,463 psi when tested in accordance with ASTM D 638.
 - c. Flexural Strength: 4082 psi when tested in accordance with ASTM D 790.
 - d. Nail Hold: 66 (finish nail) lbf/in of penetration when tested in accordance with ASTM D 1761.
 - e. Screw Hold: 593 lbf/in of penetration when tested in accordance with ASTM D 1761.
 - f. Gardner Impact: 16 in-lbs when tested in accordance with ASTM D 4226.
 - g. Charpy Impact (23 deg C): 0.1526 ft-lbs/in when tested in accordance with ASTM D 256.
 - 2. Thermal:

- a. Coefficient of Linear Expansion: 3.2×10^{-5} in/in/deg F when tested in accordance with ASTM D 696.
 - b. Burning Rate: No burn when flame removed when tested in accordance with ASTM D 635.
 - c. Flame Spread Index: 20 when tested in accordance with ASTM E 84.
3. Manufacturing Tolerances:
- a. Variation in component length: minus 0.00 plus 1.00 inch.
 - b. Variation in component width: plus or minus 1/16 inch.
 - c. Variation in component edge cut: plus or minus 2 degrees.
 - d. Variation in Density: minus 0 percent to plus 10 percent.

2.2 SIMULATED WOOD TRIM

- A. General: Provide simulated wood trim in profiles and configurations as required to completely cover existing surfaces and provide finished appearance satisfactory to Architect and Owner.
- B. Narrow Trim Boards: Nominal thickness 5/8 inch (16 mm) by required width indicated; if not indicated on shop drawing verify with Architect.
- C. Thick Trim Boards: Nominal thickness: 1 inch (25.5 mm) by required width indicated; if not indicated on shop drawing verify with Architect.
- D. J-Pocket Trim Boards: With built-in J-Pocket for siding of nominal thickness: 5/4 inches (32 mm) by nominal 4 inches (102 mm) width.
- E. J-Channel Brickmould: Nominal size 1-1/4 inches by 2 inches (51mm) by 17 feet long.
- F. Drip Cap: Nominal size 11/16 inch (17.5 mm) by 1-5/8 inches (41 mm) by 16 feet long.

2.3 ACCESSORIES

- A. Fasteners: Type designed for wood trim and siding (thinner shank, blunt point, full round head) of stainless steel or hot dipped galvanized steel.
 - 1. Fasteners Length: Long enough to penetrate a solid wood substrate a minimum of 1-1/2 inch (38 mm).
 - 2. The use of standard nail guns is acceptable.
 - 3. Use minimum two fasteners per every framing member for trimboard applications.
 - 4. Install fasteners no more than 2 inches (51 mm) from the end of the board.
 - 5. Fasten trim into a flat, solid substrate. Fastening trim into hollow or uneven areas must be avoided.
 - 6. Pre-drilling is typically not required unless a large fastener is used or product is being installed in low temperatures.
- B. Adhesives: Cellular PVC cement/adhesive as recommended in writing by PVC trim manufacturer.
- C.
 - 1. Glue all trim joints (scarf or miter) with adhesive such as TrimTight or Bond & Fill.
 - 2. Glue joints should be secured with a fastener and/or fastened on each side of the joint to allow adequate bonding time.
 - 3. Surfaces to be glued should be smooth, clean and in complete contact with each other.

4. Various adhesives may be used. Consult adhesive manufacturer to determine suitability.
- D. Sealants: Urethane, polyurethane or acrylic based sealants without silicone as specified in Section 079200.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Prior to installation, verify governing dimensions of and condition of substrate.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Examine, clean, and repair as necessary any substrate conditions that would be detrimental to proper installation.
- C. Prepare surfaces using the methods recommended by the PVC trim manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
 1. Comply with all terms necessary to maintain warranty coverage.
 2. Use trim details indicated on Drawings.
 3. Touch up all field cut edges before installing.
- B. Cutting: Use carbide tipped blades designed to cut wood. Do not use fine-tooth metal-cutting blades or plywood blades.
 1. Avoid rough edges from cutting caused by: excessive friction, poor board support, worn saw blades or badly aligned tools.
- C. Drilling: Drill with standard woodworking drill bits. Do not use bits made for rigid PVC.
 1. Avoid frictional heat build-up and remove shavings from the drill hole frequently.
- D. Milling: Mill using standard milling machines used to mill lumber. Relief angle 20 to 30 degrees. Cutting speed to be optimized with the number of knives and feed rate.
- E. Routing: Use sharp carbide tipped router bits.
- F. Edge Finishing: Use machine edging, sanding, grinding, or filling to finish edges.
- G. Nail Location: Refer to fastening schedule and diagrams in the most current version of the manufacturer's installation manual for recommended fastener spacing.
 1. Install fasteners no more than 3/4 inches (19 mm) from the end of each board.

- H. Thermal Expansion and Contraction: Expansion and contraction will occur with changes in temperature.
 - 1. When properly fastened, allow 1/4 inch (6 mm) per 18 foot (5.49 m) for expansion and contraction.
 - 2. Joints between pieces should be glued to eliminate joint separation. When gaps are glued on a long run, allow for expansion and contraction at the end of the runs.
- I. Cleaning: If moldings get dirty during installation, clean with a soft bristle brush and a bucket of soapy water. For stubborn stains, mold or mildew, use a cleaner suitable for PVC products.
 - 1. After cleaning fill dents and gouges with PVC products recommended by manufacturer.

3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair, or replace damaged products before Substantial Completion.

END OF SECTION 064055

**SECTION 072105
SPRAY FOAM INSULATION**

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Concealed low pressure foam building insulation for window opening surrounds.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.

1.3 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of building insulation through one source from a single manufacturer.
- B. Fire-Test-Response Characteristics: Provide insulation and related materials with the fire-test-response characteristics indicated, as determined by testing identical products per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.
 - 1. Surface-Burning Characteristics: ASTM E 84.
 - 2. Fire-Resistance Ratings: ASTM E 119.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Protect insulation materials from physical damage and from deterioration by moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

PART 2 - PRODUCTS

2.1 WINDOW OPENING INSULATION

- A. Foam Insulation: Low-pressure formula designed not to bow bend window or door frames.
- B. ICC-ES Legacy NER-645. Conforms to AAMA 812-04 pressure-build @ 0.08 PSI, ABAA standards for air leakage per ASTM 283, ASTM E331, ASTM E547, ASTM C1620.
- C. UL Classified as a sealant. See CCMC 13074-R.
- D. Provides real insulation value which complements energy efficiency of the window or door. Greater insulating value than chinked fiberglass or caulk.
- E. Soft, pliable foam is forgiving, easier to remove if gap is overfilled. Cured foam can be stuffed back into the gap without trimming. Flexible foam permits expansion and contraction.

- F. Repels/deflects water, but is sandable and paintable.
- G. Tack free in 8 minutes; Trims within 1 hour.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements of Sections in which substrates and related work are specified and for other conditions affecting performance.
 - 1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Comply with insulation manufacturer's written instructions applicable to products and application indicated.
- B. Install insulation that is undamaged and that has not been left exposed at any time to ice, rain, snow and sun.

3.3 INSTALLATION OF GENERAL BUILDING INSULATION

- A. Apply foamed-in-place insulation in strict accordance with manufacturer's installation instructions.
- B. Conform to CAM/ULC-S710.2.
- C. Avoid overfilling restricted spaces around window openings between window frames and walls.
- D. Apply low pressure foamed-in-place insulation in gaps and cracks up to 3 inches in size surrounding window frames.
- E. Clean excess overspray from adjacent surfaces in accordance with manufacturer's written guidelines.

END OF SECTION 072100

SECTION 072222
WEATHER RESISTANT BARRIER

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:

1. Water resistive barriers on exterior side of exterior wall sheathing.
2. Flexible flashing for use at openings and penetrations.

1.2 REFERENCES

- A. ASTM E- 1677-95 "Standard Specification for an Air Retarder (AR) Material or System for Low-Rise Framed Building Walls".
- B. ASTM E-96-90 "Standard Test Method for Water Transmission of Materials".
- C. AATCC-127 "Hydrostatic Head Test".
- D. ASTM D-5733-9 Trapezoidal Test.
- E. Air-Ins ASTM E-283 Canadian Air Barrier Materials Standard.
- F. ASTM D-779 Dry Indicator Method, Water Penetration Resistance.

1.3 SUBMITTALS

A. Quality Assurance:

1. Submit copies of test results showing performance characteristics equaling or exceeding those specified.

B. Copy of manufacturer standard Warranty stating terms and conditions.

1.4 WARRANTY

A. Special Installer's Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace weather resistant barrier that does not comply with performance and other requirements specified in this Section within specified warranty period.

1. Warranty Period: Lifetime product replacement and/or system warranty from date of acceptance of complete Project.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Spunbonded Polypropylene Weather Membrane with a microporous coating, Non-woven, Nonperforated.

B. Performance Characteristics:

1. Gurley Hill, TAPPI T-460 – sec/100cc >2500.
2. Water Vapor Transmission 9-15 perms as tested by ASTM E-96-90, Method A.
3. Water penetration resistance of 865 cm on hydrostatic head in accordance with AATCC-127.
4. Trapezoidal Test of 30/33 in accordance with ASTM D-5733-9.
5. Air-Ins < .02L/S·M2 @ 75 PA.
6. Dry Indicator Method ASTM D-779 = to 24 hour rating.

2.2 ACCESSORIES

- A. Flexible Flashing: Composite, self-adhesive, flashing product consisting of a pliable, rubberized-asphalt compound, bonded to a high-density, cross-laminated polyethylene film to produce an overall thickness of not less than 0.040 inch.
- B. Sealants as recommended by weather barrier manufacturer.
1. Elastomeric polymer based, or butyl rubber, rubber based, meeting ASTM C920 evaluation.
- C. Recommended Fasteners for Wood, Insulated Sheathing Board, or Exterior Gypsum
1. Plastic cap nails.
 2. Plastic cap staples.
- D. Recommended Fasteners for Steel Framing: Stainless steel or hot-dipped galvanized screws with washers.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Install in accordance with Manufacturer's instruction over exterior sheathing.
- B. Overlap joints a minimum of 4-inches and seal joints and penetrations through water resistive barrier with specified tape and fasteners prior to installation of finish material.
- C. Barrier shall be free from holes, tears, and punctures.
- D. Flash and seal window and door penetrations in accordance with ASTM 2112, AMMA guidelines and manufacturer instructions. Apply flexible flashing in accordance with manufacturers written instructions.
- E. Cover weather barrier with exterior cladding within 6 months of installation.

END OF SECTION 072222

**SECTION 073113
ASPHALT SHINGLES**

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Roof shingles and accessories including the following:
 - 1. Fiberglass-based asphalt shingles.
 - 2. Self-adhering ice and water barrier.
 - 3. Fasteners.

1.2 RELATED SECTIONS

- A. Section 061600 – Sheathing.
- B. Section 076200 - Flashing and Sheet Metal for metal flashing, valley flashing, drip edges, and including step-type flashing installed with shingles.

1.3 REFERENCES

- A. ASTM International (ASTM):
 - 1. ASTM D 1970 - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection.
 - 2. ASTM D 3018 - Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules.
 - 3. ASTM D 3161 - Standard Test Method for Wind-Resistance of Asphalt Shingles (Fan-Induced Method).
 - 4. ASTM D 3462 - Standard Specification for Asphalt Shingles Made from Glass felt and Surfaced with Mineral Granules.
 - 5. ASTM D 7158 - Standard Test Method for Wind Resistance of Sealed Asphalt Shingles (Uplift Force/Uplift Resistance Method).
 - 6. ASTM E 108 - Standard Test Methods for Fire Tests of Roof Coverings.
 - 7. ASTM F 1667 - Standard Specification for Driven Fasteners: Nails, Spikes, and Staples.

1.4 SUBMITTALS

- A. Product Data: Manufacturer's data sheets and detail drawings for each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Product literature.
 - 4. Installation methods.
- B. Verification Samples: For each product and finish specified, two samples representing actual products and colors.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Provide all primary roofing products, including shingles, underlayment, leak barrier by a single manufacturer to meet manufacturer's Warranty requirements.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to site in manufacturer's unopened bundles with labels intact and legible.
- B. Store all products in manufacturer's unopened, labeled packaging until they are ready for installation.
- C. Handle and store materials on site to prevent damage. Store products in a covered, ventilated area, at temperature not more than 110 degrees F (43 degrees C); do not store near steam pipes, radiators, or in direct sunlight.
- D. Store bundles on a flat surface. Do not stack product more than 2 pallets high. If stacking 2 pallets high, use separator boards to protect the shingles below. Store all rolls on end.
- E. Do not install underlayment or shingles on wet surfaces.
- F. Store and dispose of solvent-based materials in accordance with all federal, state and local regulations.
- G. For rooftop loading, lay shingle bundles flat. Do not bend over the ridge.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install systems under environmental conditions outside manufacturer's recommended limits.
 - 1. Proceed with work only when existing and forecasted weather conditions will permit work to be performed in accordance with manufacturer's recommendations.

1.8 WARRANTY

- A. Manufacturer's Warranty: Provide to the Owner manufacturer's standard prorated warranty coverage for materials in the event of a material defect. Refer to actual warranty for complete details, limitations and requirements.
 - 1. Warranty Period: Minimum 25 years from date of Substantial Completion.

PART 2 PRODUCTS

2.1 FIBERGLASS-BASED ASPHALT SHINGLES - GENERAL

- A. Compliance: When installed in accordance with manufacturer's instructions, shingles shall comply with the following:
 - 1. Underwriter's Laboratories:
 - a. UL 790, Class A Fire Resistance.

- b. UL 2218 Impact resistance.
- 2. American Society for Testing and Materials:
 - a. ASTM D 3462 Asphalt Shingle Specification.
 - b. ASTM D 3161 Wind Resistance, Class F or Class A.
 - c. ASTM D 3018 Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules, Type 1.
 - d. ASTM D 7158 (UL 2390/ASTM D 6381) Wind Resistance, Class H.
 - e. ASTM E 108 Standard Test Methods for Fire Tests of Roof Coverings, Class A.

2.2 ROOF SHINGLES

- A. Asphalt shingles with fiberglass base, standard 3-tab roofing shingles.

- 1. Nominal Size: 12 inches (305 mm) x 36 inches (914 mm).
- 2. Exposure: 5 inches (127 mm).
- 3. Shingles per Square: 80.
- 4. Bundles per Square: 3 bundles of 26, 27, 27 shingles.
- 5. Coverage per Square: 100.0 sq ft (9.29 sq m).
- 6. Color: As selected from manufacturer's full range.

2.3 SELF-ADHERING ICE AND WATER BARRIER

- A. Self-Adhering, High-Temperature Sheet: Minimum 30 mils (0.76 mm) thick, consisting of a slip-resistant polyethylene- or polypropylene-film top surface laminated to a layer of butyl- or SBS-modified asphalt adhesive, with release-paper backing; specifically designed to withstand high metal temperatures beneath metal roofing. Provide primer according to written recommendations of underlayment manufacturer.
 - 1. Thermal Stability: ASTM D 1970; stable after testing at 240 deg F or higher.
 - 2. Low-Temperature Flexibility: ASTM D 1970; passes after testing at minus 20 deg F or lower.
 - 3. Mat-faced skid resistant surface, self-adhering, self-sealing, bituminous ice and water barrier.

2.4 FASTENERS

- A. Fasteners: Galvanized steel, stainless steel, or aluminum nails complying with ASTM F 1667, minimum 12 gauge shank with 3/8 inches (9.5 mm) diameter head.
- B. All fasteners must be driven flush with the shingle surface and penetrate at least 3/4 inch (19 mm) into the wood deck. Where the deck is less than 3/4 inch thick, the fastener should be long enough to penetrate fully and extend at least 1/8 inch through roof sheathing.

2.5 METAL FLASHING

- A. Flashing: Provide flashing as specified by Section 076200 – Metal Flashing and Sheet Metal.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Prior to starting work, examine all roof decks on which work is to be applied for defects in materials and workmanship which may be detrimental to the proper installation or long-term performance of the shingles.
 - 1. Underlayment and shingles installed directly over roof insulation or similar type decks is not approved.
 - 2. Roof deck must be dry, minimum 25/32 inch thick, maximum 6 inches wide boards, or APA rated sheathing (exposure 1): minimum 3/8 inch plywood, minimum 7/16 inch oriented strand board. Consult your manufacturer for other approved constructions.
 - 3. Ventilation under roof deck must meet local code requirements, or FHA Minimum Property Standards if there is no local code in effect.
- B. Do not begin installation until the roof deck has been properly prepared.
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding. Commencement of installation constitutes acceptance of conditions

3.2 PREPARATION

- A. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- B. Remove all existing roofing down to the roof deck.
- C. Verify installed roof deck is acceptable to receive shingles. Acceptable roof decks include the following:
 - 1. Lumber sheathing: 6 inch maximum width, 25/32 inch minimum thickness.
 - 2. Plywood sheathing: 3/8 inch minimum thickness Exposure 1 grade plywood sheathing as recommended by APA and in compliance with applicable Codes.
 - 3. OSB panels: 7/16 inch minimum thickness non-veneer structural panels as recommended by APA and in compliance with applicable Codes.
 - 4. Spacing between boards or panels shall not exceed 1/4 inch between roof boards or between plywood or OSB sheathing panels.
- D. Verify that the deck is dry, structurally sound, clean and smooth. It shall be free of any depressions, waves, and projections. Cover with sheet metal all holes over 1 inch in diameter, cracks over 1/2 inch in width, loose knots and excessively resinous areas.
- E. Verify that the deck is structurally sound and free of deteriorated decking. All deteriorated and damaged decking shall be removed and replaced with new materials.
- F. Clean deck surfaces thoroughly prior to installation of self-sealing ice and water barrier and underlayment.
- G. Verify that the existing shingles are dry, sound, clean and smooth. All curled, buckled or loose tabs shall be nailed down or removed.

3.3 UNDERLAYMENT APPLICATION

- A. Install in accordance with manufacturer's instructions.
 - 1. Install using methods recommended by shingle manufacturer and in accordance with local building codes. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.

2. Install self-adhering ice and water barrier from the eaves edge of roof up the slope a full 36 inches but not less than 24 inches beyond the interior edge of the exterior wall. Lap ends 6 inches.

B. Valleys:

1. Install self-adhering ice and water barrier at least 36 inches wide and centered on the valley. Lap ends 6 inches and seal.
2. Where valleys are indicated to be "open valleys", install metal flashing over self-adhering ice and water barrier before roof deck underlayment is installed; DO NOT nail through the flashing. Secure the flashing by nailing at 18 inches on center just beyond edge of flashing so that nail heads hold down the edge, or use valley metal with a formed edge and secure with clips.

C. Roof Deck

1. Lap horizontal edges at least 2 inches and at least 2 inches over self-adhering ice and water barrier. Lap ends at least 4 inches. End laps in succeeding course should be located at least 6 ft. from end laps in the preceding course.
2. Lap underlayment over valley protection at least 6 inches.

3.4 SHINGLE INSTALLATION

- A. Install shingles in accordance with manufacturer's printed installation instructions.
- B. Install starter course at lowest roof edge and along rake with edge of shingles extending 1/2 inch over edge of roof.
- C. Install first and successive courses of shingles stepping diagonally up and across roof deck with manufacturer's recommended offset at each succeeding course. Maintain uniform exposure of shingles at each succeeding course.
- D. Fasten shingles to deck with manufacturer's recommended number of roofing nails per shingle, but not less than four per shingle.
- E. Install ridge vents and shingles at valleys, hips and ridges in accordance with manufacturer's recommendations.

3.5 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION 073113

SECTION 074600 VINYL SIDING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Vinyl siding.
2. Vinyl soffit.
3. Vinyl accessories.

B. Related Sections:

1. Section 061000 "Rough Carpentry" for wood furring, grounds, nailers, and blocking.
2. Section 061600 "Sheathing" for wall sheathing and weather-resistive barriers.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples for Verification:[For each type, color, texture, and pattern required.]

1. 12-inch- (300-mm-) long-by-actual-width Sample of siding.
2. 12-inch- (300-mm-) long-by-actual-width Sample of soffit.

C. Product Certificates: For each type of siding and soffit, from manufacturer.

D. Warranty: Sample of special warranty.

E. Maintenance Data: For each type of siding and soffit and related accessories to include in maintenance manuals.

1.3 QUALITY ASSURANCE

A. Vinyl Siding Certification Program: Provide vinyl siding products that are listed in VSI's list of certified products.

B. Source Limitations: Obtain each type, color, texture, and pattern of siding and soffit, including related accessories, from single source from single manufacturer.

1.4 COORDINATION

A. Coordinate installation with flashings and other adjoining construction to ensure proper sequencing.

PART 2 - PRODUCTS

2.1 VINYL SIDING

- A. General: Integrally colored vinyl siding complying with ASTM D 3679.
- B. Horizontal Pattern: 6-1/2- or 7-inch (165- or 178-mm) exposure in beaded-edge, single-board style.
- C. Horizontal Pattern: 8-inch (203-mm) exposure in plain, [single-] [double, 4-inch (102-mm)] [triple, 2-2/3-inch (68-mm)] <Insert requirement> board style.
- D. Horizontal Pattern: 8-inch (203-mm) exposure in Dutch-lap, double, 4-inch (102-mm) board style.
- E. Texture: Same as existing: Smooth or Wood grain.
- F. Nominal Thickness: 0.044 inch.
- G. Minimum Profile Depth (Butt Thickness): Match existing siding's profile depth.
- H. Nailing Hem: Double thickness.
- I. Finish: Wood-grain print with clear protective coating containing not less than 70 percent PVDF.
- J. Color: Match existing and verify with Architect and Owner prior to purchasing product.

2.2 VINYL SOFFIT

- A. General: Integrally colored vinyl soffit complying with ASTM D 4477.
- B. Pattern: 6-inch (152-mm) exposure in V-grooved, single-board style.
- C. Texture: Smooth.
- D. Ventilation: Provide perforated soffit unless otherwise indicated.
- E. Nominal Thickness: 0.044 inch.
- F. Minimum Profile Depth: 5/8 inch.
- G. Colors: As selected by Architect from manufacturer's full range of industry colors.

2.3 ACCESSORIES

- A. Siding Accessories, General: Provide starter strips, edge trim, outside and inside corner caps, and other items as recommended by siding manufacturer for building configuration.
 - 1. Provide accessories made from same material as and matching color and texture of adjacent siding unless otherwise indicated.

- B. Vinyl Accessories: Integrally colored vinyl accessories complying with ASTM D 3679 except for wind-load resistance.
 - 1. Texture: Smooth.
 - 2. Fasciae.
 - 3. Moldings and trim.
- C. Flashing: Provide aluminum flashing complying with Section 076200 "Sheet Metal Flashing and Trim" at window and door heads and where indicated.
- D. Fasteners:
 - 1. For fastening to wood, use siding nails or ribbed bugle-head screws of sufficient length to penetrate a minimum of 1 inch (25 mm) into substrate.
 - 2. For fastening to metal, use ribbed bugle-head screws of sufficient length to penetrate a minimum of 1/4 inch (6 mm), or three screw-threads, into substrate.
 - 3. For fastening vinyl, use aluminum fasteners. Where fasteners will be exposed to view, use prefinished aluminum fasteners in color to match item being fastened.
- E. Insect Screening for Soffit Vents: Aluminum, 18-by-16 mesh or PVC-coated, glass-fiber fabric, 18-by-14 or 18-by-16 mesh.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates for compliance with requirements for installation tolerances and other conditions affecting performance of siding and soffit and related accessories.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Comply with siding and soffit manufacturer's written installation instructions applicable to products and applications indicated unless more stringent requirements apply.
 - 1. Do not install damaged components.
 - 2. Center nails in elongated nailing slots without binding siding to allow for thermal movement.
- B. Install vinyl siding and soffit and related accessories according to ASTM D 4756.
 - 1. Install fasteners for horizontal vinyl siding no more than 16 inches o.c.
 - 2. Install fasteners for vertical vinyl siding no more than 12 inches (300 mm) o.c.
- C. Install joint sealants as specified in Section 079200 "Joint Sealants" and to produce a weathertight installation.

3.3 ADJUSTING AND CLEANING

- A. Remove damaged, improperly installed, or otherwise defective materials and replace with new materials complying with specified requirements.
- B. Clean finished surfaces according to manufacturer's written instructions and maintain in a clean condition during construction.

END OF SECTION 074600

SECTION 076200
SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following sheet metal flashing and trim:
 - 1. Hip and valley flashing.
 - 2. Formed slope roof flashing and trim.
 - 3. Window flashing.
- B. Related Sections include the following:
 - 1. Division 07 Section "Asphalt Shingles" for roofing system and installation of flashing and adjacent materials.
 - 2. Division 07 Section "Joint Sealants" for field-applied sheet metal flashing and trim sealants.

1.2 PERFORMANCE REQUIREMENTS

- A. General: Install sheet metal flashing and trim to withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failing, rattling, leaking, and fastener disengagement.
- B. Fabricate and install roof edge flashing and copings capable of resisting the following forces according to recommendations in FMG Loss Prevention Data Sheet 1-49:
 - 1. Wind Zone 1: For velocity pressures of 21 to 30 lbf/sq. ft.: 60-lbf/sq. ft. perimeter uplift force, 90-lbf/sq. ft. corner uplift force, and 30-lbf/sq. ft. outward force.
- C. Thermal Movements: Provide sheet metal flashing and trim that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of sheet metal and trim thermal movements. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.
- D. Water Infiltration: Provide sheet metal flashing and trim that do not allow water infiltration to building interior.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: Show layouts of sheet metal flashing and trim, including plans and elevations. Distinguish between shop- and field-assembled work. Include the following:

1. Identify material, thickness, weight, and finish for each item and location in Project.
 2. Details for forming sheet metal flashing and trim, including profiles, shapes, seams, and dimensions.
 3. Details for fastening, joining, supporting, and anchoring sheet metal flashing and trim, including fasteners, clips, cleats, and attachments to adjoining work.
 4. Details of expansion-joint covers, including showing direction of expansion and contraction.
- C. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below:
1. Sheet Metal Flashing: 6 inches long in finish and colors indicated.
 2. Trim: 12 inches long. Include fasteners and other exposed accessories.

1.4 QUALITY ASSURANCE

- A. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual." Conform to dimensions and profiles shown unless more stringent requirements are indicated.

1.5 COORDINATION

- A. Coordinate installation of sheet metal flashing and trim with interfacing and adjoining construction to provide a leakproof, secure, and noncorrosive installation.

PART 2 - PRODUCTS

2.1 SHEET METALS

- A. Aluminum Sheet: ASTM B 209 (ASTM B 209M), Alloy 3003, 3004, 3105, or 5005, Temper suitable for forming and structural performance required, but not less than H14, finished as follows:
1. High-Performance Organic Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid-chromate-fluoride-phosphate conversion coating; Organic Coating: as specified below). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - a. Fluoropolymer 2-Coat System: Manufacturer's standard 2-coat, thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with AAMA 2605.
 - 1) Color: As selected by Architect from manufacturer's full range of available colors.
 2. Location: Roof Trim.
- B. Stainless-Steel Sheet: ASTM A 240/A 240M, Type 304, dead soft, fully annealed; with smooth, flat surface.
1. Finish: 2D (dull, cold rolled).
 2. Location: Hip and valley flashing for roofs of bay and/or box replacement windows.

2.2 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads.
 - 1. Exposed Fasteners: Heads matching color of sheet metal by means of plastic caps or factory-applied coating.
 - 2. Fasteners for Flashing and Trim: Blind fasteners or self-drilling screws, gasketed, with hex washer head.
 - 3. Blind Fasteners: High-strength aluminum or stainless-steel rivets.
 - 4. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.
- C. Solder for Stainless Steel: ASTM B 32, Grade Sn60, with acid flux of type recommended by stainless-steel sheet manufacturer.
- D. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealing tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape.
- E. Elastomeric Sealant: ASTM C 920, elastomeric silicone polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- F. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant, polyisobutylene plasticized, heavy bodied for hooked-type expansion joints with limited movement.
- G. Epoxy Seam Sealer: Two-part, noncorrosive, aluminum seam-cementing compound, recommended by aluminum manufacturer for exterior nonmoving joints, including riveted joints.
- H. Bituminous Coating: Cold-applied asphalt emulsion according to ASTM D 1187.
- I. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.

2.3 MANUFACTURED SHEET METAL FLASHING AND TRIM

- A. Fascia, Gutters, Downspouts and Roof Trim: Match existing fascia, gutter and downspout construction in materials and finish.
 - 1. Extruded Aluminum: 0.040 inch and/or 0.050 inch thick:
 - 2. Finish: High-performance organic finish.
 - 3. Colors: As selected by Architect from manufacturer's full range of available colors.
 - 4. Splice Plates: Concealed, of same material, finish, and shape as fascia cover.
 - 5. Special Fabrications: To match existing as required.
 - 6. Fascia Accessories: Fascia extenders with continuous hold-down cleats, soffit trim and downspout scuppers with integral conductor head and downspout adapters.

2.4 FABRICATION, GENERAL

- A. General: Custom fabricate sheet metal flashing and trim to comply with details shown and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required. Fabricate sheet metal flashing and trim in shop to greatest extent possible.
 - 1. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
 - 2. Obtain field measurements for accurate fit before shop fabrication.
 - 3. Form sheet metal flashing and trim to fit substrates without excessive oil canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
 - 4. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.
- B. Fabrication Tolerances: Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines indicated on Drawings and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.
- C. Fabrication Tolerances: Fabricate sheet metal flashing and trim that is capable of installation to tolerances specified in MCA's "Guide Specification for Residential Metal Roofing."
- D. Fabricate sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.
 - 1. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.
 - 2. Seams for Other Than Aluminum: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.
- E. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant to comply with SMACNA recommendations.
- F. Expansion Provisions: Where lapped or bayonet-type expansion provisions in the Work cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with elastomeric sealant concealed within joints.
- G. Conceal fasteners and expansion provisions where possible on exposed-to-view sheet metal flashing and trim, unless otherwise indicated.
- H. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.
 - 1. Thickness: As recommended by SMACNA's "Architectural Sheet Metal Manual" and FMG Loss Prevention Data Sheet 1-49 for application but not less than thickness of metal being secured.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions and other conditions affecting performance of work.
 - 1. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
 - 2. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
 - 1. Torch cutting of sheet metal flashing and trim is not permitted.
- B. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by fabricator or manufacturers of dissimilar metals.
 - 1. Coat side of uncoated aluminum and stainless-steel sheet metal flashing and trim with bituminous coating where flashing and trim will contact wood, ferrous metal, or cementitious construction.
 - 2. Underlayment: Where installing metal flashing directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet or install a course of polyethylene underlayment.
 - 3. Bed flanges in thick coat of asphalt roofing cement where required for waterproof performance.
- C. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
- D. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and elastomeric for aluminum locations and butyl sealant for stainless steel locations.
- E. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
 - 1. Space cleats not more than 12 inches apart. Anchor each cleat with two fasteners. Bend tabs over fasteners.
- F. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped or bayonet-type expansion provisions cannot be used or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with elastomeric for aluminum locations and butyl sealant for stainless steel concealed within joints.

- G. Fasteners: Use fasteners of sizes that will penetrate substrate not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws.
 - 1. Aluminum: Use aluminum or stainless-steel fasteners.
 - 2. Stainless Steel: Use stainless-steel fasteners.
- H. Seal joints with elastomeric and/or butyl sealant as required for watertight construction.
- I. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Prein edges of sheets to be soldered to a width of 1-1/2 inches except where pretinned surface would show in finished Work.
 - 1. Do not solder prepainted and aluminum sheet.
 - 2. Do not use open-flame torches for soldering. Heat surfaces to receive solder and flow solder into joints. Fill joints completely and remove flux and spatter from exposed surfaces.

3.3 ROOF FLASHING INSTALLATION

- A. General: Install sheet metal roof flashing and trim to comply with performance requirements, sheet metal manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, set units true to line, and level as indicated. Install work with laps, joints, and seams that will be permanently watertight.
- B. Roof Edge Flashing: Anchor to resist uplift and outward forces according to recommendations in FMG Loss Prevention Data Sheet 1-49 for specified wind zone and as indicated.
 - 1. Interlock bottom edge of roof edge flashing with continuous cleats anchored to substrate at 16-inch centers.

3.4 CLEANING AND PROTECTION

- A. Clean and neutralize flux materials. Clean off excess solder and sealants.
- B. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed. On completion of installation, clean finished surfaces, including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain in a clean condition during construction.
- C. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 076200

SECTION 079200 JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes joint sealants for the following applications:
 - 1. Exterior joints in vertical surfaces and horizontal non-traffic surfaces.
 - 2. Interior joints in the following vertical surfaces and horizontal non-traffic surfaces:
 - a. Perimeter joints of exterior openings.
 - b. Perimeter joints between interior wall surfaces and frames of windows.
 - c. Other joints as indicated.

1.2 DEFINITIONS

- A. Agencies and the abbreviations used to reference them include the following:
 - 1. ASTM - American Standards for Testing Materials.
 - 2. FS - Federal Specification.
 - 3. UL - Underwriters Laboratory.

1.3 SUBMITTALS

- A. Product Data: For each joint-sealant product.
- B. Warranties: Special warranties specified in this Section.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.
- B. Codes, Standards & Regulations: Work, including materials and installation, shall be in strict accordance with the following codes.
 - 1. FS TT-S-00230C: Sealing Compound; Elastomeric Type, Single Component.
 - 2. FS TT-S-001543A: Sealing Compound; Silicone Rubber Base.
 - 3. UL 263: Fire Tests of Building Construction and Materials.

1.5 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer or are below 40 degrees F.
 - 2. When joint substrates are wet.

3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.6 WARRANTY

- A. Special Installer's Warranty: Installer's standard form in which Installer agrees to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 1. Warranty Period: Two years from date of acceptance of complete Project by The Authority.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by The Authority from manufacturer's full range.

2.2 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealants: Comply with ASTM C920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C920 classifications for type, grade, class, and uses related to exposure and joint substrates.
- B. Type: Single-component, low-modulus, neutral-cure silicone sealant for general glazing and above-grade weathersealing for joints between Masonry or Siding to Fiberglass Window Frames.
 1. Type and Grade: S (single component) and NS (non-sag).
 2. Class: 50.
 3. NST: Non-staining technology.
 4. Uses Related to exposure: T (traffic) and NT (non-traffic)
 5. Uses Related to Joint Substrates: G, M, A, and O.
 6. Federal Specification TT-S001543 A, TT-S00230C Class A.
 7. Mold and mildew resistant.
 8. Products: Subject to compliance with requirements, provide one of the following:
 - a. Pecora Corporation; 898NST.
 - b. Dow Corning 991 Silicone.
 - c. GE SCS9000 SilPruf NB non-staining silicone.

2.3 LATEX JOINT SEALANTS

- A. Latex Joint Sealant: Acrylic terpolymer latex solvent-based, thermo-plastic, solids not less than 95 percent acrylic, paintable. Comply with performance requirements of either ASTM C-920 Type S, Class 12-1/2, Grade NS; or FS TT-S-0023C, Class B, Type Non-sag.
 - 1. Location: Interior vertical and horizontal joints. Do NOT use for traffic joints.
 - 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. BASF Building Systems.
 - b. Pecora Corporation, AC-20.
 - c. Tremco Incorporated, Tremplex 834.

2.4 JOINT-SEALANT BACKING

- A. General: Provide sealant backings of material and type that are non-staining, are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, Type O, open-cell material and non-off-gassing as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

2.5 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from pre-construction joint-sealant-substrate tests and field tests.
 - 1. Provide primer at locations where PVC simulated wood trim is installed.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
 2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air.
 3. Remove laitance and form-release agents from concrete.
 4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following: Metal.
- B. Joint Priming: Prime joint substrates where recommended in writing by joint-sealant manufacturer. Apply primer to comply with manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

3.3 INSTALLATION OF JOINT SEALANTS

- A. Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
1. Do not leave gaps between edges of sealant backings.
 2. Do not stretch, twist, puncture, or tear sealant backings.
 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
1. Place sealants so they directly contact and fully wet joint substrates.
 2. Completely fill recesses in each joint configuration.
 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- E. Tooling of Non-sag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
1. Remove excess sealant from surfaces adjacent to joints.
 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
 3. Provide concave joint configuration per Figure SA in ASTM C1193, unless otherwise indicated.

END OF SECTION 079200

**SECTION 085413
FIBERGLASS WINDOWS**

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Fiberglass double-hung windows.
- B. Fiberglass sliding windows.

1.2 REFERENCES

- A. American Architectural Manufacturers Association (AAMA):
 - 1. AAMA 502 - Voluntary Specification for Field Testing of Windows and Sliding Doors.
 - 2. AAMA 623 - Voluntary Performance Requirements and Test Procedures for Organic Coatings on Fiber Reinforced Thermoset Profiles.
- B. American Society for Testing and Materials (ASTM):
 - 1. ASTM C 1036 - Flat Glass.
 - 2. ASTM C 1048 - Heat-Treated Flat Glass--Kind HS, Kind FT Coated and Uncoated Glass.
 - 3. ASTM D 3656 - Insect Screening and Louver Cloth Woven from Vinyl-Coated Glass Yarns.
 - 4. ASTM E 283 - Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Difference Across the Specimen.
 - 5. ASTM E 547 - Water Penetration of Exterior Windows, Curtain Walls and Doors by Cyclic Static Air Pressure Differential.
- C. Screen Manufacturers Association (SMA): SMA 1201 - Specifications for Insect Screens for Windows, Sliding Doors and Swinging Doors.
- D. Window and Door Manufacturers Association (WDMA): ANSI/AAMA/NWWDA 101/I.S.2 - Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors.

1.3 PERFORMANCE REQUIREMENTS

- A. **Windows shall be Pella, or approved equal. Submit alternate products/manufacturers to Architect for approval before bid submission.**
- B. Windows shall meet Rating LC30 (smaller sizes) and LC50 (larger sizes) specifications in accordance with ANSI/AAMA/NWWDA 101/I.S.2/A440-08.
- C. Window Air Leakage, ASTM E 283: Window air leakage when tested at 1.57 psf (25 mph) shall be 0.25 cfm/ft² of frame or less.
- D. Window Water Penetration, ASTM E 547: No water penetration through window when tested under static pressure of 4.5 psf (42 mph) after 4 cycles of 5 minutes each, with water being applied at a rate of 5 gallons per hour per square foot.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, including installation instructions.

- B. Shop Drawings: Submit manufacturer's shop drawings, indicating dimensions, construction, component connections and locations, anchorage methods and locations, hardware locations, and installation details.
- C. Samples: Submit full-size or partial full-size sample of window illustrating glazing system, quality of construction, and color of finish.

1.6 QUALITY ASSURANCE

- A. Factory Testing: Factory test individual standard operable windows for air infiltration in accordance with ASTM E 283, to ensure compliance with this specification.
- B. Mockup: Provide sample installation for field testing window performance requirements and to determine acceptability of window installation methods and quality of workmanship.
 - 1. Approved mockup shall represent minimum quality required for the Work.
 - 2. Approved mockup shall remain in place within the Work.
 - 3. Architect shall determine unit location of mockup.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site undamaged in manufacturer's or sales branch's original, unopened containers and packaging, with labels clearly identifying manufacturer and product name. Include installation instructions.
- B. Storage:
 - 1. Store materials in accordance with manufacturer's instructions.
 - 2. Store materials off ground and under cover.
 - 3. Protect materials from weather, direct sunlight, and construction activities.
- C. Handling: Protect materials and finish during handling and installation to prevent damage.

PART 2 PRODUCTS

2.1 FIBERGLASS DOUBLE-HUNG WINDOWS

- A. Double-Hung Windows:
 - 1. Factory-assembled window with sash installed in frame.
 - 2. Frame and Sash Material: Duracast. 5-layer, pultruded-fiberglass material, reinforced with interlocking mat.
- B. Frame:
 - 1. Type: Block frame and Precision Fit frame or of type required for replacement windows.
 - 2. Interior and Exterior Frame: Pultruded, fiberglass composite with foam inserts.
 - 3. Overall Frame Depth: Minimum 3 inches for Block frame, New Construction frame, and Precision Fit frame.
 - 4. Nominal Wall Thickness of Fiberglass Members: 0.050 inch to 0.070 inch.
 - 5. Frame Corners:
 - a. Mitered at head and jamb on 10 degree sill.
 - b. Joined and bonded with nylon corner lock, with thermoset polyurethane adhesive and

mechanically fastened.

6. Jamb: Factory-drilled, counter-bored, installation screw holes.
7. Sills: Fitted with weep valve assemblies.

C. Interior and Exterior Sash: Pultruded, fiberglass composite with foam inserts.

1. Lower Sash: Lower sash vent, tilts for cleaning exterior glass.
2. Upper Sash: Upper sash vent, tilts for cleaning exterior glass.
3. Sash Corners: Mitered and bonded and sealed with injected thermoset polyurethane adhesive.

D. Glazing: Float Glass: ASTM C 1036, Quality 1.

1. Type: Polyurethane reactive (PUR) hot-melt glazed or expanded cellular foam tape-glazed, multi-layer Low-E coated with argon.

E. Weather Stripping:

1. Vent Upper Sash: Fin-type pile on jambs, top rail and stile.
2. Vent Lower Sash: Vinyl-wrapped foam at sill on frame and bottom rail.

2.2 FIBERGLASS SLIDING WINDOWS

A. Sliding Windows:

1. Factory-assembled window with sash installed in frame.
2. Frame and Sash Material: Duracast. 5-layer, pultruded-fiberglass material, reinforced with interlocking mat.

B. Frame:

1. Type: Block frame, Flush-flange or Precision Fit frame or of type required for replacement windows.
2. Interior and Exterior Frame: Pultruded, fiberglass composite with foam inserts.
3. Overall Frame Depth: Minimum 3 inches for Block frame, New Construction frame, and Precision Fit frame.
4. Nominal Wall Thickness of Fiberglass Members: 0.050 inch to 0.070 inch.
5. Frame Corners:
 - a. Mitered at head and jamb on 10 degree sill.
 - b. Joined and bonded with nylon corner lock, with thermoset polyurethane adhesive and mechanically fastened.
6. Jamb: Factory-drilled, counter-bored, installation screw holes.
7. Sills: Fitted with weep valve assemblies.

D. Interior and Exterior Sash: Pultruded, fiberglass composite.

1. Vent Sash: Removable for cleaning exterior glass.
2. Sash Corners: Mitered and bonded and sealed with injected thermoset polyurethane adhesive.

D. Glazing: Float Glass: ASTM C 1036, Quality 1.

1. Type: Polyurethane reactive (PUR) hot-melt glazed or expanded cellular foam tape-glazed,

multi-layer Low-E coated with argon.

E. Weather Stripping:

1. Vent Sash: Fin-type dual-pile around perimeter.

2.4 SCREENS

A. Insect Screens:

1. Compliance: ASTM D 3656 and SMA 1201.
2. Screen Cloth: Half- or full-size with vinyl-coated, 18/18 mesh, fiberglass screen cloth set in aluminum frame fitted to outside of window.
3. Complete with necessary hardware.
4. Screen Frame Finish: Baked enamel in color to match window exterior.

2.5 DOUBLE-HUNG WINDOW HARDWARE

A. Balances: Galvanized steel block-and-tackle balances.

B. Lock:

1. Type: Self-aligning, cam-action lock.
2. Windows 37 Inches Wide or Greater: 2 locks.
3. Finish: Match window finish.

C. Tilt Latches:

1. Glass reinforced Nylon 6.
2. Integrated into sash corner.
3. Finish is matte gray.

D. Lower Sash Lift: Integrated into Duracast checkrail.

E. Upper Sash Lift: Color-in ABS Resin.

2.6 SLIDING WINDOW HARDWARE

A. Vent Rollers: 2 nylon roller housings containing 2 acetal rollers each and removable for cleaning and maintenance.

B. Locks: Self-aligning, cam-action type locks; provide 2 locks for windows greater than 37 inches high.

C. Standard Finish: Match window interior.

2.7 FINISH

A. Exterior and Interior Duracast Finish: Factory-applied powder-coat paint, comply with AAMA 623.

1. Color: White.

2.8 INSTALLATION ACCESSORIES

A. Flashing/Sealant Tape:

1. Aluminum-foil-backed butyl window and door flashing tape.

2. Maximum Total Thickness: 0.013 inch.
 3. UV resistant.
 4. Verify sealant compatibility with sealant manufacturer.
- B. Interior Insulating-Foam Sealant: Low-expansion, low-pressure polyurethane insulating window and door foam sealant.
- C. Exterior Perimeter Sealant: Multi-purpose sealant as specified in the joints sealant section.
- D. Block Frame Installation Accessories: Vinyl installation fin with head drip flashing and installation screws for frame screw applications.
- E. Precision Fit Frame Installation Accessories: Sill Adapters and 1/4-inch Jamb Extensions as needed for weather tight installation.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive windows. Notify Architect of conditions that would adversely affect installation or subsequent use. Do not proceed with installation until unsatisfactory conditions are corrected.

3.2 TOLERANCES

- A. Windows shall accommodate the following opening tolerances:
1. Vertical Dimensions Between High and Low Points: Plus 1/4-inch, minus 0 inch.
 2. Width Dimensions: Plus 1/4-inch, minus 0 inch.
 3. Building Columns or Masonry Openings: Plus or minus 1/4-inch from plumb.

3.3 INSTALLATION

- A. Install windows in accordance with manufacturer's instructions.
- B. Install windows to be weather-tight and freely operating.
- C. Maintain alignment with adjacent work.
- D. Secure assembly to framed openings, plumb and square, without distortion.
- E. Integrate window system installation with exterior water-resistant barrier using flashing/sealant tape. Apply and integrate flashing/sealant tape with water-resistant barrier using watershed principles in accordance with window manufacturer's instructions.
- F. Place interior seal around window perimeter to maintain continuity of building thermal and air barrier using insulating-foam sealant.
- G. Seal window to exterior wall cladding with sealant and related backing materials at perimeter of assembly.
- H. Leave windows closed and locked.

3.4 FIELD QUALITY CONTROL

- A. Field Testing: Field-test windows in accordance with AAMA 502, Test Method A.

3.5 CLEANING AND PROTECTION

- A. Clean window frames and glass on both sides with manufacturer's recommended cleaning product.
- B. Do not use harsh cleaning materials or methods that would damage finish or glass.
- C. Remove labels and visible markings.
- D. Protect installed windows to ensure that, except for normal weathering, windows will be without damage or deterioration at time of substantial completion.

END OF SECTION 085413

SECTION 085656
SECURITY WINDOWS SCREENS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Operable aluminum framed stainless steel security screen mesh.
- B. Related Sections include the following:
 - 1. Division 08 Section "Fiberglass Windows" for substrate attachment material.

1.2 SUBMITTALS

- A. Product Data: Manufacturer's product data for Protective Security Screens including:
 - 1. Manufacturer's standard details and attachment methods.
 - 2. Data on finishes, hardware, and accessories.
 - 3. Recommendations for maintenance and cleaning of finished surfaces.
- B. Provide test data: Knife Shear Test and Dynamic Impact Test.
- C. Shop Drawings: Show installation details and locations of security screens. Provide list of units to receive security screens.
 - 1. Include elevations for each type of window requiring security screens, sections, and details of attachment to substrates. Show anchorage and accessory items.
- D. Action Sample: Submit L-shaped corner sample with minimum 6-inch legs and screen mesh between the legs.
- E. Provide sample in manufacturer's standard color indicated and/or colors requested by architect.
- F. Provide copy of manufacturer's standard one (1) year warranty against any proven defective material or parts.

1.3 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Provide Security Screens produced by firm experienced in manufacturing specified screens with proven success in performance for a minimum of 5 previous installations of similar size and complexity of this project.
- B. Obtain Security Screens from a single manufacturer to ensure compatibility and standardized appearance throughout.
- C. Security Screens must conform to ANSI/SMA 6001-2002 "Proposed American National Specifications for Metal Protection Screens".

1.4 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of Security Screens and window sizes by field measurements before fabrication and indicate measurements on Shop Drawings.
 - 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating without field measurements.

PART 2 - PRODUCTS

2.1 SECURITY SCREEN FRAMES

- A. Main Frame: Not less than 5/16 inch by 15/16 inch wide, and extruded from 6063-T6 aluminum alloy. Weight of aluminum to be not less than 0.134 lbs/ft., with a nominal thickness of .050-inch.
 - 1. Miter corners of frames and fit with an internal tension coupling assembly fastened to frame.
- B. Frame Finish: Baked enamel or thermo-set powder coat finish frames in color white to match new window frames. Provide smooth, flat surfaces void of blemishes and air bubbles.

2.2 HINGES

- A. Egress screens shall have a maximum of .050 inch 304 stainless steel continuous piano hinge on the opening edge. Hinges shall be held in place by tamper-proof stainless steel fasteners.

2.3 MESH

- A. Wire Mesh: Minimum 304 h. alloy .028 inch diameter 12x12 stainless steel wire mesh with a tensile strength not less than 800 pounds per linear inch.

2.4 LATCHES

- A. Latches shall be single-point release and comply with applicable ICC/ANSI A117.1 accessibility standards.

2.5 FASTENERS

- A. General: Unless otherwise indicated, provide Type 304 stainless-steel fasteners for exterior use with stainless steel tamper resistant screws.
- B. L-Shaped Bracket: Stainless steel as indicated of size required to attach security screen frame to window substrate. In lieu of brackets direct mounting of screen framing is acceptable when accompanied by written installation instructions indicated direct mounting method.
- C. Tamper-Resistant Screws: Stainless steel in either 302 or 304 grade for corrosion resistance with special shaped head that require manufacturer's security tool to remove screws once set.
 - 1. Provide sizes and type of tamper-resistant screws as required by different substrates if applicable. Verify substrates by field inspection prior to ordering.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine screens with installer for compliance with requirements indicated and conditions that affect the installation. Verify exact screen locations and proper attachment methods.
 - 1. Correction unsatisfactory conditions before proceeding with the installation,
 - 2. Do not proceed until unsatisfactory conditions are corrected.

3.2 INSTALLATION

- A. Install Security Screens in accordance with approved shop drawings, manufacturer's installation instructions, and location requirements. Maintain alignment with windows edges and keep security screen level, plumb, true, and free of rack.
- B. After completion of installation clean exposed to view surfaces in accordance with Division 01 Section "Closeout Procedures."
- C. Installation Tolerances:
 - 1. Maximum variation from plumb or level: 1/8 inch in 3 feet and 1/4 inch in any 10 feet.
 - 2. Maximum misalignment of members abutting end to end 1/16 inch.

END OF SECTION 085656

SECTION 092900 GYPSUM BOARD

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following: Interior gypsum board.
- B. Related Sections include the following:
 - 1. Section 061053 "Miscellaneous Carpentry" for non-structural framing and suspension systems that support gypsum board panels.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.

1.3 QUALITY ASSURANCE

- A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.
- B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

1.4 STORAGE AND HANDLING

- A. Store materials inside under cover and keep them dry and protected against damage from weather, condensation, direct sunlight, construction traffic, and other causes. Stack panels flat to prevent sagging.

1.5 PROJECT CONDITIONS

- A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.
- B. Do not install interior products until installation areas are enclosed and conditioned.
- C. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.
 - 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 INTERIOR GYPSUM BOARD

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. CertainTeed Gypsum, Inc.
 - 2. G-P Gypsum.
 - 3. Lafarge North America Inc.
 - 4. National Gypsum Company.
 - 5. USG Corporation.
- B. Abuse-Resistant Type: ASTM C 1629/C 1629M, Level 2. Manufactured to produce greater resistance to surface indentation, through-penetration (impact resistance), and abrasion than standard, regular-type and Type X gypsum board.
 - 1. Thickness: 5/8 inch (12.7 mm).
 - 2. Long Edges: Tapered.

2.2 TRIM ACCESSORIES

- A. Trim: ASTM C 1047.
 - 1. Material: Hot-dip galvanized steel sheet, or rolled zinc.
 - 2. Shapes:
 - a. Cornerbead.
 - b. LC-Bead: J-shaped; exposed long flange receives joint compound.
 - c. Expansion (Control) Joint: One-piece, rolled zinc with V-shaped slot and removable strip covering slot opening.

2.3 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C 475/C 475M.
- B. Joint Tape For Interior Gypsum Wallboard: Paper.
- C. Joint Compound for Interior Gypsum Wallboard: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
 - 1. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type taping compound.
 - a. Use setting-type compound for installing paper-faced metal trim accessories.
 - 2. Fill Coat: For second coat, use setting-type, sandable topping compound.
 - 3. Finish Coat: For third coat, use setting-type, sandable topping compound.
 - 4. Skim Coat: For final coat of Level 5 finish, use setting-type, sandable topping compound or high-build interior coating product designed for application by airless sprayer and to be used instead of skim coat to produce Level 5 finish.

2.4 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
- B. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
 - 1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch thick.

PART 3 - EXECUTION

3.1 APPLYING AND FINISHING PANELS, GENERAL

- A. Comply with ASTM C 840.
- B. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch (1.5 mm) of open space between panels. Do not force into place.
- C. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
- D. Form control and expansion joints with space between edges of adjoining gypsum panels.
- E. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
 - 1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. (0.7 sq. m) in area.
 - 2. Fit gypsum panels around ducts, pipes, and conduits.
 - 3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch-wide joints to install sealant.
- F. Attachment to Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

3.2 APPLYING INTERIOR GYPSUM BOARD

- A. Install interior gypsum board in the following locations:
 - 1. Abuse-Resistant Type: Vertical surfaces, unless otherwise indicated.
 - 2. Type X: Where required for fire-resistance-rated assembly.
- B. Single-Layer Application:
 - 1. On partitions/walls, apply gypsum panels vertically (parallel to framing), horizontally (perpendicular to framing), or required by fire-resistance-rated assembly, and minimize end joints.
 - 2. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

3.3 INSTALLING TRIM ACCESSORIES

- A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.
- B. Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by Architect for visual effect. Install joints on both sides above framed door openings at locations where ceiling height is greater than 8-feet.
- C. Trim: Install in the following locations:
 - 1. Cornerbead: Use at outside corners, unless otherwise indicated.
 - 2. Bullnose Bead: Use at outside corners where indicated.
 - 3. LC-Bead: Use at exposed panel edges.
 - 4. L-Bead: Use where indicated.

3.4 FINISHING GYPSUM BOARD

- A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
- B. Prefill open joints, rounded or beveled edges, and damaged surface areas.
- C. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.
- D. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:
 - 1. Level 4: At panel surfaces that will be exposed to view, unless otherwise indicated. Including surfaces scheduled to receive wall covering.
 - a. Primer and its application to surfaces are specified in other Division 09 Sections.
 - 2. Level 5: Not used unless indicated on Drawings.

END OF SECTION 092900

SECTION 099120
EXTERIOR AND INTERIOR PAINTING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes surface preparation and field painting of, but not limited to, the following exposed exterior and interior items and surfaces.
 - 1. Gypsum surfaces surrounding windows.
 - 2. Pre-primed surfaces.
- B. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.
- C. Paint exposed surfaces, except where these Specifications indicate that the surface or material is not to be painted or is to remain natural. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, The Authority will select from standard colors and finishes available.
 - 1. Painting includes field painting of exposed bare and covered pipes and ducts (including color coding), hangers, exposed steel and iron supports, and surfaces of mechanical and electrical equipment that do not have a factory-applied final finish.
- D. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.
 - 1. Prefinished items include the following factory-finished components:
 - a. Finished mechanical and electrical equipment.
 - b. Light fixtures.
 - 2. Finished metal surfaces include the following:
 - a. Anodized aluminum.
 - b. Stainless steel.
 - c. Chromium plate.
 - d. Copper and copper alloys.
 - e. Bronze and brass.
 - 3. Operating parts include moving parts of operating equipment
 - 4. Labels: Do not paint over UL, FMG, or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

1.2 DEFINITIONS

- A. Agencies, and the abbreviations used to reference them, include the following:
 - 1. ASTM - American Standards for Testing Materials.
 - 2. FM - Factory Mutual.
 - 3. SSPC - Steel Structures Painting Council.

B. Standard coating terms defined in ASTM D 16 apply to this Section.

1. Flat: A lusterless or matte finish with a gloss range below 15 when measured at an 85-degree meter.
2. Eggshell: Low-sheen finish with a gloss range between 20 and 35 when measured at a 60-degree meter.
3. Semi Gloss: Medium-sheen finish with a gloss range between 35 and 70 when measured at a 60-degree meter.
4. Gloss: High-sheen finish with a gloss range more than 70 when measured at a 60-degree meter.

1.3 SUBMITTALS

A. Product Data:

1. Material List: Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by highlighting the manufacturer's catalog number and general classification.
2. Manufacturer's Information: Manufacturer's technical information, including MSDS label analysis and instructions for handling, storing, and applying each coating material.
3. Color chart with manufacturer's full range of standard colors

1.4 QUALITY ASSURANCE

- A. Applicator Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.
- B. Source Limitations: Obtain block fillers and primers for each coating system from the same manufacturer as the finish coats. Products shall not contain TCLP metals and PCB's.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:

1. Product name or title of material.
2. Product description (generic classification or binder type).
3. Manufacturer's stock number and date of manufacture.
4. Contents by volume, for pigment and vehicle constituents.
5. Thinning instructions.
6. Application instructions.
7. Color name and number.
8. VOC content.

B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 degrees F. Maintain storage containers in a clean condition, free of foreign materials and residue. The Authority requires additional safety controls and health rules for on-site service for flammable material storage.

1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily.

1.6 PROJECT CONDITIONS

- A. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90 degrees F.
- B. Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent; or at temperatures less than 5 degrees F above the dew point; or to damp or wet surfaces.
 - 1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.

PART 2 - PRODUCTS

2.1 PAINT MATERIALS, GENERAL

- A. Material Compatibility: Provide block fillers, primers, and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing-and field experience.
- B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint-material containers not displaying manufacturer's product identification will not be acceptable.
 - 1. Proprietary Names: Use of manufacturer's proprietary product names to designate colors or materials is intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers unless an approval request is submitted and approved by The Authority. Furnish manufacturer's material data MSDS and certificates of performance for proposed substitutions.
- C. Colors: As selected by Architect from manufacturer's full range of color chips.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for paint application. Comply with procedures specified in PDCA P4.
 - 1. Proceed with paint application only after unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
 - 2. Start of painting will be construed as Applicator's acceptance of surfaces and conditions within a particular area.
- B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
 - 1. Notify the Authority about anticipated problems when using the materials specified over substrates primed by others.

3.2 PREPARATION

- A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of size or weight of the item, provide surface-applied protection before surface preparation and painting.
1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
- B. Cleaning: Before applying paint or other surface treatments, clean substrates of substances that could impair bond of the various coatings. Remove oil and grease before cleaning.
1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
- C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturers written instructions for each particular substrate condition and as specified.
1. Provide barrier coats over incompatible primers or remove and reprime.
 2. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with SSPC's recommendations.
 - a. Treat bare and sandblasted or pickled clean metal with a metal treatment wash coat before priming.
 - b. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush; clean with solvents recommended by paint manufacturer, and touch up with same primer as the shop coat.
- D. Material Preparation: Mix and prepare paint materials according to manufacturers written instructions.
1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
 2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
 3. Use only thinners approved by paint manufacturer and only within recommended limits.
- E. Surface Preparation Schedule:

NO.	SURFACE	SURFACE PREPARATION
SP-11	Gypsum Board Surfaces	Fill minor defects with filler compound and sand smooth. Spot prime defects after repair.
SP-13	Interior Wood (or wood products)	Wipe off dust and grit prior to priming. Seal knots, pitch streaks and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats.

3.3 APPLICATION

- A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.
1. Paint colors, surface treatments, and finishes are indicated in the paint schedules.
 2. Do not paint over dirt, rust, scale; grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
 3. Provide finish coats that are compatible with primers used.
 4. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, grilles, convector covers, covers for finned-tube radiation, and similar components are in place. Extend coatings in these areas, as required, to maintain system integrity and provide desired protection.
 5. Finish exterior doors on tops, bottoms, and side edges the same as exterior faces.
 6. Sand lightly between each succeeding enamel or varnish coat.
- B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
1. The number of coats and film thickness required are the same regardless of application method. Do not apply succeeding coats until previous coat has cured as recommended by manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
 2. Omit primer over metal surfaces that have been shop primed and touchup painted.
 3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure that edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
 4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, and does not deform or feel sticky under moderate thumb pressure, and until application of another coat of paint does not cause undercoat to lift or lose adhesion.
- C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.
- D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate to achieve dry film thickness indicated. Provide total dry film thickness of the entire system as recommended by manufacturer.
- E. Electrical items to be painted include, but are not limited to, the following:
1. Panelboards.
 2. Electrical equipment that is indicated to have a factory-primed finish for field painting.
- F. Prime Coats: Before applying finish coats, apply a prime coat, as recommended by manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no bum-through or other defects due to insufficient sealing.
- G. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform (mish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.

- H. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

3.4 PAINTING & COATING SYSTEMS

- A. General: Work with Painting Schedule for number of coats.

SYSTEM	MATERIAL & CONDITION	SURFACE PREP	PRIMER COAT	INTERMEDIATE COAT	FINISH COAT
G1	Gypsum Board Interior Normal Service	SP-11	Acrylic Latex 1 coat @ 1.5-1.9 MDF per coat Color: White	N/A	Acrylic Latex 2 coats @ 1.4.-1.7 MDF per coat Color: Per Painting Schedule
W1	Wood or Wood Product, Interior Normal Surface	SP-13	Modified Alkyd 1 coat @ 2.0-2.6 MDF per coat Color: White	N/A	Styrene Acrylic Latex 1 coat @ 1.4-1.7 MDF per coat Color: Per Painting Schedule

3.5 CLEANING

- A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from Project site.

3.6 PROTECTION

- A. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by The Authority.
- B. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.
1. After work of other trades is complete, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA PI.

END OF SECTION 099120

**SECTION 085413
HORIZONTAL LOUVER BLINDS**

PART 1 GENERAL

1.1 DESCRIPTION

- A. Furnish and install Horizontal Blinds in accordance with specifications, drawings, and contract documents.
- B. Install blinds at all new windows.

1.2 SUBMITTALS

- A. Manufacturer's complete CSI 3-part specification sheet.
- B. Product Sample: Submit working hand sample or mock up blind as required.
- C. Color Sample: Submit two 6" samples of slat material indicating color and dimensions.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Product to be delivered to the jobsite in manufacturer's original packaging.
- B. Products to be handled and stored to prevent damage to materials, finishes, and operating mechanisms. Store in clean, dry area, laid flat to prevent sagging and twisting of packaging.

1.4 PROJECT / SITE CONDITIONS

- A. Building shall be enclosed; and windows, frames, and sills shall be installed and glazed.
- B. Wet work shall be complete and dry.
- C. Ceilings, window pockets, electrical, and mechanical work above window covering shall be complete.
- D. Electrical power (110 volt AC) shall be available for installer's tools within 500 feet of product installation areas.

1.6 QUALITY ASSURANCE

- A. Manufacturer, subsidiary, or licensed agent shall be approved to supply the products specified, and to honor any claims against product presented in accordance with warranty.
- B. Installer or agent shall be qualified to install specified products by prior experience, demonstrated performance, and acceptance of requirements of manufacturer, subsidiary, or licensed agent. Installer shall be responsible for an acceptable installation.

1.7 LIMITED LIFETIME WARRANTY

- A. Manufacturer shall warranty the product against original defects in materials or workmanship for the life of the blind. Manufacturer warranty need not cover damage due to accidents, misuse, abuse, improper installation, alterations, or improper cleaning.

PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Springs Window Fashions, LLC: Bali CustoMiser Aluminum Blinds or architect approved equal.
- B. Substitutions Request: Submit for approval under provisions of Section 013300.

2.2 HORIZONTAL BLINDS

- A. Aluminum Blinds:
 - a. Headrail shall be 1" high x 1" wide x .025" thick U-shaped steel. The steel finishing process includes phosphate treatment for corrosion resistance, a chrome-free sealer, a low HAP urethane primer, and a topcoat of low HAP polyester baked enamel.
 - b. Tilter shall be made of injection-molded thermoplastics for smooth low-friction operation and will incorporate a clutch mechanism to prevent damage due to over tilting.
 - c. Tilt rod shall be electro-zinc coated solid steel measuring ¼" square.
 - d. Tilt wand shall be clear polycarbonate with a hexagonal cross section measuring approximately ¼" diameter and attached to the tilter shaft by means of a spring clip for easy removal.
 - e. Cord lock shall be a snap in design made of durable high impact nylon with a stainless steel wear guard incorporating a floating shaft locking pin. The design provides a crash-proof safety feature that will lock blinds automatically upon release of cord.
 - f. Drum and cradles shall be low-friction thermoplastic and provided for each ladder.
 - g. Installation brackets shall be a rivet-hinged front cover phosphate-treated steel with urethane primer and polyester baked enamel finish to match headrail.
 - h. Braided ladder shall be made of 100% polyester yarn incorporating two extra strength rungs per ladder for slat support. Standard ladder spacing shall be 22.5mm.
 - i. Slats shall be 5000 series cold-rolled aluminum containing the maximum allowable recycled content to produce a high strength and corrosion resistant flexible product. Slats shall be nominally 1" wide x .006" thick and processed to provide a smooth, hard, less porous surface with anti-static performance to repel dust. Slats shall be treated with a chrome-free sealer and a topcoat of low HAP polyester baked enamel.
 - j. Bottomrail shall be tubular shape made of phosphate-treated steel for corrosion resistance and finished with a chrome-free sealer, low HAP urethane primer and a topcoat of low HAP polyester baked enamel and shall measure 0.25" thick.
 - k. Options shall include:
 - i..008 thick slat
 - ii.21.5mm ladder spacing
 - iii.20mm ladder spacing
 - iv.Perforated slat
 - v.Tilt limiter
 - vi.Ring tilter
 - vii.Top lock cord lock
 - viii.Ring pull
 - ix.Turn clips for extruded pockets
 - x.Extension brackets
 - xi.Hold down brackets
 - xii.2 slat valance
 - xiii.Deluxe 2 slat valance

2.3 FABRICATION

- A. Blinds shall be fabricated according to specifications and accurate to tolerance established by manufacturer's engineering standards..

PART 3 EXECUTION

3.1 INSPECTION

- A. Installer shall be responsible for inspection of jobsite, approval of mounting surfaces, verification of field measurements, and installation conditions. Installation shall commence when satisfactory conditions are met.

3.2 INSTALLATION

- A. Install blinds in accordance with manufacturer's instructions including recommended support brackets and fasteners.
- B. Install blinds with adequate clearance to permit smooth operation of the blinds. Demonstrate blinds to be in smooth, uniform working order.

3.3 MAINTENANCE AND CLEANING

- A. Clean blinds with mild soap and water only. Do not use cleaning methods involving heat, bleach, abrasives, or solvents. Do not use window cloths with paper content. Use of these methods will void warranty.

END OF SECTION 122113

SECTION 329200
TURF AND GRASSES - SODDING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following: Seeding and sodding.
- B. Related Sections include the following:
 - 1. Division 32 Section "Plants - Shrubs" for adjacent vegetation, planting and nurturing plant growth.

1.2 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Manufactured Soil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- C. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- D. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath planting soil.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Seed: Deliver seed in original sealed, labeled, and undamaged containers.

1.5 SCHEDULING

- A. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.

PART 2 - PRODUCTS

2.1 SEED

- A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Journal of Seed Technology; Rules for Testing Seeds" for purity and germination tolerances.
- B. Seed Species: Penn State Mixture, as follows:
 - 1. 25% Premier Perennial Ryegrass

2. 25% Pinnacle Perennial Ryegrass
3. 20% Creeping Red Fescue
4. 20% Kentucky Bluegrass
5. 10% Pennlawn Red Fescue

2.2 SOD MATERIALS

- A. Sod: Any turfgrass sod planted on cultivated agricultural land and grown specifically for turfgrass sod purposes. Being mowed regularly and carefully maintained from planting to harvest to assure reasonable quality and uniformity.
- B. Provide "Commercial Grade" sod with a density and mowing requirements of No. 1 sod. Containing no more than 10 percent undesirable grass species and 10 weeds per 50 square feet (50 sq m). Any grass other than the species shown on the invoice/sales slip shall be deemed as an undesirable. Annual bluegrass shall be included in this classification. Thickness of the turfgrass sod soil portion should not exceed one-half inch.

2.3 TOPSOIL

- A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of 4 percent organic material content; free of stones 1 inch or larger in any dimension and other extraneous materials harmful to plant growth.
 1. Topsoil Source: Amend existing in-place surface soil to produce topsoil. Verify suitability of surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
 - a. Surface soil may be supplemented with imported or manufactured topsoil from off-site sources. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from bogs or marshes.

2.4 INORGANIC SOIL AMENDMENTS

- A. Lime: ASTM C 602, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent and as follows:
 1. Class: Class O, with a minimum 95 percent passing through No. 8 sieve and a minimum 55 percent passing through No. 60 sieve.

2.5 ORGANIC SOIL AMENDMENTS

- A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 3/4-inch sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 1. Organic Matter Content: 50 to 60 percent of dry weight.
 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.
- B. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture, free of chips, stones, sticks, soil, or toxic materials.

- C. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.

2.6 FERTILIZER

- A. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - 1. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.

2.7 MULCHES

- A. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.

2.8 PLANTING SOIL MIX

- A. Planting Soil Mix: Mix topsoil with the following soil amendments or as required:
 - 1. Ratio of Loose Compost to Topsoil by Volume: 1:3.

PART 3 - EXECUTION

3.1 LAWN PREPARATION

- A. Limit lawn subgrade preparation to areas to be planted.
- B. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 4 inches. Remove stones larger than 1-1/2 inches in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
 - 1. Spread planting soil mix to a depth of 4 inches but not less than required to meet finish grades after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
 - 2. Spread approximately one-half the thickness of planting soil mix over loosened subgrade. Mix thoroughly into top 2 inches of subgrade. Spread remainder of planting soil mix.
- C. Unchanged Subgrades: If lawns are to be planted in areas unaltered or undisturbed by excavating, grading, or surface soil stripping operations, prepare surface soil as follows:
 - 1. Remove existing grass, vegetation, and turf. Do not mix into surface soil.
 - 2. Loosen surface soil to a depth of at least of 6 inches. Apply soil amendments and fertilizers according to planting soil mix proportions and mix thoroughly into top 4 inches of soil. Till soil to a homogeneous mixture of fine texture.
 - 3. Remove stones larger than 1-1/2 inches in any dimension and sticks, roots, trash, and other extraneous matter.
 - 4. Legally dispose of waste material, including grass, vegetation, and turf, off Owner's property.

- D. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1/2 inch of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit fine grading to areas that can be planted in the immediate future.
- E. Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- F. Restore areas if eroded or otherwise disturbed after finish grading and before planting.

3.2 SEEDING

- A. Sow seed with spreader or seeding machine. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
 - 1. Do not use wet seed or seed that is moldy or otherwise damaged.
- B. Sow seed at the rate recommended by the seed producer.
- C. Rake seed lightly into top 1/8 inch of topsoil, roll lightly, and water with fine spray.
- D. Protect seeded areas with slopes not exceeding 1:6 by spreading straw mulch. Spread uniformly at a minimum rate of 2 tons/acre to form a continuous blanket 1-1/2 inches in loose depth over seeded areas. Spread by hand, blower, or other suitable equipment.
 - 1. Anchor straw mulch by crimping into topsoil with suitable mechanical equipment.

3.3 SODDING

- A. Low pH Correction: Where subsoil is highly acid, it shall be tested by a reputable laboratory and a pH correction material shall be spread at a rate sufficient to correct the pH to a range of 6.0 to 7.0.
- B. High pH Correction: Saline and alkali soils may be found in arid and semiarid regions and in areas near sea water. In many of these areas the salts can be leached, but other soils will require special amendments or management.
- C. Lightly moisten the soil immediately prior to installation of the turfgrass sod.
- D. Starter Strip: Lay first row of turfgrass sod in a straight line, with subsequent rows placed parallel to and tightly against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Care shall be exercised to insure that the pieces are not stretched or overlapped and that all joints are butted tightly to prevent voids that would cause air drying of the roots.
- E. Sloping Surfaces: On 3:1 or greater slopes, traditional size (1 sq yd / 1 sq m) turfgrass sod, lay sod across the angle of the slope (perpendicular), with staggered joints and secured by tamping, pegging, stapling or other approved methods of temporarily securing each piece. Lay large-roll turfgrass sod in the direction of the slope, with temporary securing being at the discretion of the installation contractor.
- F. Watering and Rolling: Water turfgrass sod immediately after transplanting to prevent drying. As sodding is completed in any one section, the entire area shall be lightly rolled. Thoroughly water

to a depth sufficient to ensure the underside of the new sod pad and soil immediately below the pad are thoroughly wet.

3.4 SATISFACTORY LAWNS

- A. Satisfactory Seeded Lawn: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. (0.92 sq. m) and bare spots not exceeding 5 by 5 inches.
- B. Reestablish lawns that do not comply with requirements and continue maintenance until lawns are satisfactory.

3.5 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris created by lawn work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Erect barricades and warning signs as required to protect newly planted areas from traffic. Maintain barricades throughout maintenance period and remove after lawn is established.
- C. Remove erosion-control measures after grass establishment period.

END OF SECTION 329200

SECTION 329333
PLANTS – SHRUBS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Plants and shrubs.

1.2 RELATED SECTIONS

- A. Section 329223 Turf and Grasses – Sodding for lawn areas adjacent to shrubs.

1.3 SUBMITTALS

- A. Product Data: Maintenance data sheets and drawings/picture for each plant and shrub to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Handling requirements and recommendations.
 - 3. Installation method recommendations.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Order and request deliver within one day of when actual planting is to occur. Do not store plants and shrub for more than several days. Water and handle plants in strict compliance with growers' instructions and recommendations and landscaping standards.
- B. Store plants in protected area in original containers with labels clearly identifying in plant and the proper handling of that plant. Protect from plants damage.

1.5 PROJECT CONDITIONS

- A. Consider environmental conditions (temperature, humidity, and ventilation) order and cultivate plants within limits recommended by grower/nursery for optimum results.
- B. Do not install plants and shrubs under environmental conditions outside recommended limits.

PART 2 PRODUCTS

2.1 PLANTS - SHRUBS

- A. Materials: Provide 2 – 5 gallon containers of deciduous plants in the following varieties:
 - 1. Miniature Rock Cotoneaster 'Tom Thumb' (syn. C. 'Little Gem'), USDA Hardiness Zones 5–7 remains compact at 8 to 12 inches tall with an eventual spread of 3 to 6 feet. It requires little or no pruning.
 - 2. Gray-blue juniper (*Juniperus squamata* 'Blue Star', Zones 4–9.
 - 3. Chartreuse dwarf chamaecyparis (*Chamaecyparis pisifera* 'Filifera Aurea Nana', Zones 4–8.
- B. Planting Amendments: Sphagnum Peat Moss use as an ingredient to blend with topsoil as a general purpose soil amendment. Provide peat moss as mulch around newly planted scrubs and plants.

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Do not proceed with installation until substrates have been prepared using the methods recommended and within acceptable tolerances. Commencement of installation constitutes acceptance of conditions.

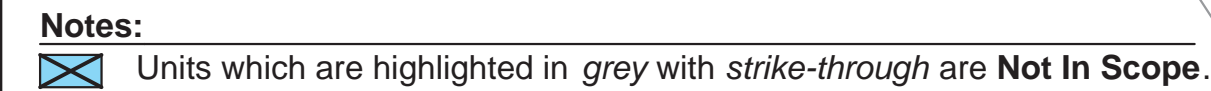
3.2 INSTALLATION

- A. Install in accordance with planting recommended installation instructions for project conditions and the following.
 - 1. Dig hole to twice the diameter of the container and/or root ball. Mix removed soil with specified Peat Moss.
 - 2. Remove plastic containers from root ball.
 - 3. Set each plant in general location where an existing plant was damaged during window replacement work.
 - 4. Remove existing damaged plants and dispose of dead, torn, and dismantled plants. Replace with specified species. Heel the plant's root ball into place.
 - 5. Water freshly planted shrubs. Surround each plant with minimum 3 inches of Peat Moss; wet peat moss down after installation.
 - 6. Fill and finish planting using landscaping best practices.

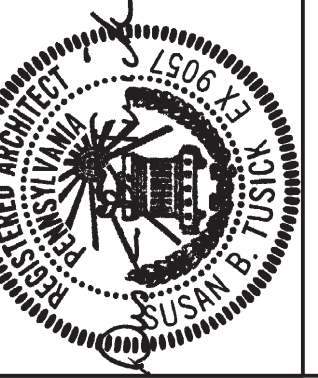
3.3 PROTECTION

- A. Protect installed plants and shrubs until completion of project.

END OF SECTION 329333



CS	Cover Sheet
A1.1	Site Plan & Code Info.
A2.1	Exterior Elevations
A2.2	Exterior Elevations
A4.1	Typical Wall Sections
A5.1	Window Types & Details
A6.1	Window Schedule
A6.2	Window Schedule
A7.1	Existing Window Schedule
A7.2	Existing Window Schedule
A7.3	Existing Window Schedule



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DATE ISSUED Sept. 1, 2015	
DATE PRINTED Sept. 1, 2015	

Cover Sheet & Site Plan

Housing Authority of the City of Pittsburgh
Window Replacement at the Homewood North Community
10 Alberty Road
Pittsburgh, PA 15207

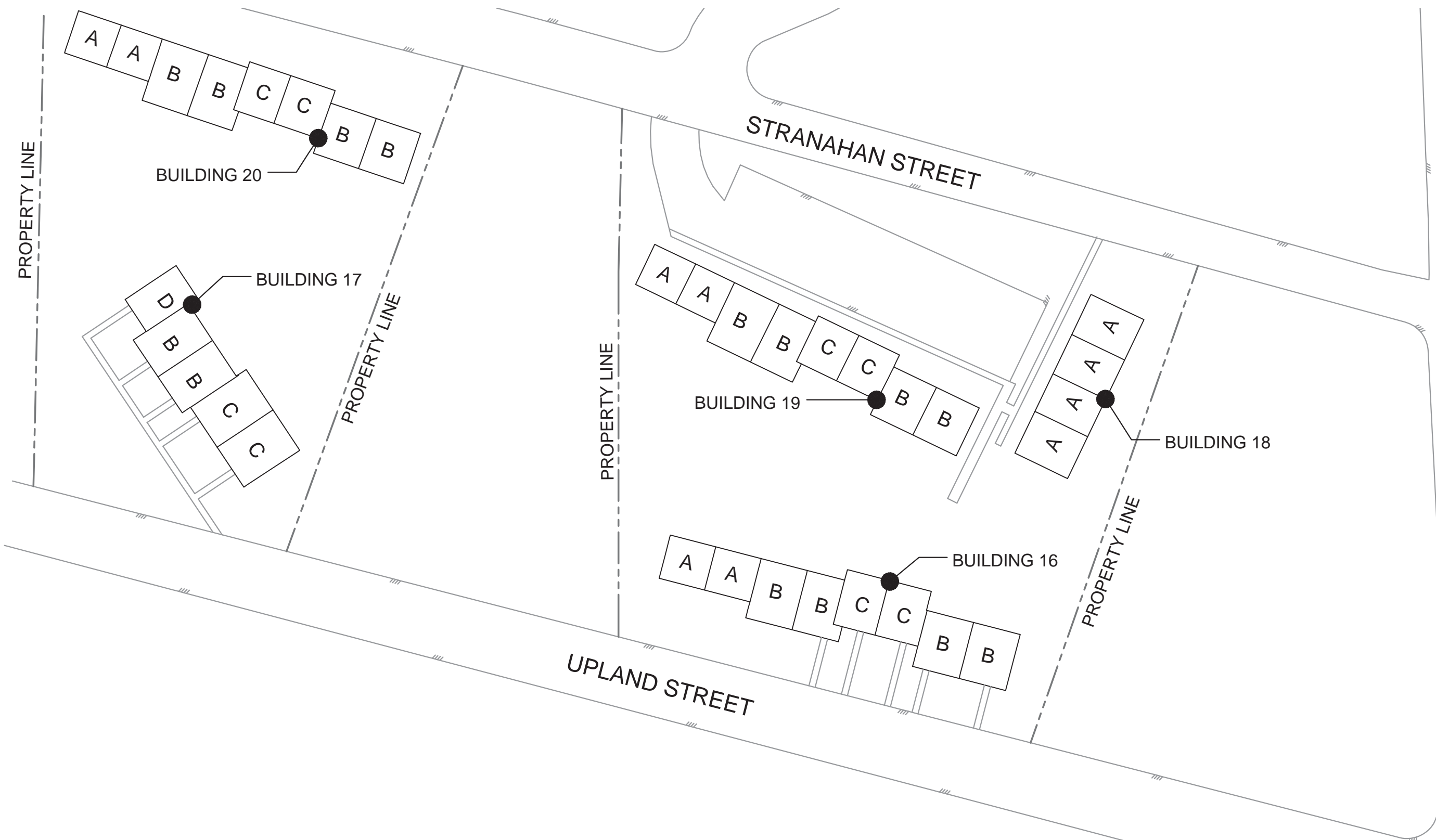
PROJECT NUMBER:

CS

Housing Authority of the City of Pittsburgh
Window Replacement at the Homewood North Community
10 Albertice Street, Pittsburgh, PA 15208

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Building, Unit, and Reference Index - See Sheets A6.1 & A6.2 for complete Schedule

Bldg No.	Address	Unit Type	Reference Elevations	
			Front	Rear
1	1246 Nolan Court	D	12/A2.2	10/A2.2
	1248 Nolan Court	B	9/A2.1	7/A2.1
	1250 Nolan Court	B	12/A2.1	10/A2.1
	1252 Nolan Court	C	3/A2.2	1/A2.2
	1254 Nolan Court	C	6/A2.2	4/A2.2
	1256 Nolan Court	A	6/A2.1	4/A2.1
	1258 Nolan Court	A	3/A2.1	1/A2.1
2	1234 Nolan Court	B	10/A2.1	12/A2.1
	1236 Nolan Court	B	7/A2.1	9/A2.1
	1238 Nolan Court	A	1/A2.1	3/A2.1
	1240 Nolan Court	A	4/A2.1	6/A2.1
	1242 Nolan Court	B	10/A2.1	12/A2.1
3	1224 Nolan Court	D	7/A2.2	9/A2.2
	1226 Nolan Court	B	10/A2.1	12/A2.1
	1228 Nolan Court	B	7/A2.1	9/A2.1
	1230 Nolan Court	C	4/A2.2	6/A2.2
4	1208 Nolan Court	A	4/A2.1	6/A2.1
	1210 Nolan Court	A	1/A2.1	3/A2.1
	1212 Nolan Court	B	10/A2.1	12/A2.1
	1214 Nolan Court	B	7/A2.2	9/A2.2
	1216 Nolan Court	C	4/A2.2	6/A2.2
	1218 Nolan Court	C	1/A2.2	3/A2.2
	1220 Nolan Court	B	10/A2.1	12/A2.1
5	1260 Nolan Court	B	9/A2.1	7/A2.1
	1262 Nolan Court	B	12/A2.1	12/A2.1
	1264 Nolan Court	G	3/A2.2	4/A2.2
	1266 Nolan Court	G	6/A2.2	4/A2.2
	1268 Nolan Court	A	6/A2.1	4/A2.1
	1270 Nolan Court	A	12/A2.1	10/A2.1
	1272 Nolan Court	E	2/A2.4	-
6	1200 Nolan Court	A	1/A2.1	3/A2.1
	1202 Nolan Court	A	4/A2.1	6/A2.1
	1204 Nolan Court	A	1/A2.1	3/A2.1
	1206 Nolan Court	A	4/A2.1	6/A2.1
7	1201 Mohler Street	B	12/A2.1	10/A2.1
	1203 Mohler Street	BAA2	6/A2.3	6/A2.3
	1205 Mohler Street	BAA1	6/A2.3	-
	1207 Mohler Street	-	-	-
	1209 Mohler Street	B	12/A2.1	10/A2.1

Bldg No.	Address	Unit Type	Reference Elevations	
			Front	Rear
8	1213 Mohler Street	A(2)	5/A2.1	6/A2.1
	1215 Mohler Street	A(2)	2/A2.1	3/A2.1
	1217 Mohler Street	C(3)	5/A2.2	6/A2.2
	1219 Mohler Street	C(3)	2/A2.2	3/A2.2
	1221 Mohler Street	B(2)	11/A2.1	12/A2.1
	1223 Mohler Street	B(2)	8/A2.1	9/A2.1
	1225 Mohler Street	D(3)	11/A2.2	12/A2.2
9	1227 Mohler Street	D	10/A2.2	12/A2.2
	1229 Mohler Street	B	7/A2.1	9/A2.1
	1231 Mohler Street	B	10/A2.1	12/A2.1
	1233 Mohler Street	C	1/A2.2	3/A2.2
	1235 Mohler Street	C	4/A2.2	6/A2.2
	1237 Mohler Street	A	4/A2.1	6/A2.1
	1239 Mohler Street	A	1/A2.1	3/A2.1
10	1241 Mohler Street	A	4/A2.1	6/A2.1
	1243 Mohler Street	A	1/A2.1	3/A2.1
	1245 Mohler Street	B	10/A2.1	12/A2.1
	1247 Mohler Street	B	7/A2.1	9/A2.1
	1249 Mohler Street	C	1/A2.2	3/A2.2
	1251 Mohler Street	C	4/A2.2	6/A2.2
	1253 Mohler Street	B	10/A2.1	12/A2.1
11	1255 Mohler Street	B	7/A2.1	9/A2.1
	1294 Ferris Court	C	1/A2.2	3/A2.2
	1296 Ferris Court	C	4/A2.2	6/A2.2
	1298 Ferris Court	B	7/A2.1	9/A2.1
13	1304 Ferris Court	D	10/A2.2	12/A2.2
	1306 Ferris Court	B	7/A2.1	9/A2.1
	1308 Ferris Court	B	10/A2.1	12/A2.1
	1310 Ferris Court	B	10/A2.1	12/A2.1
14	1312 Ferris Court	C	1/A2.2	3/A2.2
	1314 Ferris Court	C	4/A2.2	6/A2.2
	1316 Ferris Court	C	4/A2.2	6/A2.2
	1318 Ferris Court	D	10/A2.2	12/A2.2
	1320 Ferris Court	B	7/A2.1	9/A2.1
	1322 Ferris Court	B	10/A2.1	12/A2.1
	1324 Ferris Court	C	1/A2.2	3/A2.2
15	1326 Ferris Court	C	4/A2.2	6/A2.2
	1328 Ferris Court	A	4/A2.1	6/A2.1
	1330 Ferris Court	A	1/A2.1	3/A2.1
	1332 Ferris Court	D	10/A2.2	12/A2.2

Bldg No.	Address	Unit Type	Reference Elevations	
			Front	Rear
16	7505 Upland Street	A	3/A2.1	1/A2.1
	7507 Upland Street	A	3/A2.1	1/A2.1
	7509 Upland Street	B	12/A2.1	10/A2.1
	7511 Upland Street	B	9/A2.1	7/A2.1
	7513 Upland Street	C	6/A2.2	4/A2.2
	7515 Upland Street	C	3/A2.2	1/A2.2
	7517 Upland Street	B	12/A2.1	10/A2.1
17	7519 Upland Street	B	9/A2.1	7/A2.1
	7335 Upland Street	D	9/A2.2	7/A2.2
	7337 Upland Street	B	12/A2.2	10/A2.2
	7339 Upland Street	B	9/A2.2	7/A2.2
18	7341 Upland Street	C	6/A2.2	4/A2.2
	7343 Upland Street	C	3/A2.2	1/A2.2
	7416 Stranahan St.	A	1/A2.1	3/A2.1
	7418 Stranahan St.	A	4/A2.1	6/A2.1
19	7420 Stranahan St.	A	1/A2.1	3/A2.1
	7422 Stranahan St.	A	4/A2.1	6/A2.1
	7400 Stranahan St.	A	1/A2.1	3/A2.1
	7402 Stranahan St.	A	4/A2.1	6/A2.1
20	7404 Stranahan St.	B	10/A2.1	12/A2.1
	7406 Stranahan St.	B	7/A2.1	9/A2.1
	7408 Stranahan St.	C	4/A2.2	6/A2.2
	7410 Stranahan St.	C	1/A2.2	3/A2.2
	7412 Stranahan St.	B	10/A2.1	12/A2.1
	7414 Stranahan St.	B	7/A2.1	9/A2.1
	7330 Stranahan St.	A	1/A2.1	3/A2.1
21	7332 Stranahan St.	A	4/A2.1	6/A2.1
	7334 Stranahan St.	B	10/A2.1	12/A2.1
	7336 Stranahan St.	B	7/A2.1	9/A2.1
	7338 Stranahan St.	C	4/A2.2	6/A2.2
	7340 Stranahan St.	C	1/A2.2	3/A2.2
	7342 Stranahan St.	B	10/A2.1	12/A2.1
	7344 Stranahan St.	B	7/A2.1	9/A2.1

Notes:
• Units which are highlighted in grey with ~~strike-through~~ text are Not In Scope.

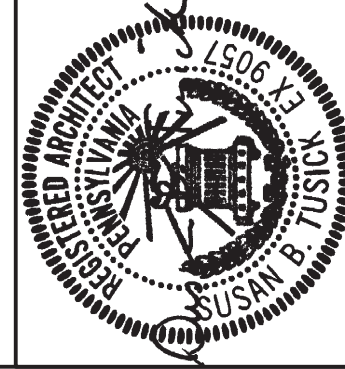
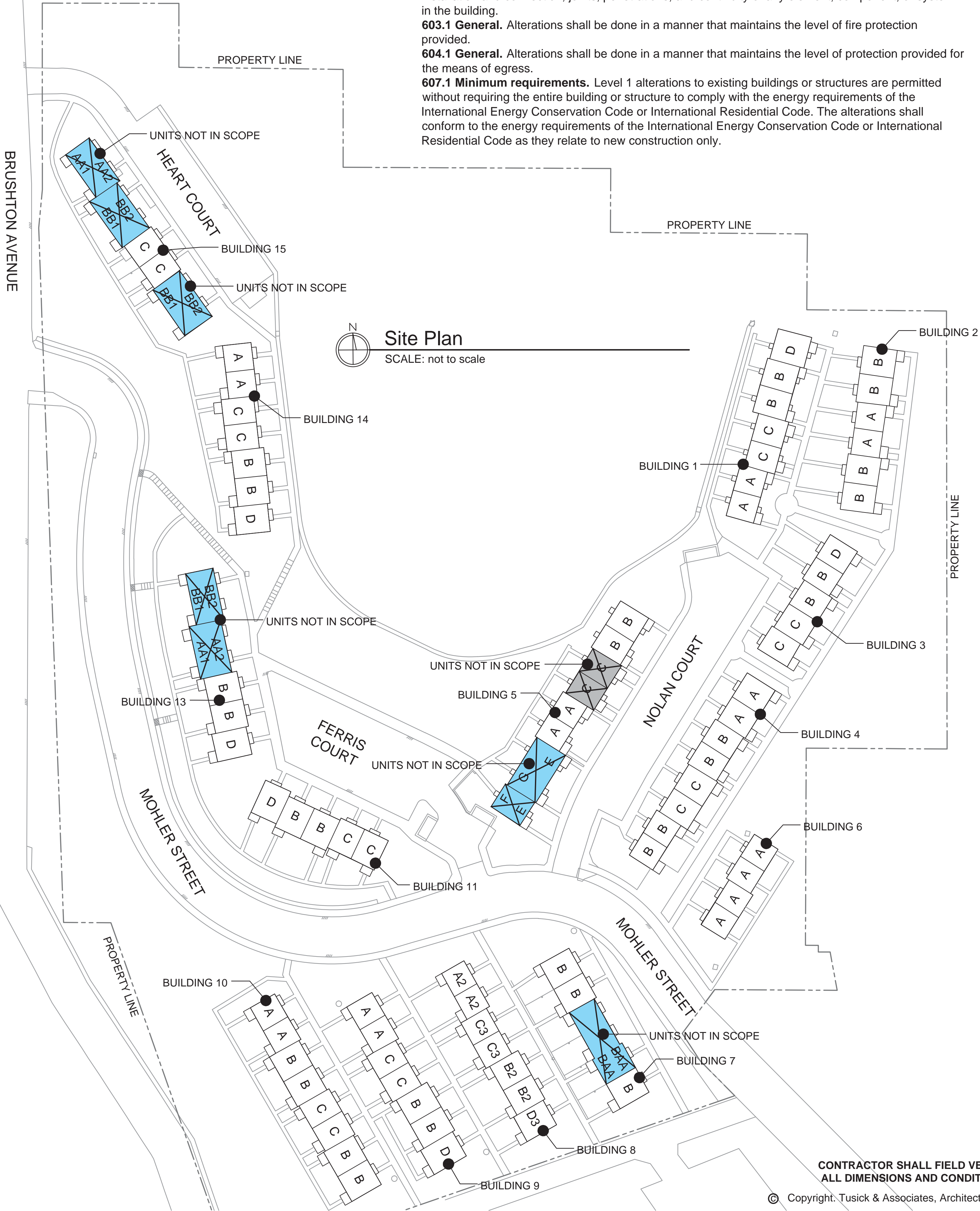
Building Code Summary

International Existing Building Code 2009:

Existing (2/3-story) Single-use Building Type: VB
Occupancy Type(s): R-2 / R-3
No Fire Suppression System (No Sprinklers)
Building Square Footage: varies
1. Comply with International Existing Building Code 2009.
2. Comply with all applicable divisions of the International Building Code 2009 + 2012.
3. Comply with ICC/ANSI A117.1-2009.

International Existing Building Code 2009:

403.1 Scope. Level 1 alterations include the removal and replacement or the covering of existing materials, elements, equipment, or fixtures using new materials, elements, equipment, or fixtures that server the same purpose.
403.2 Application. Level 1 alterations shall comply with the provisions of Chapter 6.
601.2 Conformance. An existing building or portion thereof shall not be altered such that the building becomes less safe than its existing condition.
602.4 Materials and methods. All new work shall comply with materials and methods requirements in the International Building Code, International Energy Conservation Code, International Mechanical Code, and International Plumbing Code, as applicable, that specify material standards, detail of installation and connection, joints, penetrations, and continuity of any element, component, or system in the building.
603.1 General. Alterations shall be done in a manner that maintains the level of fire protection provided.
604.1 General. Alterations shall be done in a manner that maintains the level of protection provided for the means of egress.
607.1 Minimum requirements. Level 1 alterations to existing buildings or structures are permitted without requiring the entire building or structure to comply with the energy requirements of the International Energy Conservation Code or International Residential Code. The alterations shall conform to the energy requirements of the International Energy Conservation Code or International Residential Code as they relate to new construction only.



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DATE PRINTED	Sept. 1, 2015

Site Plan & Code Information
Housing Authority of the City of Pittsburgh
Window Replacement at the Homewood North Community
10 Alibert Road
Pittsburgh, PA 15207

PROJECT NUMBER:
A1.1

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Exterior Elevations

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Window Replacement at the Homewood North Community
10 Alberice Road
Pittsburgh, PA 15207

PROJECT NUMBER:

A2.1

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1
A2.1
Exterior Elevation - Unit Type 'A'
SCALE: not to scale



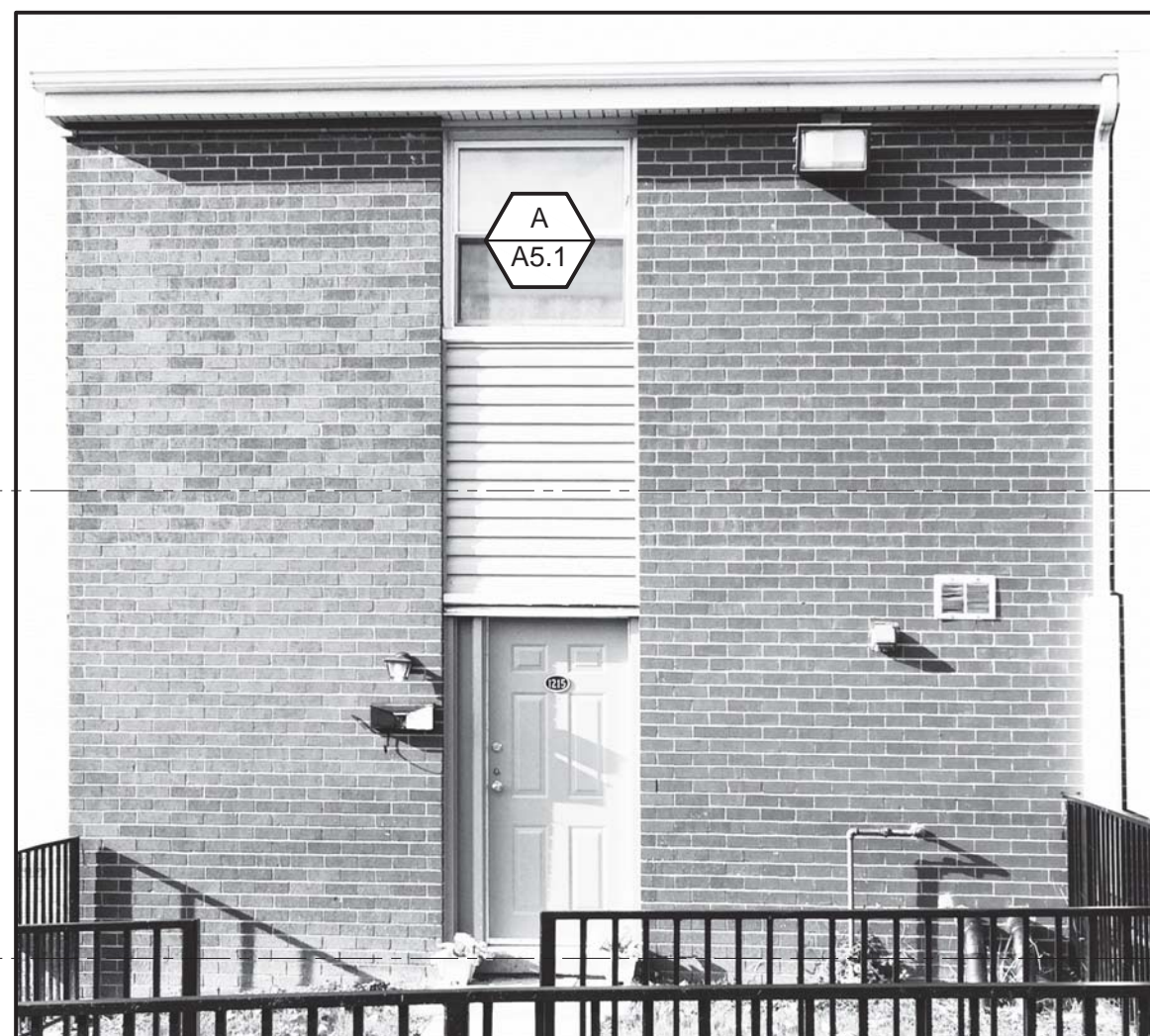
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Exterior Elevation - Unit Type 'A'
SCALE: not to scale



7
A2.1
Exterior Elevation - Unit Type 'B'
SCALE: not to scale



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A2.1
Exterior Elevation - Unit Type 'B'
SCALE: not to scale



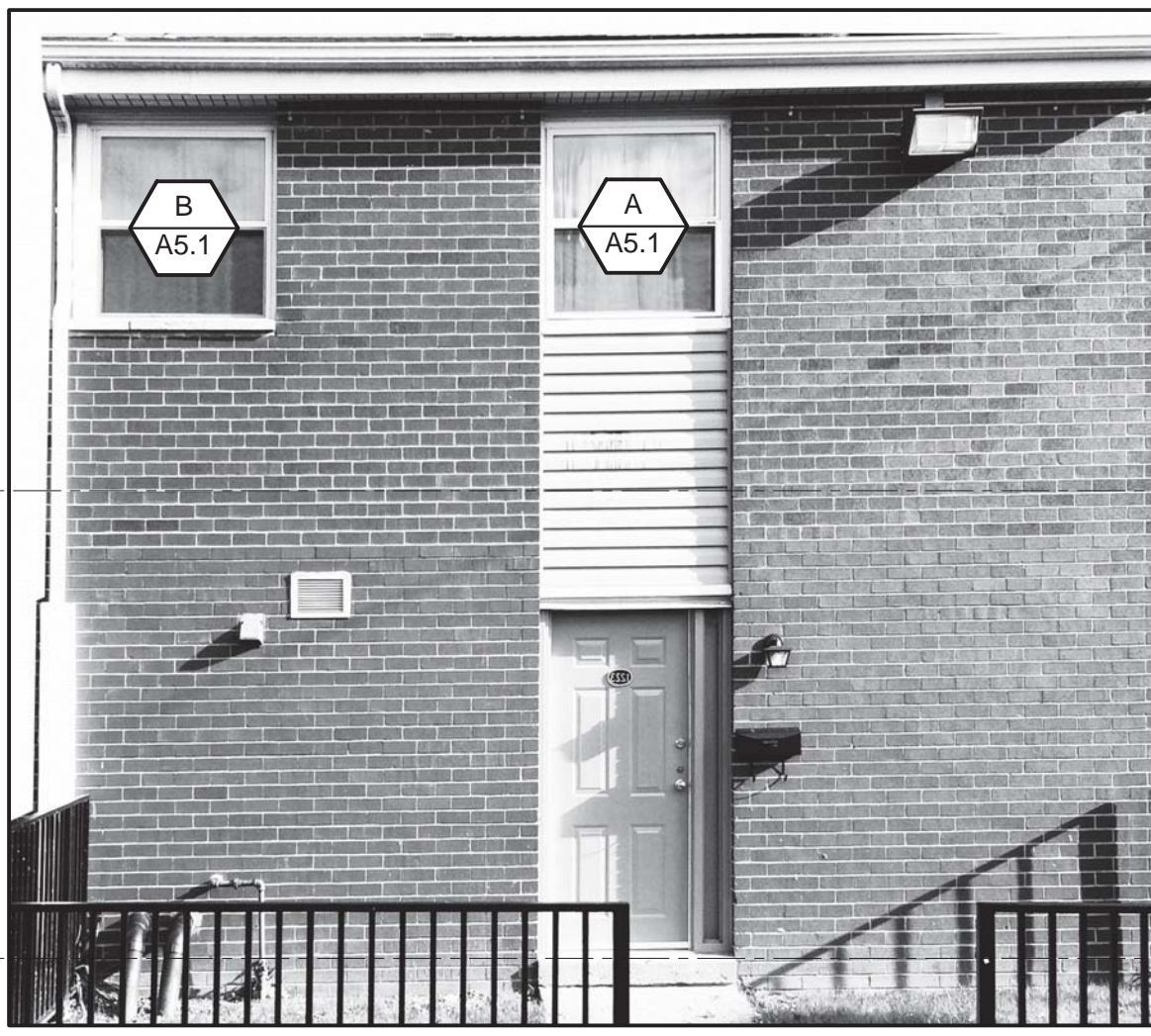
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SCALE: not to scale



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A2.1
Exterior Elevation - Unit Type 'B2'
SCALE: not to scale



11
A2.1
Exterior Elevation - Unit Type 'B2'
SCALE: not to scale



3
A2.1
Exterior Elevation - Unit Type 'A'
SCALE: not to scale



6
A2.1
Exterior Elevation - Unit Type 'A'
SCALE: not to scale



9
A2.1
Exterior Elevation - Unit Type 'B'
SCALE: not to scale



12
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Exterior Elevation - Unit Type 'B'
SCALE: not to scale



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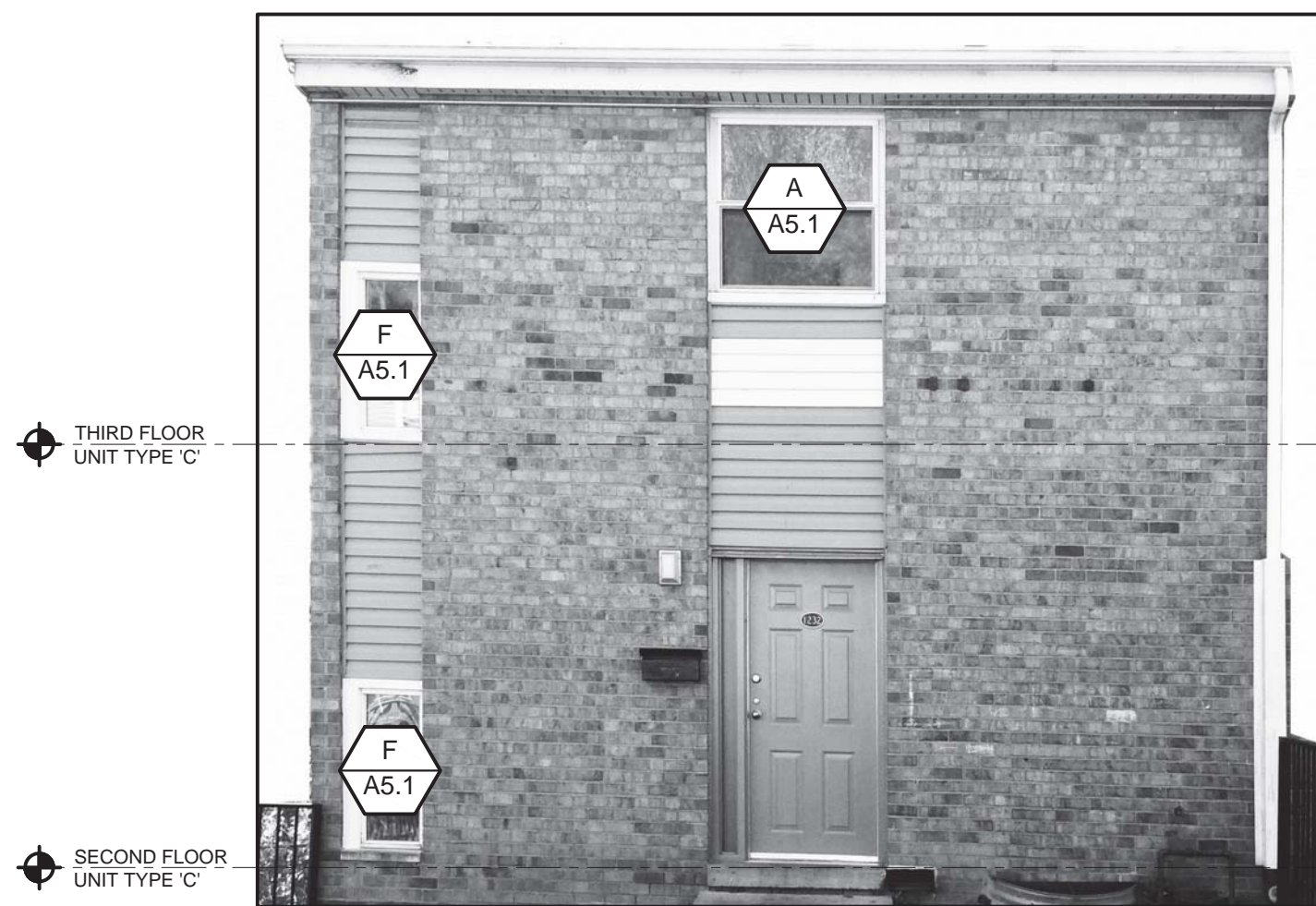
Exterior Elevations

Housing Authority of the City of Pittsburgh
Window Replacement at the Homewood North Community
10 Alvertice Road
Pittsburgh, PA 15207

PROJECT NUMBER:

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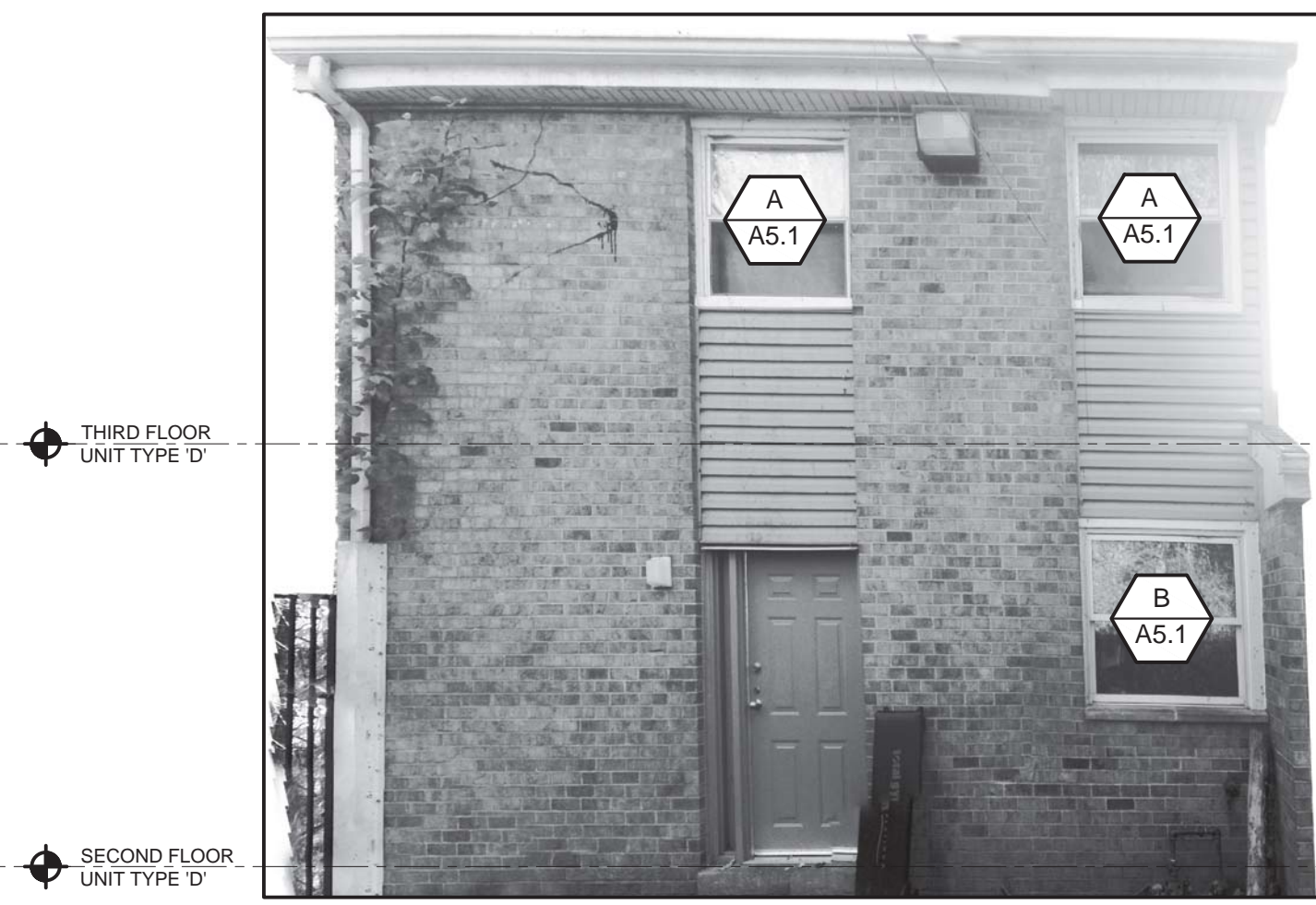
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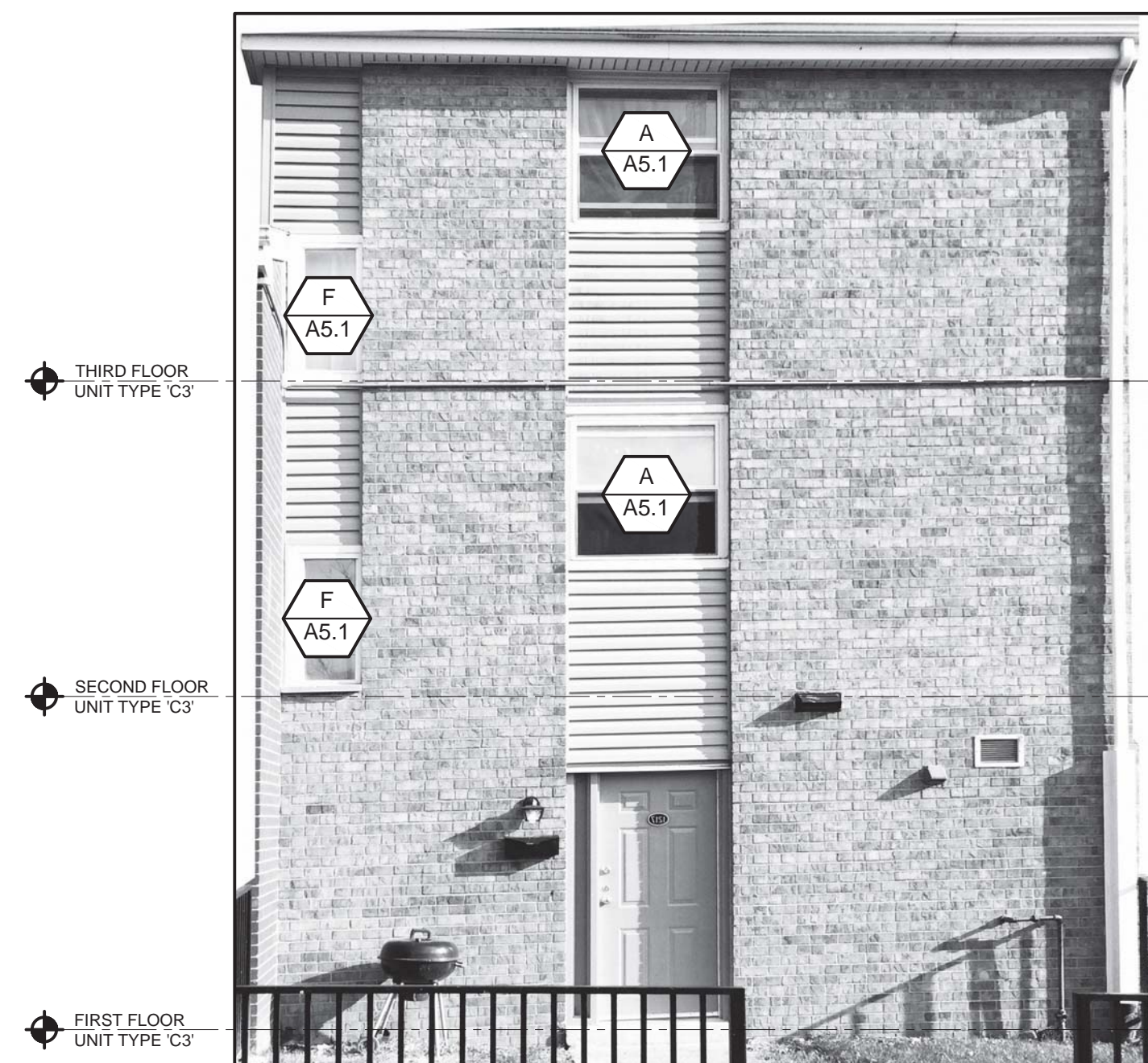
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7 Exterior Elevation - Unit Type 'D'
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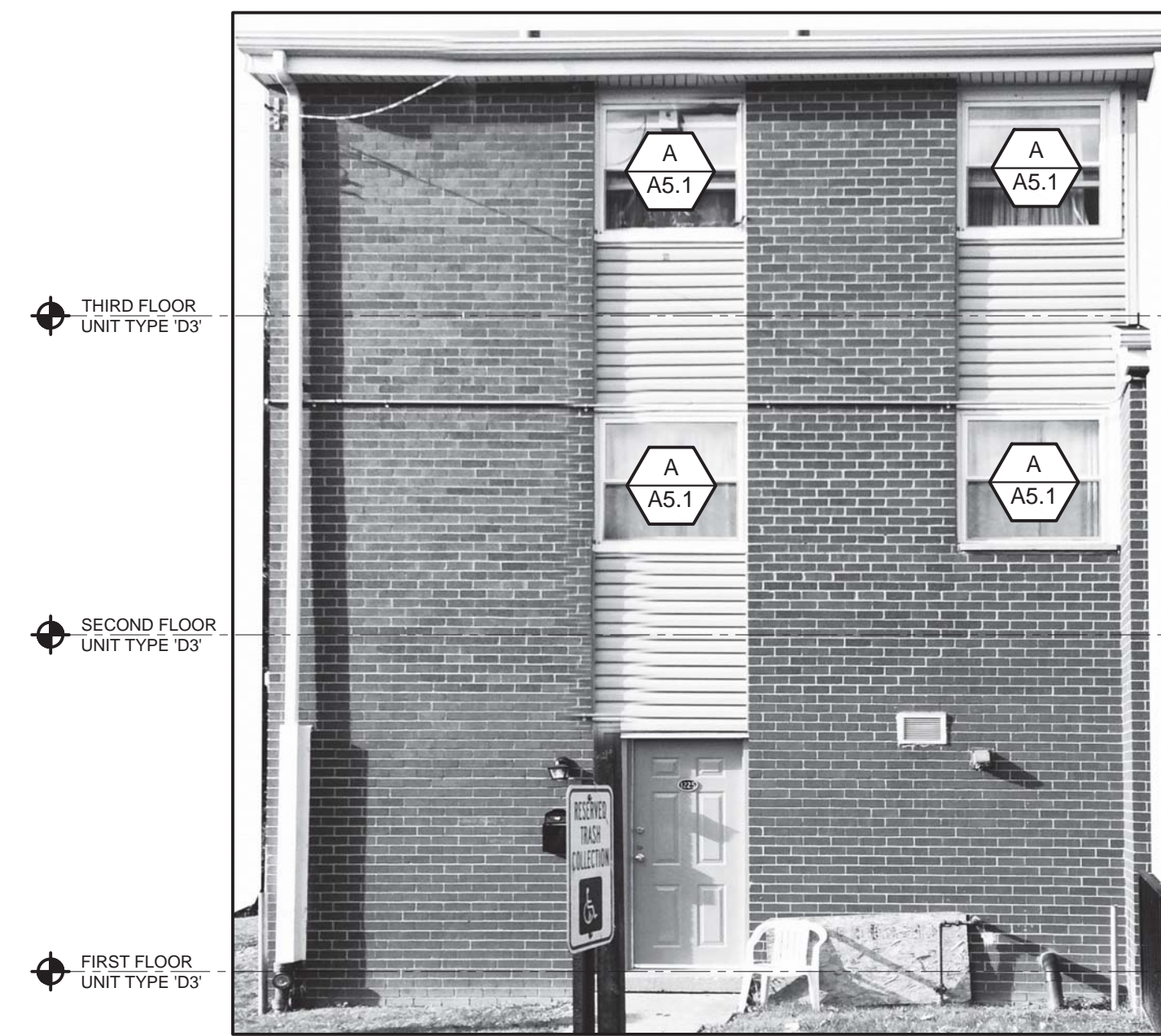
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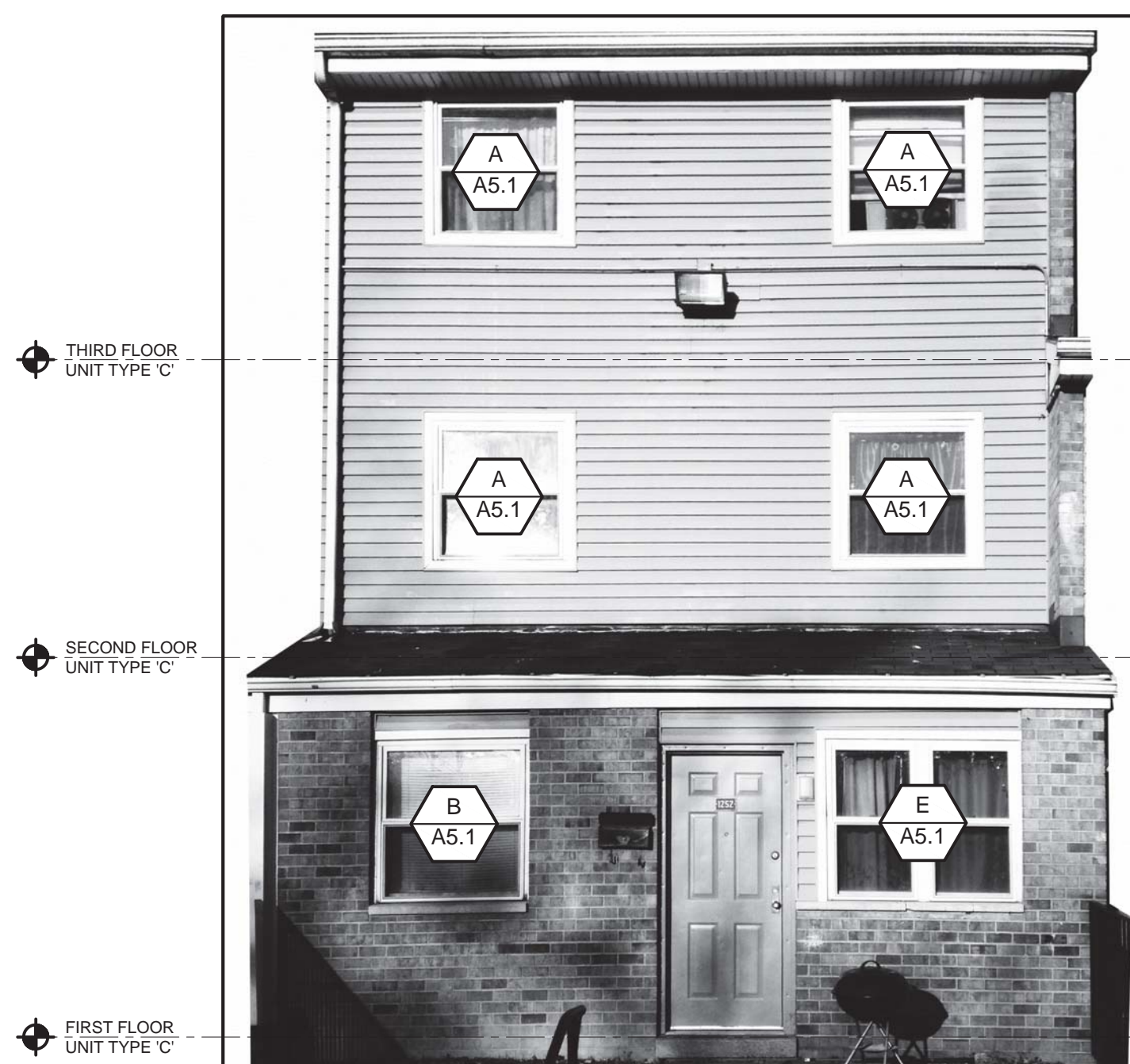
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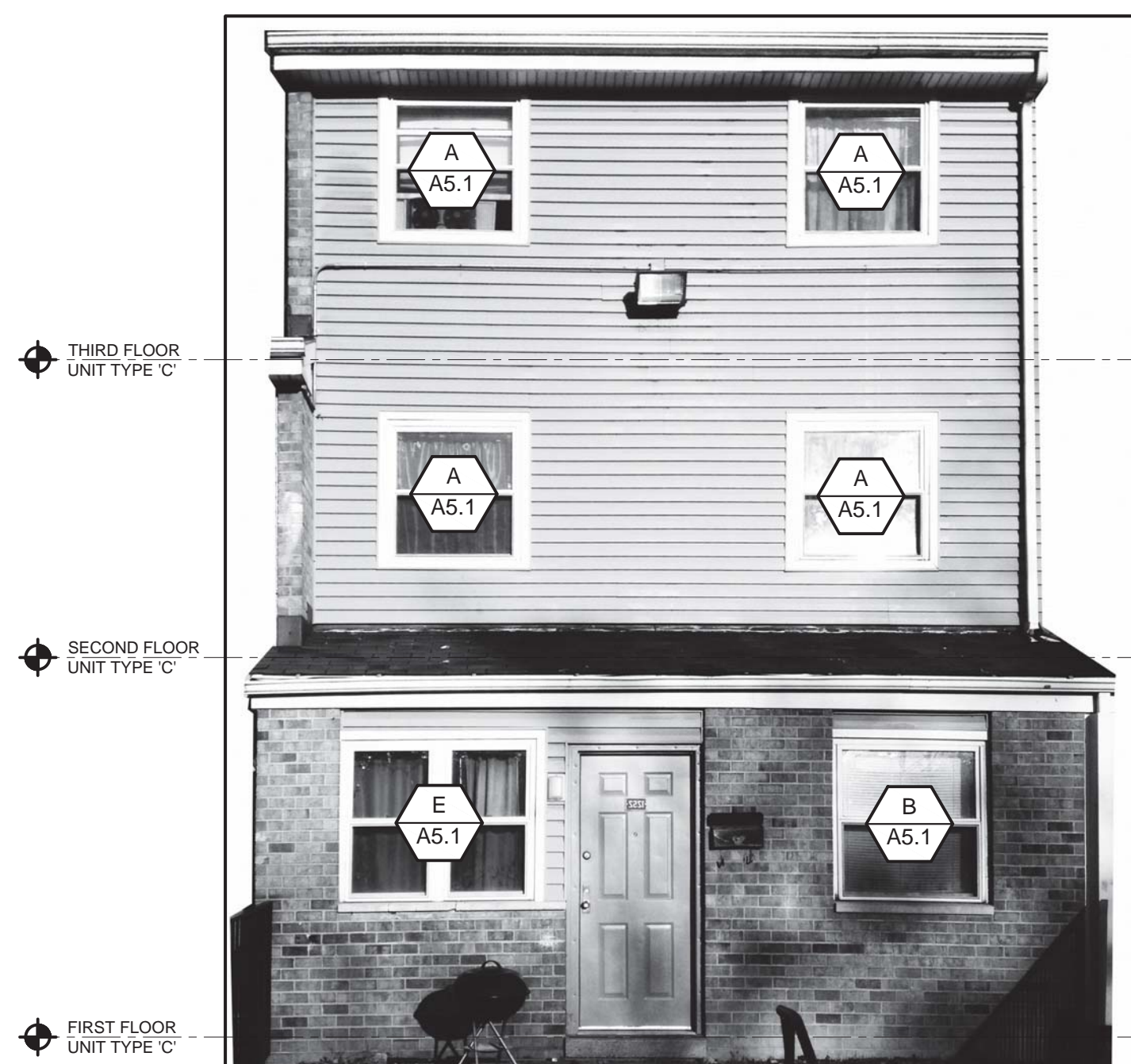
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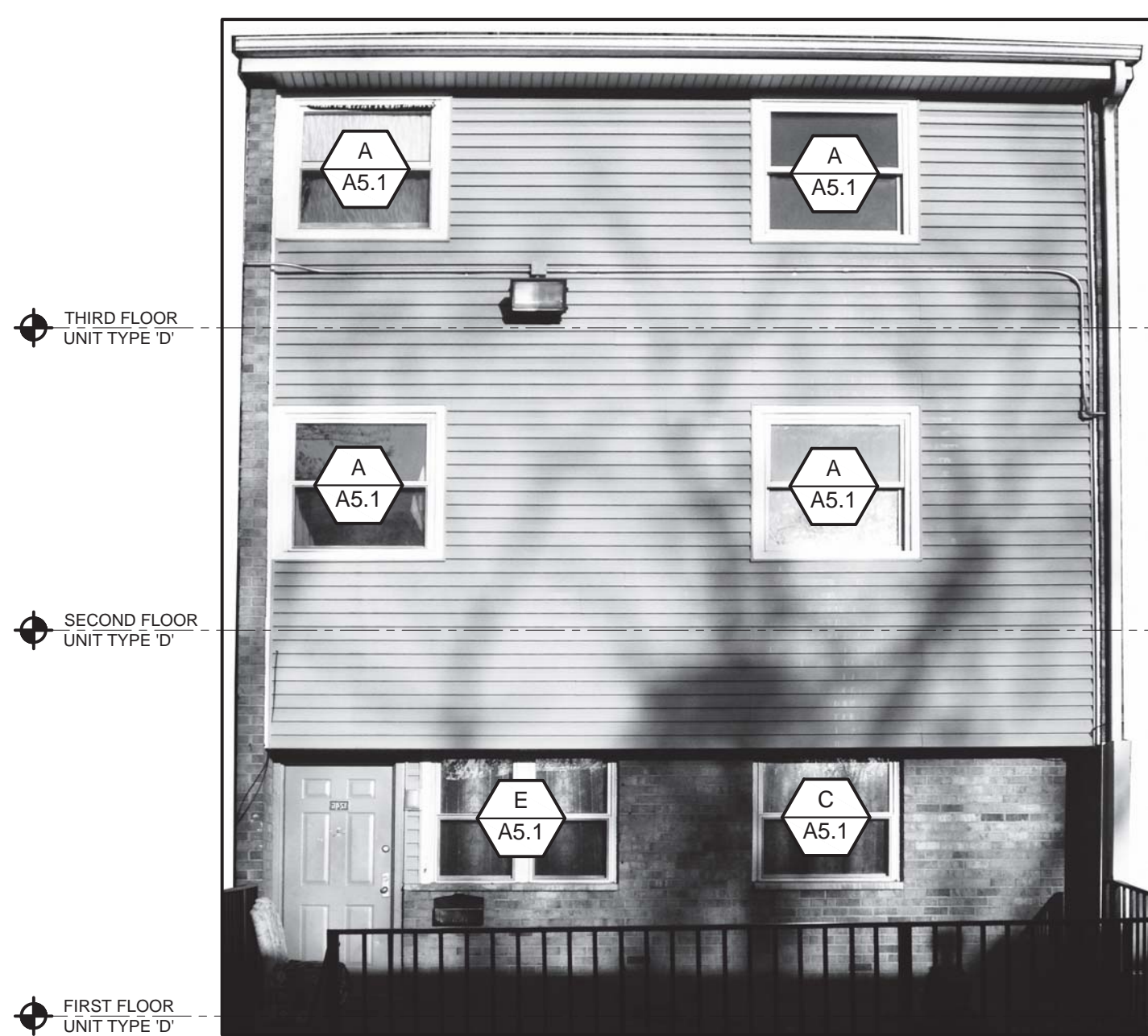
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3 Exterior Elevation - Unit Type 'C'
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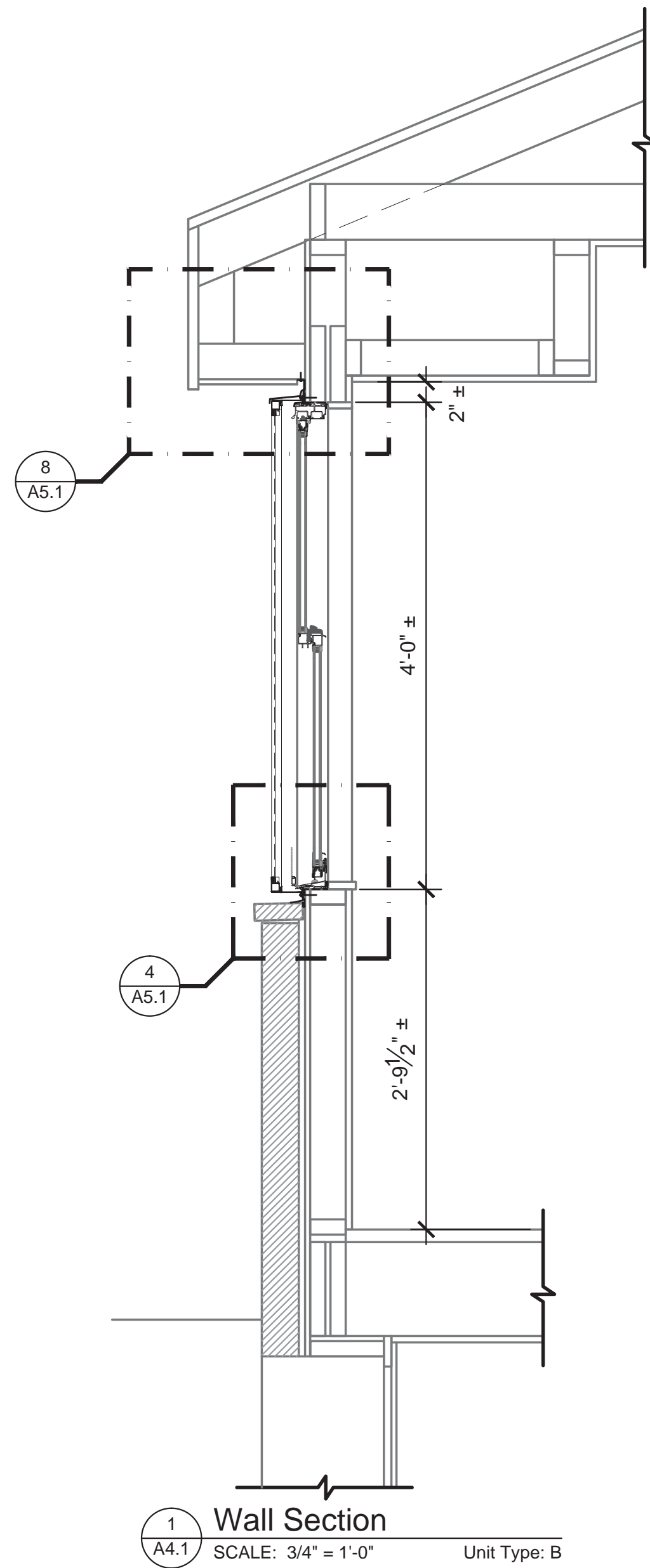
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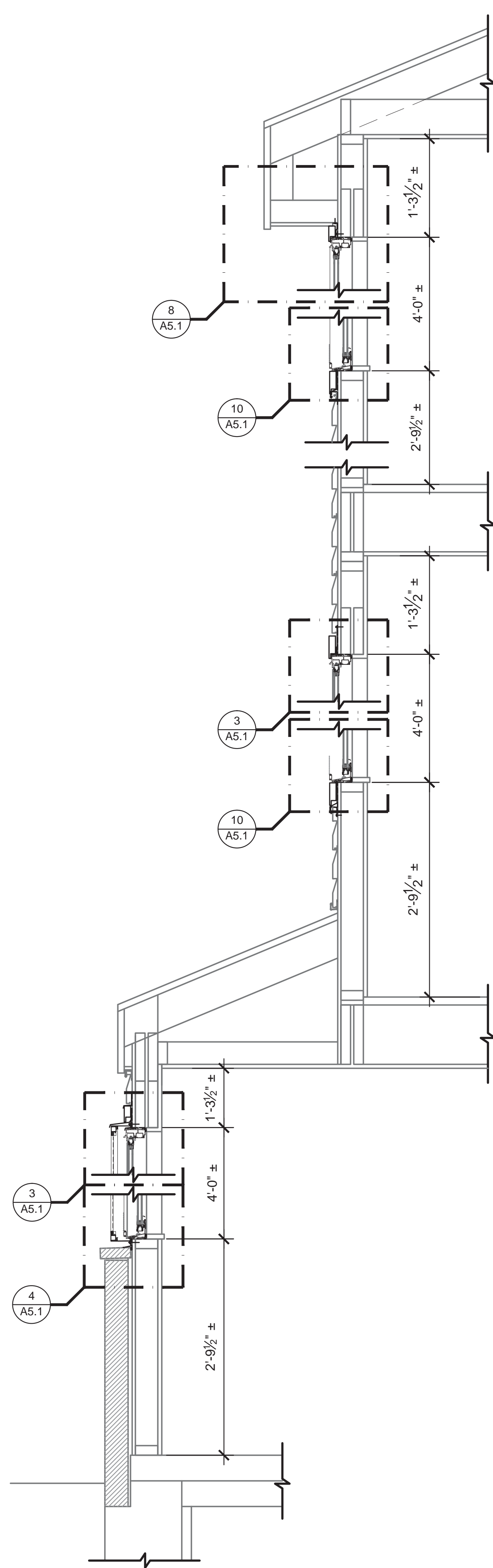
9 Exterior Elevation - Unit Type 'D'
A2.2 SCALE: not to scale



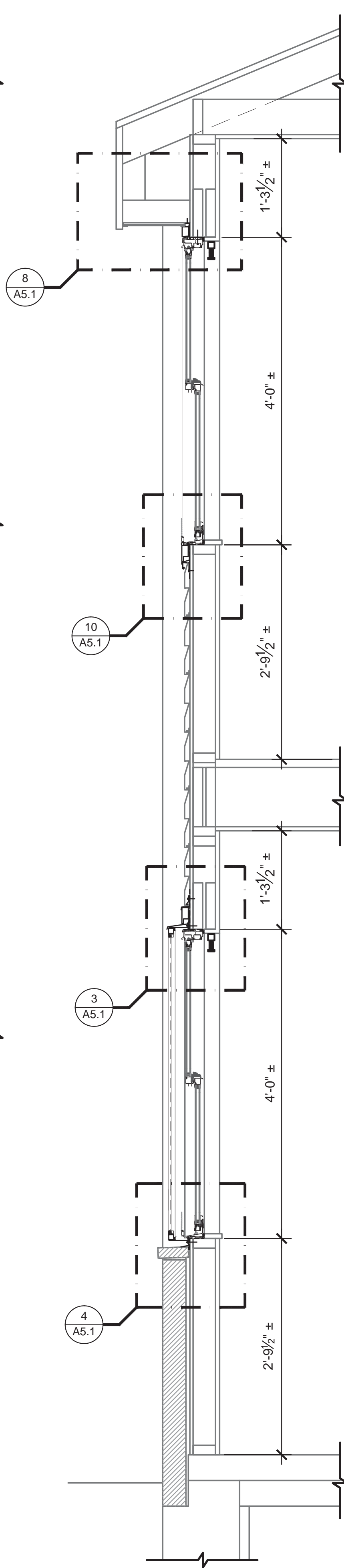
12 Exterior Elevation - Unit Type 'D'
A2.2 SCALE: not to scale



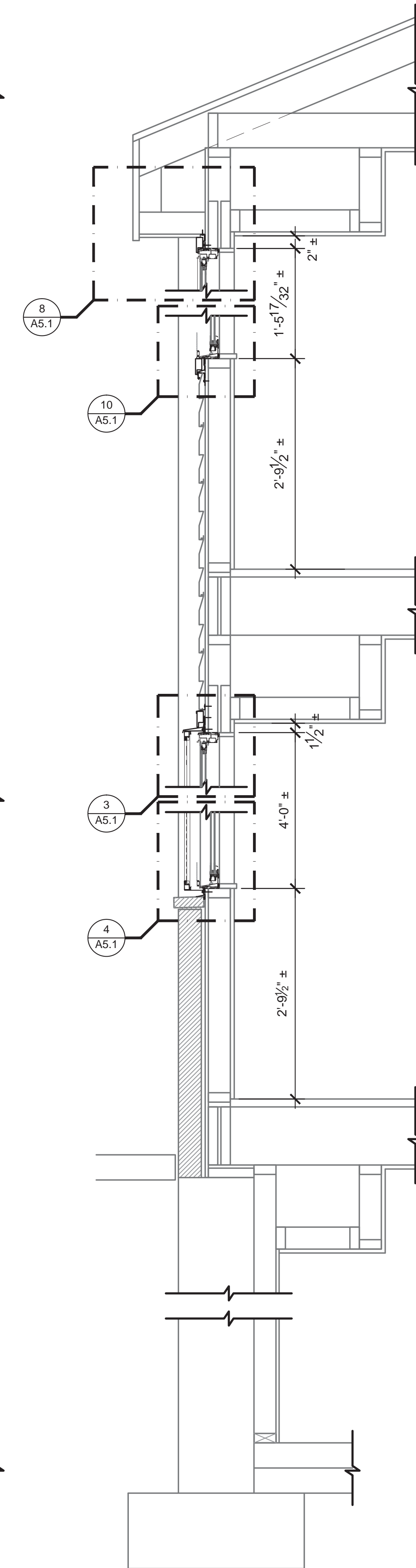
1 Wall Section
SCALE: 3/4" = 1'-0" Unit Type: B



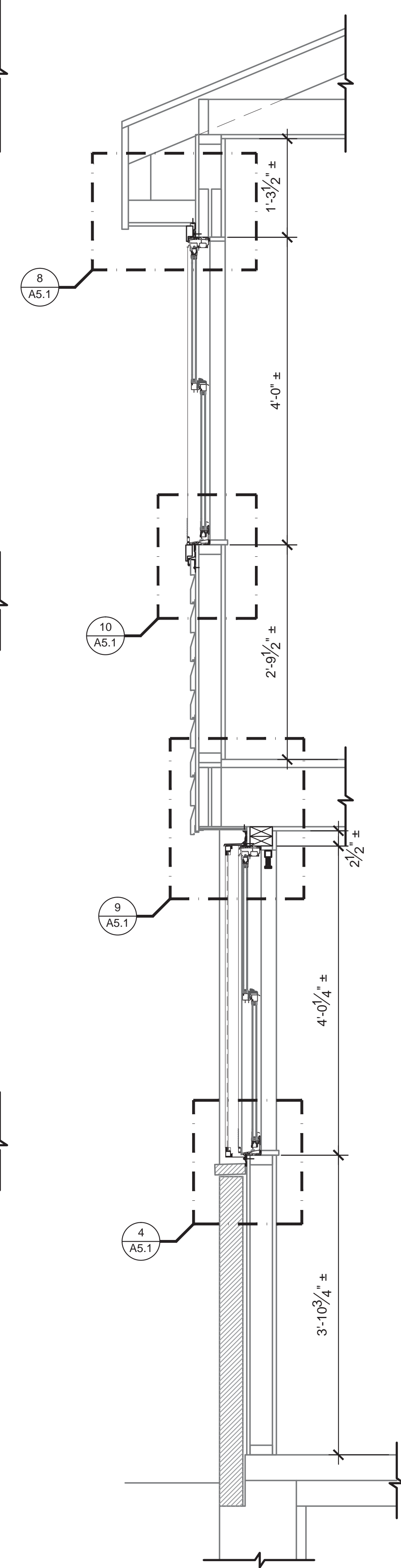
3 Wall Section
SCALE: 3/4" = 1'-0" Unit Type: C



4 Wall Section
SCALE: 3/4" = 1'-0" Unit Types: A & D

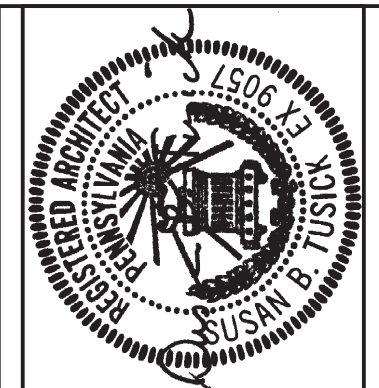


5 Wall Section
SCALE: 3/4" = 1'-0" Unit Types: C & D



6 Wall Section
SCALE: 3/4" = 1'-0" Unit Types: B & Similar to D
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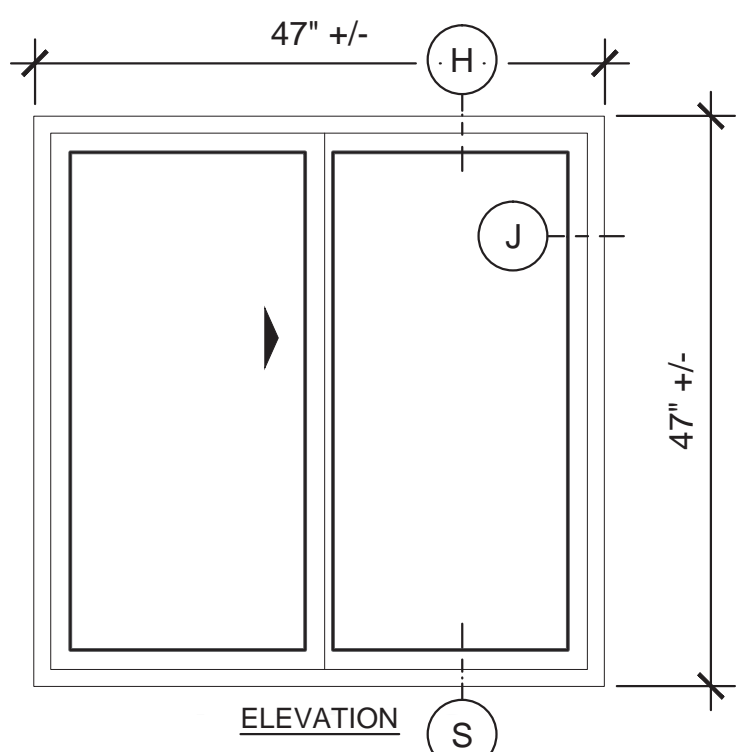
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Typical Wall Sections

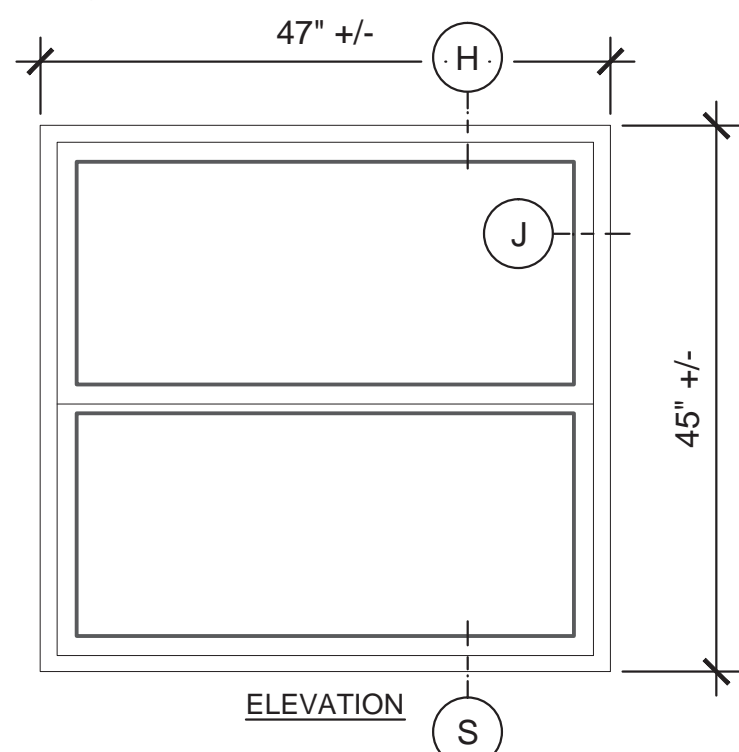
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Window Replacement at the Homewood North Community
10 Alberte Road
Pittsburgh, PA 15207

PROJECT NUMBER:

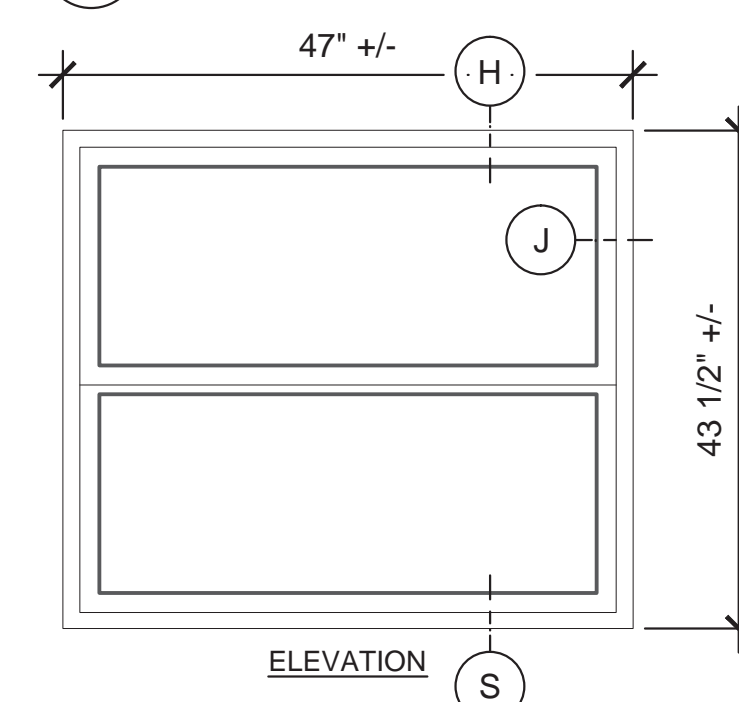
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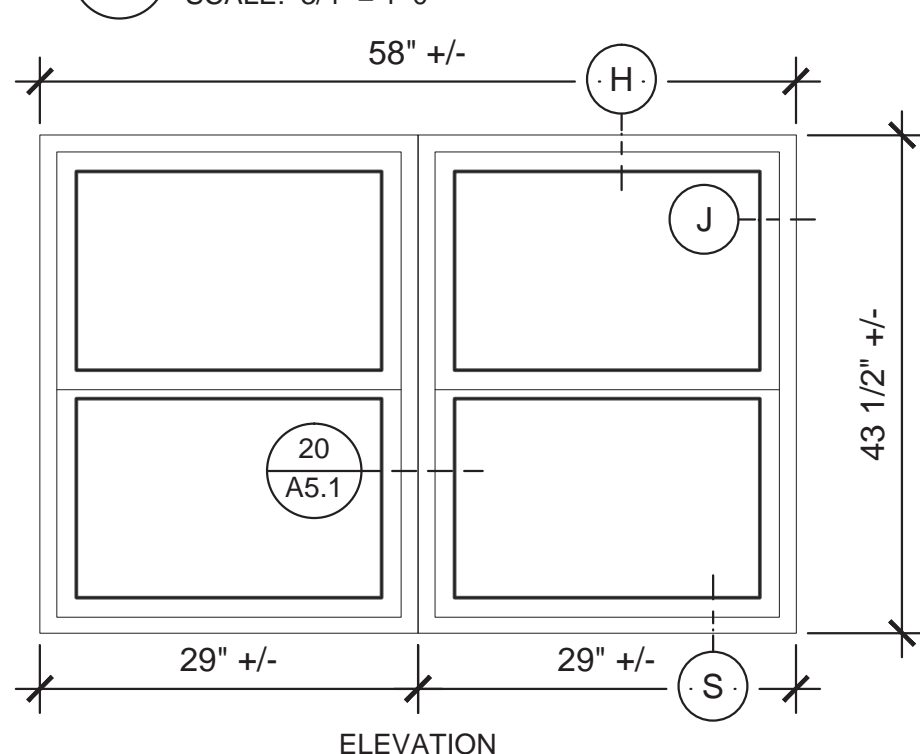
Window Type A
A5.1 SCALE: 3/4" = 1'-0"



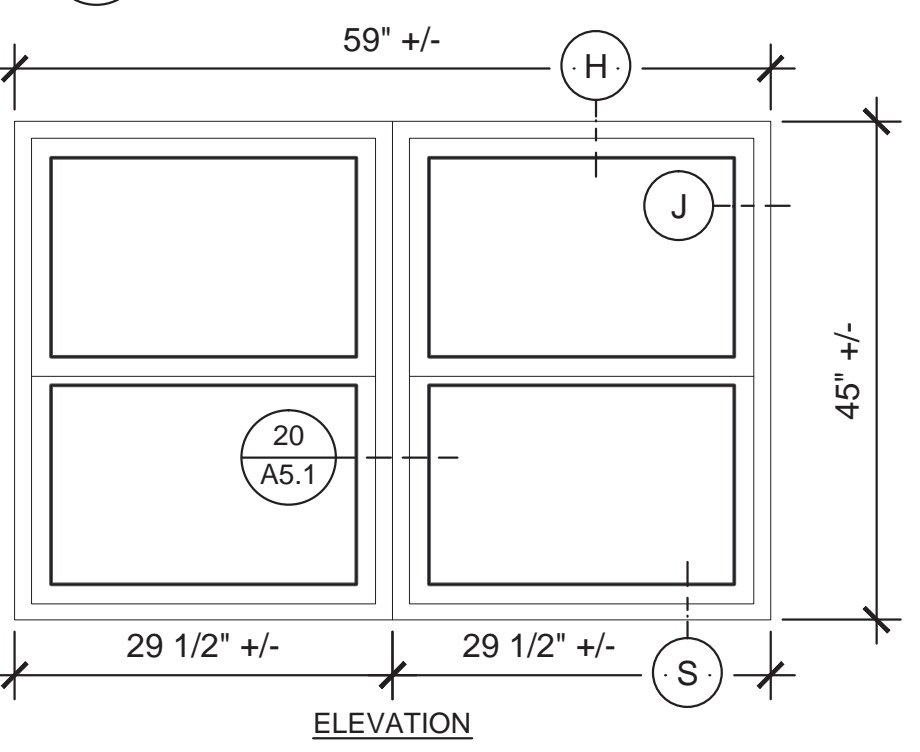
Window Type B
A5.1 SCALE: 3/4" = 1'-0"



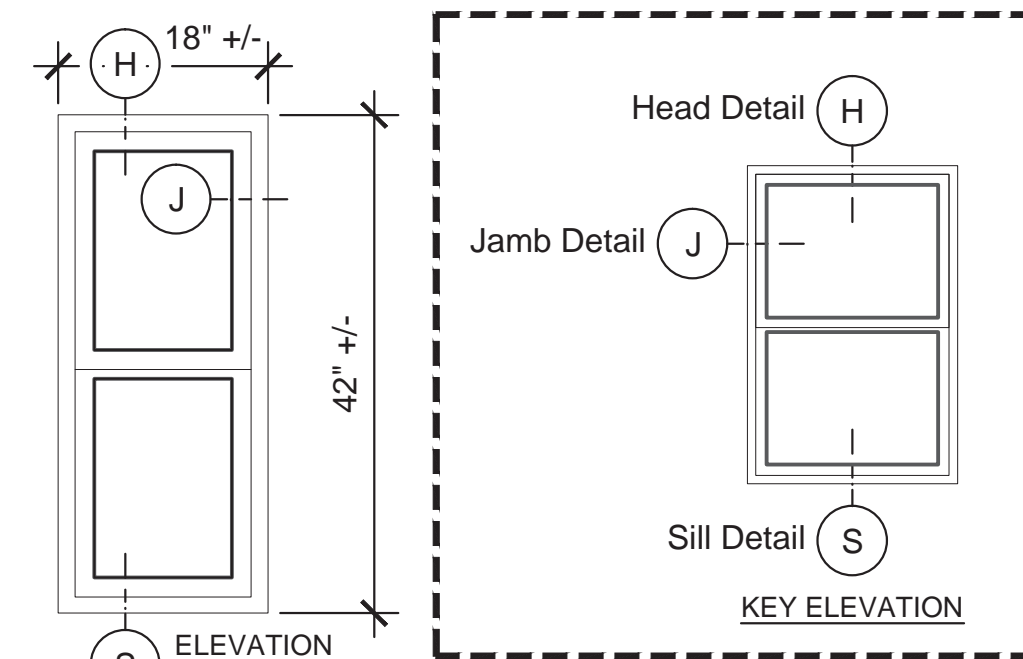
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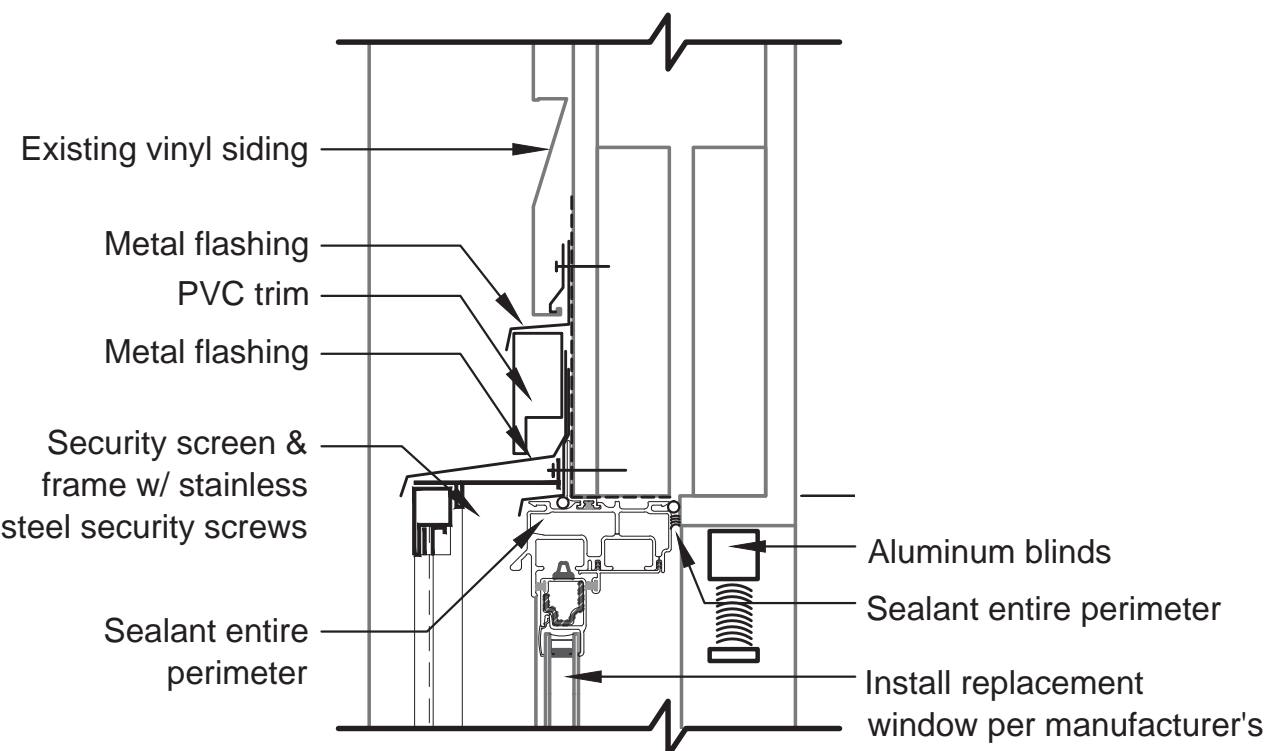
Window Type D
A5.1 SCALE: 3/4" = 1'-0"



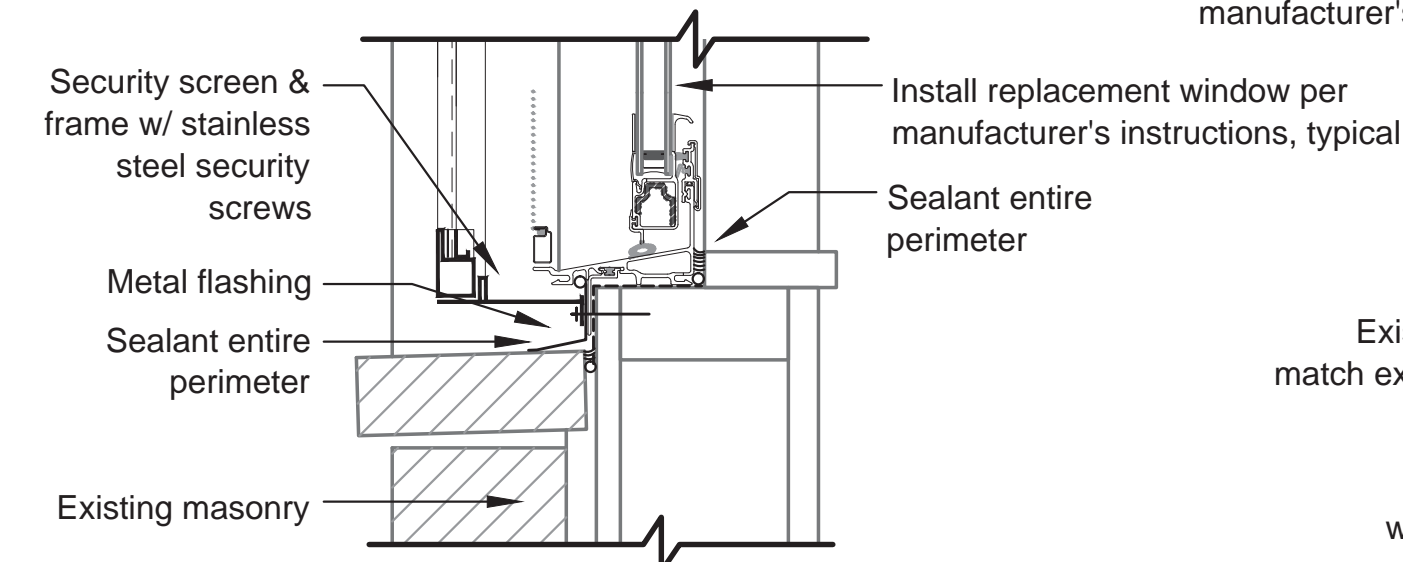
Window Type E
A5.1 SCALE: 3/4" = 1'-0"



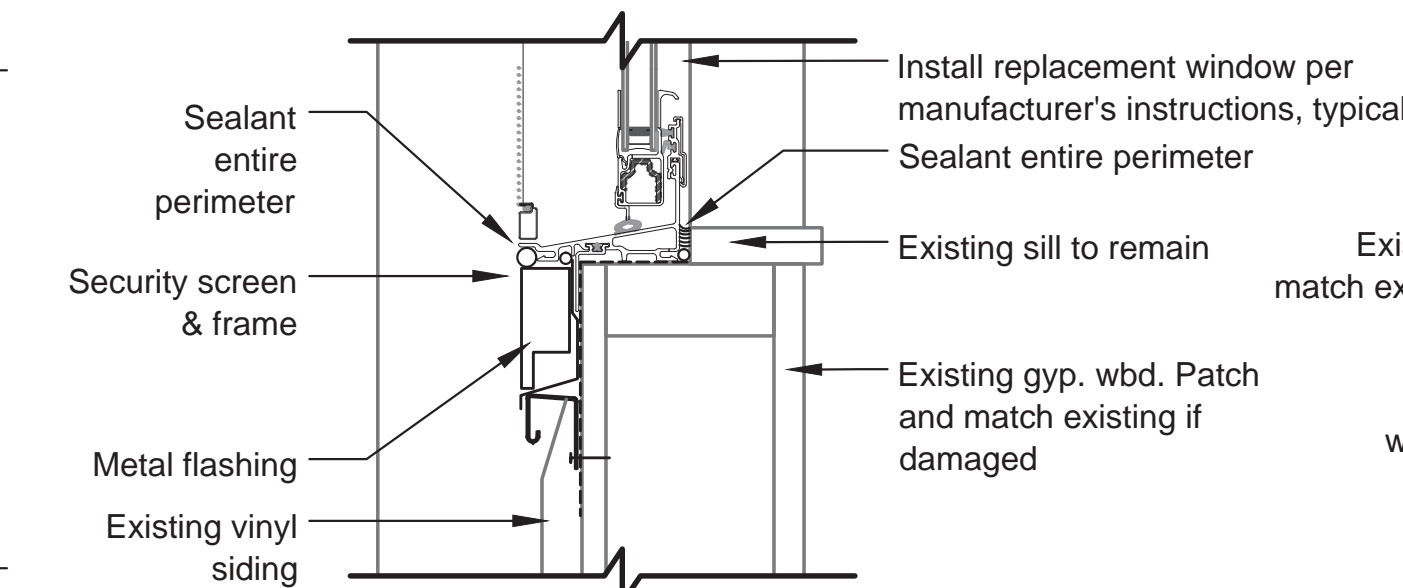
Window Type F
A5.1 SCALE: 3/4" = 1'-0"



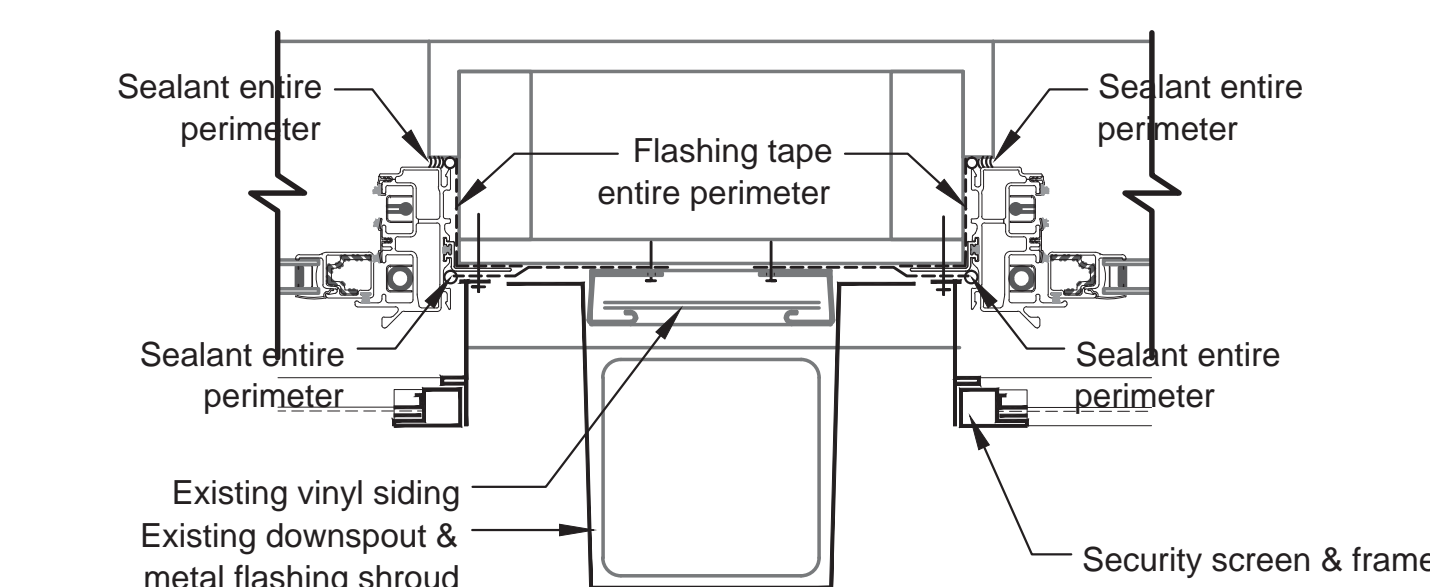
Head Detail
A5.1 SCALE: 3" = 1'-0"



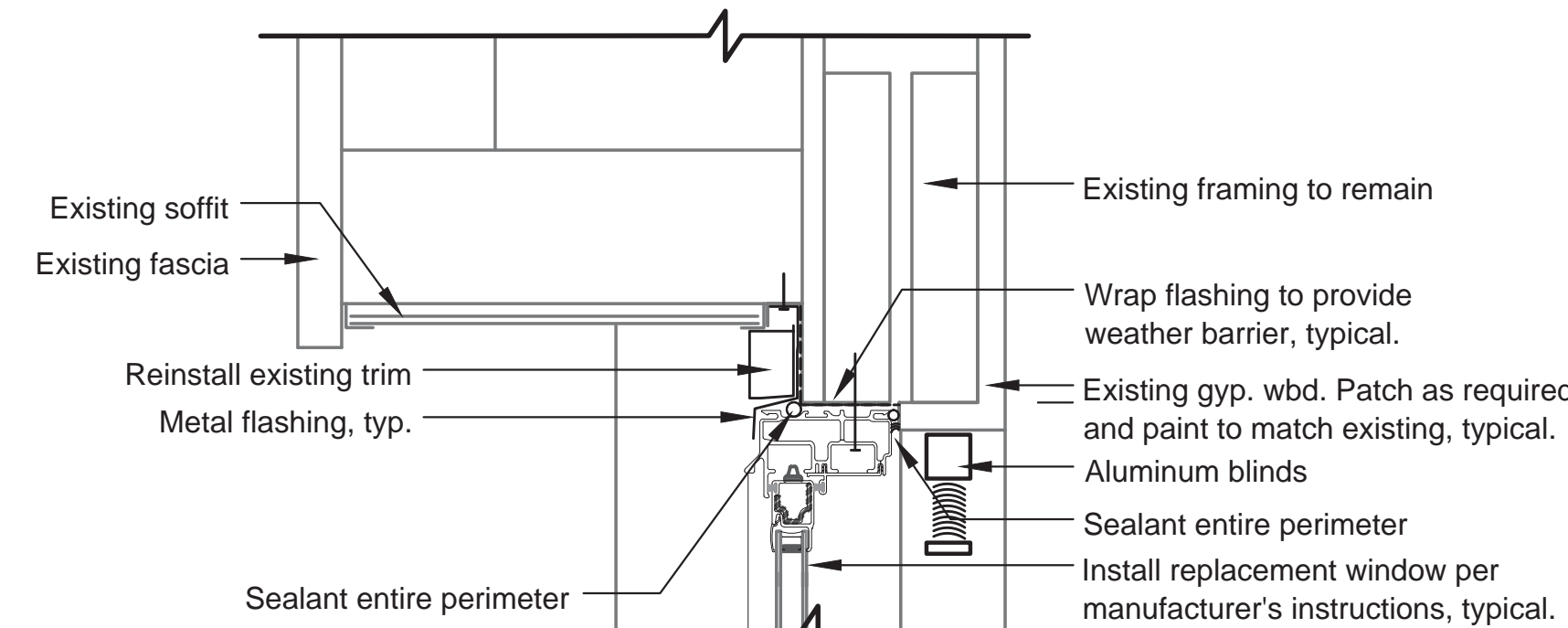
Sill Detail
A5.1 SCALE: 3" = 1'-0"



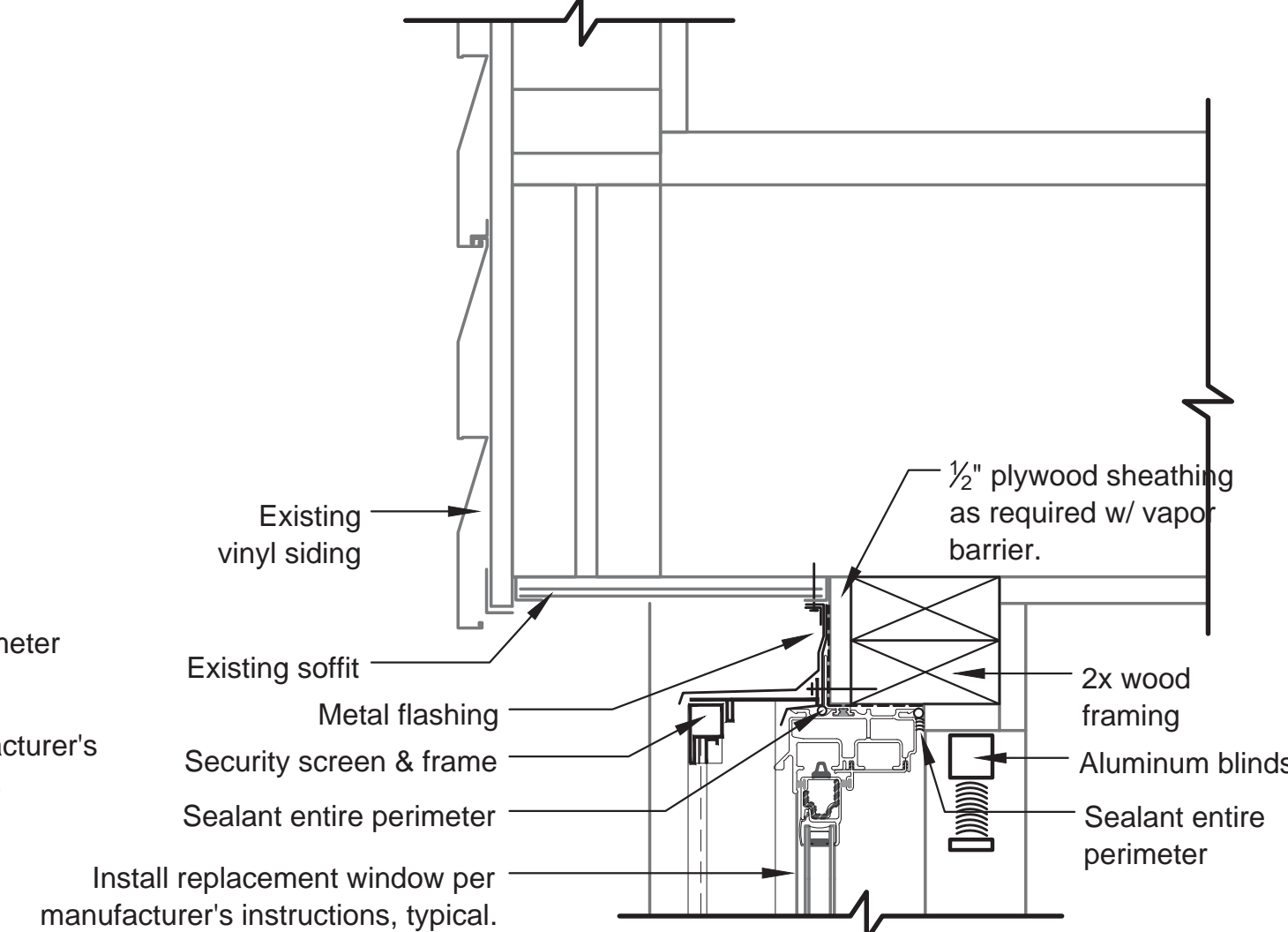
Sill Detail
A5.1 SCALE: 3" = 1'-0"



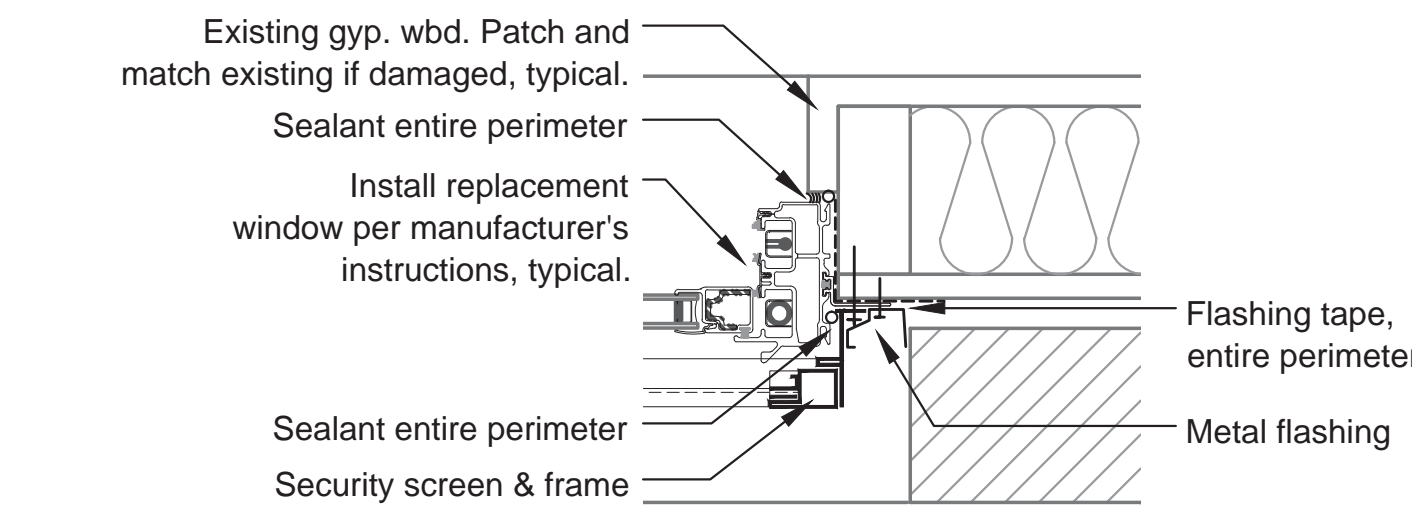
Jamb Detail @ Downspout
A5.1 SCALE: 3" = 1'-0"



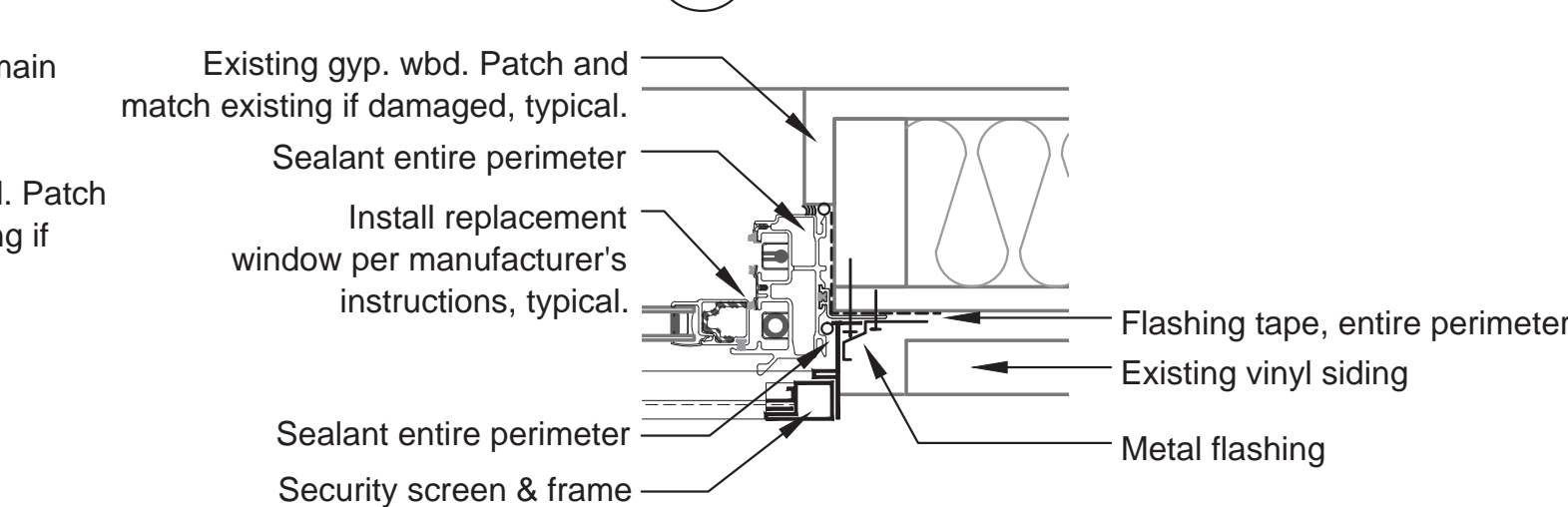
Head Detail
A5.1 SCALE: 3" = 1'-0"



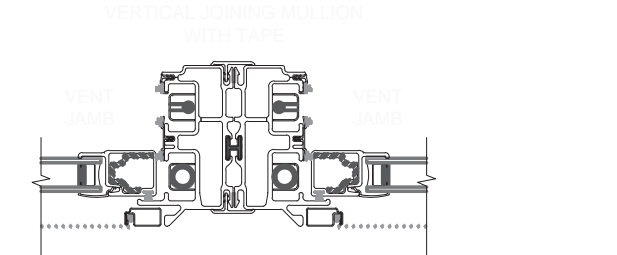
Head Detail
A5.1 SCALE: 3" = 1'-0"



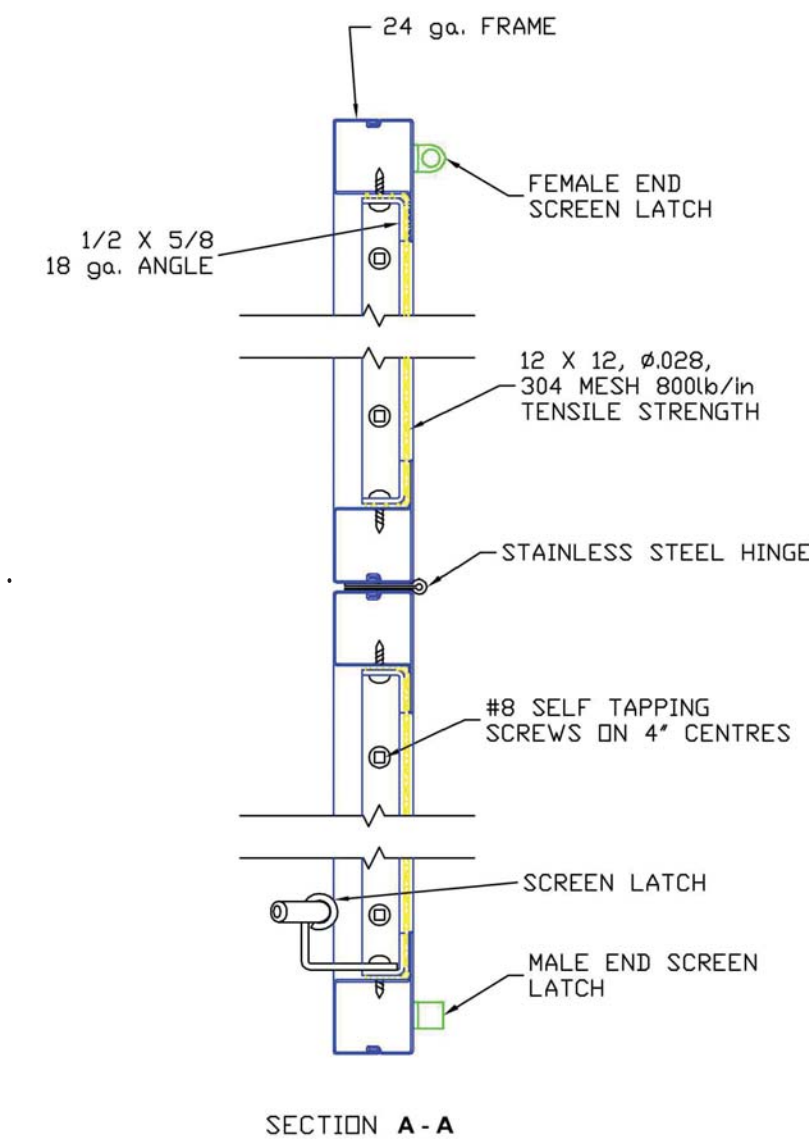
Jamb Detail
A5.1 SCALE: 3" = 1'-0"



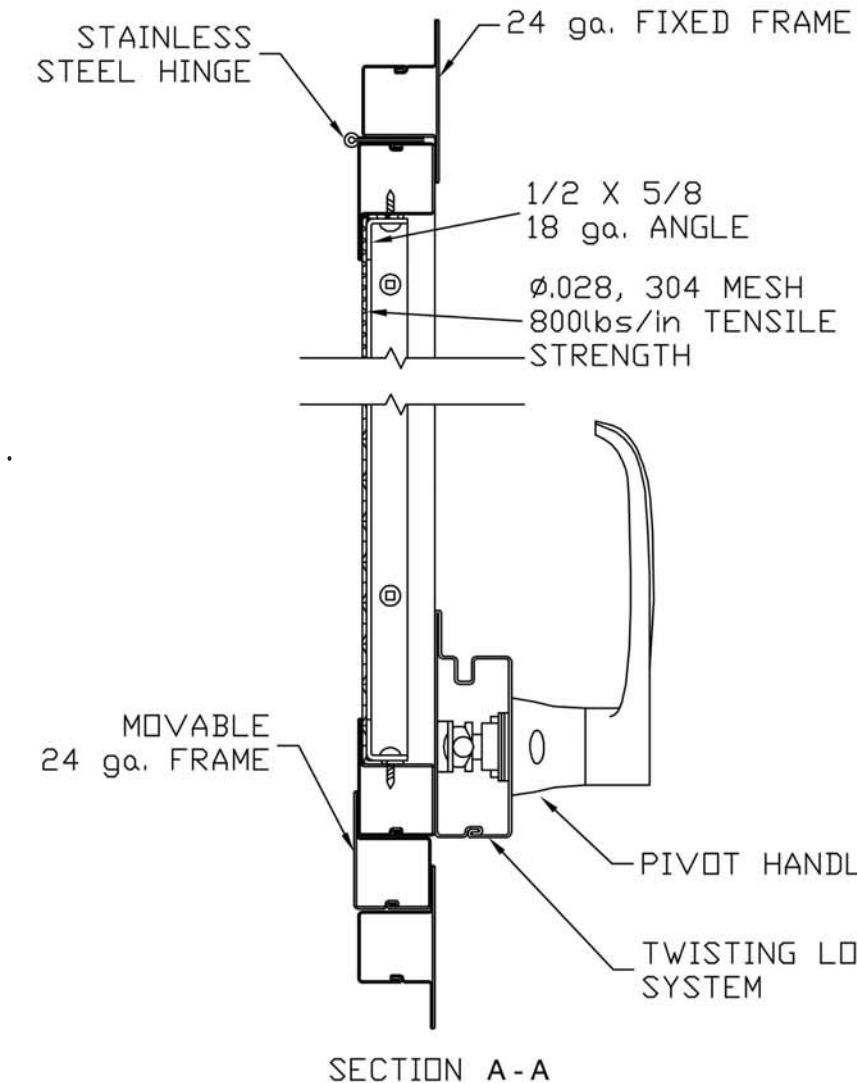
Jamb Detail
A5.1 SCALE: 3" = 1'-0"



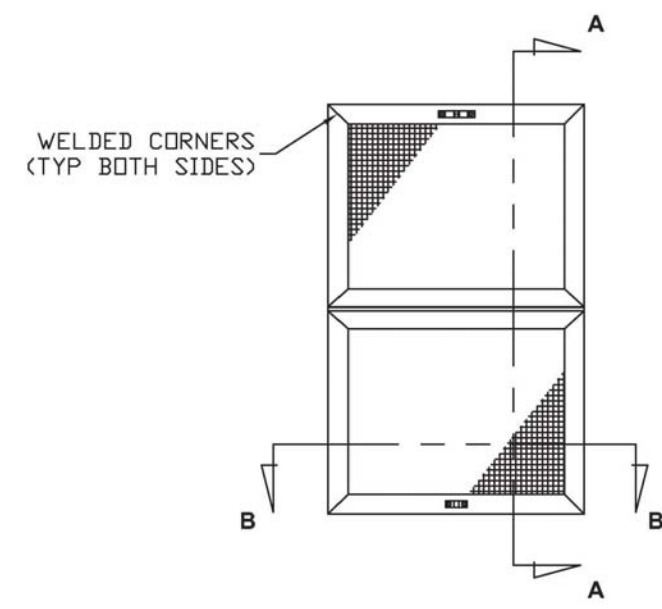
Mullion Detail
A5.1 SCALE: 3" = 1'-0" DOUBLE WINDOW



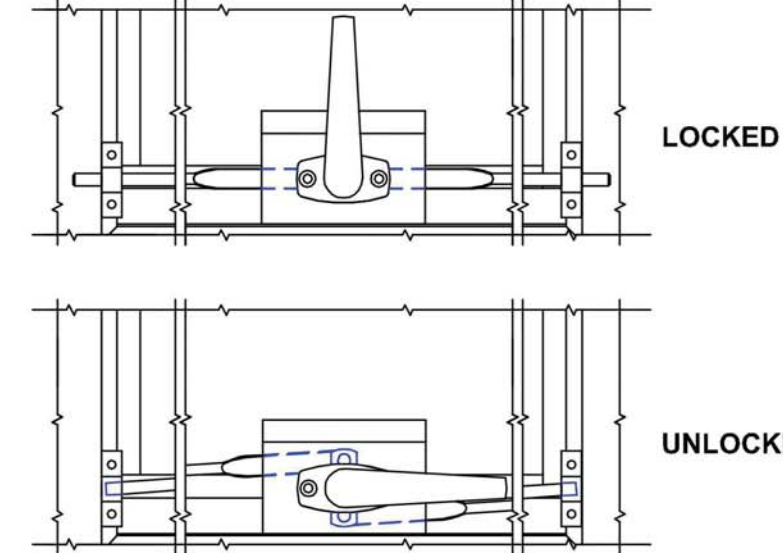
SECTION A - A



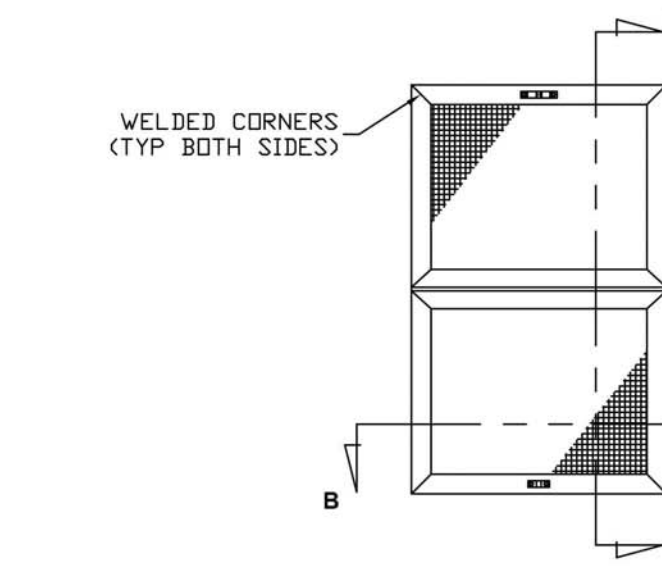
SECTION A - A



WELDED CORNERS (TYP BOTH SIDES)



LOCKED
UNLOCKED



WELDED CORNERS (TYP BOTH SIDES)

Typical Security Screen Details
A5.1 SCALE: not to scale



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REVISIONS

DRAWN BY	CHECKED BY	DATE ISSUED	DATE PRINTED
DAC	SBT	Sept. 1, 2015	Sept. 1, 2015

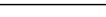

Window Types & Details

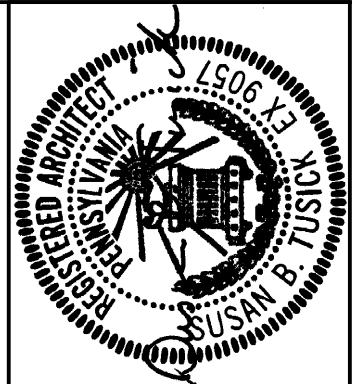
Housing Authority of the City of Pittsburgh
Window Replacement at the Homewood North Community
10 Alberte Road
Pittsburgh, PA 15207

PROJECT NUMBER:

A5.1

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Graphic Legend		Note: All new windows to receive blinds per Specifications.
	No windows on this side	<p>CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CONDITIONS</p> <p>© Copyright, Turjak & Associates, Architects, Inc.</p>
	No floor on this level	
TEXT	Text w/ Strikethrough NOT in SCOPE	
	Address is not in scope of work.	
[]	Door on this side	

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REVISIONS

DRAWN BY
DAC

Window Schedule

Housing Authority of the City of Pittsburgh
 Window Replacement at the Homewood North Community
 10 Abercree Road
 Pittsburgh, PA 15207

PROJECT NUMBER:	
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A6.1

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Bldg No.	Address	Unit Type	Reference Elevations		First Level Windows								Second Level Windows								Third Level Windows								Notes												
			Front	Rear	Front (L)			Front (R)			Rear (L)		Rear (R)		Front (L)			Front (R)			Rear (L)		Rear (R)		Front (L)			Front (R)			Rear (L)		Rear (R)								
					Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen		Type	Treatment	S. Screen	Type	Treatment	S. Screen						
																																				Treatments: B - BLINDS T - OTHER	C - CURTAINS				
1	1246 Nolan Street	D	12/A2.2	10/A2.2	F	C	-	E	C	-							A	-	-	A	C	-	[]			F	-	-	A	-	-	A	C	-	A	C	-				
	1252 Nolan Street	B	9/A2.1	7/A2.1	F	C	-	G	C	-							A	C	-	A	C	-	[]			F	C	√													
	1250 Nolan Street	B	12/A2.1	10/A2.1	G	-	-	F	-	-							A	C	-	A	C	-	F	C	√	[]															
	1252 Nolan Street	C	1/A2.2	3/A2.2	F	C	-	E	C	-							A	C	-	A	C	-	J	-	√	[]			A	C	-	A	C	-	J	-	-				
	1254 Nolan Street	C	4/A2.2	6/A2.2	E	C	-	F	C	-							A	C	-	A	C	-	[]			J	C	√	A	C	-	A	C	-	A	C	-				
	1256 Nolan Street	A	6/A2.1	4/A2.1	F	C	-	I	C	-							A	C	-	A	C	-				[]															
	1258 Nolan Street	A	3/A2.1	1/A2.1	I	C	-	F	C	-							A	C	-	A	C	-	[]																		
2	1244 Nolan Street	B	7/A2.1	9/A2.1							F	B	√	G	B	√	[]			F	C	-	A	B	-	A	C	-													
	1242 Nolan Street	B	10/A2.1	12/A2.1							G	C	√	F	C	√	F	C	-	[]			A	C	-	A	C	-													
	1240 Nolan Street	A	1/A2.1	3/A2.1							F	C	√	E	C	√	[]						A	C	-	A	C	-													
	1238 Nolan Street	A	4/A2.1	6/A2.1							E	C	√	F	-	√				[]			A	C	-	A	C	-													
	1236 Nolan Street	B	7/A2.1	9/A2.1							F	C	√	G	C	√	[]			F	B	-	A	C	-	A	B	-													
	1234 Nolan Street	B	10/A2.1	12/A2.1							G	C	√	F	B	√	F	B	-	[]			A	C	-	A	C	-													
3	1232 Nolan Street	C	1/A2.2	3/A2.2							F	B	√	E	B	√	J	-	-	[]			A	C	-	A	C	-	J	-	-	A	C	-	A	B	-	A	C	-	
	1230 Nolan Street	C	4/A2.2	6/A2.2							E	C	√	F	B	√	[]			J	-	-	A	B	-	A	B	-	A	C	-	J	-	-	A	B	-	A	B	-	
	1228 Nolan Street	B	7/A2.1	9/A2.1							F	C	√	G	C	√	[]			F	C	-	A	C	-	A	C	-													
	1226 Nolan Street	B	10/A2.1	12/A2.1							G	C	-	F	C	-	F	C	-	[]			A	C	-	A	C	-													
	1224 Nolan Street	D	7/A2.2	9/A2.2							E	C	-	F	C	-	F	C	-	[]			A	C	-	A	C	-	A	C	-	A	C	-	A	C	-				
4	1222 Nolan Street	B	7/A2.1	9/A2.1							F	C	√	G	C	√	[]			F	C	-	A	C	-	A	C	-													
	1220 Nolan Street	B	10/A2.1	12/A2.1							G	C	√	F	C	√	F	C	-	[]			A	C	-	A	C	-													
	1218 Nolan Street	C	1/A2.2	3/A2.2							F	C	√	E	C/B	√	J	C	-	[]			A	C	-	A	C	-	J	C	-	A	-	-	A	C	-	A	C	-	
	1216 Nolan Street	C	4/A2.2	6/A2.2							E	C	√	F	C	√	[]			J	C	-	A	C	-	A	C	-	A	C	-	J	C	-	A	C	-	A	C	-	
	1214 Nolan Street	B	7/A2.2	9/A2.2							F	B	√	G	B	√	[]			F	C	-	A	B	-	A	B	-													
	1212 Nolan Street	B	10/A2.1	12/A2.1							G	B	√	F	C	√	F	C	-	[]			A	B	-	A	B	-													
	1210 Nolan Street	A	1/A2.1	3/A2.1							F	B	√	E	B	√				[]			A	C	-	A	C	-													
	1208 Nolan Street	A	4/A2.1	6/A2.1							E	C	√	F	C	√	[]						A	C	-	A	C	-													
5	1260 Nolan Street	B	9/A2.1	7/A2.1	F	C	-	G	C	-							A	C	-	A	C	-	[]			A	T	-													
	1262 Nolan Street	B	12/A2.1	10/A2.1	G	C	-	F	C	-							A	C	-	A	C	-	A	C	-	[]															
	1264 Nolan Street	C	3/A2.2	1/A2.2	F	B	-	E	B	-							A	B	-	A	B	-	J	B	-	[]			A	B	-	A	B	-	J	B	-	A	B	-	NOT IN SCOPE (RECENTLY REPLACED)
	1266 Nolan Street	C	6/A2.2	4/A2.2	E	B	-	F	B	-							A	B	-	A	B	-	[]			J	B	-	A	B	-	A	B	-	J	B	-	A	B	-	NOT IN SCOPE (RECENTLY REPLACED)
	1268 Nolan Street	A	6/A2.1	4/A2.1	F	C	-	E	C	-							A	C	-	A	C	-				[]															
	1270 Nolan Street	B	12/A2.1	10/A2.1	E	T	-	F	T	-							A	C	-	A	C	-	[]																		
	1272 Nolan Street	E	2/A2.4	-	5A	T	√	D**	-	√																										UFAS. Side Window - Type F (SINGLE-FLR)					
	1274 Nolan Street	G	1/A2.4	2/A2.4													2A	C	-	2A	C	-	3A	C	-	[]										UFAS. (SINGLE-FLOOR)					
1276 Nolan Street	F	5/A2.4	2/A2.4													A	C	-	A	C	-	A	T	-	[]			A	C	-	A	C	-	A	C	-	A	T	-	UFAS. (TWO-FLOOR)	
6	1200 Nolan Court	A	1/A2.1	3/A2.1							F	C	-	E	C	-				[]			A	-	-	A	C	-													
	1202 Nolan Court	A	4/A2.1	6/A2.1							E	B	-	F	B	-	[]						A	-	-	A	-	-													
	1204 Nolan Court	A	1/A2.1	3/A2.1							F	C	-	I	C	-				[]			A	-	-	A	-	-													
	1206 Nolan Court	A	4/A2.1	6/A2.1							I	C	-	F	C	-	[]						A	T	-	A	T	-													
7	1201 Mohler Street	B	12/A2.1	10/A2.1	G	C	-	F	C	-							A	C	-	A	-	-	H	C	-	[]											UFAS				
	1203 Mohler Street	BAA2	5/A2.3	6/A2.3													2C	-	√	C	-	√	A	T	-	4A	T	-								UFAS					
	1205 Mohler Street	BAA1	6/A2.3	-	C	B	√	4C	B	√																										ADDRESS ELIMINATED					
	1207 Mohler Street																																								
	1209 Mohler Street	B	12/A2.1	10/A2.1	G	C	-	F	C	-							A	C	-	A	T	-	H	C	-	[]															
	1211 Mohler Street	B	9/A2.1	7/A2.1	F	B	-	G	B	-							A	B	-	A	B	-	[]			H	T	-													

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Existing Conditions Window Schedule

Housing Authority of the City of Pittsburgh
Window Replacement at the Homewood North Community
10 Alberte Road
Pittsburgh, PA 15207

PROJECT NUMBER:

A7.1

Bldg No.	Address	Unit Type	Reference Elevations		First Level Windows												Second Level Windows												Third Level Windows												Notes				
			Front	Rear	Front (L)			Front (R)			Rear (L)			Rear (R)			Front (L)			Front (R)			Rear (L)			Rear (R)			Front (L)			Front (R)			Rear (L)			Rear (R)							
					Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen					
																																									Treatments: B - BLINDS T - OTHER	C - CURTAINS			
8	1213 Mohler Street	A(2)	5/A2.1	6/A2.1				[]					I	C	-	F	C	-					A	C	-	A	C	-	A	C	-														
	1215 Mohler Street	A(2)	2/A2.1	3/A2.1	[]								F	B	-	I	B	-	A	C	-				A	B	-	A	B/C	-															
	1217 Mohler Street	C(3)	5/A2.2	6/A2.2				[]					E	C	-	F	C	-	A	C	-	J	C	-	A	C	-	A	C	-	A	C	-	J	C	-	A	C	-	A	C	-			
	1219 Mohler Street	C(3)	2/A2.2	3/A2.2	[]								F	C	-	E	C	-	J	-	-	A	C	-	A	C	-	A	C	-	J	-	-	A	-	-	A	T	-	A	C	-			
	1221 Mohler Street	B(2)	11/A2.1	12/A2.1				[]					G	T	-	F	T	-	A	T	-	A	C	-	A	T	-	A	T	-															
	1223 Mohler Street	B(2)	8/A2.1	9/A2.1	[]								F	C	-	G	C	-	A	C	-	A	C	-	A	C	-	A	C	-	A	C	-												
	1225 Mohler Street	D(3)	11/A2.2	12/A2.2				[]					F	C	-	E	C	-	A	C	-	A	C	-	A	C	-	A	C	-	A	C	-	A	C	-	A	T	-	A	C	-			
9	1227 Mohler Street	D	10/A2.2	12/A2.2									F*	-	-	E*	-	-	[]				F*	-	-	A*	-	-	A*	-	-	A**	-	-	A	-	-	A	-	-	A	-	-	* plywood over window, ** broken glass	
	1229 Mohler Street	B	7/A2.1	9/A2.1									F	C	-	G	C	-	[]				F	T	-	A	C	-	A	C	-														
	1231 Mohler Street	B	10/A2.1	12/A2.1									G	C	-	F	C	-	F	C	-	[]			A	C	-	A	C	-															
	1233 Mohler Street	C	1/A2.2	3/A2.2									F	C	-	E*	C	-	J	-	-	[]			A	C	-	A	C	-	J	-	-	A	C	-	A	C	-	A	C	-	* Missing part of sill		
	1235 Mohler Street	C	4/A2.2	6/A2.2									E	C	-	F	C	-	[]				J	C	-	A	C	-	A	C	-	A	C	-	J	C	-	A	C	-	A	C	-		
	1237 Mohler Street	A	1/A2.1	3/A2.1									F	C	-	I	C	-				[]			A	C	-	A	C	-															
	1239 Mohler Street	A	4/A2.1	6/A2.1									I*	C	-	F	C	-	[]						A	C	-	A	C	-												* Missing part of sill near door			
10	1241 Mohler Street	A	4/A2.1	6/A2.1									I*	-	-	F*	-	-	[]						A	C	-	A	C	-													* plywood over window		
	1243 Mohler Street	A	1/A2.1	3/A2.1									F	-	√	I	-	√				[]			A	-	-	A	-	-															
	1245 Mohler Street	B	10/A2.1	12/A2.1									E	C	√	F	C	√	F	C	-	[]			A	C	-	A	C	-															
	1247 Mohler Street	B	7/A2.1	9/A2.1									F	C	√	E	C	√	[]				F	C	-	A	C	-	A	C	-														
	1249 Mohler Street	C	4/A2.2	6/A2.2									E	C	√	F	C	√	[]				J	C	-	A	C	-	A*	C	-	A	C	-	J	C	-	A	C	-	A	C	-	* cables at window	
	1251 Mohler Street	C	1/A2.2	3/A2.2									F	B	√	E	B	√	J	B	-	[]			A	B	-	A	B	-	J	C	-	A	C	-	A	B	-	A	B	-			
	1253 Mohler Street	B	10/A2.1	12/A2.1									G	B	√	F	B	√	F	B	-	[]			A	T	-	A	T	-															
	1255 Mohler Street	B	7/A2.1	9/A2.1									F	C	√	G	C	√	[]				F	C	-	A	C	-	A	C	-														
11	1294 Ferris Court	C	1/A2.2	3/A2.2									F	C	-	E	C	-	J	C	-	[]			A	C	-	A	C	-	A	C	-	A	C	-	A	C	-	A	-	-	A	-	-
	1296 Ferris Court	C	4/A2.2	6/A2.2									E	C	-	F	C	-	[]				J	B	-	A	C	-	A	B	-	A	C	-	A	C	-	A	C	-	A	C	-		
	1298 Ferris Court	B	7/A2.1	9/A2.1									F	C	-	G	-	-	[]				F	C	-	A	C	-	A	C	-														
	1300 Ferris Court	B	10/A2.1	12/A2.1									G	C	-	F	-	-	F	C	-	[]			A	-	-	A	T	-															
	1302 Ferris Court	D	7/A2.2	9/A2.2									E	C	-	F	C	-	F	B	-	[]			A	B	-	A	B	-	A	B	-	A	B	-	A	B	-	A	B	-			
13	1304 Ferris Court	D	10/A2.2	12/A2.2									F	C	-	E	C	-	[]				F	-	-	A*	C	-	A	C	-	A	C	-	A	C	-	A*	C	-	A*	C	-	* cables through window sill	
	1306 Ferris Court	B	7/A2.1	9/A2.1									F	C	-	G	C	-	[]				F	C	-	A	C	-	A	C	-														
	1308 Ferris Court	B	10/A2.1	12/A2.1									G	C	-	F	C	-	F	C	-	[]			A	C	-	A	C	-															
	1310 Ferris Court	AA2	1/A2.3	2/A2.3															[]				C	-	√	2A	-	-	2A	-	-														
	1312 Ferris Court	AA1	2/A2.3	-									D/A	C	√	A/D	C	√																											
	1314 Ferris Court	BB2	3/A2.3	4/A2.3															3C	C	√	[]						2A			2A														
	1316 Ferris Court	BB1	4/A2.3	-									[]						4A	C	√																								
14	1318 Ferris Court	D	10/A2.2	12/A2.2									F	C	-	E	C	√	[]				F	C	-	A	-	-	A	-	-	A	-	-	A	C	-	A	-	-	A	-	-	* cable through window	
	1320 Ferris Court	B	7/A2.1	9/A2.1									F	C	√	G	C	√	[]				F	C	-	A*	C	-	A*	C	-														
	1322 Ferris Court	B	10/A2.1	12/A2.1									G	C	√	F	C	√	F	C	-	[]			A	C	-	A	C	-															
	1324 Ferris Court	C	1/A2.2	3/A2.2									F	C	√	E	C	√	J	B	-	[]			A	C	-	A	C	-	J	B	-	A	C	-	A	C	-	A	C	-			
	1326 Ferris Court	C	4/A2.2	6/A2.2									E	C	√	F	C	√	[]				J**	-	-	A*	C	-	A*	C	-	A	c	-	J	c	-	A	C	-	A	C	-	* cable through window, ** plywood over win.	
	1328 Ferris Court	A	1/A2.1	3/A2.1									F	C	√	I	C	√	[]							A	C	-	A	C	-														
	1330 Ferris Court	A	4/A2.1	6/A2.1									I	C	√	F	C	√				[]				A	C	-	A	C	-														



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REVISIONS

DRAWN BY
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CHECKED BY
SBT

DATE ISSUED
Sept. 1, 2015

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Sept. 1, 2015

Existing Window Condition Schedule

Housing Authority of the City of Pittsburgh
Window Replacement at the Homewood North Community
10 Alberte Road
Pittsburgh, PA 15207

PROJECT NUMBER:

A7.2

Bldg No.	Address	Unit Type	Reference Elevations		First Level Windows												Second Level Windows												Third Level Windows												Notes	
			Front	Rear	Front (L)			Front (R)			Rear (L)			Rear (R)			Front (L)			Front (R)			Rear (L)			Rear (R)			Front (L)			Front (R)			Rear (L)			Rear (R)				
					Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen	Type	Treatment	S. Screen					
																																		Treatments: B - BLINDS C - CURTAINS T - OTHER								
15	1332 Ferris Court	BB2	5/A2.3	6/A2.3													3C	-	√	[]					2A*	C	-	2A*	C	-							* conduit along soffit					
	1334 Ferris Court	BB1	6/A2.3	-																																						
	1336 Ferris Court	C	1/A2.2	3/A2.2													J	C	-	[]					A	B	-	A	C	-	J	C	-	A	C	-						
	1338 Ferris Court	C	4/A2.2	6/A2.2																						A	C	-	A	C	-	J	C	-	A	C	-					
	1340 Ferris Court	BB2	5/A2.3	6/A2.3																																* conduit along soffit						
	1342 Ferris Court	BB1	6/A2.3	-																																* conduit along soffit						
	1344 Ferris Court	AA2	1/A2.3	2/A2.3																																* conduit along soffit						
	1346 Ferris Court	AA1	2/A2.3	-	4C	C	√	[]																																		
16	7505 Upland Street	A	3/A2.1	1/A2.1	I	C	-	F	C	-							A*	C	-	A*	C	-	[]														* A/C unit in window					
	7507 Upland Street	A	6/A2.1	4/A2.1	F	C	-	I	C	-							A	C	-	A	C	-																				
	7509 Upland Street	B	12/A2.1	10/A2.1	E	C	-	F	C	-							A	C	-	A*	C	-	[]				F	B	-								* Conduit above window					
	7511 Upland Street	B	9/A2.1	7/A2.1	F	B	-	E	B	-							A*	C	-	A*	B	-	F	B	-	[]										* Conduit above window						
	7513 Upland Street	C	6/A2.2	4/A2.2	E	C	-	F	C	-							A	C	-	A	C	-	[]				J*	-	-	A	-	-	A	C	-	A	-	-	J	-	-	* plywood over window
	7515 Upland Street	C	3/A2.2	1/A2.2	F	C	-	E	C	-							A	C	-	A	C	-	J	-	-	[]			A	B	-	A	C	-	J	-	-	A	-	-		
	7517 Upland Street	B	12/A2.1	10/A2.1	G	C	-	F	C	-							A	C	-	A	C	-	F*	B	-	[]												* Conduit above window				
	7519 Upland Street	B	9/A2.1	7/A2.1	F	B	-	G	B	-							A	B	-	A	B	-	[]				F*	C	-									* Conduit above window				
17	7335 Upton Street	D	9/A2.2	7/A2.2	E	-	-	F	-	-							A	-	-	A	-	-	F	-	-	[]			A	-	-	A	C	-	A	-	-	A	-	-		
	7337 Upton Street	B	12/A2.2	10/A2.2	G	B	-	F	-	-							A	C	-	A	C	-	F	C	-	[]																
	7339 Upton Street	B	9/A2.2	7/A2.2	F	C	-	G	C	-							A	T	-	A	C	-	[]				F	C	-													
	7341 Upton Street	C	6/A2.2	4/A2.2	E	C	-	F	B	-							A*	-	-	A	C	-	[]				J	-	-	A	T	-	A	C	-	A	C	-	J	C	-	* Broken window pane
	7343 Upton Street	C	3/A2.2	1/A2.2	F	C	-	E	C	-							A	C	-	A	C	-	J	C	-	[]			A	-	-	A	-	-	J	C	-	A	C	-		
18	7416 Stranahan St.	A	4/A2.1	6/A2.1	[]												A	C	-	A	C	-	A	C	-	A	C	-	A	C	-									* Cables around window		
	7418 Stranahan St.	A	1/A2.1	3/A2.1													A	C	-	A	C	-	A	C	-	A*	C	-											* Small solar panel by window			
	7420 Stranahan St.	A	4/A2.1	6/A2.1	[]												A	C	-	A	C	-	A	C	-	A	C	-	A	C	-											
	7422 Stranahan St.	A	1/A2.1	3/A2.1													A	C	-	A	C	-	A	C	-	A	C	-	A	C	-											
19	7400 Stranahan St.	A	4/A2.1	6/A2.1																						A	C	-	A	C	-											
	7402 Stranahan St.	A	1/A2.1	3/A2.1																						A	T	-	A	C	-											
	7404 Stranahan St.	B	10/A2.1	12/A2.1																						A	C	-	A	B	-									* plywood over window		
	7406 Stranahan St.	B	7/A2.1	9/A2.1																						F	C	-	A	C	-											
	7408 Stranahan St.	C	4/A2.2	6/A2.2																						J	-	-	A	C	-	A	C	-	A	-	-	A	C	-		
	7410 Stranahan St.	C	1/A2.2	3/A2.2																						F	C	-	E	C	-	J	C	-	[]							
	7412 Stranahan St.	B	10/A2.1	12/A2.1																						G	B	-	F	B	-	F	C	-	[]							
	7414 Stranahan St.	B	7/A2.1	9/A2.1																						F	C	-	G	C	-	[]										
20	7330 Stranahan St.	A	4/A2.1	6/A2.1																						A	-	-	A	-	-											
	7332 Stranahan St.	A	1/A2.1	3/A2.1																						[]			A	-	-	A	-	-								
	7334 Stranahan St.	B	10/A2.1	12/A2.1																						[]			A	B	-	A	C	-								
	7336 Stranahan St.	B	7/A2.1	9/A2.1																						F	C	-	E	C	-	[]										
	7338 Stranahan St.	C	4/A2.2	6/A2.2																						J	B	-	A	C	-	A	C	-	A	-	-	A	C	-		
	7340 Stranahan St.	C	1/A2.2	3/A2.2																						F	-	-	E	-	-	J	-	-	[]							
	7342 Stranahan St.	B	10/A2.1	12/A2.1																						G	C	-	F	C	-	F	C	-	[]							
	7344 Stranahan St.	B	7/A2.1	9/A2.1																						F	C	-	G	C	-	[]										



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