

SPECIFICATIONS
FOR
MODERNIZATION WORK
FOR
KITCHEN, WINDOW & SIDING REPLACEMENT
AT
CONNECTICUT AVENUE A&B
38 CONNECTICUT AVENUE
STAMFORD, CT

FOR

THE HOUSING AUTHORITY
OF THE CITY OF STAMFORD
DBA CHARTER OAK COMMUNITIES
22 CLINTON AVENUE
STAMFORD, CONNECTICUT 06901

VINCENT J. TUFO
NATALIE COARD

CHIEF EXECUTIVE OFFICER
EXECUTIVE DIRECTOR

CONSTRUCTION DOCUMENT SET

PREPARED BY



HIBBARD & ROSA ARCHITECTS, L.L.C.
100 RIVERVIEW CENTER
SUITE 272
MIDDLETOWN, CT. 06457

DATE: February 17, 2020

Project # 1919/1921

PROJECT MANUAL

PART I

ADVERTISEMENT AND BID DOCUMENTS

TABLE OF CONTENTS

1.	Title Page	1-1
2.	Table of Contents	1-4
3.	Schedule of Drawings	1-1

CONDITIONS OF BIDDING

1.	Advertisement for bid	1-1
2.	Instruction to Bidders, HUD Form 5369	1-5
3.	Representation, Certifications and Other Statements of Bidders HUD Form 5369A	1-4
4.	Non-Collusive Affidavit	1-2
5.	Bid Form	1-6
6.	Previous Participation Certificate, HUD Form 2530	1-4
7.	Section 3 Clause Plan and Statement of Compliance	1-1
8.	Bid Bond Form	1-2

CONDITIONS OF THE CONTRACT

1.	General Conditions, HUD Form 5370	1-19
2.	Supplementary Conditions of the Contract, HUD Form 2554	1-4
3.	Federal Labor Standards Provisions, HUD Form 4010	1-5
4.	Construction Contract Lump Sum, HUD Form 92442-CA	1-3
5.	Payment Bond, HUD Form 92452-A	1-2
6.	Performance Bond – Dual Oblige, HUD Form 92452	1-4
7.	Contractor's and/or Mortgagor's Cost Breakdown, HUD Form 2328	1-3
8.	Contractor's Requisition, HUD Form 92448	1-2
9.	Construction Progress Schedule, HUD Form 5372	1-2
10.	Schedule of Amounts of Contract Payments, HUD Form 51000	1-3
11.	Periodic Estimate for Partial Payment, HUD Form 51001	1-2
12.	Schedule of Change Orders, HUD Form 51002	1-1
13.	Schedule of Materials Stored, HUD Form 51003	1-1
14.	Request for Construction Changes on Project Mortgages, HUD Form 92437	1-2
15.	Prevailing Wage Rates	1-6

DIVISION 1 - GENERAL REQUIREMENTS:

01 00 00 –	General Requirements.....	1-12
01 22 00 –	Unit Prices	1-1
01 31 13 –	Coordination.....	1-2
01 31 19 –	Project Meetings.....	1-1
01 33 00 –	Submittals.....	1-5
01 45 00 –	Quality Control.....	1-2
01 50 00 –	Temporary Facilities and Controls.....	1-6
01 70 00 –	Closeout.	1-5

PART II

TECHNICAL SPECIFICATIONS

DIVISION 2 - EXISTING CONDITIONS:

02 41 14.13 –	Removal and Salvage of Construction Materials.....	1-4
---------------	--	-----

DIVISION 3 – CONCRETE :

03 41 23 –	Precast Concrete Stairs.....	1-5
------------	------------------------------	-----

DIVISION 4 – MASONRY – NOT UTILIZED

DIVISION 5 – METALS – NOT UTILIZED

DIVISION 6 – WOOD, PLASTICS AND COMPOSITES:

06 10 00 –	Rough Carpentry.....	1-4
06 46 00 –	Finish Carpentry.....	1-3

DIVISION 7 – THERMAL AND MOISTURE PROTECTION

07 25 00 –	Weather Barrier.....	1-5
07 46 46 –	Siding.....	1-7
07 92 13 –	Joint Sealers.....	1-6

DIVISION 8 – OPENINGS:

08 15 00 –	Molded Panel Doors.....	1-3
08 53 13 –	Vinyl Windows.....	1-4
08 71 00 –	Finish Hardware.....	1-4

DIVISION 9 – FINISHES

09 65 13 –	Resilient Base & Accessories.....	1-8
09 65 16 –	Resilient Flooring.....	1-9

09 91 13 – Interior Painting.....1-6

DIVISION 10 – SPECILATIES - NOT UTILIZED

DIVISION 11 – EQUIPMENT

11 35 13 – Residential Kitchen Appliances.....1-3

DIVISION 12 – FURNISHINGS

12-35-31 –Kitchen Casework.....1-8

12-36-61 –Simulated Stone Countertops.....1-7

DIVISION 13 – SPECIAL CONSTRUCTION - NOT UTILIZED

DIVISION 14 – CONVEYING SYSTEMS - NOT UTILIZED

DIVISION 21 – FIRE SUPPRESSION - NOT UTILIZED

DIVISION 22 – PLUMBING

22 00 00 – Plumbing systems.....1-11

DIVISION 23 – HEATING, VENTILATING AND AIR CONDITIONING
(HVAC)

23 00 00 – Mechanical systems.....1-9

DIVISION 25 – INTEGRATED AUTOMATION - NOT UTILIZED

DIVISION 26 – ELECTRICAL

26 00 00 – Electrical Material, Methods and Requirements.....1-7

26 01 12 – Temporary Electrical disconnects & reconnects.....1-2

DIVISION 27 – COMMUNICATIONS - NOT UTILIZED

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY –
NOT UTILIZED

DIVISION 31 – EARTHWORK - NOT UTILIZED

DIVISION 32 – EXTERIOR IMPROVEMENTS - NOT UTILIZED

DIVISION 33 – UTILITIES - NOT UTILIZED

DIVISION 34 – TRANSPORTATION - NOT UTILIZED

DIVISION 35 – WATERWAY AND MARINE CONSTRUCTION - NOT UTILIZED

DIVISION 40 – PROCESS INTEGRATION - NOT UTILIZED

DIVISION 41 – MATERIAL PROCESSING AND HANDLING EQUIPMENT - NOT UTILIZED

DIVISION 42 – PROCESS HEATING, COOLING AND DRYING EQUIPMENT - NOT UTILIZED

DIVISION 43 – PROCESS GAS AND LIQUID STORAGE HANDLING, PURIFICATION, AND STORAGE EQUIPMENT - NOT UTILIZED

DIVISION 44 – POLLUTION CONTROL EQUIPMENT - NOT UTILIZED

DIVISION 45 – INDUSTRY-SPECIFIC MANUFACTURING EQUIPMENT - NOT UTILIZED

DIVISION 46 – WATER AND WASTE WATER EQUIPMENT – NOT UTILIZED

DIVISION 48 – ELECTRICAL POWER GENERATION - NOT UTILIZED

End of Project Manual

SCHEDULE OF DRAWINGS

MODERNIZATION WORK FOR KITCHEN, WINDOW, & SIDING REPLACEMENT AT CONNECTICUT AVENUE A&B, 38 CONNECTICUT AVENUE, STAMFORD CT.

Architectural

T-1	Title Sheet
S-1	Schematic Site Plan
A-1	Existing / Demolition 1st Floor Plan Building A
A-2	Existing / Demolition 1st Floor Plan Building B
A-3	Proposed 1st Floor Plan Building A
A-4	Proposed 2nd Floor Plan Building A
A-5	Proposed 1st Floor Plan Building B
A-6	Proposed 2nd Floor Plan Building B
A-7	Typical Appliance & Cabinet Sections
A-8	Kitchen Details Units 1A & 2A
A-9	Kitchen Details Units 3A & 4A
A-10	Kitchen Details Unit 5A
A-11	Kitchen Details Units 1B & 2B
A-12	Kitchen Details Units 3B & 4B
A-13	Kitchen Details Unit 5B & 6B
A-14	Exterior Elevations Building A
A-15	Exterior Elevations Building A
A-16	Exterior Elevations Building B
A-17	Exterior Elevations Building B
A-18	Window Details & Schedules

MEP engineering

P001	Plumbing Symbols, Notes, & Specifications
P100	Plumbing Typical Building Unit Plans
P101	Connecticut Avenue Plumbing Partial Plans
ME001	Mechanical, Electrical Symbols, Notes, & Specifications
ME100	Mechanical, Electrical Typical Building Unit Plans
ME101	Connecticut Avenue Plumbing Partial Plans

ADVERTISEMENT FOR BID

Sealed bids will be received in triplicate by the Housing Authority of the City of Stamford d/b/a Charter Oak Communities for **MODERNIZATION WORK for KITCHEN, WINDOW, & SIDING REPLACEMENT at 38 CONNECTICUT AVE. A & B**, Stamford, CT., until **2:00 PM, 3-17- 2020** at its offices at 22 Clinton Ave., Stamford, CT., 06901, at which time and place all bids will be publicly opened and read aloud.

A satisfactory Bid Bond executed by the bidder and sureties in the amount equal to five percent (5%) of the total bid or a certified check equivalent to five percent (5%) of the total bid shall be submitted with each bid. The successful bidder will be required to furnish Performance and Payment Bonds in the full amount of the contract.

The Housing Authority is exempt from all Federal, State, and Municipal taxes. The Housing Authority of the City of Stamford reserves the right to reject any or all bids and to waive any informality in bids, when such action is deemed to be in the best interest of the Authority. All Bid Documents must be completely filled in when submitted. Bidders will note requirements of minimum wage rates, Section 3, nondiscrimination/equal opportunity rules (Executive Order 11246) and related provisions in the General Conditions.

Plans and Specifications are on file and can be obtained on/or after 02/19/2020 at the Housing Authority Office at 22 Clinton Ave., Stamford, CT 06901, 203-977-1400 x3322 upon depositing Fifty dollars (\$50.00) for each set obtained. Plans and Specifications are also available electronically by e-mail by contacting:

Carmelo Rosa
Hibbard & Rosa Architects
100 Riverview Center, Suite 272 – Middletown, CT – 06457
Tel: (860) 346-1809 (Ext. 702)
Carm@HRA.bz

Pre-bid inspection: The Housing Authority will conduct **a pre-bid inspection tour** of the work area **on Tuesday, 3-3- 2020, at 11:00 AM**. All parties will meet at 38 Connecticut Avenue, Stamford, CT. It is highly recommended that all prospective bidders attend.

No bid may be withdrawn for a period of ninety (90) days subsequent to the opening of bids without the consent of the Housing Authority of the City of Stamford. The Housing Authority is an equal opportunity employment contractor. Minority and women owned business enterprises are encouraged to participate.

HOUSING AUTHORITY OF THE CITY OF STAMFORD
d/b/a CHARTER OAK COMMUNITIES
NATALIE COARD
Executive Director

**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

Table of Contents

Clause	Page
1. Bid Preparation and Submission	1
2. Explanations and Interpretations to Prospective Bidders	1
3. Amendments to Invitations for Bids	1
4. Responsibility of Prospective Contractor	1
5. Late Submissions, Modifications, and Withdrawal of Bids	1
6. Bid Opening	2
7. Service of Protest	2
8. Contract Award	2
9. Bid Guarantee	3
10. Assurance of Completion	3
11. Preconstruction Conference	3
12. Indian Preference Requirements	3

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 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 [] 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.

**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

Table of Contents

Clause	Page
1. Certificate of Independent Price Determination	1
2. Contingent Fee Representation and Agreement	1
3. Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions	1
4. Organizational Conflicts of Interest Certification	2
5. Bidder's Certification of Eligibility	2
6. Minimum Bid Acceptance Period	2
7. Small, Minority, Women-Owned Business Concern Representation	2
8. Indian-Owned Economic Enterprise and Indian Organization Representation	2
9. Certification of Eligibility Under the Davis-Bacon Act	3
10. Certification of Nonsegregated Facilities	3
11. Clean Air and Water Certification	3
12. Previous Participation Certificate	3
13. Bidder's Signature	3

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)

NON-COLLUSIVE AFFIDAVIT

AFFIDAVIT
(Prime Bidder)

State of _____)

ss

County of _____)

_____, being first duly sworn,
deposes and says:

1. That he/she is a () Partner; () Officer; () Owner of the firm of:

the party making the foregoing proposal or bid;

2. He/she is fully informed respecting the preparation and contents of the attached proposal or bid and all circumstances regarding the same;
3. Said proposal or bid is genuine and is not a collusive or sham proposal or bid;
4. Neither the said bidder nor any of its officers, partners, owners, agents, representatives, employees, or parties-in-interest, including this affiant has in any way 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 or affiance or of any other bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any other bidder, or to secure any advantage against the Housing Authority of the City of Stamford or any person interested in the proposed contract.
5. The price or prices quoted in the attached proposal or bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of this Bidder or any of its agents, representatives, owners, employees, or parties-in-interest, including this affiant; and

6. All statements in said proposal or bid are true.

(Signed): _____

(Title): _____

Subscribed and sworn to before me

This _____ day of _____, 20____.

Notary Public

My Commission expires _____, 20____.

BID FORM

To: Mrs. Natalie Coard
Executive Director
Stamford Housing Authority
DBA Charter Oak Communities
22 Clinton Avenue
Stamford, CT 06901

Project: Modernization Work for Kitchen, Window, & Siding Replacement at
Connecticut Avenue A & B, 38 Connecticut Avenue Stamford, CT

Date: _____

Submitted by: _____
(full name)

(full address)

1. OFFER

Pursuant to and in compliance with the Invitation to Bid relating thereto, the Undersigned _____ having familiarized Himself/herself with the conditions present affecting the cost of the work, hereby proposes to furnish all labor, materials, equipment and services required for the Modernization Work for Kitchen, Window, & Siding Replacement at Connecticut Avenue A & B, 38 Connecticut Avenue Stamford, CT having carefully examined all documents (including Drawings and Specifications, Instructions to Bidders, Supplementary Instructions to Bidders, Bid Form, Non-Collusive Affidavit, Statement of Bidders Construction Experience, Previous participation Certificate, Representations, Certifications and Other Statements of Bidders, Contract Form, Notice to Proceed, Performance and payment Bond, or 20% cash escrow, or 25% irrevocable letter of credit, General Conditions, of the Contract for Construction, Supplemental General Conditions of the Contract, together with the Addenda issued and received prior to closing time for receipt of Bids as prepared by _____ hereby offers and Agrees as follows:

BASE BID:

To provide all materials, labor, and all else whatsoever necessary to erect and properly finish all work for the Kitchen, Window, & Siding Replacement Connecticut Avenue A & B, 38 Connecticut Avenue Stamford, CT after having carefully examined the work, in accordance with said Documents for the above mentioned project to the satisfaction of the Architect and Owner for the stipulated sum of:

_____ (\$ _____)

This amount shall be identified as the Base Bid

BID ALTERNATE #1:

UNIT PRICES

The Contractor shall quote in his Bid Proposal the following unit prices which may be as selected by the Owner.

	Unit	Added
1. Replace deteriorated wood studs	Ln. Ft.	_____
2. Replace deteriorated plywood sub floor	Sq. Ft.	_____
3. Replace deteriorated plywood sheathing	Sq. Ft.	_____

Enclosed herein is the Bid Guaranty (5% of the Base Bid minimum) which is in the form of:

() Bid Bond () Bank Draft () Certified Check () US Government Bonds

All State of Connecticut Taxes are excluded from this Bid.

Attached hereto is the Non-Collusive Affidavit, and Representations, Certifications and other Statement of Bidders.

The bidder represents that he () has () has not, participated in a previous contract or subcontract subject to the equal opportunity clause prescribed by Executive Orders 10925, 11114, 11246 or the Secretary of Labor; that he/she () has, () has not, filed all required compliance reports; and that the representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained prior to subcontract awards. (the above representations need not be submitted in conjunction with contracts or subcontracts which are exempt from this clause).

Certification of Non-segregated facilities: By signing this bid, the bidder certifies that he does not maintain or provide for his/her employees any segregated facilities at any of his/her establishments, and that he/she does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. He/she certifies further that he/she will not maintain or provide for his/her employees any segregated facilities at any of his/her establishments, and that he/she will not permit his/her employees to perform their services at any location, under his/her control, where segregated facilities are maintained. The bidder agrees that a breach of this certification is a violation of the Equal Opportunity clause in this contract. As used in this certification, the term "segregated facilities" 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 which 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. He/she further agrees that (except where he/she has obtained identical certifications from proposed subcontractors for specific time periods) he/she will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause; that he/she will retain such certifications in his files; and that he/she will forward a notice to his proposed subcontractors as provided in the instruction to bidders. The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

The project is Federally assisted. Therefore, bidders must comply with the following requirements: Housing and Urban Development Act of 1968; Equal Employment Opportunity provisions of Executive Order 11246; Non-Discrimination provisions of the Davis-Bacon Act and related acts and Contract Work Hours Standard Act; prevailing wage determinations as issued by the United States Department of Labor; and all applicable provisions under Title I of the Housing and Community Development Act of 1974.

The Contract award shall be made on available funds; the Housing Authority of the City of Stamford reserves the right to deduct work based on the availability of funds.

2. ACCEPTANCE

The offer shall be open to acceptance for ninety (90) days from the bid opening date. If this bid is accepted by the Owner within the time period stated above, the Undersigned will:

Execute the agreement within ten (10) days of receipt of acceptance of this BID.

Furnish required bond(s) within ten (10) days of receipt of acceptance of this BID.

Commence work within seven (7) days after written Notice to Proceed.

If this Bid is accepted within the time stated, and the Undersigned fails to provide the required Bond(s), the Owner may charge against the Undersigned the difference between

the amount of this bid and the amount for which a contract for the work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the bid guaranty.

In the event the bid is not accepted within the time stated above, the required security deposit shall be returned to the Undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

3. CONTRACT TIME

If this bid is accepted, the undersigned will complete all the work of the contract in one-hundred-twenty (120) days from the Notice to Proceed. It is additionally understood that liquidated damages in the amount of \$100.00 per day, will be assessed for the failure to complete the project within the above time period as described in the General Conditions.

4 CHANGES TO THE WORK

Equitable changes adjustments for changes in the work will be net cost plus a percentage fee in accordance with HUD General Conditions (See Paragraph 29).

5 ADDENDA

Receipt of the following Addenda is hereto acknowledged. The modifications to the Bid Documents noted herein have been considered and all costs thereto are included in the Base Bid

Addendum	Signature	Date
No. 1	_____	_____
No. 2	_____	_____
No. 3	_____	_____
No. 4	_____	_____

6 SUBCONTRACTORS

The following work will be performed (or provided) by the following Subcontractors listed and coordinated by the undersigned (list all Subcontractors for all work,)

SECTION OF WORK	NAME
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

7 BID FORM SIGNATURES

The Corporate Seal

(Bidder-please print full name of your Corporation, Proprietorship or Partnership)

Was hereunto affixed in the presence of:

(Authorized signing officer) (Title)

(Seal)

(Authorized signing officer) (Title)

If the Bid is a joint venture or partnership, add additional forms of execution for each member of the joint venture in the appropriate form or forms as above.

End of Bid Form

WUFGrcetvo gpvqhJ qwłpi cpf Włdcp F gxgnro gpv
Office of Housing/Federal Housing Commissioner

WUFGrcetvo gpvqhCi tlewwwt g
Farmers Home Administration

Rctv Kw dg eqo rıgvf d{ Rtlpekr cm qhO wnlkco kř Rtqlgevu (See instructions)		Hqt J WF J S Hb J C wug qprř	
Reason for submission: 30 Agency name and City where the application is filed		4. Project Name, Project Number, City and Zip Code	
5. Loan or Contract amount \$	6. Number of Units or Beds	7. Section of Act	8. Type of Project (check one) <input type="checkbox"/> Existing <input type="checkbox"/> Rehabilitation <input type="checkbox"/> Proposed (New)

90Nłwcmrtqr qvřf Rtlpekr cm ecpf ewej qti eplř evkp ej ctv hqt cm qti eplř evkp

Name and address of Principals and Affiliates (Name: Last, First, Middle Initial) proposing to participate	: Tqq qh Gcej Rtlpekr cnlp Rtqlgev	; 0Gzrgevř ' Qy pgt uj lr lp Rtqlgev	320UP qt KřUGo rıřř gt Pwo dgt

Certifications: The principal(s) listed above hereby apply to HUD or USDA FmHA, as the case maybe, for approval to participate as principal(s) in the role(s) and project listed above. The principal(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. **Y ct plpi** <HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. The principal(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 principal(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 principals 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 principals or their projects;
 - There has not been a suspension or termination of payments under any HUD assistance contract due to the principal's fault or negligence;
 - The principals 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 principals 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 principals 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 principals who propose to participate in this project are listed above.
- None of the principals 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 principals 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 principals 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 principals or affiliates 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 principals 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 principal(s) cannot certify have been deleted by striking through the words with a pen, and the relevant principal(s) have initialed each deletion (if any) and have attached a true and accurate signed statement (if applicable) to explain the facts and circumstances.

Pco g qh Rtlpekr cn	Uli pcwrt g qh Rtlpekr cn	Egt vřlec vqp Fcvř*o o řř ř {{{	Ctgc Eqf g cpf Vgř0Pq0
Vj kłřto rtgrctřf d{ řřtlpvpcog+		Ctgc Eqf g cpf Vgř0Pq0	

Previous Participation Certification

OMB Approval No. 2502-0118
(Exp. 02/29/2016)

Uej gf wng C< Nkuvqh Rt gxlqwu Rt qlgevu cpf Ugevlqp : Eqpvt cevu0 Below is a complete list of the principals' previous participation projects and participation history in multifamily Housing programs of HUD/FmHA, State and local Housing Finance Agencies. **Pqvg<** 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, "**P q r t g x l q w u r c t v l e k r c v l q p . H l t u v G z r g t l g p e g ö .**"

1. Principals Name (Last, First)	2. List of previous projects (Project name, project ID and, Govt. agency involved)	3. List Principals' 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 [g u P q K { g u g z r r e l p		6. Last MOR rating and Physical Insp. Score and date

Rct v H Hqt J WF Kpvt pcnRt qegulpi Qprf

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		
Supervisor	Director of Housing/Director, Multifamily Division	Approved <input type="checkbox"/> Yes <input type="checkbox"/> No	Date (mm/dd/yyyy)

Ípwt wevkpu hqt Ego rígvípi vj g Ríxkqwu Retvlekrvklp Egt vllcevg. hqt o J WF/4752

Carefully read these instructions and the applicable regulations. A copy of those regulations published at 24 C.F.R. 200.210 to 200.245 can be obtained from the Multifamily Housing Representative 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.

Ectghwí tgcí vj g egt vllcevg dghgt g (q w uí p k)

Any questions regarding the form or how to complete it can be answered by your HUD Office Multifamily Housing Representative.

Rwt r qug< This form provides HUD with a certified report of all previous participation in HUD multifamily housing projects 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 principal 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.

Y j q O wu Uí p cpf Hlg Hqt o J WF/4752<

Form HUD-2530 must be completed and signed by all principals applying to participate in HUD multifamily housing projects, including those who have no previous participation. The form must be signed and filed by all principals and their affiliates who propose participating in the HUD project. Use a separate form for each role in the project unless there is an identity of interest.

Principals include all individuals, joint ventures,

partnerships, corporations, trusts, non-profit organizations, any other public or private entity that will participate in the proposed project as a sponsor, owner, prime contractor, turnkey developer, managing agent, nursing home administrator or operator, packager, or consultant. Architects and attorneys who have any interest in the project other than an arm's length fee arrangement for professional services are also considered principals by HUD.

In the case of partnerships, all general partners regardless of their percentage interest and limited partners having a 25 percent or more interest in the partnership are considered principals. In the case of public or private corporations or governmental entities, principals include the president, vice president, secretary, treasurer and all other executive officers who are directly responsible to the board of directors, or any equivalent governing body, as well as all directors and each stockholder having a 10 percent or more interest in the corporation.

Affiliates are defined as any person or business concern that directly or indirectly controls the policy of a principal or has the power to do so. A holding or parent corporation would be an example of an affiliate if one of its subsidiaries is a principal.

Gzevrklp hqt Eqtrqtevkpu – All principals and affiliates must personally sign the certificate except in the following situation. When a corporation is a principal, all of its officers, directors, trustees and stockholders with 10 percent or more of the common (voting) stock need not sign personally if they all have the same record to report. The officer who is authorized to sign for the corporation or agency will list the names and title of those who elect not to sign. However, any person who has a record of participation in HUD projects that is separate from that of his or her organization must report that activity on this form and sign his or her name. The objective is **hmd**disclosure.

Gzgo r vkpu ó The names of the following parties do not need to be listed on form HUD-2530: Public Housing Agencies, tenants, owners of less than five condominium or cooperative units and all others whose interests were acquired by inheritance or court order.

Y j gt g cpf Y j gp Hqt o J WF/4752 O wu Dg

Hlgf <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, or when otherwise required in the situations listed below:

- Projects to be financed with mortgages insured under the National Housing Act (FHA).

- Projects to be financed according to Section 202 of the Housing Act of 1959 (Elderly and Handicapped).
- Projects in which 20 percent or more of the units are to receive a subsidy as described in 24 C.F.R. 200.213.
- Purchase of a project subject to a mortgage insured or held by the Secretary of HUD.
- Purchase of a Secretary-owned project.
- Proposed substitution or addition of a principal or principal participation in a different capacity from that previously approved for the same project.
- Proposed acquisition by an existing limited partner of an additional interest in a project resulting in a total interest of 25 percent or more or proposed acquisition by a corporate stockholder of an additional interest in a project resulting in a total interest of 10 percent or more.
- Projects with U.S.D.A., Farmers Home Administration, or with state or local government housing finance agencies that include rental assistance under Section 8 of the Housing Act of 1937. For projects of this type, form HUD-2530 should be filed with the appropriate applications directly to those agencies.

Tgxly qh Cf xgt ug Fvgto lpcvkp< 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 by the HUD Review Committee. Alternatively, you may request a hearing before a Hearing Officer. Either request must be made in writing within 30 days from your receipt of the notice of determination.

If you do request reconsideration by the Review Committee and the reconsideration results in an adverse determination, you may then request a hearing before a Hearing Officer. The Hearing Officer will issue a report to the Review Committee. You will be notified of the final ruling by certified mail.

Ur ge lte Nlpg Ípwt wevkpu<

Tgeupp hqt uwo kvlpi this Certification: e.g., refinance, change in ownership, change in management agent, transfer of physical assets, etc.

Dmjem3< Fill in the name of the agency to which you are applying. For example: HUD Office, Farmers Home Administration District office, or the name of a State or local housing finance agency. Below that, fill in the name of the city where the office is located.

Dmjem 4< Fill in the name of the project, such as "Greenwood Apts." If the name has not yet been selected, write "Name unknown." Below that, enter the HUD contract or project identification number, the Farmers Home Administration project number, or

the State or local housing finance agency project or contract number. Include **cm** project or contract identification numbers that are relevant to the project. Also enter the name of the city in which the project is located, and the ZIP Code.

Dmjem 5< Fill in the dollar amount requested in the proposed mortgage, or the annual amount of rental assistance requested.

Dmjem 6< Fill in the number of apartment units proposed, such as "40 units." For hospital projects or nursing homes, fill in the number of beds proposed, such as "100 beds."

Dmjem 7< Fill in the section of the Housing Act under which the application is filed.

Dmjem 9< Definitions of all those who are considered principals and affiliates are given above in the section titled "Who Must Sign and File...."

Dmjem: < Beside the name of each principal, fill in the appropriate role. The following are examples of possible roles that the principals may assume: Owner/Mortgagor, Managing Agent, Sponsor, Developer, General Con-tractor, Packager, Consultant, Nursing Home Administrator etc.

Dmjem; < Fill in the percentage of ownership in the proposed project that each principal is expected to have.

Dmjem 32< Fill in the Social Security Number or IRS employer number of every principal listed, including affiliates.

Ípwt wevkpu hqt Ego rígvípi Uej gf wng C<

Be sure that Schedule A is filled-in completely, accurately and the certification is properly dated and signed, because it will serve as a legal record of your previous experience. All Multifamily Housing projects involving HUD/ FmHA, and State and local Housing Finance Agencies in which you have previously participated **o wu d g** listed. Applicants are reminded that previous participation pertains to the individual principal within an entity as well as the entity itself. A newly formed company may not have previous participation, but the principals within the company may have had extensive participation and disclosure of that activity is required.

E qno p 40 *All previous projects must be listed or your certification cannot be processed.* Include the name of all projects, project number, city where it is located and the governmental agency (HUD, USDA-FmHA or state or local housing finance agency) that was involved.

E qno p 50 List the role(s) as a principal, dates participated and if fee or identity of interest (IOI) with owners.

Equo p 60 Indicate the current status of the loan. Except for current loan, the date associated with the status is required. Loans under a workout arrangement are considered assigned. For all noncurrent loans, an explanation of the status is required.

Equo p 70 Explain any project defaults during your participation.

Equo p 80 Provide the latest Management Review (MOR) rating and Physical Inspection score.

Egtvllcvtqp After you have completed all other parts of

form HUD-2530, including schedule A, read the Certification carefully. In the box below the statement of the certification, fill in the names of all principals and affiliates as listed in block 7. Each principal should sign the certification with the exception in some cases of individuals associated with a corporation (see "Exception for Corporations" in the section of the instructions titled "Who Must Sign and File Form HUD-2530). Principal who is signing on behalf of the entity should attach signature authority document. Each principal who signs the form

should fill in the date of the signature and a telephone number. By providing a telephone number, HUD can reach you in the event of any questions.

If you cannot certify and sign the certification as it is printed because some statements do not correctly describe your record, use a pen to strike through those parts that differ with your record, and then sign and certify.

Attach a signed statement of explanation of the items you have struck out on the certification. Item 2e. relates to felony

convictions within the past 10 years. If you are convicted of a felony within the past 10 years, strike out 2e. and attach statement of explanation. A felony conviction will not necessarily cause your participation to be disapproved unless there is a criminal record or other evidence that your previous conduct or method of doing business has been such that your participation in the project would make it an unacceptable risk from the underwriting stand point of an insurer, lender or governmental agency.

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 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 principal may not participate in a proposed or existing multifamily project. HUD uses this information to evaluate whether or not principals pose an unsatisfactory underwriting risk. The information is used to evaluate the potential principals and approve only individuals and organizations that will honor their legal, financial and contractual obligations.

Rtlxce{ CevUcvgp gp 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.

Rwdnle tgrqtvpi dwtf gp 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.

SECTION 3 CLAUSE

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 by 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 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).

BID BOND FORM

Bond No. _____

KNOW ALL MEN BY THESE PRESENTS, that we _____
(Contractor Name)

As Principal, hereinafter called the Principal,

and _____
(Bonding Company)

a corporation organized and existing under the laws of the State of _____ as
surety, herein after called the surety, are held and firmly bound unto The Housing Authority of the
City of Stamford (HA) for the sum of _____ Dollars (\$ _____),
for payment of which sum well and truly to be made, the said Principal and the said surety bind
ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly
by these presents.

WHEREAS, the Principal has submitted a bid for _____
at _____.

NOW, THERFORE, if the Housing Authority shall accept the bid of the Principal and the Principal
shall enter into a contract with the Housing Authority in accordance with the terms of such bid, and
give such bond or bonds as may be specified in the bidding or contract documents with good and
sufficient surety for the faithful performance of such contract and for the prompt payment of labor
ad material furnish in the prosecution thereof, or in the event of the failure of the Principal to enter
such Contract and give such bond or bonds, if the principal shall pay to the Housing Authority the
difference not to exceed the penalty hereof between the amount specified in said bid and such
larger amount for which the Housing Authority may in good faith contract with another party to
perform the work covered by said bid or in appropriate required amount as specified in the
Invitation for Bids then this obligation shall be null and void, otherwise to remain in full force and
effect.

Signed and sealed this _____ day of _____ 20____.

(Principal)

(Seal)

(Witness)

(Title)

(Witness)

(Bonding Company)

By, _____

(Attorney-in-Fact)

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. 1/31/2014)

Applicability. This form is applicable to any construction/development contract greater than \$100,000.

This form includes those clauses required by OMB's common rule on grantee procurement, implemented at HUD in 24 CFR 85.36, 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.

Table of Contents

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
4.	Other Contracts	3	27.	Payments	9
Construction Requirements			28.	Contract Modifications	10
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 Damages	12
10.	As-Built Drawings	5	34.	Termination of Convenience	12
11.	Material and Workmanship	5	35.	Assignment of Contract	12
12.	Permits and Codes	5	36.	Insurance	12
13.	Health, Safety, and Accident Prevention	6	37.	Subcontracts	13
14.	Temporary Buildings and Transportation Materials	6	38.	Subcontracting with Small and Minority Firms, Women's Business Enterprise, and Labor Surplus Area Firms	13
15.	Availability and Use of Utility Services	6	39.	Equal Employment Opportunity	13
16.	Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements	6	40.	Employment, Training, and Contracting Opportunities for Low-Income Persons, Section 3 of the Housing and Urban Development Act of 1968	14
17.	Temporary Buildings and Transportation Materials	7	41.	Interest of Members of Congress	15
18.	Clean Air and Water	7	42.	Interest of Members, Officers, or Employees and Former Members, Officers, or Employees	15
19.	Energy Efficiency	7	43.	Limitations on Payments Made to Influence	15
20.	Inspection and Acceptance of Construction	7	44.	Royalties and Patents	15
21.	Use and Possession Prior to Completion	8	45.	Examination and Retention of Contractor's Records	15
22.	Warranty of Title	8	46.	Labor Standards-Davis-Bacon and Related Acts	15
23.	Warranty of Construction	8	47.	Non-Federal Prevailing Wage Rates	19
24.	Prohibition Against Liens	9	48.	Procurement of Recovered Materials	19

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 words 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.

- (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

The Contractor shall complete all work required under this contract within _____ 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 breakdown of the contract price. Such estimates shall be submitted not later than _____ 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 no wise 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 \$_____ [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 \$_____ [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 \$_____ [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 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.

Supplementary Conditions of the Contract for Construction

U.S. Department of Housing
and Urban Development
Office of Housing
Federal Housing Commissioner

OMB Approval No. 2502-0470
(Expires 12/31/2016)

Public reporting burden for this collection of information is estimated to average 30 minutes 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 information is required to obtain benefits and voluntary. HUD may not collect this information, and you are not required to complete this form, unless it displays a currently valid OMB control number.

This information collection is necessary to ensure that viable projects are developed. It is important to obtain information from applicants to assist HUD in determining if nonprofit organizations initially funded continue to have the financial and administrative capacity needed to develop a project and that the project design meets the needs of the residents. The Department will use this information to set forth the obligations of the contractor or subcontractor performing under the covered contract. This information is required in order to obtain benefits. This information is considered non-sensitive and no assurance of confidentiality is provided.

Article 1 – Labor Standards

Instructions

Whenever only FHA mortgage insurance is involved, use paragraph (A) and (C) of Article 1 – Labor Standards. Whenever any direct form of assistance (Section 8, Section 202/811 Capital Advance, grants etc.) is involved, use paragraphs (A) and (B) and (C) of Article 1 – Labor Standards.

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted or insured by the United States of America and the following Federal Labor Standards Provisions are included in this Contract or related instrument pursuant to the provisions applicable to such Federal assistance or insurance.

A. 1. (i) Minimum Wages. All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), 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 particular 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 on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 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 Part 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.

(ii) (a) Any class of laborers or mechanics 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 therefore only when the following criteria have been met:

(1) The work to be performed by the classification

requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) 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, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 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. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) 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 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. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs A.1.(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(ii) 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.

(iv) 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. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. 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 on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 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, sponsor, applicant, or owner, 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. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) Payrolls and basic records. 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 at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, 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 any 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. (Approved by the Office of Management and budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, 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 29 CFR Part 5.5(a)(3)(i). This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime 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 1215-0149.)

(b) 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:

- (1)** That the payroll for the payroll period contains the information required to be maintained under 29 CFR Part 5.5(a)(3)(i) and that such information is correct and complete;
- (2)** 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;

(3) 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.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph A.3.(ii)(b) of this section.

(d) 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 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph A.3.(i) of this section available for inspection, copying, or transcription by authorized representatives of HUD or its designee 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, sponsor, applicant, or owner, 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 Part 5.12.

4. (i) Apprentices and Trainees. 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, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, 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 the Bureau of Apprenticeship and Training 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 above, 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 journeymen 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 determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau

of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, 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.

(ii) 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's 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 on 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 on 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 on 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 on 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.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act Requirements. The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor will insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as HUD or its designee may be appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.

7. Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. 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.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract 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 HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) Certification of Eligibility. By entering into this contract the contractor certifies 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 Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1010, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration . . . makes, utters or publishes any statement, knowing the same to be false . . . shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

B. 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 shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty 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 forty hours in such workweek.

2. Violation; liability for unpaid wages, liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefore 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 clause set forth in subparagraph (1) of this paragraph, 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 forty hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

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 other 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 clause set forth in subparagraph (2) of this paragraph.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. The Contractor will be required to execute FHA Form No. 2403-A, Contractor's Prevailing Wage Certificate, as a condition precedent to insurance by the Federal Housing Administration of that certain mortgage loan, or an advance thereof, made or to be made by the mortgagee in connection with the construction of the project.

Article 2 – Equal Employment Opportunity

The applicant hereby agrees that it will incorporate or cause to be

incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, the following equal opportunity clause:

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

A. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training including apprenticeship. The Contractor agrees to post in conspicuous places available to employees and applicants for employment notices to be provided setting forth the provisions of this nondiscrimination clause.

B. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

C. The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding a notice to be provided advising the said labor union or workers representatives of the Contractor's commitments hereunder, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

D. The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965 and of the rules, regulations, and relevant orders of the Secretary of Labor.

E. The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will 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.

F. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, 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 in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulations or order of the Secretary of Labor, or as otherwise provided by law.

G. The Contractor will include the portion of the sentence immediately preceding paragraph A and the provisions of paragraphs A through G in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will 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, however,* that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Secretary of Housing and Urban Development or the Secretary of Labor, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

H. The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work:

Provided, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

I. The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

J. The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

Article 3 – Equal Opportunity for Businesses and Lower Income Persons Located Within the Project Area

(Applicable to Section 236 projects, where the estimated replacement cost of the project as determined by the Secretary of Housing and Urban Development exceeds \$500,000, and to all projects, including Section 236 regardless of estimated replacement cost, receiving rent supplement assistance under Title I, Section 101 of the Housing and Urban Development Act of 1965.)

A. The work to be performed under this contract is on a project assisted under a program providing direct Federal financial assistance from the Department of Housing and Urban Development and 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 requires that to the greatest extent feasible opportunities for training and employment be given lower income residents of the unit of local government or the metropolitan area (or nonmetropolitan county) as determined by the Secretary of Housing and Urban Development in which the projects located and contracts for work in connection with the project be awarded to business concerns which are located in, or owned in substantial part by persons residing in the same metropolitan area (or nonmetropolitan county) as the project.

Article 4 – Health and Safety

A. No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

B. The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 (formerly part 1518) and 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).

C. The Contractor shall include the provisions of this Article in every subcontract so that such provisions will be binding on each subcontractor. The Contractor shall take such action with respect to any subcontract as the Secretary of Housing and Urban Development of the Secretary of Labor shall direct as a means of enforcing such provisions.

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A. 1. (i) Minimum Wages. All laborers and mechanics employed or working upon the site of the work, 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 I(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 particular 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 on 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.

(ii) (a) Any class of laborers or mechanics 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 the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) 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, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 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. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) 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 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. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) 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.

(iv) 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. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. 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 on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, 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. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. 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 any 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. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, 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 29 CFR 5.5(a)(3)(i) except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(b) 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:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5 (a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;

(2) 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;

(3) 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.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A.3.(ii)(b).

(d) 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 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee 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, sponsor, applicant or owner, 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.

4. Apprentices and Trainees.

(i) **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 Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, 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 the Office of Apprenticeship Training, Employer and Labor Services 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 above, 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 journeymen 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 determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, 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.

(ii) **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 on 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 on 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 on the wage determination for the 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 on 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.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract

6. Subcontracts. The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 in this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

7. Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. 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

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract 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 HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) Certification of Eligibility. 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 Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be

awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1 01 0, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration..... makes, utters or publishes any statement knowing the same to be false..... shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable where the amount of the prime contract exceeds \$100,000. 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 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 clause set forth in subparagraph (1) of this paragraph, 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 clause set forth in subparagraph (1) of this paragraph, 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 the clause set forth in subparagraph (1) of this paragraph.

(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 other Federal contract with the same prime contract, 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 clause set forth in subparagraph (2) of this paragraph.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. Health and Safety. The provisions of this paragraph C are applicable where the amount of the prime contract exceeds \$100,000.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and 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 USC 3701 et seq.

(3) The contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

Capital Advance Program
Construction Contract
Lump Sum

U.S. Department of Housing and Urban Development
Office of Housing
Federal Housing Commissioner

OMB Approval No. 2502-0011
(exp. 9/30/2013)

For use under Section 202 of the Housing Act of 1959
or Section 811 of the National Affordable Housing Act)

Public reporting burden for this collection of information is estimated to average 16 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.

The Department of Housing and Urban Development (HUD) is authorized to collect this information by provisions set forth in Article 1.E of the National Housing Act (Public Law 479, 48 Stat. 1246, 12 U.S.C., 1701 et. seq.).

Privacy Act Notice. The United States Department of Housing and Urban Development, Federal Housing Administration, is authorized to solicit the information requested in this form by virtue of Title 12, United States Code, Section 1701 et seq., and regulations promulgated thereunder at Title 12, Code of Federal Regulations.

This Agreement, made the _____ day of _____, 20____, between _____

_____ (hereinafter called the "Contractor") and

_____ (hereinafter called the "Owner").

Witnesseth, that the Contractor and the Owner, for the consideration hereinafter set out, agree as follows:

Article 1 - Scope of Contract

A. The Contract between the parties is set forth in the "Contract Documents" which consists of this Agreement, the Drawings and Specifications, together with any addenda thereto, the current edition of AIA Document A201, "General Conditions of the Contract for Construction," except all paragraphs concerning arbitration, and Form HUD 2554, "Supplementary Conditions of the Contract for Construction."

B. The Contractor shall furnish all of the materials and perform all of the work (within the property lines) shown on, and in accordance with, the Drawings and Specifications entitled _____

_____ ,

HUD Project No. _____, dated _____.

C. The Drawings, which are numbered _____, and the Specifications, the pages of which are numbered _____,

and addenda numbered _____, have been prepared by _____, ("Design Architect").

The Architect administering the Construction Contract (hereinafter, and elsewhere in the Contract Documents, referred to as the "Architect") is _____

D. A master set of said Drawings and Specifications, identified by the parties hereto and by the Design Architect, the Architect, and the

Contractor's Surety or Guarantor have been placed on file with the Department of Housing and Urban Development ("HUD"), and shall govern in all matters which arise with respect to such Drawings and Specifications.

E. Changes in the Drawings and Specifications or any terms of the Contract Documents, or orders for extra work, or changes by altering or adding to the work, or which will change the design concept, may be affected only with the prior written approval of HUD under such conditions as HUD may establish.

Article 2 - Time

A. The work to be performed under this Contract shall be commenced within _____ days of this Agreement, and shall be completed by _____, 20____. The time by which the work shall be completed may be extended in accordance with the terms of the said AIA General Conditions only with the prior written approval of HUD.

B. The Contractor shall correct any defects due to faulty materials or workmanship which appear within one year from the date of final completion.

C. If the work is not brought to final completion in accordance with the Drawings and Specifications, including any authorized changes, by the date specified above, or by such date to which the contract time may be extended, the sum stated in Article 3A below shall be reduced by the actual cost of taxes and insurance, as approved by HUD, for the period from the scheduled date of completion through the date construction was actually completed, shall be determined. This cost shall be reduced by an amount equal to the project's net operating income (as determined by HUD) for the period upon which the aforementioned actual costs are based.

D. The Owner and Contractor may amend this contract prior to initial endorsement, in a form prescribed by the Commissioner, to provide for an incentive payment to the Contractor, which will result in an increase in the contract sum stated in Article 3A below, if the work is completed before the date specified in this contract. The Contractor will not be entitled to any incentive payment resulting

from early completion if HUD determines that the Contractor's cost certification, if required by Article 7, is fraudulent or materially misrepresents the Contractor's actual cost of construction.

E. The date of final completion shall be the date the HUD representative signs the final HUD Representative's Trip Report provided that the trip report is subsequently endorsed by the Chief Architect.

Article 3 – Contract Sum and Payments

A. The Owner shall pay the Contractor for the performance of the Contract, as hereinafter provided, the sum of \$ _____

B. Each month after the commencement of work hereunder, the Contractor shall make a monthly request on Form HUD 92448 for payment by the Owner for work done during the preceding month. Each request for payment shall be filed at least _____ days before the date payment is desired. Subject to the approval of HUD, the Contractor shall be entitled to payment thereon in an amount equal to (1) the total value of classes of the work acceptably complete; plus (2) the value of materials and equipment not incorporated in the work, but delivered to and suitably stored at the site; plus (3) the value of components stored off-site in compliance with applicable HUD requirements less (4) 10 percent holdback and less prior payments. The "values" of (1), (2) and (3) shall be computed in accordance with the amounts assigned to classes of the work in the "Contractor's and/or Mortgager's Cost Breakdown," attached hereto as Exhibit "A". The Contractor agrees that no materials or equipment required by the Specifications will be purchased under a conditional sale contract or with the use of any security agreement or the vendor's title or lien retention instrument.

C. The balance due the Contractor hereunder shall be payable upon the expiration of 30 days after the work hereunder is fully complete, provided the following have occurred:

(1) All work hereunder requiring inspection by municipal or other governmental authorities having jurisdiction has been inspected and approved by such authorities and by the rating or inspection organization, bureau, association or office having jurisdiction;

(2) All certificates of occupancy, or other approvals, with respect to all units of the project have been issued by State or local governmental authorities having jurisdiction; and

(3) Permission(s) To Occupy (Form HUD-92485) for all units of the project have been issued by HUD.

D. With its final application for payment by the Owner, the Contractor shall disclose, on a form prescribed by HUD, all unpaid obligations contracted in connection with the work performed under this Contract. The Contractor agrees that, within 15 days following receipt of final payment, it will pay such obligations in cash and furnish satisfactory evidence of such payment to the Owner.

Article 4 – Receipts and Releases of Liens

The Owner may require the Contractor to attach to each request for payment its acknowledgement of payment and all subcontractors' and material supplier's acknowledgements of payment for work done and materials, equipment and fixtures furnished through the date covered by the previous payment. Concurrently with the final payment, the Owner may require the Contractor to obtain similar waivers or releases from all subcontractors and material suppliers.

Article 5 – Requirements of Contractor

A. The Contractor shall furnish, at its own expense, all building and

other permits, licenses, tools, equipment and temporary structures necessary for the construction of the project. The Contractor shall give all required notices and shall comply with all applicable codes, laws, ordinances, rules and regulations, and protective covenants, and with the current regulations of the National Board of Fire Underwriters, wherever applicable. The Contractor further shall comply with the provisions of the Occupational Safety and Health Act of 1970. The Contractor shall immediately notify HUD of the delivery of all permits, licenses, certificates of inspection, certificates of occupancy, and any other such certificates and instruments required by law, regardless of to whom issued, and shall cause them to be displayed to HUD upon request.

B. If the Contractor observes that the Drawings and Specifications are at variance with any applicable codes, laws, ordinances, rules or regulations, or protective covenants, it shall promptly notify the Architect in writing, and any necessary changes shall be made as provided in this Contract for changes in the Drawings and Specifications. If the Contractor performs any work knowing it to be contrary to such codes, laws, ordinances, rules or regulations, or protective covenants, without giving such notice to the Architect, it shall bear all cost arising therefrom.

C. Upon completion of construction, the Contractor shall furnish to the Owner a survey showing the location on the site of all improvements constructed thereon, and showing the location of all water, sewer, gas and electric lines and mains, and of all existing utility easements. Such survey shall be prepared by a licensed surveyor who shall certify that the work is installed and erected entirely upon the land covered by the mortgage and within any building restriction lines on said land, and does not overhang or otherwise encroach upon any easement or right-of-way of others. In addition, the Contractor shall furnish additional surveys when required by the Owner for any improvements, including structures and utilities, not theretofore located on a survey. The Contractor shall furnish copies of such survey required hereunder for HUD.

D. The Contractor shall assume full responsibility for the maintenance of all landscaping which may be required by the Drawings and Specifications until such time as both parties to this Contract shall receive written notice from HUD that such landscaping has been finally completed. The Owner hereby agrees to make available to the Contractor, for such purpose, without cost to the latter, such facilities as water, hose and sprinkler.

Article 6 – Assurance of Completion

The Contractor shall furnish to the Owner assurance of completion of the work in the form of (specify) _____

Such assurance of completion shall run to the Owner and HUD as obligees.

Article 7 – Cost Certification

An identity of interest between the Owner and the Contractor is prohibited. In the event HUD determines that there is an identity of interest between the Owner and the Contractor, the Contractor shall certify on a form prescribed by HUD, its cost incurred in the performance of work under this Contract.

Article 8 – Right of Entry and Interpretation

A. HUD, its agents or assigns, at all times during construction, has the right of entry and free access to the project and the right to inspect all work done and materials, equipment and fixtures furnished, installed or stored in and about the project. For such purpose, the Contractor shall furnish such enclosed working space as HUD may require and find acceptable as to location, size, accommodations and furnishings.

B. HUD shall also have the right to interpret the Contract Documents and to determine compliance therewith.

Article 9 – Assignments, Subcontracts and Termination

A. This Contract shall not be assignable by either party without prior written consent of the other party and HUD, except that the Owner may assign the Contract, or any rights hereunder, to HUD.

B. The Contractor shall not subcontract all of the work to be performed hereunder without the prior written consent of the Owner and HUD.

C. Upon request by the Owner, or HUD, the Contractor shall disclose the names of all persons with whom it has contracted or will contract with respect to work to be done and materials and equipment to be furnished hereunder.

D. The Contractor understands that the work under this contract is to be financed by a capital advance to be secured by a mortgage and subject to the terms of a Capital Advance Agreement between the Owner and HUD.

The Contractor further understands that said Capital Advance Agreement provides that in the event of the failure of the Owner to perform its obligations to HUD thereunder, HUD may, as attorney-in-fact for the Owner, undertake the completion of the project in accordance with this Contract. In the event HUD elects not to undertake such completion, the Contractor's obligations under this Contract shall terminate.

In Witness Whereof, the parties to these presents have executed this contract in six (6) counterparts, each of which shall be deemed an original, in the year and day first above mentioned.

(Seal) Attest:	Owner
Witness	By
Witness	Title

(Seal)	Contractor
Witness	By
Witness	Title

Note: If Contractor or Owner is a corporation, Secretary should attest.

Payment Bond

U.S. Department of Housing
and Urban Development
Office of Housing
Federal Housing Commissioner

OMB Approval No. 2502-0602
(Expires 05/31/2016)

(This Bond is issued simultaneously with Performance Bond in favor of Owner conditioned on the full and faithful performance of the contract)

Project Number: _____

Know All Men By These Presents, **that we**, _____ of _____

as Principal, (hereinafter called the Principal) and _____

_____, a _____ as

Surety, (hereinafter called the Surety) are held and firmly bound unto _____

as Obligee, (hereinafter called the "Owner"), for the use and benefit of claimants as hereinafter defined, in the sum of

_____ Dollars \$ _____, lawful money of the United States of America,

for the payment of which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas, Principal has entered into a Construction Contract dated _____ with Owner for the construction of a Housing Project designated as _____ a copy of which Construction Contract is by reference made a part hereof; and is hereinafter referred to as the Contract.

Now, therefore, the conditions of this obligation is such that, if Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A Claimant is defined as one having a direct contract with the Principal or with a subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.

2. The above name Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.

3. No suit or action shall be commenced hereunder by any claimant:

a) Unless claimant, other than one having direct contract with the Principal, shall have given written notice to any two of the following: The Principal, the Owner, or the Surety above named,

within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.

b) After the expiration of one (1) year following the date on which Principal ceased work on said Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.

4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.

Signed and Sealed this _____ day of _____, 20_____.

Witness as to Principal: _____ (Principal) _____ (Seal)

By: _____

By: _____ (Surety)

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. HUD may not collect this information, and you are not required to complete this form, unless it displays a currently valid OMB control number.

This information collection is necessary to ensure that viable projects are developed. It is important to obtain information from applicants to assist HUD in determining if nonprofit organizations initially funded continue to have the financial and administrative capacity needed to develop a project and that the project design meets the needs of the residents. The Department will use this information to determine if the project meets statutory requirements with respect to the development and operation of the project, as well as ensuring the continued marketability of the projects. This information is required in order to obtain benefits. This information is considered non-sensitive and no assurance of confidentiality is provided.

\$ _____

(Surety)

PAYMENT BOND

No. _____

On Behalf of

To

Date _____, 20 _____

Expires _____, 20 _____

Public reporting burden for this collection of information is estimated to average 2 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.

HUD may not collect this information, and you are not required to complete this form, unless it displays a currently valid OMB control number.

This information collection is necessary to ensure that viable projects are developed. It is important to obtain information from applicants to assist HUD in determining if nonprofit organizations initially funded continue to have the financial and administrative capacity needed to develop a project and that the project design meets the needs of the residents. The Department will use this information to determine if the project meets statutory requirements with respect to the development and operation of the project, as well as ensuring the continued marketability of the projects. This information is required in order to obtain benefits. This information is considered non-sensitive and no assurance of confidentiality is provided.

Privacy Act Notice: The United States Department of Housing and Urban Development, Federal Housing Administration, is authorized to solicit the information requested in the form by virtue of Title 12, United States Code, Section 1701 et seq., and regulations promulgated thereunder at Title 12, Code of Federal Regulations. While no assurance of confidentiality is pledged to respondents, HUD generally discloses this data only in response to a Freedom of Information Act request.

Know All Men By These Presents, That We,

of

as Principal, (hereinafter called the Principal) and _____, a

as Surety, (herinafter called the Surety) are held and firmly bound unto _____

Owner, (hereinafter called the "Owner-Obligee") and unto _____,

its successors and assigns, of _____ (hereinafter called the "Lender")

as their respective interests may appear, as OBLIGEES, in the sum of _____

Dollars (\$ _____), lawful money of the United States of America, for the payment of which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has entered into a Construction Contract dated _____
with

Owner-Obligee for the construction of a Housing Project designated as _____

a copy of which Construction Contract is by reference made a part hereof; and

WHEREAS, Lender has agreed to lend to Owner-Obligee a sum of money to be secured by a mortgage on said project and to be used in making payments under said Contract, and desires protection as its interests may appear, in event of default by Principal under said Contract, said protection to be subject to the performance by the Obligees, or either of them, of the obligations to Principal in connection with said Contract.

NOW, THEREFORE, the condition of this obligation is such that, if Principal shall well and truly perform all the undertakings, covenants, terms, conditions and agreements of said Contract on its part, and fully indemnify and save harmless Obligees from all cost and damage which they may suffer by reason of failure so to do, and fully reimburse and repay Obligees all outlay and expense which Obligees may incur in making good any such default, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The foregoing, however, is subject to the following further provisions:

1. The Surety shall not be liable under this Bond to the Obligees, or either of them, unless the said Obligees, or either of them, shall make payments to the Principal strictly in accordance with the terms of said Contract as to payments, and shall perform all the other obligations to be performed under said Contract at the time and in the manner therein set forth.

2. Surety agrees that any right of action that either of Obligees herein might have under this bond may be assigned to the Secretary of Housing and Urban Development, acting by and through the Federal Housing Commissioner, and that such assignment will in no manner invalidate or qualify this instrument.

3. No suit, action, or proceeding by reason of any default whatever shall be brought on this bond after two years from the day on which the final payment under the Contract falls due.

4. The prior written approval of Surety shall be required with regard to any changes or alterations in said Contract where the cost thereof, added to prior changes or alterations, causes the aggregate cost of all changes and alterations to exceed 10 percent of the original Contract price; but, except as to the foregoing, any alterations which may be made in the terms of the Contract, or in the work to be done under it, or the giving by the Obligees of any extension of time for the performance of the Contract, or any other forbearance on the part of either the Obligees or Principal to the other, shall not in any way release Surety or Principal of the obligations of this instrument, notice to Surety of any such alteration, extension, or forbearance being hereby waived.

5. The aggregate liability of Surety hereunder to the Obligees or their assigns is limited to the penal sum above stated, and Surety, upon making any payment hereunder, shall be subrogated to, and shall be entitled to an assignment of, all rights of the payee, either against Principal or against any other party liable to the payee in connection with the loss which is the subject of the payment.

SIGNED and SEALED this _____ day of _____ 20____

Witness as to Principal

(Principal) (SEAL)

By

(Surety)

By

\$ _____

(Surety)

PERFORMANCE BOND-DUAL OBLIGEE

No. _____

On Behalf of

Date _____, 20_____

Expires _____, 20_____

If collecting SSN or EIN:

Privacy Act Statement: The Department of Housing and Urban Development is authorized to collect this information by the National Housing Act, Section 235(b), P.L. 479, 48 Stat. 12 U.S.C. 1701 et seq. HUD is authorized to collect the Social Security Number (SSN) by Section 165(a) of the Housing and Community Development Act of 1987, P.L. 100-242, and by Section 904 of the Stewart B. McKinney Homeless Assistance Amendments Act of 1988, P.L. 100-628. The information is being collected to determine the amount of assistance (if any) the applicant is entitled. The information is also used as a tool for managing the program(s) related to this form, and for protecting the Government's financial interests. **The information may be used to conduct computer-matching programs to check for underreported or unreported income.** The SSN is used as a unique identifier. The information may be released to appropriate Federal, State, and local agencies, and when relevant, to civil, criminal, or regulatory investigators and/or prosecutors. This information will not be otherwise disclosed or released outside of HUD except as permitted or required by law. It is mandatory that you provide all of the requested information, including all SSN(s), for you and all other household members age six years and older. Failure to provide SSN(s) and required documents will result in a delay or loss of assistance payments.

If not collecting SSN or EIN:

Privacy Act Notice: The United States Department of Housing and Urban Development, Federal Housing Administration, is authorized to solicit the information requested in the form by virtue of Title 12, United States Code, Section 1701 et seq., and regulations promulgated thereunder at Title 12, Code of Federal Regulations. While no assurance of confidentiality is pledged to respondents, HUD generally discloses this data only in response to a Freedom of Information Act request.

Contractor's and/or Mortgagor's Cost Breakdown Schedules of Values

U.S. Department of Housing and
Urban Development
Office of Housing
Federal Housing Commissioner

OMB No. 2502-0044 (exp. 06/30/2016)

Public reporting burden for this collection of information is estimated to average 4 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. This information is required to obtain benefits. HUD may not collect this information, and you are not required to complete this form, unless it displays a currently valid OMB Control Number.

Section 227 of the National Housing Act (Section 126 of the Housing Act of 1954, Public Law 560, 12 U.S.C., 1715r), authorizes the collection of this information. The information is required for a general contractor when an identity of interest exists between the general contractor and the mortgagor or when the mortgagor is a non-profit entity and a cost plus contract has been used. The information is used by HUD to facilitate the advances of mortgage proceeds and their monitoring.

Privacy Act Notice. The United States Department of Housing and Urban Development, Federal Housing Administration, is authorized to solicit the information requested in this form by virtue of Title 12, United States Code, Section 1701 et seq., and regulations promulgated thereunder at Title 12, Code of Federal Regulations. While no assurances of confidentiality is pledged to respondents, HUD generally discloses this data only in response to a Freedom of Information request.

Date		Sponsor	
Project No.		Building Identification	
Name of Project		Location	

This form represents the Contractors and/or Mortgagors firm costs and services as a basis for disbursing dollar amounts when insured advances are requested. Detailed instructions for completing this form are included on the reverse side.

Line	Div.	Trade Item	Cost	Trade Description
1	3	Concrete		
2	4	Masonry		
3	5	Metals		
4	6	Rough Carpentry		
5	6	Finish Carpentry		
6	7	Waterproofing		
7	7	Insulation		
8	7	Roofing		
9	7	Sheet Metal		
10	8	Doors		
11	8	Windows		
12	8	Glass		
13	9	Lath and Plaster		
14	9	Drywall		
15	9	Tile Work		
16	9	Acoustical		
17	9	Wood Flooring		
18	9	Resilient Flooring		
19	9	Painting and Decorating		
20	10	Specialties		
21	11	Special Equipment		
22	11	Cabinets		
23	11	Appliances		
24	12	Blinds and Shades, Artwork		
25	12	Carpets		
26	13	Special Construction		
27	14	Elevators		
28	15	Plumbing and Hot Water		
29	15	Heat and Ventilation		
30	15	Air Conditioning		
31	16	Electrical		
32		Subtotal (Structures)		
33		Accessory Structures		
34		Total (Lines 32 and 33)		

Line	Div.	Trade Item	Cost	Trade Description			
35	2	Earth Work					
36	2	Site Utilities					
37	2	Roads and Walks					
38	2	Site Improvements					
39	2	Lawns and Planting					
40	2	Unusual Site Condition		Nonresidential and Special Exterior Land Improvement (costs included in trade item breakdown)		Offsite Costs (costs not included in trade item breakdown)	
41		Total Land Improvements					
42		Total Struct. & Land Imprvts.		Description	Est. Cost	Description	Est. Cost
43	1	General Requirements					
44		Subtotal (Lines 42 and 43)					
45		Builder's Overhead					
46		Builder's Profit		Total \$			
47		Subtotal (Lines 44 thru 46)		Other Fees		Total \$	
48						Demolition (costs not included in trade item breakdown)	
49		Other Fees					
50		Bond Premium				Description	Est. Cost
51		Total for All Improvements					
52		Builder's Profit Paid by Means Other Than Cash					
53		Total for All Improvements Less Line 52		Total \$		Total \$	

I hereby certify that all the information stated herein, as well as any information provided in the accompaniment herewith, is true and accurate.

Warning: HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. (18 U.S.C. 1001, 1010, 1012; 31 U.S.C. 3729, 3802)

Mortgagor	By	Date	
Contractor	By	Date	
FHA (Processing Analyst)	Date	FHA (Chief, Cost Branch or Cost Analyst)	Date
FHA (Chief Underwriter)		Date	

Instructions for Completing Form HUD-2328

This form is prepared by the contractor and/or mortgagor as a requirement for the issuance of a firm commitment. The firm replacement cost of the project also serves as a basis for the disbursement of dollar amounts when insured advances are requested. A detailed breakdown of trade items is provided along with spaces to enter dollar amounts and trade descriptions.

A separate form is prepared through line 32 for each **structure type**. A summation of these structure costs are entered on line 32 of a master form. Land improvements, General Requirements and Fees are completed through line 53 on the master 2328 **only**.

Date—Date form was prepared.

Sponsor—Name of sponsor or sponsoring organization.

Project No.—Eight-digit assigned project number.

Building Identification—Number(s) or Letter(s) of each building as designated on plans.

Name of Project—Sponsors designated name of project.

Location—Street address, city and state.

Division—Division numbers and trade items have been developed from the cost accounting section of the uniform system.

Accessory Structures—This item reflects structures, such as: community, storage, maintenance, mechanical, laundry and project office buildings. Also included are garages and carports or other buildings.

When the amount shown on line 33 is \$20,000.00 or 2% of line 32 whichever is the lesser, a separate form HUD-2328 will be prepared through line 32 for Accessory Structures.

Unusual Site Conditions—This trade item reflects rock excavation, high water table, excessive cut and fill, retaining walls, erosion, poor drainage and other on-site conditions considered unusual.

Cost—Enter the cost being submitted by the Contractor or bids submitted by a qualified subcontractor for each trade item. These costs will include, as a minimum, prevailing wage rates as determined by the Secretary of Labor.

Trade Description—Enter a brief description of the work included in each trade item.

Other Fees—Includable are fees to be paid by the Contractor, such as sewer tap fees not included in the plumbing contract. Fees paid or to be paid by the Mortgagor are not to be included on this form.

Total For All Improvements—This is the sum of lines 1 through 50 and is to include the total builder's profit (line 46).

Line 52—When applicable, enter that portion of the builder's profit (line 46) to be paid by means other than cash and/or any part of the builder's profit to be waived during construction.

Non-Residential and Special Exterior Land Improvement Costs—Describe and enter the cost of each improvement, i.e. on-site parking facilities including individual garages and carports, commercial facilities, swimming pools with related facilities and on-site features provided to enhance the environment and livability of the project and the neighborhood. The Design Representative and Cost Analyst shall collaborate with the mortgagor or his representative in designating the items to be included.

Off-Site Costs—Enter description and dollar amount including fees and bond premium for off-site improvements.

Demolition—Enter description and dollar amount of demolition work necessary to condition site for building improvements including the removal of existing structures, foundations, utilities, etc.

Other Fees—Enter a brief description of item involved and cost estimate for each item.

Signatures—Enter the firm name, signature of authorized officer of the contractor and/or mortgagor and date the form was completed.

Contractor's Requisition Project Mortgages

U.S. Department of Housing
and Urban Development
Office of Housing
Federal Housing Commissioner

OMB Approval No. 2502-0028 (Exp. 03/31/2017)

To be submitted to mortgagee in quadruplicate

This information is used to verify program benefits consisting of distribution of insured mortgage proceeds when construction costs are involved. The information regarding completed work items is used by HUD to ensure that payments from mortgage proceeds are made for work actually completed in a satisfactory manner. This information is a requirement under Section 207(b) of the National Housing Act (Public Law 479, 48 Stat. 1246, 12 U.S.C. 1701 et. seq) authorizing the Secretary of HUD to insure mortgages. The information collection does not contain information of a sensitive nature.

Public reporting burden for this collection of information is estimated to average 6 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. 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.

To (owner) _____ Requisition Number _____

Project _____ Project Number _____ Location _____

In accordance with the provision of the Construction Contract dated _____ and Contractor's and/or Mortgagor's Cost Breakdown (Schedule of Values) attached thereto, this requisition is submitted for the amount of \$ _____ due for work performed up to the _____ day of _____ and as itemized below by the trades listed in the Schedule of Values.

DIV	Trade Item	Cost as per Cost Breakdown (A)	Enter Amounts to Nearest Even Dollar	
			Amounts Complete (B)	For HUD-FHA Use (C)
3	Concrete	\$	\$	\$
4	Masonry			
5	Metals			
6	Rough Carpentry			
6	Finish Carpentry			
7	Waterproofing			
7	Insulation			
7	Roofing			
7	Sheet Metal			
8	Doors			
8	Windows			
8	Glass			
9	Lath and Plaster			
9	Drywall			
9	Tile Work			
9	Acoustical			
9	Wood Flooring			
9	Resilient Flooring			
9	Painting and Decorating			
10	Specialties			
11	Special Equipment			
11	Cabinets			
11	Appliances			
12	Blinds and Shades, Artwork			
12	Carpets			
13	Special Construction			
14	Elevators			
15	Plumbing and Hot Water			
15	Heat and Ventilation			
15	Air Conditioning			
16	Electrical			
	Accessory Buildings			
2	Earth Work			
2	Site Utilities			
2	Roads and Walks			
2	Site Improvement			
2	Lawns and Planting			
2	Unusual Site Conditions			
1	General Requirements			
1	Bond Premium (\$ _____)			

DIV	Trade Item	Cost as per Cost Breakdown (A)	Enter Amounts to Nearest Even Dollar							
			Amounts Complete (B)			For HUD-FHA Use (C)				
1	Other Fees (\$)									
(1)	Subtotal of Breakdown Items	\$ 0 *	%	\$ 0 **	%	\$	%	\$		
(2)	Builder's Overhead	\$	%	\$	%	\$	%	\$		
(3)	Builder's Profit	\$	%	\$	%	\$	%	\$		
(4)	Total of Cost Breakdown Items	\$		\$		\$		\$		
(5)	Inventory of Materials Stored On-site (See Note Below)			\$				\$		
(6)	Inventory of Materials Stored Off-Site (See Note Below)			\$				\$		
(7)	Sum of Cost Breakdown Items Plus Inventories of Materials			\$				\$		
(8)	Less Net Decrease in Cost as a Result of Approved Changes			\$				\$		
(9)	Total After Adjusting for Net Decrease to Approved Changes			\$				\$		
(10)	Less Retained 10%			\$				\$		
(11)	Bal.: Total Amount Due to Date on Account of Construction Contract			\$				\$		
(12)	Less Previous Payments			\$				\$		
(13)	Net Amount of This Requisition			\$				\$		

I certify that the Work covered by this requisition has been completed in accordance with the Contract Documents, and that I have actually received \$ _____ for Work performed and materials purchased up to the _____ day of _____ (date of previous requisition).

For Use of HUD-Federal Housing Commissioner

Date	Net Amount Approved for Payment	Column C Completed by (Mortgage Credit Examiner)
Reviewed and Approved by (Chief, Mortgage Credit)	Director, Housing Development	

Architect's Certificate I certify, based on my on-site observations (or those of my authorized representative) and the data comprising this requisition, that the Work has progressed to the point indicated; that to the best of my knowledge, information and belief the Work is in accordance with the Contract Documents; and that the Contractor is entitled to payment of the amount certified.

Inspector's Certificate Amount Modified _____ No Modification _____

I certify that I have visited the site on this date _____, observed the Work, and monitored the log and reports of the Architect (if an architect is administering the Construction Contract); that to the best of my knowledge, information and belief the amount certified represents acceptable Work; and that I have no personal interest, present or prospective, in the property, applicant or proceeds of the mortgage.

Contractor's Prevailing Wage Certificate (For use under all sections of the National Housing Act requiring certification as to payment of prevailing wages. To be completed with each request for insurance of advance of mortgage proceeds which includes a payment on account of construction cost, or at the time the mortgage is presented for insurance pursuant to a commitment to insure upon completion.)

Manager	Project Name
Field Office	Project Number

The undersigned, as principal contractor in connection with the construction of the above project, states that he/she is fully familiar with applicable wage determination decision of the Secretary of Labor and certifies that:

- A copy of the applicable wage determination decision is posted in a conspicuous place at the site of the work and he/she has required each subcontractor as a part of his/her contract, to agree to pay wages at rates not less than those contained in the decision.
- All laborers and mechanics employed in the construction of the project have been, to the date hereof, paid for such employment at wage rates not less than those contained in the applicable wage determination decision of the Secretary of Labor and no deductions or rebates have been made, either directly or indirectly, from the full weekly wages earned by any person, other than permissible deductions as defined in Regulations of the Secretary of Labor, Part 3 (29 CFR Part 3).
- He/She has fulfilled his/her obligations, to the date hereof, under The Labor Standards Provisions of the Supplementary Conditions of the Contract for Construction and has included said conditions in all subcontracts.

This certificate is executed by the undersigned for the purpose of inducing the Commissioner to approve for insurance that certain mortgage loan, or an advance thereof, made or to be made by the mortgagee in connection with the construction of the project, and with the intent that the Commissioner rely upon this certification to establish compliance with the provisions of Section 212 of the National Housing Act, which provides in part: The Commissioner shall not insure ... unless the principal contractor files a certificate ... certifying that the laborers and mechanics ... have not been paid not less than the wages prevailing ... as determined by the Secretary of Labor..."

I hereby certify that all the information stated herein, as well as any information provided in the accompaniment herewith, is true and accurate.

Warning: HUD will prosecute

false claims and statements. Conviction may result in criminal and/or civil penalties (18 U.S.C. 1001, 1010, 1012; 31 U.S.C. 329, 3802).

By
X

Date:

HUD-92448

Construction Progress Schedule

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

OMB Approval No. 2577-0157 (Exp. 1/31/2017)

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 conduct or sponsor, and a person is not required to respond to, a collection of information unless that collection displays a valid OMB control number.

Construction practices and HUD administrative requirements establish the need that HAs maintain certain records or submit certain documents in conjunction with the oversight of the award of construction contracts for the construction of new low-income housing developments or modernization of existing developments. These forms are used by HAs to provide information on the construction progress schedule and schedule of amounts for contract payments. 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.

1. Name of Public Housing Agency/Indian Housing Authority (PHA/IHA)

2. City		3. State	5. Project Name				
4. Location			6. Project Number				
7. Contract For			8. Contract Time (Days)				
9. From (mm/dd/yyyy)		To (mm/dd/yyyy)	10. Contract Price \$				
11. Number of Buildings		12. Number of Dwelling Units			13. Number of Rooms		

(Submit as many pages as necessary to cover the construction period.)	Year (yyy)						
	Month						
Actual Monthly Value, Work in Place	\$						
Actual Accumulated Progress	(%)						
Anticipated Monthly Value	\$						
Accumulated Scheduled Progress	(%)						

Submitted by	Contractor's Name		
	Title	Signature	Date (mm/dd/yyyy)
Approved by	PHA/IHA		
	Title		Date (mm/dd/yyyy)
Approved by	Architect		Date (mm/dd/yyyy)

**Instructions for Preparation of Construction Progress Schedule
Form HUD-5372**

General. The information required for items 1 through 6 can be obtained from the contract documents. (7.) Enter the type of work awarded by the PHA/IHA. This may be "general construction," "plumbing," "heating," "electrical," etc., depending upon prime contract awards. (8.) Enter the contract time in calendar days (unless otherwise stated). (9.) Enter the starting and completion dates as established by the Notice to Proceed.

Year and Month. At the top of the Schedule, space is provided for inserting the "Year" and "Month" to identify the times during which the work is to be performed.

Year. Enter the year when the Notice to Proceed was issued. If the starting date of the contract is such that the time assigned for completion will be carried into a succeeding year, two yearly designations will be shown, each centered over the applicable spread of time for each year.

Month. The body of the Schedule is divided into Columns, each representing a period of one month. Starting in the Column with the month stated in the Notice to Proceed, enter at the top of each column the successive months corresponding to the entire spread of the total contract time. The Schedule must contain monthly columns to cover the entire active period of contract, with extra columns for possible overruns in contract time.

Computation of Anticipated Monthly Value of Work in Place

Before presenting the form for approval, enter in each monthly column the dollar value (omit cents) of the increment of work anticipated to be put in place during that interval of time. This shall be the Contractor's best estimate of the rate of progress for each month. This section contains a suggested guide for the elapsed contract time vs. progress percentages.

The horizontal total of the monthly dollars shown for "Anticipated Monthly Value" must equal the contract price shown in the heading.

Accumulated Scheduled Progress – %

Entries on this line shall show in percentage of total completion the cumulative stage of progress that is scheduled to be reached at the end of each monthly interval. It is generally sufficient to state this anticipated progress to the nearest tenth of one percent, but for very large contracts it may be advisable to extend computations to the nearest hundredth.

The entry for the first month's column should be the % obtained by the anticipated monthly dollar value of work in place at the close of the first month being divided by the contract price.

The entry for the second month's column is obtained by the sum of the anticipated monthly dollar values of work in place for Columns 1 and 2 being divided by the contract price.

Enter in the third month's column the percentage computed similarly, using the sum of dollar values of work in place for Columns 1, 2, and 3. Continue in this manner for the succeeding monthly columns until "100" is reached in the final column.

Charting Actual Progress. The horizontal space extending through the monthly columns is divided into "Actual Monthly Value of Work in Place – \$" and "Actual Accumulated Progress – %." In each monthly column show the actual accumulated % of progress and the actual value of work in place for that month, as the work progresses. An anticipated complete shutdown at some stage in the work because of adverse seasonal weather or otherwise, as may occur in road work, excavation (grading), etc., is readily shown by a gap.

The Contractor's name shall be placed in the lower left-hand corner of the form, together with the signature and title of the employee who prepared the Schedule and the date. The form then shall be sent to the Architect for review. If the Architect considers that changes are necessary to make the Schedule more realistic, it will withhold approval and so advise the Contractor. When the form is acceptable and approved by the Architect, and the PHA/ IHA, it will be returned to the Contractor, who shall reproduce and submit the number and style of prints required by the PHA/ IHA.

Normal building construction experience has proved that the rate of overall progress (as measured by work in place) accelerates slowly at the start, reaches its peak in the middle third of the construction period, and tapers down at the close. The data following illustrate the general average expectancy of a well-balanced operation and may be used as a guide. If the proposed progress lies within reasonable range of these check points, the Schedule may be considered satisfactory insofar as the time-performance feature is involved.

% of Time	% of Contract Accumulated Progress
0	
10	
20	28
30	20
40	37
50	57
60	75
70	89
80	96
90	99
100	100

The foregoing percentages must be tempered by consideration of seasonal weather conditions and other known conditions which may affect the progress of the work. These percentages are offered for information only.

Schedule of Amounts for Contract Payments

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

OMB Approval No. 2577-0157
(Exp. 01/31/2014)

No progress payments shall be made to the contractor unless a schedule of amounts for contract payments in accordance with the construction contract is received.

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 conduct or sponsor, and a person is not required to respond to, a collection of information unless that collection displays a valid OMB control number.

Construction practices and HUD administrative requirements establish the need that HAs maintain certain records or submit certain documents in conjunction with the oversight of the award of construction contracts for the construction of new low-income housing developments or modernization of existing developments. These forms are used by HAs to provide information on the construction progress schedule and schedule of amounts for contract payments. 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.

Project Name and Location	Project Number
---------------------------	----------------

Name, Address, and Zip Code of Contractor

Nature of Contract	Contract Number
--------------------	-----------------

Approved for Contractor by	Title	Date (mm/dd/yyyy)
----------------------------	-------	-------------------

Approved for Architect by	Title	Date (mm/dd/yyyy)
---------------------------	-------	-------------------

Approved for Owner by	Title	Date (mm/dd/yyyy)
-----------------------	-------	-------------------

Item No. (1)	Description of Item (2)	Quantity (3)	Unit of Measure (4)	Unit Price in Place (5)	Amount of Sub-Item (6)	Amount of Principal Item (7)

Total Amount of Contract or Carried Forward \$

To the best of my knowledge, all the information stated herein, as well as any information provided in the accompaniment herewith, is true and accurate.
Warning: HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. (18 U.S.C. 1001, 1010, 1012; 31 U.S.C. 3729, 3802)

Signature of authorized representative

Date signed (mm/dd/yyyy)

Instructions for Preparation of form HUD-51000

1. A separate breakdown is required for each project and prime contract instructions for preparation are given below.

a. **Heading.** Enter all identifying information required for both forms.

b. **Columns 1 and 2.** In column 1, enter the item numbers starting with No. 1, and in column 2 enter each principal division of work incorporated in the contract work.

(1) **Master List.** The Master list contains the basic items into which any construction contract may be subdivided for the purpose of preparing the Construction Progress Schedule and the Periodical Estimates for Partial Payments. Only those items shall be selected which apply to the particular contract. To ensure uniformity, no change shall be made in the item numbers. Generally, about 25 to 40 major items appear in a contract.

(2) **Items Subdivided.** In the Contractor's breakdown, against which all periodical estimates will be checked prior to payment, each major item must be subdivided into sub-items pertinent to the project involved and in agreement with the Contractor's intended basis for requesting monthly payments.

c. **Column 3.** Enter the total quantity for each sub-item of each principal division of work listed in the breakdown.

d. **Column 4.** Enter the appropriate unit of measure for each sub-item of work opposite the quantities described in column 3, such as "sq. ft.," "cu. yd.," "tons," "lb.," "lumber per M/BM," "brickwork per M," etc., applicable to the particular sub-item. Items shown on "lump sum" or equivalent basis will be paid for only on completion of the whole item and not on a percentage of completion basis.

e. **Column 5.** Enter the unit price, in place, of each sub-item of work.

f. **Column 6.** Enter the amount of each sub-item obtained by multiplying the quantities in column 3 by the corresponding unit prices in column 5.

g. **Column 7.** Enter the amount of principal item only, obtained by adding the amounts of all sub-items of each principal division of work listed in column 6. Continue with the breakdown on form HUD-51000.

h. The "Schedule of Amounts for Contract Payments" shall be signed and dated in the space provided at the bottom of each sheet of the form by the individual who prepared the breakdown for the Contractor.

2. The minimum number of copies required for each submission for approval is an original and two copies. When approved, one fully approved copy will be returned to the Contractor.

Master List of Items

Item No.	Division of Work	Item No.	Division of Work	Item No.	Division of Work
1	Bond	20	Rough Carpentry		Site Improvements
2	General Conditions \1	21	Metal Bucks	44	Retaining Walls
3	Demolition & Clearing	22	Caulking	45	Storm Sewers
	Structures	23	Weatherstripping	46	Sanitary Sewers
4	General Excavation	24	Lath & Plastering-Drywall	47	Water Distribution System
5	Footing Excavation	25	Stucco	48	Gas Distribution System
6	Backfill	26	Finish Carpentry	49	Electrical Distribution System
7	Foundation Piles & Caissons	27	Finish Hardware	50	Street & Yard Lighting
8	Concrete Foundations	28	Glass & Glazing	51	Fire & Police Alarm System
9	Concrete Superstructures	29	Metal Doors	52	Fire Protection System
10	Reinforcing Steel	30	Metal Base & Trim	53	Street Work
11	Waterproofing & Dampproofing	31	Toilet Partitions	54	Yard Work
12	Spandrel Waterproofing	32	Floors	55	(Other)
13	Structural Steel	33	Painting & Decorating	56	(Other)
14	Masonry	34	Screens		Equipment
15	Stonework	35	Plumbing	57	Shades & Drapery Rods
16	Miscellaneous & Ornamental Metal	36	Heating	58	Ranges
17	Metal Windows	37	Ventilating System	59	Refrigerators
18	Roofing	38	Electrical	60	Kitchen Cabinets & Work Tables
19	Sheet Metal	39	Elevators	61	Laundry Equipment
		40	Elevator Enclosures—Metal	62	(Other)
		41	Incinerators—Masonry & Parts		Punch List \2
		42	(Other)	63	Lawns & Planting
		43	(Other)	64	

1 General Conditions should be 3% to 5% of contract amount.

2 Punch List should be approximately 1/2 of 1% or \$30 per dwelling unit, whichever is greater.

Periodic Estimate for Partial Payment

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

OMB Approval No. 2577-0157
(exp. 01/31/2014)

Submit original and one copy to the Public Housing Agency.
Complete instructions are on the back of this form.

Public reporting burden for this collection of information is estimated to average 3.5 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. This agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless that collection displays a valid OMB control number.

This information is collected under the authority of Section 6(c) of the U.S Housing Act of 1937 and HUD regulations. HAs are responsible for contract administration to ensure that the work for project development is done in accordance with State laws and HUD requirements. The contractor/sub contractor reports provide details and summaries on payments, change orders, and schedule of materials stored for the project. The information will be used to ensure that the total development costs, identified in the ACC, are kept as low as possible and consistent with HUD construction requirements. Responses to the collection are necessary to obtain a benefit. The information requested does not lend itself to confidentiality.

Name of Public Housing Agency	Period Estimate Number	Period From (mm/dd/yyyy) To (mm/dd/yyyy)
-------------------------------	------------------------	---

Location of Project	Project Number
---------------------	----------------

Name of Contractor	Contract Number
--------------------	-----------------

Item Number (1)	Description of Item (2)	Completed to Date (3)
		\$
Value of Contract Work Completed to Date (Transfer this total to line 5 on back of this sheet)		

Instructions

Headings. Enter all identifying data required. Periodic estimates must be numbered in sequence beginning with the number 1.

Columns 1 and 2. The "Item Number" and "Description of Item" must correspond to the number and descriptive title assigned to each principal division of work in the "Schedule of Amounts for Contract Payments", form HUD-51000.

Column 3. Enter the accumulated value of each principal division of work completed as of the closing date of the periodic estimate. Enter the total in the space provided.

Certifications. The certification of the contractor includes the analysis of amounts used to determine the net balance due. In the first paragraph, enter the name of the Public Housing Agency, the contractor, and the date of the contract. Enter the calculations used in arriving at the "Balance Due This Payment" on lines 1 through 16.

Enter the contractor's name and signature in the certification following line 16. The latter portion of this certification relating to payment of legal rates of wages, is required by the contract before any payment may be made. However, if the contractor does not choose to certify on behalf of his/her subcontractors to wage payments made by them, he/she may modify the language to cover only himself /herself and attach a list of all subcontractors who employed labor on the site during the period covered by the Periodic Estimate, together with the individual certifications of each.

Certification of the Contractor or Duly Authorized Representative

According to the best of my knowledge and belief, I certify that all items and amounts shown on the other side of this form are correct; that all work has been performed and material supplied in full accordance with the items and conditions of the contract between the (name of owner)

_____ and (contractor) _____ dated (mm/dd/yyyy) _____, and duly authorized deviations, substitutions, alterations, and additions; that the following is a true and correct statement of the Contract Account up to and including the last day of the period covered by this estimate, and that no part of the "Balance Due This Payment" has been received.

1. Original Contract Amount \$ _____

Approved Change Orders:

2. Additions (Total from Col. 3, form HUD-51002) \$ _____

3. Deductions (Total from Col. 5, form HUD-51002) \$ _____ (net) \$ _____

4. Current Adjusted Contract Amount (line 1 plus or minus net) \$ _____

Computation of Balance Due this Payment

5. Value of Original Contract work completed to date (from other side of this form) \$ _____

Completed Under Approved Change Orders

6. Additions (from Col. 4, form HUD-51002) \$ _____

7. Deductions (from Col. 5, form HUD-51002) \$ _____ (net) \$ _____

8. Total Value of Work in Place (line 5 plus or minus net line 7) \$ _____

9. Less: Retainage, _____ % \$ _____

10. Net amount earned to date (line 8 less line 9) \$ _____

11. Less: Previously earned (line 10, last Periodic Estimate) \$ _____

12. Net amount due, work in place (line 10 less line 11) \$ _____

Value of Materials Properly Stored

13. At close of this period (from form HUD-51004) \$ _____

14. Less: Allowed last period \$ _____

15. Increase (decrease) from amount allowed last period \$ _____

16. Balance Due This Payment \$ _____

I further certify that all just and lawful bills against the undersigned and his/her subcontractors for labor, material, and equipment employed in the performance of this contract have been paid in full in accordance with the terms and conditions of this contract, and that the undersigned and his/her subcontractors have complied with, or that there is an honest dispute with respect to, the labor provisions of this contract.

Name of Contractor _____ Signature of Authorized Representative _____ Title _____ Date (mm/dd/yyyy) _____

Certificate of Authorized Project Representative and of Contracting Officer

Each of us certifies that he/she has checked and verified this Periodic Estimate No. _____; that to the best of his/her knowledge and belief it is a true statement of the value of work performed and material supplied by the contractor; that all work and material included in this estimate has been inspected by him/her or by his/her authorized assistants; and that such work has been performed or supplied in full accordance with the drawings and specifications, the terms and conditions of the contract, and duly authorized deviations, substitutions, alterations, and additions, all of which have been duly approved.

We, therefore, approve as the "Balance Due this Payment" the amount of \$ _____.

Authorized Project Representative _____

Date (mm/dd/yyyy) _____ Contracting Officer _____

Date (mm/dd/yyyy) _____

Warning: HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. (18 U.S.C. 1001, 1010, 1012; 31 U.S.C. 3729,

Previous editions are obsolete. Handbooks 7417.1 & 7450.1 form HUD-51001 (3/92) (3802)

Schedule of Change Orders

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

OMB Approval No. 2577-0157
(exp. 1/31/2017)

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 conduct or sponsor, and a person is not required to respond to, a collection of information unless that collection displays a valid OMB control number.

This information is collected under the authority of Section 6(c) of the U.S Housing Act of 1937 and HUD regulations. HAs are responsible for contract administration to ensure that the work for project development is done in accordance with State laws and HUD requirements. The contractor/subcontractor reports provide details and summaries on payments, change orders, and schedule of materials stored for the project. The information will be used to ensure that the total development costs, identified in the ACC, are kept as low as possible and consistent with HUD construction requirements. Responses to the collection are necessary to obtain a benefit. The information requested does not lend itself to confidentiality.

Instructions: Contractors use this form for reporting the details of approved Change Orders. Attach an original (or a copy) to each copy of the Periodic Estimate for Partial Payment (form HUD-51001) submission, and send to the Public Housing Agency. Complete all entries. Only Change Orders which bear the signatures required by the contract are to be recorded.

Name of Public Housing Agency	Supporting Periodic Estimate for Partial Payment Number	Period From (mm/dd/yyyy) to (mm/dd/yyyy)
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Location of Project	Project Number
---------------------	----------------

Name of Contractor	Contract Number
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Approved Change Orders		Additions		Deductions
Change Order Number (1)	Dated (mm/dd/yyyy) (2)	Total Amount of Change Order (3)	Value of Work Completed to Date (4)	Total Amount of Change Order (5)
		\$	\$	\$
Totals		\$	\$	\$

Authorized Project Representative	Date (mm/dd/yyyy)
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Warning: HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. (18 U.S.C. 1001, 1010, 1012; 31 U.S.C. 3729, 3802)

Schedule of Materials Stored

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

OMB Approval No. 2577-0157
(exp. 1/31/2017)

Public reporting burden for this collection of information is estimated to average 1.5 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. This agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless that collection displays a valid OMB control number.

This information is collected under the authority of Section 6(c) of the U.S Housing Act of 1937 and HUD regulations. HAs are responsible for contract administration to ensure that the work for project development is done in accordance with State laws and HUD requirements. The contractor/subcontractor reports provide details and summaries on payments, change orders, and schedule of materials stored for the project. The information will be used to ensure that the total development costs, identified in the ACC, are kept as low as possible and consistent with HUD construction requirements. Responses to the collection are necessary to obtain a benefit. The information requested does not lend itself to confidentiality.

Instructions: This form is to be used to support the Periodic Estimate for Partial Payment (form HUD-51001). The contractor must prepare a separate schedule for his/her materials and for those of his/her subcontractors. Attach an original (or a copy) to each copy of the Summary of Materials Stored (form HUD-51004). Enter all identifying data and list materials stored. The listing of materials stored must correspond to the arrangement established on the Schedule of Contract Payments (form HUD-51000) and each item will be keyed by corresponding item number. This form must be signed as noted.

Name of Public Housing Agency	Supporting Periodic Estimate for Partial Payment Number	Period From (mm/dd/yyyy) To (mm/dd/yyyy)
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Name and Location of Project	Project Number
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Name of General Contractor	Contract Number
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Name of Subcontractor	Subcontract Number
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Item Number*	Description and Quality	Quantity	Unit of Measure	Unit Price at Site	Total Price
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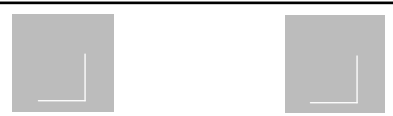
Amount Carried Forward \$

Item Number*	Description and Quality	Quantity	Unit of Measure	Unit Price at Site	Total Price

Total Amount or Amount Carried Forward \$

Prepared by (Contractor's Representative)	Date (mm/dd/yyyy)	Checked by (Owner's Representative)	Date (mm/dd/yyyy)
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Warning: HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. (18 U.S.C. 1001, 1010, 1012; 31 U.S.C. 3729, 3802)



Request for Construction Changes on Project Mortgages

U.S. Department of Housing and Urban Development
Office of Housing
Federal Housing Commissioner

OMB Approval No. 2502-0011 (exp. 11/30/2016)

No changes in the drawings and specifications may be effected unless a completed request for construction changes has been filed and approved by HUD in accordance with the Construction Contract. **Read the instructions & Public Burden statement on the back of this form.**

Name and location of this project	Request No. (HUD use only)	Project Number
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Name of Contractor	Name of Mortgagor	Name of Mortgagee
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To the Federal Housing Commissioner: You are requested to consider the following proposed changes in the project. The changes are satisfactory to the parties hereto, as indicated by the signatures below.

Description of Changes	Mortgagor Estimated Effect on Cost + or -	HUD Estimated Effect on Cost + or -	V = Acceptable O = Unacceptable	
			Arch.	Val.
a.				
b.				
c.				
d.				
e.				
f.				
g.				
h.				
i.				
j.				
k.				
l.				
m.				

Amount on deposit with mortgagee to cover increased cost of changes pursuant to conditions of Request No. _____ \$	Total \$		Initial & Date	Initial&Date	Initial&Date
--	----------	--	----------------	--------------	--------------

I certify that I have no financial interest in this project beyond the fee for my professional services, and that I have no interest with the mortgagor, contractor, or any subcontractor or supplier. The changes set forth in this request conform to the intent of the contract documents and I recommend that the changes be approved.

Contractor (signature)	Mortgagor (signature)	Mortgagee (signature)
------------------------	-----------------------	-----------------------

The following is required on requests involving cooperatives and non-profit mortgagors with respect to any increase or decrease in cost resulting from acceptable changes: (check appropriate box.)

- The abovesigned contractor agrees to assume any additional costs and agrees that he will not assert any claim against the Mortgagor in connection therewith.
- The abovesigned Mortgagor, acting pursuant to a resolution adopted at a meeting of its stockholders or members, and the abovesigned Contractor, agree to the above described construction changes and agree that the construction contract executed by them (date) _____ is amended by increasing the contract price of \$ _____ set forth in Article 3 thereof to \$ _____ all other provisions of the Construction Contract remain unchanged.
- The abovesigned Mortgagor and the above signed Contractor agree to the construction changes described above and agree that the construction contract executed by them (date) _____ is amended by decreasing the contract price of \$ _____ set forth in Article 3 thereof to \$ _____ ; all other provisions of the construction contract remain unchanged.

Federal Housing Commissioner Findings:			1. Mortgagor's Estimate				2. Net effect on Construction Costs			
a. Effect on cost of previously accepted changes \$	b. Effect on cost to date of all changes \$	c. Percent %	a. Present changes \$	b. Previous changes \$	c. Total \$	d. Percent %				
			<input type="checkbox"/> Increase <input type="checkbox"/> Decrease	<input type="checkbox"/> Increase <input type="checkbox"/> Decrease	<input type="checkbox"/> Increase <input type="checkbox"/> Decrease					

3. Changes _____ are acceptable and the drawings and specifications amended, provided:

- a. That a total sum of \$ _____ is on deposit with the mortgage to cover net increase in cost resulting from present and previous construction changes. This supersedes any previous requirements. The money will not be released without written consent of HUD prior to final completion and acceptance of the project construction. No further advances of the mortgage proceeds under the Building Loan Agreement will be approved unless the total sum is on deposit with you.
- b. That in order to reflect the net decrease in cost or reduction in mortgage based on net income or number of family units, resulting from acceptable present and previous construction changes, the amount of \$ _____ shall be deducted from the amount entered on the line entitled "Sum of Cost Breakdown Items Plus Inventories of Materials", form HUD-92448. This amount may be modified by later changes.
- c. Consent of surety to these changes is obtained in writing and a signed copy sent to this office prior to effecting the change.
- d. There is compliance with the conditions stated on the back of this form.

4. <input type="checkbox"/> Changes _____ are not acceptable. See "Reasons for Unacceptability" on the back of this form.	Mortgage Credit Initial & Date
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HUD analysis and findings reviewed and approved: Director, Housing Development Division (signature)	Date	Federal Housing Commissioner Signature of authorized agent
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Public Reporting Burden for this collection is estimated to average 2 hours per response, including the time for reviewing, searching existing data sources, gathering and maintaining the data needed, and compiling and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to the Reports Management Officer, Paperwork Reduction Project (2502-0011), U.S. Department of Housing and Urban Development, 451 7th Street SW, Washington, DC 20410-3600.

The Department of Housing and Urban Development (HUD) is authorized to collect this information by provisions set forth in Section 5 of the United States Housing Act of 1937, as amended. It is provided by contractors, mortgagors and mortgagees to obtain the FHA Commissioner's approval of changes in contract drawings and specifications, and this information is used to ensure that viable projects are developed. This information is used by HUD to ensure that viable projects are being developed. Furnishing of this information is mandatory, and failure to provide it may result in your not receiving your benefits.

Privacy Act Notice. The United States Department of Housing and Urban Development, Federal Housing Administration, is authorized to solicit the information requested in this form by virtue of Title 12, United States Code, Section 1701 et seq., and regulations promulgated thereunder at Title 12, Code of Federal Regulations. While no assurances of confidentiality is pledged to respondents, HUD generally discloses this data only in response to a Freedom of Information request. This agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless that collection displays a valid OMB control number.

Instructions

Send the original and six copies to HUD through the mortgagee.

Under "Description of Changes" describe each proposed change and enter the amount by which the construction cost will be increased or decreased as the net result of each proposed change. Attach documentation including (1) reason for each change, (2) general scope, (3) full detailed description of work to be omitted and/or added and the cost for each trade affected, and (4) reference any attachments showing proposed revisions.

Estimate the cost of each change on the basis of the current cost of items omitted, substituted or added. Estimates include job overhead and builder's fee, or job overhead and general overhead, as applied in the HUD estimate of the project. No allowance for "Builder's and Sponsor's Profit and Risk" is included. No architect's or engineer's fee is included.

This form is not used for off-site changes. Such changes must be submitted in writing, using this form as a guide.

To be acceptable to HUD a proposed change must be due to necessity, or be an appropriate betterment, or qualify as an equivalent. In accepting any changes, it is assumed that they will be executed. If an accepted change is not executed, it must be nullified by substituting a Request for Construction Changes amending the drawings and specifications so as to restore the drawings and specifications to prior status or to a status acceptable to HUD.

Send requests for a time extension on a separate form.

Conditions of Acceptance or Reasons for Unacceptability

When the HUD estimated cost of all accepted changes results in a net decrease in the total construction cost, the insurable mortgage will be similarly decreased; but if the net effect is an increase, the additional costs will be defrayed by the mortgagor. The acceptance of any change or changes involving a net increase does not increase the mortgage amount.

INSERT
PREVAILING WAGE RATES
FOR
STAMFORD, CT

"General Decision Number: CT20200020 01/24/2020

Superseded General Decision Number: CT20190020

State: Connecticut

Construction Type: Building

County: Fairfield County in Connecticut.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.80 for calendar year 2020 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 \$10.80 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 2020. 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	01/03/2020
1	01/17/2020
2	01/24/2020

ASBE0033-002 06/01/2019

	Rates	Fringes
HEAT & FROST INSULATOR (Includes Duct, Pipe and Mechanical Systems).....	\$ 40.21	30.99

* BRCT0001-006 01/06/2020

	Rates	Fringes
BRICKLAYER.....	\$ 35.71	34.34

* BRCT0001-007 01/06/2020

Rates	Fringes
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CEMENT MASON/CONCRETE FINISHER...	\$ 35.71	34.34

CARP0326-009 01/06/2020		
	Rates	Fringes
MILLWRIGHT.....	\$ 34.94	26.19

CARP0326-024 05/06/2019		
	Rates	Fringes
FLOOR LAYER: Carpet Only.....	\$ 33.53	25.66

CARP0326-025 05/06/2019		
	Rates	Fringes
FLOOR LAYER: Hardwood Floors Only.....	\$ 33.53	25.66

CARP0326-026 05/06/2019		
	Rates	Fringes
METAL BUILDING ERECTOR (Metal Siding / Wall Panels).....	\$ 33.53	25.66

CARP0326-027 05/06/2019		
	Rates	Fringes
CARPENTER (Scaffold Builder).....	\$ 33.53	25.66

CARP0326-028 05/06/2019		
	Rates	Fringes
CARPENTER (Includes Acoustical Ceiling Installation, Drywall Hanging, Form Work, and Metal Stud Installation).....	\$ 33.53	25.66

CARP0326-029 05/06/2019		
	Rates	Fringes
SOFT FLOOR LAYER.....	\$ 33.53	25.66

CARP0326-030 05/06/2019		
	Rates	Fringes
FLOOR LAYER: Vinyl Flooring Only.....	\$ 33.53	25.66

ELEC0003-006 04/28/2016		
	Rates	Fringes
ELECTRICIAN (Includes Low Voltage and Installation of		

Alarms and Sound and Communication Systems).....	\$ 50.75	43.704

ELEC0488-003 06/01/2019		
	Rates	Fringes
ELECTRICIAN (HVAC/Temperature Controls Installation).....	\$ 39.62	3%+27.25

ELEV0091-002 01/01/2019		
	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 53.37	33.705+a+b

ENGI0478-004 04/07/2019		
	Rates	Fringes
POWER EQUIPMENT OPERATOR (Backhoe/Excavator/Trackhoe).....	\$ 39.88	24.80

ENGI0478-005 04/07/2019		
	Rates	Fringes
POWER EQUIPMENT OPERATOR (Bulldozer).....	\$ 39.88	24.80

ENGI0478-012 04/07/2019		
	Rates	Fringes
POWER EQUIPMENT OPERATOR (Crane).....	\$ 40.97	24.80

ENGI0478-016 04/07/2019		
	Rates	Fringes
POWER EQUIPMENT OPERATOR (Loader - 7 cubic yards or over).....	\$ 40.97	24.80

IRON0424-001 06/03/2019		
	Rates	Fringes
IRONWORKER (Reinforcing, Structural, Ornamental).....	\$ 36.67	35.77

LABO0230-002 04/07/2019		
	Rates	Fringes
LABORER (Mason Tender-Cement/Concrete).....	\$ 31.25	20.84

PAIN0011-014 06/01/2019		
	Rates	Fringes

GLAZIER.....	\$ 38.18	21.80

PAIN0011-021 06/01/2019		
	Rates	Fringes
PAINTER (Brush and Roller).....	\$ 34.62	21.80

PAIN0011-023 06/01/2019		
	Rates	Fringes
PAINTER (Drywall Finisher/Taper).....	\$ 35.37	21.80

PLUM0777-001 06/01/2018		
	Rates	Fringes
PLUMBER.....	\$ 42.62	31.21

PLUM0777-003 06/01/2018		
	Rates	Fringes
PIPEFITTER.....	\$ 42.62	31.21

PLUM0777-009 06/01/2018		
	Rates	Fringes
PIPEFITTER (HVAC Pipe Installation Only).....	\$ 42.62	31.21

ROOF0009-001 06/01/2019		
	Rates	Fringes
ROOFER.....	\$ 37.60	20.65

SHEE0038-006 07/01/2018		
	Rates	Fringes
SHEET METAL WORKER (Metal Flashing and HVAC Duct Installation Only).....	\$ 43.70	38.67

SHEE0040-001 07/01/2019		
	Rates	Fringes
SHEET METAL WORKER (Including HVAC Unit Installation).....	\$ 37.98	38.31

SHEE0040-008 07/01/2019		
	Rates	Fringes
SHEET METAL WORKER (Metal Roofs Installation).....	\$ 37.98	38.31

TEAM0677-001 04/07/2019		

	Rates	Fringes
TRUCK DRIVER (Dump Truck)	\$ 29.72	24.52

* UAVG-CT-0001 01/01/2019		

	Rates	Fringes
LABORER: Common or General	\$ 30.05	19.84

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"

SECTION 01 00 00
GENERAL REQUIREMENTS

1.1 GENERAL SCOPE:

- A. The General Conditions, Supplementary General Conditions, Supplementary Instructions to Bidders, and all other parts set forth in Part 1 of the Specifications are hereby made a part hereof unless specifically accepted.

1.2 QUALIFICATIONS:

- A. The Contractor shall have been regularly engaged in construction and the installation and fabrication of the type work set forth in the Contract Documents for a period of not less than five (5) years prior to the Bid date set forth in the Contract Documents.
- B. The Contractor shall have adequate Plant & Equipment facilities for the proper performance of the work set forth in the Contract Documents, and all such Plant & Equipment facilities shall be subject to the approval of the Owner.
- C. The Owner shall be the sole judge and shall have the final privilege to approve or disapprove the qualifications of the Contractor, and to approve or disapprove his Plant & Equipment facilities available to perform the work required by the Contract Documents.

1.3 EXAMINATION OF SITE:

- A. The Contractor is required to attend the Pre-Bid meeting and to fully acquaint himself with the Site and with the existing conditions, so that he may fully understand the facilities, difficulties, and restrictions attending the execution of the work under the Contract. The failure of the Contractor to visit the Site and acquaint himself with the conditions there existing in connection with the existing Site conditions, shall in no way relieve the Contractor from any obligations with respect to the work included in the Contract. The submission of a Bid by the Contractor shall be taken as prima facie evidence of compliance with this Section.
- B. The Contractor shall include in his Bid, all costs for the full completion of all work under the Contract as indicated on the Drawings and specified in the Specifications, including all items of work required and necessary due to existing conditions encountered in-the-field during the process of performing the work; all costs in connection with encountered existing conditions shall be performed by the Contractor at no additional cost to the Owner.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

1.4 INSPECTIONS:

- A. The Contractor shall be responsible for the proper inspection of his work during its installation by his workmen, his sub-contractors, all lawful authorities, other workmen which may be engaged by the Owner, and the Contractor shall obtain and pay for all necessary permits, fees, and other requirements.
- B. The Contractor shall comply with all laws relative to persons employed by him or his sub-contractors.

1.5 INTENT:

- A. It is the intention of the Drawings and Specifications that all work shall be fully completed, tested, and placed into final operation for the use intended. All materials, equipment, apparatus, appliance workmanship, etc., shall be new and of first-class quality.
- B. Any apparatus, appliance, material, or work not indicated on the drawings but mentioned in the Specifications, or vice versa, or all miscellaneous materials and workmanship not indicated on the Drawings or mentioned in the Specifications but necessary and required by the Owner to make the work complete and finished in all respects and made ready for use intended by the Owner, even if not particularly specified in the Drawings and Specifications, shall be provided by the Contractor without additional cost to the Owner.

1.6 APPROVAL OF MATERIALS:

- A. The materials, workmanship, design, and arrangement of all work installed under the Contract shall be subject to the approval of the Architect.
- B. Within twenty one (21) days after the Notice to Proceed with the work has been issued to the Contractor, and prior to the submission of any shop drawings for approval, the Contractor shall submit to the Architect for approval, a complete list of Manufacturers of all equipment and materials proposed for use in the work. No approvals will be rendered by the Architect on any shop drawing submitted before the complete "List of Manufactures" is approved. Any item of equipment or materials not submitted for approval on the "List of Manufacturers" within the twenty one (21) day period will not be approved unless it shall be of the exact make and characteristic specified in the Contract Documents.

1.7 SHOP DRAWINGS:

- A. Prior to delivery to the job site, but sufficiently in advance of requirements necessary to allow the Architect ample time for review, the Contractor shall submit for review six (6) copies each of shop drawings of all equipment, materials, tapered insulation, piping, wiring, hardware, fixtures, equipment, etc., and further shall obtain review approval for same from the Architect before installing any of the same in the work of the Project.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- B. The review shall be only for general conformance with the design concept and general compliance with the information given in the Contract Documents. It shall not include review of quantities, dimensions, weights or gauges, fabrication processes, construction methods, etc., all of which shall be the sole responsibility of the Contractor. The Contractor shall not be relieved from furnishing materials or work as may be required for the completion of all items of work intended by the Owner.
- C. Prior to submission of shop drawings, the Contractor shall thoroughly check each shop drawing and shall reject those not conforming to the Contract Documents, and he shall indicate by his signature thereon that the shop drawings submitted in his opinion meet the full requirements of the Contract Documents. The requirements herein for shop drawings shall be in addition to the requirements set forth in the General Conditions.

1.8 SHUTDOWNS:

- A. The temporary shutdown by the Contractor of the existing systems, construction, equipment, etc., shall be performed at such time as shall be agreed to by the Owner.
- B. The Owner shall be notified of estimated duration of the shutdown period at least two (2) days in advance of the date the work is to be performed. The maximum duration of any shut down shall not exceed two (2) hours.
- C. Work shall be arranged for continuous performance, including overtime periods if so required, to assure that existing operating services, equipment, passageways, construction, etc., shall be shut down only during the time actually required to make necessary connections.

1.9 RENOVATION WORK:

- A. The Contractor shall disconnect, remove, relocate, replace, reconnect, rebuild, reconstruct, etc., all encountered existing equipment required for the kitchen, window, & siding replacement, including all materials, piping, wiring, electrical systems, heating systems, plumbing systems, foundation walls and/or footings, walls, and all other items of existing construction, including all site improvements such as lawns, curbs, walks, etc., encountered during the performance of the work under the Contract.
- B. The Contractor shall construct, build, re-construct, rebuild, and restore and replace to its original condition or with new and/or existing similar materials, all items of surface and subsurface construction which has been interrupted, changed, or altered in any way by and during the performance of the work under the Contract.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

1.10 WORK SCHEDULE:

- A. The Contractor shall submit a Work Schedule for approval by the Owner which shall set forth the date and time for each area and/or phase of renovation work, the commencement of any work under the contract. The Contractor shall schedule his work so that the installation of new work shall be fully completed as soon as possible. The Contractor shall prepare the Work Schedule in accordance with the limits of Contract Time set forth in the Contract Documents.
- B. The Contractor shall schedule his work in a manner to provide not less than three (3) days written notice to Charter oak Communities to the performance of work under the contract. The Contractor shall take precautions to insure all walkways and entrances/exits remain clear and unobstructed for use by the occupants. The Contractor shall conform to the Work Schedule approved by the owner.
- C. The Contractor shall coordinate all aspects of the kitchen, window & siding renovation work with any mechanical upgrades/improvement work.

1.11 OCCUPANCY OF BUILDING:

- A. Attention is directed to the fact that the Building(s) on the site will be continuously occupied throughout the period required for the Contractor to perform the work set forth in the Contract Documents. The Contractor shall limit the hours of work from 7:00 AM to 5:00 PM local time.
- B. The Contractor shall perform his work in a manner, form, schedule, and sequence, so that the normal occupancy of the Buildings on the site shall be maintained in continuous operation without causing any undue inconvenience or interruption to the safety, use, and function of the Buildings by the occupants.

1.12 CODES AND REGULATIONS:

- A. The Contractor shall comply with all codes and regulations of the local Municipality, the State of Connecticut, all Utility Companies, Telephone company, Cable company and all other governing Agencies having jurisdiction over the project.
- B. The Contractor shall, prior to the acceptance of all work by the Owner, furnish written proof of the acceptance of all work by the local Municipality, the Utility Companies, the State of Connecticut, and all other governing Agencies having jurisdiction over the Project.
- C. The Contractor shall pay for all fees in connection with the installation of the work and he shall pay for all fees charged by the local Municipality, by Utility Companies, and all other governing Agencies having jurisdiction over the Project.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

1.13 EXISTING IMPROVEMENTS:

- A. Maintain in operating condition, all active utilities, driveways, streets, parking areas, sidewalks, lighting systems, electric services, plumbing systems, heating systems, telephone systems, cable systems, fire alarm systems, and all other active utilities and improvements.
- B. The Contractor shall make interruptions to the existing systems only when necessary and shall maintain interruptions to the existing systems to an absolute minimum and only upon approval by the owner, and he shall provide the Owner with complete information as to the time, location, sequence and length of each system interruption. Unless otherwise permitted by the owner, the Contractor shall maintain continuous service of all existing and new system or systems at all times to all adjacent tenant occupied buildings and areas.
- C. Maintain vehicular traffic through streets as per local Municipality requirements; do not completely block passage of vehicles and maintain at all times open traffic lanes for access by all types of vehicular traffic. Provide temporary barricades, enclosures, separators, signs, etc., as may be required for streets, sidewalks, vehicles, pedestrians, and other type traffic. The Contractor shall comply with all rules, regulations, and laws governing the work and for the continued customary use of the Buildings and all areas of the Project Site.

1.14 SAMPLES:

- A. When so requested by the Owner and prior to commencement of work under the Contract, the Contractor shall submit samples for review and approval by the Owner. The Contractor shall deliver the samples to the office of the Owner or to such other location stipulated by the Owner, and the samples shall be complete with not less than four (4) copies of the Manufacturer's literature, printed data, etc.
- B. The Owner, shall be the sole judge and shall have the final privilege to approve, disapprove, or reject samples submitted by the Contractor.
- C. The Contractor shall furnish affidavits certifying that materials used in the Project comply with the Specifications. Affidavits shall be in the form and manner approved by the Architect; submitted in duplicate, properly executed, signed as required for each item of material used in the performance of the Contract.

1.15 SLEEVES, ETC.:

- A. The Contractor shall provide and shall be held responsible for the location of and maintaining in proper position, all sleeves, inserts, anchor bolts, openings, holes, etc., required for the work.
- B. All sleeves shall have an internal diameter of one (1) inch larger than the outside diameter of the pipe, conduit, raceway, duct, etc., passing through the construction.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- C. Sleeves through outside exposed to the weather construction shall be of Schedule 40 galvanized steel pipe. Sleeves through interior partitions of non-masonry construction shall be of not less than No. 22 gauge galvanized sheet steel. All sleeves shall be set flush with the finished surfaces of floors, roofs, walls, partitions, etc.
- D. The space between the sleeve and the pipe (both interior and exterior sleeves) shall be packed with non-staining Ethafoam plastic rope, and shall be surface caulked with a waterproof sealant meeting the approval of the Architect. Provide all sleeves located in exposed to view areas with escutcheon plates.

1.16 ESCUTCHEONS:

- A. Where exposed to view pipes, conduits, sleeves, etc., pass through floors, walls, partitions, ceilings, etc., they shall be fitted with neat, heavy spun or stamped escutcheon plates firmly secured to the pipes, conduits, etc. All escutcheon plates shall be of sufficient outside diameter to amply cover the sleeve openings. All escutcheon plates shall be non-ferrous metal and shall be chrome plated.

1.17 SCAFFOLDING, RIGGING, HOISTING EQUIPMENT, ETC.:

- A. The Contractor shall provide and remove when no longer necessary, all scaffolding, rigging, hoisting equipment, temporary coverings, and other service necessary for the performance of all work under the Contract.
- B. Install and remove all temporary coverings and leave all existing construction neat, clean, and free of all debris.

1.18 CLEANING, REMOVAL OF DEBRIS:

- A. The Contractor shall periodically or as directed during the progress of the work, remove and properly dispose of all debris, and shall keep the premises clean and clear of all obstructions. Upon completion of the work, he shall remove all temporary construction, facilities and materials, and shall leave the Building and the Project Site in a neat and clean condition.
- B. All debris due to removal and installation of new work shall be removed daily from the job Site by the Contractor.

1.19 RENOVATIONS TO EXISTING CONSTRUCTION:

- A. All changes, additions, alterations, renovations, deletions, removal, replacements, reconstruction, etc., which are necessary and required for the installation of new work shall be included in the Contract. The items of work throughout the various Divisions of the Contract Documents shall be coordinated under this Division of the work to the extent that all alterations, changes, additions, deletions, reconstruction, replacements, etc., to the existing construction work shall be fully completed for the use intended by the Owner, and all such work shall be performed by the Contractor at no additional cost to the Owner.
- B. The Contractor shall remove, replace, reconstruct, reduce, enlarge, alter, cut, patch, repair, drill, cover, etc., all existing items of work. Include all site improvements, general construction, mechanical construction, electrical work, heating and ventilating work, plumbing systems, fire alarm systems, telephone systems, cable systems etc., which have been damaged or disturbed by and during the performance of the work under the Contract, and all of which shall be restore to their original condition and use by the Contractor at no additional cost to the Contract.
- C. Exercise proper care in the removal of existing construction so that structural stability of the existing construction will not be impaired; protect existing construction from damage and take all necessary precautions to avoid undue damage to all finishes.
- D. All existing construction shall be patched, adjusted and repaired using similar materials to match the original condition and construction insofar as possible. Patch and repair walls, floors, roofs, ceilings, concrete and brick work, and all other existing finishes and construction.
- E. All penetrations through floors, ceilings, walls, etc., shall be properly sealed (and fire rated where required) with proper non-combustible sealant materials.

1.20 CASH ALLOWANCE & UNIT PRICES:

- A. The Contractor shall include in the Contract Sum, all allowances and Unit Price set forth in the Contract Documents, and he shall perform the work with his own personnel or by other sub-contractors engaged by him within the amounts set forth in the Contract Documents.
- B. The Contractor accepts and declares that the Contract Sum includes all amounts for expenses and profit on account of the Cash Allowance and Unit Prices set forth in the Contract Documents; no demand by the Contractor for expenses or profit other than the amount set forth Cash Allowances and the Unit Prices shall be allowed to the Contractor.
- C. Unless specified otherwise in the Contract Documents, the Owner reserves the right to select and approve the materials, equipment, method of performance and installation, for which the Cash Allowances and Unit Prices are specified.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- D. The approved selected Sub-Contractor or other personnel selected to perform the work herein stated, shall assume the status of a Sub-Contractor under the Contractor, and the Documents. The Contractor shall not be required to employ for any such work included under the Cash Allowances and Unit Prices, persons against whom he has a reasonable objection.

1.21 CO-ORDINATION OF WORK WITH OTHERS:

- A. Attention is directed to the fact that the Owner may award a separate Contract or Contracts for various items of work throughout the Project.
- B. The Contractor shall coordinate his work with the Contractors or Contractor engaged by the Owner so that each and all Contractors performing work for the Owner shall share equally in the advantages and disadvantages of performing the work under their various Contracts.
- C. Each Contractor shall notify and shall coordinate all items of work with each other individual Contractor. Coordinate temporary interruptions to the heating system, shutdowns, temporary connections and services, removal and replacements of existing work, installation of new work, and all other items for work, so that the combined effort of all Contractors or Contractor will produce the full completion of the Owner intended work set forth under the Contract.

1.22 MISCELLANEOUS CUTTING, PATCHING, ETC.:

- A. The Contractor shall perform all items of concrete work, masonry work, carpentry work, excavating and backfilling work, mechanical work, electrical work, and all other type of construction due to the installation of work under the Contract.
- B. During the performance of miscellaneous cutting, patching etc., the Contractor shall maintain all operational heating and plumbing lines, electrical lines, service lines, and all other necessary services in operating condition during the performance of work required by the Contract. The Contractor shall maintain all required services to each occupied area, so that all areas shall be habitable and can be occupied for normal customary use by the occupants. Provide all temporary connections, construction, supports, etc. required, and all such work shall be completely removed when no longer required.

1.23 INTERPRETATION OF DRAWINGS & SPECIFICATIONS:

- A. Any questions or disagreements arising as to the true intent of this specification or the Drawings, or the kind and quality of work required thereby, shall be decided by the Architect, whose interpretations thereof shall be final, conclusive, and binding on all parties.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- B. In the case of any discrepancies between Drawings and Specifications, or within either document itself, the better quality, greater quantity or more costly work shall be included in the Contract Price, and shall be furnished and installed in the performance of the required work.
- C. In the case of any discrepancies between Part 1 and part 2 of the Specification Manual, the requirements as specified in Part 2 of the Specification Manual shall prevail.

1.24 APPROVAL:

- A. The materials, workmanship, design and arrangement of all work installed under the Contract shall be subject to the approval of the Architect. If material or equipment is installed before it is approved, the Contractor shall be liable for the removal and replacement, at no extra cost to the Owner, if, in the opinion of the Architect, the material or equipment does not meet the intent of the Drawings and Specifications.

1.25 SUBSTITUTIONS:

- A. Substitutions of equipment or materials other than those indicated on the Drawings or in the Specifications, shall be confined to only those manufacturer's listed, or those otherwise indicated, and may be made only upon written approval from the Architect.
- B. The Contractor shall submit his substitution for approval before releasing order for fabrication and/or shipment. Submittal will be forwarded with a letter of transmittal or cover letter listing all items for approval. The Architect reserves the right to disapprove such substitution, provided, in his opinion, the item offered is not equal to the item specified.
- C. Where a Contractor proposes to use an item of material or equipment other than that specified or detailed on Drawings, and which requires any redesign of the roof and/or structure, or architectural lay-out, all such redesign and all new drawings and details required thereof shall, with the approval of the Architect be prepared by the Contractor at his own expense.
- D. Where such approved deviation requires a different quantity and arrangement of material and equipment from that specified or indicated on the drawings, subject to the approval of the Architect, the Contractor shall provide any such material, structural supports, and any other items at no additional cost to the Owner.

1.26 APPROVAL OF INSTALLATION:

- A. The materials, workmanship, design, and arrangement of all work installed under the contract shall be subject to the approval of the Architect. If material or equipment is installed before layout and design of same is approved, the contractor shall be liable for the removal and replacement of all such unapproved work at no extra cost to the Owner.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

1.27 ROYALTIES & PATENTS:

- A. The Contractor shall pay all royalties and shall defend all suits or claims for infringement of any patent rights and shall save the Owner harmless from loss on account thereof.
- B. If the Contractor observes that a process or article specified is an infringement of a patent, he shall promptly notify the Architect in writing, and any necessary changes shall be adjusted as provided in the Contract for changes in the work. If the Contractor performs any work specified, knowing it is to be an infringement of a patent, he shall bear all costs arising therefrom.

1.28 PROTECTION OF WORK & PROPERTY:

- A. The Contractor shall be responsible for the maintenance and protection of all equipment, materials, and tools, supplied by him and stored or installed on the job site, from loss or damage of all causes, until final acceptance.
- B. The Contractor shall be responsible for the protection of any finished work of other trades from damage or defacement by his operations and must remedy any such injury at his own expense.

1.29 ACCESSIBILITY:

- A. The Contractor shall install all work so that all parts required are easily accessible for inspection, operation, maintenance and repair. Minor deviations from Drawings may be made to accomplish this, but changes of magnitude shall not be made without prior written approval from the Architect.

1.30 TESTS:

- A. All equipment shall be tested as specified under the various sections of the work. Labor, materials, instruments, and power required for testing shall be furnished by the Contractor, unless otherwise indicated under the particular section of the Specifications.
- B. Tests shall be performed in the presence and to the satisfaction of the Architect, and such other parties as may have legal jurisdiction.
- C. All defective work shall be promptly repaired or replaced and the tests shall be repeated until the particular system and component parts thereof receive the approval of the Architect.
- D. Any damages resulting from tests shall be repaired and damaged materials replaced, all to the satisfaction of the Architect.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- E. The duration of tests shall be as determined by all Authorities having jurisdiction, but in no case less than that prescribed in each section of the Specification.
- F. Equipment and systems which normally operate during certain seasons of the year shall be tested during the appropriate season. Tests shall be performed on individual equipment, systems and their controls. Wherever the equipment of systems under test is inter-related with, and depends upon, the operation of other equipment, systems, and controls for proper operation, functioning and performance, the latter shall be operated simultaneously with the equipment or system being tested.
- G. All costs in connection with tests shall be paid for by the Contractor.

1.31 AS-BUILT DRAWINGS:

- A. The Contractor shall keep concurrent with the installation of the progress of the work, an accurate record of the as-built location and condition of all work performed under the Contract. All as-built information shall be recorded on a clean set of Black and White Contract Drawings and shall indicate the final location of all items of work complete with dimensions, sizes, notations, etc.
- B. Upon completion of all work and prior to Final Acceptance of all work under the Contract, the Contractor shall transfer all as-built information to clean set of Black and White Zerox Contract Documents. Submit all final as built Drawings to the Architect for final approval and acceptance.

1.32 OWNERSHIP OF DRAWINGS & SPECIFICATIONS:

- A. All Drawings, Specifications, and copies thereof furnished by the Architect are his property and they are not to be used on other work, and shall be returned to the Architect at the completion of the work.
- B. On the award of the Contract, the Architect will issue to the Contractor Two (2) stamped and signed copies of the drawings and specifications for permit application.

1.33 TEMPORARY SERVICES:

- A. Refer to specification section 01 50 00, "Temporary Facilities and Controls" for information on the following items:
 - 1. Temporary Electricity
 - 2. Temporary Lighting
 - 3. Temporary Telephone Service
 - 4. Temporary Water Service

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

5. Temporary Sanitary Facilities
6. On-site Parking

1.34 GUARANTY:

- A. The Contractor shall guaranty all work performed under the Contract for a period of two (2) years from the date of final acceptance by the Owner of all work under the Contract. Final acceptance will be as set forth in a written notice by the Owner to the Contractor. This Owner will give notice of observed defects to the Contractor with reasonable promptness and the Contractor shall remove, patch, repair, and adjust all defective work immediately in accordance with the terms of the Contract.
- B. The above guaranty shall be in addition to all work guarantees and warranties required under the Contract.

1.35 CONTRACTOR'S PERSONNEL:

- A. Smoking and the consumption of food and beverages throughout the Buildings and on the site shall not be permitted. The consumption of alcoholic beverages shall not be permitted on-site at any time. The use of radios, boom boxes and similar type units shall not be permitted on-site at any time.

END OF SECTION

SECTION 01 22 00
UNIT PRICES

1.1 SUMMARY:

- A. This section includes: Procedures for Identification and description of Unit Prices for various building components and systems which shall be used to establish cost of change in the scope of the work which may occur.
- B. Related Sections
 - 1. Bidding form: Quotation of the cost of proposed unit prices.
 - 2. Owner-Contractor agreement: Incorporation of unit prices into the Work.
 - 3. Sections of the Specifications listed under the respective unit prices.

1.2 COORDINATION:

- A. Coordinate pertinent related work and modify surrounding work required to properly integrate the work provided by unit prices, and to provide the complete construction required by Contract Documents.

1.3 DESCRIPTION OF UNIT PRICES:

- A. Unit price and rules of measurement as listed in Bid Form shall be used in evaluating additions and deductions to the Contract Price and shall be used for all classifications of the work irrespective of the quantity involved.
- B. The Contractor shall quote his Base Bid Proposal the Unit Prices included in the bid form, which may be as selected by the Owner.

END OF SECTION

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

SECTION 01 31 13
COORDINATION

1.1 GENERAL SCOPE:

- A. The General Conditions, Special Conditions, Instructions to Bidders, and all other parts set forth in Part 1 of the Specifications are hereby made a part hereof unless specifically excepted.

1.2 COORDINATION:

- A. Coordinate scheduling, submittals and work of the various Specification sections to assure efficient and orderly sequence of installation of interdependent construction elements with provisions for accommodating items installed later.
- B. Verify that utility requirement characteristics of operating equipment are compatible with building utilities. Coordinate work of various specification sections having interdependent responsibilities installing, connecting, and placing such materials, equipment and utilities in service.
- C. Coordinate completion and cleanup of work of separate sections of Specifications in preparation for completion of all portions of Work.

1.3 CUTTING AND PATCHING:

- A. Employ skilled and experienced installers to perform cutting and patching.
- B. Submit written request in advance of cutting or altering elements which affect the following:
 - 1. Structural integrity of element.
 - 2. Integrity of weather-exposed or moisture-resistant elements.
 - 3. Performance, efficiency, maintenance and safety of element.
 - 4. Visual qualities of exposed-to-view elements.
 - 5. Work of Owner and separate contractors.
- C. Execute cutting, fitting, and patching to complete Work, and to:
 - 1. Fit the several parts together and to integrate with other Work.
 - 2. Uncover Work to install or correct ill-timed Work.
 - 3. Remove and replace defective and non-conforming Work.
 - 4. Remove samples of installed Work for testing.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

Provide openings in elements of work for penetrations of mechanical and electrical work.

- D. Execute work by methods which will avoid damage to other work, and provide proper surfaces to receive patching and finishing.
 - 1. Provide required protection and support for existing surfaces and components.
 - 2. Cut rigid materials using masonry saw or core drill.

- E. Restore Work with new products in accordance with requirements of contract Documents.
 - 1. Fit new and existing Work tight to pipes, sleeves ducts, conduits, and other penetrations through surfaces.
 - 2. All finish or new/disturbed grades shall be made to blend smoothly and evenly into existing work on the property.

Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection. For an assembly, refinish entire unit.

- F. In the event hazardous substances or conditions are exposed during the work, identify such hazards to the Architect for decision or remedy.

END OF SECTION

SECTION 01 31 19
PROJECT MEETINGS

1.1 GENERAL SCOPE:

- A. The General Conditions, Special Conditions, Instructions to Bidders, and all other parts set forth in Part 1 of the Specifications are hereby made a part hereof unless specifically excepted.

1.2 MEETING REQUIREMENTS:

- A. Schedule regular job Site meetings at intervals of approximately two (2) weeks.
- B. Arrange for special meetings as may be required due to progress of the work.
- C. Meetings shall be held at the Project Site.
- D. Attendance shall be by: Owner's Representative, Architect, Contractor, Sub-Contractors, Suppliers, and such other Persons or Companies appropriate to the project construction work. All Persons attending the meetings shall be qualified, familiar with the Project, and authorized to conclude matters relating to the Project.

1.3 SUGGESTED AGENDA:

- A. Project job Site meeting shall in general contain the following agenda:
 - 1. Review of progress report and construction schedule.
 - 2. Review of off-site fabrication, delivery schedules.
 - 3. Review submittal schedules.
 - 4. Review of follow-up list of problems and incompletions.
 - 5. Field observations, problems, conflicts.
 - 6. Maintenance of quality standards.
 - 7. Review proposed changes for effect on construction schedule, completion date and other contracts.
 - 8. Other business pertinent to the work of the Project.

END OF SECTION

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

SECTION 01 33 00
SUBMITTALS

1.1 GENERAL SCOPE:

- A. The General Conditions, Special Conditions, Instructions to Bidders, and all other parts set forth in Part 1 of the Specifications are hereby made a part hereof unless specifically excepted.

1.2 SUBMITTAL PROCEDURES:

A. Transmittals to Architect:

1. Transmit each submittal to Architect with sequentially numbered transmittal forms. Number re-submittals with original number and an alphabetic suffix.
2. Identify Project, Contractor, subcontractor, supplier, pertinent drawing and detail numbers, and specification section numbers as appropriate.
3. Provide space for Contractor and Architect review stamps.
4. Identify deviations from Contract Documents.

- B. Contractor's review: Apply Contractor's stamp, signed or initialed certifying that review, verification of products required, field dimensions, adjacent construction work, and coordination of information, is in accordance with the requirements of the Work and the Contract Documents.

C. Submittals:

1. Schedule submittals to expedite the Project. Deliver to the Architect in compliance with Construction Progress Schedule.
2. Coordinate submission or related item.
3. Submit all items relating to color selection within 30 days after award of contract Color selection will not be made until all color related submittals have been received.

- D. Revise and resubmit submittals as required, identify changes made since previous submittal.

- E. Distribute copies of reviewed submittals to appropriate parties.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

1.3 CONSTRUCTION PROGRESS SCHEDULE:

A. Submittals:

1. Submit initial progress schedule in duplicate within 15 days after date of Notice to Proceed for Architect review
2. Revise and resubmit as required.
3. Submit revised schedules with each Application for Payment, identifying changes made since from previous version.

B. Format – Provide the following:

1. Computer generated horizontal bar chart with separate line for each major section of work or operation, identifying first work day of each week.

C. Indicate the following:

1. Indicate complete sequence of construction by activity, identifying work of separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration.
2. Indicate estimated percentage of completion for each item of work at each submission.
3. Indicate submittal dates required for shop drawings, product data samples, and product delivery dates.
4. Indicate delivery dates for items furnished by Owner and under Allowances.

1.4 SCHEDULE OF VALUES:

A. Submittal:

1. Submit initial schedule in duplicate with 15 days after date of Owner- Contractor Agreement. After review by Architect revise and resubmit as required.
2. Submit revised schedule with each Application for Payment, reflecting changes since previous submittal.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- B. Format:
1. Submit typed schedule on AIA Form G703 – Application and Certificate for Payment Continuation Sheet. Contractor's standard form or media-driven printout will be considered on request.
 2. Utilize the table of Contents of this Project Manual. Identify each line item with number and title of the major specification Section.
 3. Identify Site mobilization.
- C. For Unit Cost Allowance, identify quantities taken from Contract Documents multiplied by the unit cost to achieve the total for the item.
- D. Include separately from each line item a directly proportional amount of Contractor's overhead and profit.
- 1.5 PROPOSED PRODUCTS LIST:
- A. Within 10 days after date of Notice to Proceed, submit complete list of major products proposed for us, with name of manufacturer, trade name, and model number of each product.
 - B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standard.
- 1.6 PRODUCT DATA:
- A. Submit the number of copies which the Contractor requires, plus one copy which will be retained by the Architect.
 - B. Mark each copy to identify applicable products, models, options, and other data. Supplement Manufacturers standard data to provide information unique to this product.
 - C. After review, distribute in accordance with Submittal Procedures above. Provide copies for Record Documents described in Section 01 70 00 Contract Closeout.
- 1.7 SHOP DRAWINGS:
- A. Submit the number of opaque reproductions which the Contractor requires, plus one copy which will be retained by the Architect.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

B. After review, distribute in accordance with Submittal procedures above and for Record Documents described in Section 01 70 00.

1.8 SAMPLES:

A. Submit samples to illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittal for interfacing work.

B. Submit samples of finishes in selected custom or standard colors, patterns, and textures for Architect selection.

C. Identify each sample. Include full Project information.

D. Submit the number of samples specified in individual specification sections or the number required by Contractor, plus one which will be retained by the Architect. Observe Submittal Procedures, above, relating to color submittals.

E. Reviewed samples which may be used in the Work are indicated in individual specification sections.

1.9 MANUFACTURER'S INSTRUCTIONS:

A. When specified in individual Specification Sections, submit manufacturer's printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data.

B. Identify conflicts between manufacturer's instructions and Contract Documents.

1.10 MANUFACTURER'S CERTIFICATES:

A. When specified in individual specification sections, submit manufacturer's certificate to Architect for review, in quantities specified for Project Data.

B. Indicate that material or product conforms to or exceeds specified requirements. Submit supporting references date, affidavits, and certifications as appropriate.

1.11 DOCUMENT REVIEW:

A. When required by individual Specification Section, require installer and agent of manufacturer of product system to:

1. Review the Contract Documents.
2. Verify that systems are appropriate for the intended use.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

3. Submit a statement of concurrence signed by installer and manufacturer.
- B. Submit three copies of the statement of concurrence to Architect for review and acceptance.
 - C. Do not proceed with installation until Architect has reviewed and accepted statement of concurrence.

END OF SECTION

SECTION 01 45 00
QUALITY CONTROL

1.1 GENERAL SCOPE:

- A. The General Conditions, Special Conditions, Instruction to Bidders, and all other parts set forth in Part 1 of Specifications are hereby made a part hereof unless specifically excepted.

1.2 QUALITY ASSURANCE:

- A. Monitor quality control over suppliers, manufacturers, products, services, Site conditions and workmanship, to produce Work of specified quality.
- B. Comply fully with manufacturers' approved instructions including each step in sequence. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- C. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.
- D. Use only skilled mechanics thoroughly trained and experienced in the necessary crafts to produce workmanship of specified quality.
- E. Secure products in place with positive anchorage devices designed and size to withstand stresses, vibration, physical distortion and disfigurement.

1.3 REFERENCES:

- A. Conform to specified standards by date of issue as follows:
 - 1. Code listings: For standards which are part of the Building Code in effect for this product, comply with the edition date published in the Building Code.
 - 2. Non-code listings: For standards which are not a part of the Building Code in effect for this Product, use the edition in effect at the date of Notice to Proceed, except where otherwise specified in product sections.
- B. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in reference documents.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

1.4 MANUFACTURERS' FIELD SERVICES AND REPORTS:

- A. When specified in individual Specification Sections, required material supplier or manufacturer to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, and quality of workmanship; to start-up equipment: to test, adjust and balance equipment as applicable; and to initiate instructions when necessary.
- B. Require observer to report observations, Site decisions and Site instructions given to applicators or installers that are supplemental or contrary to manufacturer's written instructions.
- C. Submit to Architect a written report by observer in duplicate within 7 days of observation.

1.5 TESTING LABORATORY SERVICES:

- A. Employ and pay for services of an Independent Testing Laboratory to perform inspections, tests, and other services required by individual Specification Sections. Select laboratory and submit to Architect for approval.
- B. Direct Laboratory to perform services in accordance with requirements of governing authorities and with specified standards.
- C. Submit reports to Architect in duplicate, giving observations and results of tests, indicating compliance or non-compliance with specified standards and with Contract Documents.
- D. Cooperate with Testing laboratory personnel: furnish tools, samples of materials, design mix, equipment, storage and assistance as requested.
 - 1. Notify Architect and Testing Laboratory 24 hours prior to expected time for operations requiring testing services.
 - 2. Make arrangements with Testing Laboratory and pay for additional samples and tests for Contractor's convenience.

END OF SECTION

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

1.1 GENERAL SCOPE:

- A. The General Conditions, Special Conditions, Instructions to Bidders, and all other parts set forth in Part 1 of the Specifications are hereby made a part hereof unless specifically excepted.

1.2 TEMPORARY UTILITIES:

A. Electricity:

1. Contractor shall provide all electrical power and such additional power outlets as may be required for construction operations, with branch wiring and distribution boxes. Provide flexible power cords as required. Contractor shall be responsible for all cost associated with electrical power.
2. Provide main service disconnect and over current protection at convenient location.
3. Permanent Building convenience receptacles shall not be utilized during construction. Coordinate use with Owner personnel.
4. Electrical power required shall not be furnished to the Contractor by the Owner.

B. Temporary lighting:

1. Provide and maintain adequate lighting for construction operations.
2. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.
3. Maintain lighting and provide routine repairs.
4. Permanent Building lighting may be utilized during construction.
5. All temporary wiring, lighting fixtures and accessory parts shall be removed when no longer needed and the permanent systems in each area has been installed.

C. Temporary Water Service:

1. The Owner shall provide temporary water to the Contractor from location(s) designated by the Owner. The Owner shall be responsible to pay for all water used by the Contractor.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

2. The Contractor shall provide all temporary additional water lines as may be required for construction operations, with all branch lines, fittings, and fixtures as required. Contractor shall be responsible for all cost associated with temporary additional water lines.
3. The Contractor shall provide backflow preventers at convenient location(s) if required. The Contractor shall be responsible for all cost associated with backflow preventers.
4. The Contractor shall make every effort to conserve water. Failure of the Contractor to conserve water may result in forfeiture of the right to use Stamford Housing Authority facilities.

D. Temporary sanitary facilities:

1. The Contractor shall provide all temporary toilet and sanitary facilities as may be required for construction operations. Contractor shall be responsible for all cost associated with temporary toilets and sanitary facilities.
2. Permanent Building toilets and sanitary facilities shall not be used during construction.

1.3 ENVIRONMENTAL CONTROLS:

A. Comply with applicable Federal, State, and local laws, regulations, and ordinances and the following requirements for environmental pollution control and abatement in performing construction activities throughout the Building.

B. Rubbish Disposal:

1. Do not burn, bury or dispose of debris and waste materials on the Project Site in an unauthorized manner.

C. Dust:

1. Keep dust within acceptable levels at all times, including non-working hours, weekends and holidays, in conformance with State and local regulations.
2. Only wet grinding or cutting of concrete, masonry, and asphaltic concrete will be allowed on exterior surfaces. Dry cutting or grinding may be used on interior surfaces provided openings are covered.
3. Mechanical dry sweeping not permitted: Vacuuming, wet mopping, approved limited dry hand, wet or damp sweeping is acceptable.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

4. During loading operations, water down debris and waste materials to allay dust.
 5. Select method of dust control and pay all costs incurred.
- D. Air pollution:
1. Do not permit or cause air pollution from mist, smoke, vapor, gas, odorous substances and particulate matter.
 2. Do not operate any gasoline or diesel-powered vehicle or equipment on the Building Site which emits visible smoke.
- E. Noise: Muffle internal combustion engine-powered equipment to minimize noise and properly maintain to reduce noise to acceptable levels.
- F. Others
1. If spray application is allowed under the other Specification Sections, use 'airless spray' process only.
 2. Where the requirements of other Project Manual Sections are in conflict with this Section, the more stringent requirement shall govern.
 3. Suspension of work: Violation of any of these requirements or any other pollution control requirements which may be specified in other sections may cause suspension of the work creating such violation. No additional compensation will be allowed for remedial measures to correct the offense and no extension of time will be granted for delays caused by such suspensions. If no corrective action is taken by the Contractor within 72 hours after a suspension is ordered, the Owner reserves the right to take whatever action is necessary to correct the situation and to deduct costs incurred in taking such action from monies due the Contractor.

1.4 TEMPORARY CONTROLS:

- A. Barriers:
1. Provide barriers to prevent unauthorized entry to construction areas to allow for Owner's use of Site, and to protect existing Building facilities and adjacent properties from damage from construction operations and demolition.
 2. Provide barricades required by governing authorities for public rights-of-way and for public access to existing Building and facilities.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

3. Protect non-owned vehicular traffic, stored materials, Site and other structures and facilities from damage.
4. Contractor shall be responsible for all cost associated with the construction, maintenance, and removal of all barriers and fences.

B. Protection:

1. Protect installed work and existing improvements. Provide special protection where specified in individual Specification Sections.
2. Control traffic and activity to prevent damage to components and services.
3. Provide temporary and removable protection for installed products.
4. Landscaping:
 - a. Protect existing and new landscaping against damage from construction operations on the property.
 - b. Do not dispose of paint, petroleum products, dirty water or other deleterious materials on or around roots.
 - c. Do not burn trash under or near shrubs or trees.
 - d. Do not permit compaction of root areas within drip line by foot, vehicle or machine traffic, or by the storage of equipment, gravel, earth fill, supplies or materials.
 - e. Do not damage trunks or limbs by maneuvering vehicles or stacking material and equipment too close.
 - f. Do not allow puddling or continuous running water under trees or on landscaped areas.
 - g. Do not allow traffic on landscaped areas.

1.5 CONSTRUCTION FACILITIES:

A. Security:

1. Provide security and facilities, to protect Work, and existing improvements, and Owner's operations from unauthorized entry, vandalism, and theft.
2. Coordinate with Owner's security program for all facilities.

B. Access:

1. Maintain access to fire hydrants free of obstructions.
2. Only designated Site paved areas may be used for construction traffic.

C. Parking:

1. Arrange with Owner's personnel for designated Site parking areas to accommodate construction personnel.

D. Progress Cleaning:

1. Maintain areas free of waste materials, debris, and rubbish. Maintain Site in a clean and orderly condition.
2. Remove debris and rubbish prior to enclosing pipe chases, plenums, attics, crawl spaces and other closed or remote spaces.
3. Broom and vacuum clean areas prior to start of surface finishing. Continue cleaning to eliminate dust.
4. Remove waste material, debris, and rubbish from construction areas daily. Dispose of debris in an authorized manner.

1.6 REMOVAL OF TEMPORARY UTILITIES AND FACILITIES:

A. Remove temporary utilities, equipment, facilities and materials prior to Final Inspection.

B. Clean and repair damage caused by installation or use of temporary work.

C. Restore existing facilities used during construction to original condition. Restore permanent new facilities used during construction to specified condition.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

1.7 ENVIRONMENTAL CONTROLS:

- A. Comply with applicable Federal, State, and Local Laws, regulations and ordinances and the following requirements for environmental pollution control and abatement in performing construction activities.

END OF SECTION

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

SECTION 01 70 00
CONTRACT CLOSEOUT

1.1 GENERAL SCOPE:

- A. The General Conditions, Special Conditions, Instructions to Bidders, and all other parts set forth in Part 1 of the Specifications are hereby made a part hereof unless specifically excepted.

1.2 CLOSEOUT PROCEDURES:

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Architect's final review.
- B. Provide submittals to Architect/Owner that are required by governing or other authorities.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- D. Owner will occupy portions or all of the Buildings and site specified in section 01 00 00.
- E. Comply with requirements for Final Observation of the Work as set forth in Special Conditions, Section B; coordinate with the requirements set forth in this Section 01 70 00.

1.3 FINAL CLEANING:

- A. Execute final cleaning prior to final review by the Architect.
- B. Clean equipment, site and fixtures to a sanitary condition.
- C. Remove waste and surplus materials, rubbish, and construction facilities from the Building(s) and from the site.

1.4 ADJUSTING:

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

1.5 PROJECT RECORD DOCUMENTS:

A. Maintenance of documents and samples:

1. Maintain on site one set of the following record documents:
 - a. Contract Drawings.
 - b. Specifications.
 - c. Addenda.
 - d. Change Orders and other Modifications to the Contract.
 - e. Reviewed shop drawings, product data, and samples.
2. Store Record Documents separate from Documents used for construction.

B. Recording:

1. Record concurrently with construction progress on reproducible drawings provided for this purpose. Do not conceal Work until actual revisions to the Work are recorded.
2. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 - a. Manufacturer's name and product model number.
 - b. Product substitution or alternates utilized.
 - c. Changes made by Addenda and Modifications.
3. Record documents and shop drawings: Legibly mark each item to record actual construction including the following:
 - a. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - b. Field changes of dimension and detail.
 - c. Details not on original Contract Drawings.
4. Other documents: Maintain manufacturer's certifications, inspection certifications and field test records required by individual Specifications Sections.
5. Delete Architect title block from all Record Documents.

C. Submittals:

1. At Contract close-out, submit Record Documents with transmittal letter in duplicate, containing date, project title, list of documents and contractor's name, address, and signature. Arrange documents in sequence with index.
2. Submit the marked-up reproducible and two prints for each record drawing and three copies of each 8 1/2" x 11 drawing.

1.6 OPERATION AND MAINTENANCE DATA:

A. Prepare and submit two sets of operating and maintenance manuals prior to final inspection.

1. 8 1/2 x 11 inch three D side ring binders with durable plastic covers.
2. Prepare binder covers with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when more than one binder is required.
3. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.

B. Contents of manuals:

1. Prepare a Table of Contents for each volume with each Product or system description identified.
2. Part 1: Directory, listing names, addresses, and telephone numbers of Architect, Contractor, Subcontractors, and major equipment suppliers.
3. Part 2: Operation and maintenance instructions, arranged by system and subdivided by Specification Section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for special finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents.

4. Part 3: Project documents and certificates including the following:

- a. Shop drawings and product data.
- b. Certificates.
- c. Photocopies of warranties and bonds.

D. Submittal:

1. Submit one copy of completed volumes in final form 15 days prior to final review with Architect comments. Revise content of documents as required prior to final submittal.
2. Submit final volumes revised within ten days after final review.

1.7 WARRANTIES:

A. Provide notarized copies of each warranty and bond.

1. Execute and assemble documents from subcontractors, suppliers, and manufacturers.
2. Assemble in three D side ring binder with durable plastic cover.
3. Prepare binder covers with printed title "WARRANTIES AND BONDS" and title of project.
4. Provide Table of Contents.

B. Submit prior to final Application for payment.

C. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

1.8 STATEMENT OF APPLICATION:

A. When required by individual Specification Section, upon completion of the work and as condition of its acceptance, submit a statement in duplicate signed by the product installer stating the following:

1. Materials conform to Specifications.

2. Products were installed in accordance with Specifications and the manufacturers' written instructions.
 3. Installation was proper and adequate for the conditions of installation and performance.
- B. When required by individual Specification Section, Contractor shall jointly execute statement of application.
- 1.9 SPARE PARTS AND MAINTENANCE MATERIALS:
- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual Specification Sections.
 - B. Deliver to Project Site and place in location as directed. Obtain receipt prior to final payment.

END OF SECTION

SECTION 02 41 14.13
REMOVAL AND SALVAGE OF CONSTRUCTION MATERIALS

PART I- GENERAL

1.1 Related Documents

The provisions of the Contract, the General Conditions, the Supplementary Conditions and other Division I Specification Sections, apply to the work in this section.

1.2 Work Included

Demolition work shall include, but is not limited to the following:

- A. Removal and disposal of existing kitchen cabinets, counters, sinks, faucets, controls, valves, and all associated components for the replacement of kitchens. Removal and disposal of existing windows, siding, trim boards and all associated components for the replacement windows & siding as scheduled on drawings, removal and disposal of screen doors and entry doors, removal and disposal of precast concrete landings, stairs, and metal railings.
- B. Identification and replacement of existing damaged or deteriorated plywood floor & wall sheathing, wall framing and gypsum board walls & ceilings for the kitchen, window and siding replacement as scheduled on drawings.
- C. Removal and disposal of existing VCT (vinyl Composition Tile), vinyl base, wood base, glue and associated accessories in kitchens as scheduled on drawings.
- D. Remove and dispose of existing light fixtures, electrical switches, electrical boxes, and associated accessories in kitchens as scheduled on drawings.
- E. Removal and disposal of the existing plumbing fixtures, including but not limited to kitchen sink, associated faucets, controls, valves and associated accessories as scheduled on drawings.

1.3 Coordination

- A. It is the responsibility of the Contractor to coordinate the work of this section with all other work on the Project.

1.4 Job Conditions

- A. The Contractor shall inspect the premises prior to the submittal of its bid for conditions which may affect its work.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- B. Demolition, storage of materials, removal of debris and construction operations shall not interfere with the Owner's use of the property.

1.5 Permits

- A. The Contractor shall obtain, at its expense, all permits required by governing authorities, including any required for disposal of demolition debris or for use or blockage of streets or sidewalks.

1.6 Sequence of Operations

- A. The Contractor shall submit for approval the complete sequence of operations for demolition and show how this Work is coordinated with all other aspects of the Project. Work shall not begin until such a schedule has been approved in writing by the Owner or his authorized representatives.

PART II- PRODUCTS

Not Applicable

PART III- EXECUTION

3.1 Protection

- A. Before starting demolition, the Contractor shall be solely responsible for making the necessary arrangements and for performing the necessary work involved in connection with the discontinuance or interruption of public and private utilities or services or components of said utilities or services under the jurisdiction of the Owner, utility companies or corporations, Police Department, Fire Department and Public Works Department including but not limited to gas, electricity, telephone, police signal, fire alarm, water, sanitary sewer, storm drainage and other systems which will be affected by the work to be performed under this Contract.
- B. The Contractor shall preserve in operating condition active utilities traversing the Work site and shall protect manholes, catch basins, valve boxes and other apparatus. He shall repair damage to any such utility, due to work under this Contract, to the satisfaction of the Owner or his authorized representatives.
- C. Adequate protection of persons and property shall be provided at all times. The work shall be executed in a manner to avoid interference with the use of adjacent buildings, areas or properties, and to avoid interruption of free passage to or from such buildings, areas or properties.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- D. Furnish signs, lights, barricades and other equipment as may be necessary for the safe execution of the work.
- E. Hazardous Materials: In the event the Contractor finds any undocumented asbestos, PCBs or other hazardous materials which require abatement the Contractor shall stop work immediately and notify the Architect and Owners Representative

3.2 Removal

- A. Remove the existing kitchens, windows & siding as shown on drawings. Carefully inspect and repair exposed surfaces, etc., for damage and repair or replace as required to install new work. Removal shall result in a smooth, consistent substrate for installation of new work.
- A. A thorough inspection of the existing substrate and adjoining materials shall be made to determine if any repairs are required. If conditions are uncovered or created that would be detrimental to the application of specified work, immediately notify the Owner's Representative of such conditions for determination of treatment.

3.3 Occupancy of Units – Temporary Shutdowns

- A. The temporary shutdown by the Contractor of the existing systems, construction, equipment, etc., shall be performed at such time as shall be agreed to by the Owner.
- B. The temporary shutdown of the water systems in the units shall be limited to 8:00 AM to 5:00 PM local time each day. The Owner shall be notified of estimated duration of the shutdown period at least three (3) days in advance of the date the work is to be performed.
- D. The Kitchen sink, counter, and cabinets can only be out of service between 8:00 AM a to 5:00 PM local time. The sink and counter must be available for use by the unit occupants at the end of the work day.

3.4 Pollution Control

- A. The Contractor shall be aware that the facility must remain in use throughout the course of construction and that any disruption or inconvenience sustained by the Owner, employees, visitors and patrons must be kept to an absolute minimum. To this end, the Contractor shall provide, if necessary, an impermeable barrier to minimize dust and debris infiltration. Also the Contractor shall select equipment and procedures to mitigate noise discomfort.

- B. Debris shall be considered the property of the Contractor and shall be removed for the site in its entirety on a daily basis and be legally disposed. On site storage of discarded material will only be permitted when stored in a covered container.

3.5 On-Site Storage

- A. Ground level storage areas, if available, will be provided adjacent to the facility for new materials. Size and location of area shall be coordinated with the Owner.
- B. No debris or waste material shall be stored on or within the building, unless otherwise designated.

3.6 Repair of Damages

- A. The Contractor shall provide a list of damaged or deteriorated elements of the building and adjacent areas to the Owner prior to demolition and shall be responsible for repair or replacement of damaged or deteriorated items not on that list when the operations of the Contractor are substantially complete.
- B. Damage to any portion of the building which results in disruption of or inconvenience to the Owner, employees or patrons shall be immediately repaired or replaced by the Contractor. If such restitution is not promptly made, the Owner shall have the necessary work performed by an outside agency at the Contractor's expense. Such work shall be completed to the satisfaction of the Owner prior to the release of final payment.

3.7 Clean-Up

- A. The building and adjacent areas shall be left in a broom clean condition at the end of each day.
- B. On completion of the work of this section and after removal of debris, the site shall be left in a clean and safe condition, satisfactory to the Owner or his authorized representative.

END OF SECTION

PRECAST CONCRETE STAIRS

SECTION 03 41 23

1. GENERAL

1.01 Description

- A. Work Included: These specifications cover manufacture, transportation and erection of precast concrete stairs and landings.
- B. Related Sections:
 - 1. 03300 – Cast-in-Place Concrete: Site Cast Precast
 - 2. 03400 – Prestressed Hollowcore Plank
- C. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.

1.02 Quality Assurance

- A. Manufacturer Qualifications: Precast Prestressed Concrete Institute (PCI) Plant Certification Program and shall be certified in category C1.
- B. Erector Qualifications: Precast Prestressed Concrete Institute Qualified Erector and regularly engaged for at least 5 years in the erection of precast structural concrete similar to the requirements of this project. Retain a registered structural engineer to certify that erection is in accordance with design requirements.
- C. Welder Qualifications: In accordance with AWS D1.1.
- D. Codes and Standards: Comply with provision of following codes, specifications and standards, except as otherwise indicated.
 - 1. ACI 301 "Specifications for Structural Concrete".
 - 2. ACI 318 "Building Code Requirements for Structural Concrete".
 - 3. Concrete Reinforcing Steel Institute, "Manual of Standard Practice".
 - 4. Precast Prestressed Concrete Institute MNL 116, Manual for Quality Control for Plants and Production of Precast Concrete Products".
 - 5. Precast Prestressed Concrete Institute MNL 135, "Tolerance Manual for Precast and Pre-stressed Concrete Construction".
 - 6. Precast Prestressed Concrete Institute MNL 120, "PCI Design Handbook".

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

7. American Welding Society, AWS D1.1 “Structural Welding Code-Steel”, D1.4 “Structural Welding Code – Reinforcing Steel”, D1.6 “Structural Welding Code - Stainless Steel”, C5.4, “Recommended Practices for Stud Welding”.
- E. Fabricator Qualifications: Fabricator must be certified producer member of the Precast/Prestressed Concrete Institute (PCI) and participate in its Plant Certification Program with a C1 classification.
- F. Performance Requirements:
 1. Delegated Design: Design precast concrete stairs, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
 2. Structural Performance: Provide precast structural concrete units and connections capable of withstanding the following design loads within limits and under conditions indicated:
 - a. Stairs shall be designed to support the full dead load plus 100 psf live load.
 - b. short term and long term deflection shall be no greater than Table 9.5 (b) of ACI-318.

1.03 Submittals and Design

- A. Shop Drawings:
 1. Erection drawings shall show dimensions for proper fabrication; reinforcing steel sizes, grades and locations; inserts accessories and handling methods; calculations for reinforcing; details, sections, jointing, anchoring, and all other necessary information.
- B. Tests and Reports:
 1. Perform all concrete testing in accordance with PCI MNL-116 requirements.

2. PRODUCTS

2.01 Materials

- A. Portland cement:
 1. ASTM C 150, Type I or III
- B. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.
- C. Plain-Steel Welded Wire Reinforcement: ASTM A 185 or A497 fabricated from plain steel wire into flat sheets having a minimum yield strength of 70,000psi.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- D. Plates and Angles: Cast-in loose plates and angles shall conform to ASTM 36.
- E. Water: Potable, clean and free from oils, acids, salts or other injurious substances.
- F. Admixtures:
 - 1. Air entrainment agents shall conform to ASTM C 260.
 - 2. Precast elements exposed to weather or vulnerable to deicers shall have $6\% \pm 1.5\%$ of air entrainment.
 - 3. Water reducing agent shall conform to ASTM C 494, Type A.
 - 4. High range water reducing agent shall conform to ASTM C494 Type A.
- G. Normal-Weight Aggregates:
 - 1. Fine Aggregates: ASTM C 33, washed natural sand
 - 2. Course Aggregates: Crushed stone conforming to ASTM C 33. Aggregate shall be graded crushed stone with a resulting weight of concrete up to 155 lbs./cu. ft.
- H. Grout:
 - 1. Cement shall be gray Portland cement, free from soluble salts and complying with ASTM C 150, Type I or Type III High Early Strength, one brand throughout work. Strength shall be 4,000 psi in 28 days.

2.02 Concrete Mixes

- A. 28-day compressive strength: Minimum of 5,000 psi
- B. Use of calcium chloride or admixtures containing chlorides is not permitted.

2.03 Fabrication

- A. Casting shall be done in rigidly constructed forms designed to produce dimensionally correct members with uniform surfaces per shop drawings.
- B. At time of casting, manufacturer shall incorporate all accessories, reinforcing steel and handling devices required for proper installation and handling of units.
- C. Provide finished units, which are straight, true to size and shape, and within specified casting tolerances.
- D. Make exposed edges sharp, straight, and square. Make flat surfaces into a true plane.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- E. Place and secure in the forms all anchors, clips, stud bolts, inserts, lifting devices, shear ties, and other devices required for handling and installing the precast units and for attachment of subsequent items indicated and specified.
- F. Curing:
 - 1. Form curing by moisture retention without supplemental heat until concrete reaches adequate strength for removal of product from forms, a minimum of 2,500 psi.
 - 2. Precast units shall be cured to the required 28 day strength prior to shipment.
- G. Casting tolerances: Maintain casting, bowing, warping and dimension tolerances within PCI MNL-116 and PCI MNL-135.

2.04 Product Delivery, Storage, & Handling

- A. Delivery and Handling:
 - 1. Carefully transport and handle precast concrete stairs so as to prevent soiling or damage. Store clear of ground in manner to prevent cracking, distortion, warping and to protect from damage and dirt. Soiling or staining of precast units may be cause for rejection of units. Lift and support units only at designated lifting or supporting points as shown on approved shop drawings.
- B. Delegated-Design Submittal:
 - 1. For precast concrete stairs indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- C. Examination:
 - 1. Examine supporting structural frame or foundation and conditions for compliance with requirements for installation tolerances, true and level bearing surfaces, and other conditions affecting performance of the Work.
 - 2. Proceed with installation only after unsatisfactory conditions have been corrected.
 - 3. Do not install precast concrete units until supporting, building structural framing has attained minimum allowable design compressive strength or until supporting steel or other structure is complete.

3. EXECUTION

3.01 Erection

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- A. Work to be performed by a PCI Qualified Erector. Install in accordance with shop drawings and manufacturer's recommended installation procedures.
- B. Handling and Erection:
 - 1. Temporarily stabilize all precast work until permanent connections and/or adjoining cast-in-place concrete work or masonry has been completed and the framework is stable.

3.02 Grouting

- A. Grouting:
 - 1. After precast units have been placed and secured, grout open spaces at connections and joints between platforms and stairs, and between platforms and floor plank.
 - 2. Place grout in a manner to finish smooth, plumb, and level with adjacent concrete surfaces.

3.03 Welding

- A. Welding shall be continuous with Low-Hydrogen rods per AWS A5.1 or A5.5

3.04 Patching

- A. Patch precast units if strength and appearance has not been impaired. Manufacturer of precast units shall point up all chopped areas. Pointed up areas shall have minimum variation in texture and color. Amount of variation shall be acceptable to the Architect.

3.05 Cleaning

- A. Remove rubbish and debris resulting from precast concrete stair work from premises upon completion.

END OF SECTION 034123

SECTION 06 10 00
ROUGH CARPENTRY

PART I - GENERAL

1.1 RELATED DOCUMENTS:

The provisions of the Contract, the General Conditions, the Supplementary Conditions and other Division I Specification Sections, apply to the work in this section.

1.2 RELATED SECTIONS

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

B. Related Sections

1. Section 09 21 16 - Gypsum Board Assemblies
2. Section 10 28 16 - Bath Accessories
3. Section 12 35 31- Kitchen Casework

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM)

1. ASTM C-209 Water Absorption, % by Volume
2. ASTM C-1289, Type V
3. ASTM D-2126 Dimensional Stability Change
4. ASTM D-16121 Compression Resistance
5. ASTM E96 Moisture Vapor Transmission
6. ASTM E-108 Class A fire resistance rating

B. Federal Specification

1. HH-1-1972/Gen and HH-1-1972/2

1.4 DELIVERY, STORAGE AND HANDLING

A. Time delivery and installation of carpentry work to avoid delaying other trades whose work is dependent on or affected by the carpentry work. Keep materials dry during delivery.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- B. Store lumber, plywood in stacks with provisions for air circulation within stacks. Protect bottom of stacks against contact with damp or wet surfaces.
- C. Protect exposed materials against water and wind. Remove damaged or unsuitable material from the job site.

1.5 QUALITY ASSURANCE

- A. Comply with governing codes & regulations. Use experienced installers.
- B. Lumber Standards: American Softwood Lumber Standard PS 20-70 by the U.S. Department of Commerce.
- C. Plywood Standards: U.S. product Standard PSI-74/ANSI A 199.1 or latest APA Performance Standards for American Plywood Association.
- D. Factory Marking: Mark each piece of lumber or plywood to indicate type, grade, agency providing inspection service.
- E. Size and Shape: Dress lumber 4 sides (S4S) and work to shapes and patterns shown. Nominal sizes shown and specified refer to undressed lumber dimensions. Detailed dimensions show actual lumber size required.

1.6 SCOPE OF WORK

- A. Replace all damaged or deteriorated wood blocking, sleepers, studs and plywood in kind.
- B. Add wood blocking as required according to drawings and as required to attach cabinets, & kitchen accessories.
- C. Replace deteriorated trim in kind and install new wood.

PART II - PRODUCTS

2.1 DIMENSIONAL LUMBER AND PLYWOOD

- A. Construction Lumber: Standard Grade Douglas Fir, Western Larch, Western Hemlock (WWPA or WCLB) or No. 2 dimension Southern Pine (SPIB).

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- B. Exterior Type Plywood: APA Rated sheathing, EXT.
- C. Bucks, Nailers, Blocking, Etc.: No. 2 common grade of any WWPA or WCLA species or No. 2 Southern Pine (SPIB).
- D. Anchorage and Fastenings: Proper type, size material and finish for each application.
- E. Quality: Sound, seasoned, well manufactured materials of longest practical lengths and sizes to minimize joints. Free from warp which cannot be easily corrected by anchoring and attachment. Discard material with defects which would impair quality of work.

PART III - EXECUTION

3.1 EXAMINATION

- A. Verify measurements and dimensions shown before proceeding with carpentry work.
- B. Examine supporting structure and conditions under which carpentry work is to be Installed. Do not proceed with installation until unsatisfactory conditions have been corrected.
- C. Correlate location of nailers, blocking and similar supports for attached work.
- D. Scribe and cope as required for accurate fit of carpentry work to other work.

3.2 Protection

- A. Protect installed work from damage by other trades until acceptance of work.

3.3 Installation of Lumber and plywood products

- A. Provide all nailers, blocking and sleepers where shown on the drawings or required for attachment of other work. Coordinate with location with other work involved; refer to shop drawings of such work.
- B. Attach to substrate securely as required to support applied loading. Countersink bolts and nuts flush with surfaces.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- C. Securely attach wood nailers to substrates in accordance with Factory Mutual Loss Prevention Data Sheet 1-49 and as required by recognized standards.
- D. Provide washers under bolt heads and nuts in contact with wood.
- E. Do not wax or lubricate fasteners that depend on friction for holding power.
- F. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish material.
- G. Make tight connections between members. Install fasteners without splitting of wood; predrill as required. Do not drive threaded friction type fasteners; turn into place. Tighten bolts and lag screws at installation and retighten as required for tight connections prior to closing in or at completion of work.

End of Section

SECTION 06 46 00
FINISH CARPENTRY

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes finish carpentry items, other than shop prefabricated casework; hardware and attachment accessories.
- B. Related sections: The following sections contain requirements that relate to this section.
 - 1. Section 06100 rough carpentry
 - 2. Section 09900 paints and coatings

1.3 SUBMITTALS

- A. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, finishes, and accessories.
- B. Samples: Submit two, 10 inch size samples illustrating wood grain and specified finish of trim work to be installed.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with AWI Quality Standards, premium Grade.

PART 2 PRODUCTS

2.1 FINISH CARPENTRY MATERIALS

- A. Manufacturers:

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

1. Brosco.
2. Hardi Trim.
4. Substitutions: Permitted

2.2 COMPONENTS

- A. Softwood Lumber: PS 20; Graded in accordance with AWI II species, pine sawn, maximum moisture content of 6 percent; with vertical grain of quality suitable for transparent finish.
- B. Wood casing at doors & windows match existing profile.

2.3 ACCESSORIES

- A. Fasteners: Size and type to suit application; Hot dipped galvanized steel for exterior, high humidity and treated wood locations, plain finish elsewhere.

2.4 FABRICATION

- A. Fabricate to AWI Custom standards.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.

3.2 PREPARATION

- A. Prime paint surfaces of items or assemblies in contact with cementitious materials, before installation.

3.3 INSTALLATION

- A. Install work in accordance with AWI Custom quality standard.
- B. Set and secure materials and components in place, plumb and level.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- C. Install trim by nails.
- D. Site Applied Wood Treatment:
 - 1. Brush apply two coats of preservative treatment on wood in contact with cementitious materials, roofing and related metal flashings. Treat site-sawn cuts.
 - 2. Allow preservative to dry prior to erecting members.
- E. Preparation For Finish:
 - 1. Sand work smooth and set exposed fasteners. Apply wood filler in exposed fastener indentations.
 - 2. Site Finishing: Refer to Section 09900.

3.4 SCHEDULES

- A. Interior:
 - 1. Window Sills and stools: match existing prepare existing finish.
 - 2. Moldings, Bases, Casings, and Miscellaneous Trim: match existing, prepare for existing finish.
- B. Exterior :
 - 1. Hradi Trim door & window surround.

END OF SECTION

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

06 46 00-3 Door & Window Casings

SECTION 07 25 00
WEATHER BARRIER

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Sheet applied weather barrier and related accessories for wall air/moisture barrier system.

1.2 RELATED SECTIONS

- A. Section 06100 - Rough Carpentry: Wood framing and bracing.
- B. Section 06100 - Rough Carpentry: Sheathing.
- C. Section 07210 - Insulation: Exterior wall insulation.
- D. Section 07460 - Siding: Wall finish and primary weather barrier.

1.3 REFERENCES

- A. The American Association of Textile Chemists and Colorists (AATCC) 127 - Water Resistance: Hydrostatic Pressure Test.
- B. American Society for Testing and Materials (ASTM) E-96 - Standard Test Methods for Water Vapor Transmission of Materials.
- C. American Society for Testing and Materials (ASTM) D1117 - Standard Guide for Evaluating Nonwoven Fabrics.
- D. American Society for Testing and Materials (ASTM) D3330 - Standard Test Method for Peel Adhesion of Pressure-Sensitive Tape1.
- E. American Society for Testing and Materials (ASTM) D3759 - Standard Test Method for Tensile Strength and Elongation of Pressure-Sensitive Tapes.
- F. PSTC-1 - Peel Adhesion of Single Coated Pressure-Sensitive Tapes at 180 Degree Angle.
- G. TAPPI T-460 - Porosity - Gurley.

1.4 SYSTEM DESCRIPTION

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- A. The airtight components and secondary moisture protection of the building enclosure and the joints, junctures and transitions between materials, products, and assemblies forming the air-tightness and moisture barrier of the building enclosure are called "the air/moisture barrier system". Services include coordination between the trades, the proper scheduling and sequencing of the work, preconstruction meetings, inspections, tests, and related actions, including reports performed by Contractor, by independent agencies, and by governing authorities. They do not include contract enforcement activities performed by the Architect.
- B. Air Barrier Penetrations: All penetrations of the air/moisture barrier and paths of air infiltration / exfiltration through the air/moisture barrier system shall be made air-tight.
- C. Moisture Barrier Penetrations: All penetrations of the air/moisture barrier and paths of water migration through the air/moisture barrier system shall be made water shedding.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Minimum of 5 years experience with installation of similar products.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Do not store in direct sunlight. Weather barrier shall be stored in a covered area. Do not expose to building site chemicals.
- C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.8 PROJECT CONDITIONS

- A. Anticipate environmental conditions and schedule installation when conditions are within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.9 WARRANTY

- A. Product Warranty: Limited product warranty against manufacturing defects.
 - 1. HardieWrap Weather Barrier and related products for 10 years.

PART 2 PRODUCTS

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: James Hardie Building Products, Inc., which is located at: 26300 La Alameda Suite 400 ; Mission Viejo, CA 92691; Toll Free Tel: 866-274-3464; Tel: 949-367-4980; Fax: 949-367-4981; Email: [request info \(info@jameshardie.com\)](mailto:info@jameshardie.com); Web: www.jameshardiecommercial.com
- B. Requests for approval of equal substitutions will be considered in accordance with provisions of Section 01600.

2.2 WEATHER BARRIER SYSTEM

- A. Moisture Air Barrier Sheet:
1. Product: HardieWrap Weather Barrier as manufactured by James Hardie Building Systems.
 2. Composition: Non-woven, non-perforated polyolefin.
 3. Film: MicroTech Coating with micropores to balance water holdout and breathability.
 4. Thickness: 11 mil (0.28 mm).
 5. UV Stability: Up to 180 days.
 6. Water Holdout (AATCC127): 128 inches (3250 mm).
 7. Breathability/Water Vapor Permeance (ASTM E-96A): 15 perms.
 8. Air Resistance (TAPPI T-460): >1800 sec/100 cc.
 9. Tear Strength (ASTM D1117): 15 to 18 lb (6.8 to 8.2 kg).
 10. Basis Weight: 19.4 lbs/1000 sf (9.5 kgs/100 sm).
 11. Sizes: 3 feet by 195 feet (914 mm by 59.4 m), 9 feet by 100 feet (2743 mm by 30.5 m), 9 feet by 150 feet (2743 mm by 45.7 m), 10 feet by 100 feet (3048 mm by 30.5 m), 10 feet by 150 feet (3048 mm by 45.7 m).
- B. Self-adhering Flashing: Designed for peel and stick application.
1. Product: HardieWrap Flashing as manufactured by James Hardie Building Systems.
 2. Composition: Butyl rubber adhesive non-woven polyolefin backing; coated Kraft paper release.
 3. Total Thickness: 25 mil (0.64 mm).
 4. UV Stability: Up to 180 days.
 5. Application Temperature: 30 degree F to 180 degree F (-1 degree C to 82 degree C).
 6. Operating Temperature: -30 degree F to 200 degree F (-34 degree C to 93 degree C).
 7. Packaging: Individually shrink-wrapped.
 8. Roll Weight: 4 inch (102 mm) = 4.6 lb (2 kg)/roll, 6 inches (152 mm) = 6.9 lb (3 kg) /roll, 9 inches (229 mm) = 9.9 lb (4.5 kg)/roll.
 9. Provide Width for Application Required: 4 inches by 100 feet (102 mm by 30.5 m) (2x4 construction), 6 inches by 100 feet (152 mm by 30.5 m) (2x4 construction), 9 inches by 100 feet (229 mm by 30.5) (2x6 construction).
- C. Flexible Flashing:
1. Product: HardieWrap Flex Flashing as manufactured by James Hardie Building Systems.
 2. Composition: Butyl rubber adhesive; creped cross-laminated polyolefin backing; polyethylene film release.
 3. Total Thickness: 60 mil (1.5 mm).
 4. Tensile Strength (ASTM D3759): 18 lb/inch (3.2kg/cm).
 5. UV Stability: Up to 180 days.
 6. Water Vapor Transfer Rate (ASTM E96-94): <.2g/100 square inches/24hrs.

7. Application Temperature: 30 degree F to 180 degree F (-1 degree C to 82 degree C).
 8. Operating Temperature: -30 degree F to 200 degree F (-34 degree C to 93 degree C).
 9. Packaging: Each roll is packed in a convenient dispenser box
 10. Roll Weight: 6 inches (152 mm) = 22.2 lb (10kg)/roll, 9 inches (229 mm) = 33.3 lb (15 kg)/roll.
 11. Provide Width for Application Required: 6 inches by 75 feet (152 mm by 23.9 m) (2x4 construction), 9 inches by 75 feet (229 mm by 23.9) (2x6 construction).
- D. Seam Tape:
1. HardieWrap Seam Tape as manufactured by James Hardie Building Systems.
 2. Composition: Polypropylene film coated with acrylic adhesive Total Thickness: 3.0 mil (.08 mm).
 3. Adhesion Peel to HardieWrap (PSTC-1): 22 oz/inch (25 N/100 mm).
 4. Tensile Strength (ASTM D3759): 32 lb/in (.58 kg/mm).
 5. Elongation: 136 percent.
 6. UV Stability: Up to 90 days.
 7. Application Temperature: 30 degree F to 180 degree F (-1 degree C to 82 degree C).
 8. Operating Temperature: -30 degree F to 200 degree F (-34 degree C to 93 degree C).
 9. Packaging: Individually shrink-wrapped.
 10. Roll Weight: 1 lb(0.5 kg)/roll.
 11. Roll Size: 1-7/8 inches (43 mm) by 165 feet (50 m).

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If framing preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Weather barrier shall be installed before window and door installation. Do not install on saturated sheathing. Weather barrier can become slippery and should not be used in any application where it may be walked on.
- D. Weather barrier shall be installed on vertical wall applications only.
- E. Manufacturer warrants weather barrier sheet only when covered within 180 days of its installation.

3.3 INSTALLATION

- A. Moisture Air Barrier Sheet:
 1. Weather barrier shall be installed before window and door installation. Do not install on saturated sheathing. Weather barrier can become slippery and

- should not be used in any application where it may be walked on.
2. Begin by affixing weather barrier extending at least 6 inches (152 mm) around a building corner. Unroll horizontally (with print side facing out) around the building covering rough window and door openings.
 3. Fasten to studs or nailable sheathing material with galvanized construction grade staples a maximum of 18 inches (457 mm) in the vertical and horizontal direction.
 4. Attach weather barrier so that it is taut and flat. The vertical overlap shall have a minimum of 6 inches (152 mm) and the vertical seam shall be taped.
 5. Assure that the bottom edge of the weather barrier extends over the sill plate and foundation interface by at least 1 inch (25 mm).
 6. Overlap upper layers of weather barrier (in shingle lap fashion) by a minimum of 6 inches below the horizontal edge, and tape the horizontal seam line.
 7. At roof to wall intersection (or wall to deck), affix wrap to the wall such that it overlaps any step flashing already in place on the wall by at least 2 inches (51 mm).

B. Flexible Flashing:

1. Windows and Doors: Weather barrier is not designed nor guaranteed as a flashing material to prevent moisture or air from intruding behind weather barrier. Verify that flashing has previously been installed around all windows and door openings. Install flexible flashing per manufacturer's instructions.
 - a. Use the inverted "Y" cut method at rough window and door openings. Do not place fasteners within 9 inches (229 mm) of the rough opening, door or window heads. This area shall not be fastened to allow for proper head flashing installation. At the top corners of the rough opening, cut the weather barrier at 45 degree to extend 9 inches (229 mm) past the joint.
 - b. Fold the top flap up and out of the way and fasten temporarily.
 - c. Fold the remaining three flaps in through the opening fastening them inside the opening with staples.
2. Rough Electrical and Plumbing Penetrations: Seal with a double layer of flashing. Install the top flashing piece over the bottom flashing piece overlapping flashing layers to cover flashing cut-out necessary for placement around penetration.

- C. Repairs: For minor punctures or tears, less than 3 inches (76 mm), cover and completely seal with seam tape. For larger holes, greater than 3 inches (76 mm), use slit flashing technique.
- a. Slit flashing requires making a horizontal slit above the damaged area and placing a cut piece of weather barrier into the slit, covering the damaged area. Tape the perimeter of the patched area.

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

SECTION 07 46 46

SIDING

(James Hardie HZ5 Engineered for Climate Siding)

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Fiber cement lap siding, panels, shingle, trim, fascia, moulding and accessories; James Hardie HZ5 Engineered for Climate Siding.
- B. Factory-finished fiber cement lap siding, panels, shingle, trim, fascia, moulding and accessories; James Hardie HZ5 Engineered for Climate Siding.

1.2 RELATED SECTIONS

- A. Section 06100 - Rough Carpentry: Wood framing and bracing.
- B. Section 06100 - Rough Carpentry: Sheathing.
- C. Section 07210 - Insulation: Exterior wall insulation.

1.3 REFERENCES

- A. ASTM C1186 - Standard Specification for Flat Fiber-Cement Sheets
- B. ASTM D3359 - Standard Test Method for Measuring Adhesion by Tape Test, Tool and Tape.
- C. ASTM E136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 degrees C.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Shop Drawings: Provide detailed drawings of atypical non-standard applications of cementitious siding materials which are outside the scope of the standard details and specifications provided by the manufacturer.
- D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- E. Verification Samples: For each finish product specified, two samples, minimum size

4 by 6 inches (100 by 150 mm), representing actual product, color, and patterns.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Minimum of 5 years experience with installation of similar products.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store siding on edge or lay flat on a smooth level surface. Protect edges and corners from chipping. Store sheets under cover and keep dry prior to installing.
- C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

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. Product Warranty: Limited, non-pro-rated product warranty.
 - 1. HardiePlank HZ5 lap siding for 30 years.
 - 2. HardiPanel HZ5 vertical siding for 30 years.
 - 3. HardieSoffit HZ5 panels for 30 years.
 - 4. HardieShingle HZ5 siding for 30 years.
 - 5. Artisan HZ5 lap siding for 30 years.
- B. Product Warranty: Limited, product warranty.
 - 1. HardieTrim HZ and HZ5 boards for 15 years.
- C. Finish Warranty: Limited product warranty against manufacturing finish defects.
 - 1. When used for its intended purpose, properly installed and maintained according to James Hardie's published installation instructions, James Hardie's ColorPlus finish with ColorPlus Technology, for a period of 15 years from the date of purchase: will not peel; will not crack; and will not chip. Finish warranty includes the coverage for labor and material.
- D. Workmanship Warranty: Application limited warranty for 2 years.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: James Hardie Building Products, Inc., which is located at: 26300 La Alameda Suite 400 ; Mission Viejo, CA 92691; Toll Free Tel: 866-274-3464; Tel: 949-367-4980; Fax: 949-367-4981; Email: [request info \(info@jameshardie.com\)](mailto:info@jameshardie.com); Web: www.jameshardiecommercial.com
- B. Substitutions: Not permitted.
- C. Requests for approval of equal substitutions will be considered in accordance with

provisions of Section 01600.

2.2 SIDING

- A. HardiePlank HZ5 lap siding, HardiPanel HZ5 vertical siding, HardieSoffit HZ5 panels and HardieShingle HZ5 siding requirement for Materials:
1. Fiber-cement Siding - complies with ASTM C 1186 Type A Grade II.
 2. Fiber-cement Siding - complies with ASTM E 136 as a noncombustible material.
 3. Fiber-cement Siding - complies with ≈STM E 84 Flame Spread Index = 0, Smoke Developed Index = 5.
 4. CAL-FIRE, Fire Engineering Division Building Materials Listing - Wildland Urban Interface (WUI) Listed Product.
 5. National Evaluation Report No. NER 405 (BOCA, ICBO, SBCCI, IBC, IRC).
 6. City of Los Angeles, Research Report No. 24862.
 7. Miami Dade County, Florida Notice of Acceptance 07-0418.04.
 8. US Department of Housing and Urban Development Materials Release 1263d.
 9. California DSA PA-019.
 10. City of New York M EA 223-93-M.
 11. Florida State Product Approval FL889.
 12. Texas Department of Insurance Product Evaluation EC-23.
- B. Artisan HZ5 lap siding requirement for Materials:
1. Fiber-cement Siding - complies with ASTM C 1186 Type A Grade II.
 2. Fiber-cement Siding - complies with ≈STM E 136 as a noncombustible material.
 3. Fiber-cement Siding - complies with ASTM E 84 Flame Spread Index = 0, Smoke Developed Index = 5.
 4. Warnock Hersey Product Listing.
 5. CAL-FIRE, Fire Engineering Division Building Materials Listing - Wildland Urban Interface (WUI) Listed Product.
 6. Florida State Product Approval FL10477.
 7. Miami Dade County, Florida Notice of Acceptance 08-0514.11.
 8. Texas Department of Insurance Product Evaluation EC-55.
 9. Manufacturer's Technical Data Sheet.
- C. Lap Siding: HardiePlank HZ5 Lap siding with a sloped top, beveled drip edge and nailing line as manufactured by James Hardie Building Products, Inc.
1. Type: Select Cedarmill 5-1/4 inches (133 mm) with 4 inches (102 mm) exposure.
- D. Shingle Siding: HardieShingle HZ5 siding as manufactured by James Hardie Building Products, Inc.
1. Type: HardieShingle Straight-Edge Notched Panel 48 inches (1219 mm) wide by 16 inches (406mm) high with 7 inches (178 mm) exposure.
- E. Trim:
1. HardieTrim HZ5 boards and HardieTrim HZ boards as manufactured by James Hardie Building Products, Inc.
 2. HardieTrim HZ5 Fascia boards as manufactured by James Hardie Building Products, Inc.
 3. HardieTrim HZ5 Crown moulding manufactured by James Hardie Building Products, Inc.
 4. Artisan HZ5 Accent trim as manufactured by James Hardie Building Products, Inc.

2.3 FASTENERS

- A. Wood Framing Fasteners:
 - 1. Wood Framing: 4d common corrosion resistant nails.
 - 2. Wood Framing: 6d common corrosion resistant nails.
 - 3. Wood Framing: 8d box ring common corrosion resistant nails.
 - 4. Wood Framing: 0.089 inch (2.2 mm) shank by 0.221 inch (5.6 mm) head by 2 inches (51 mm) corrosion resistant siding nails.
 - 5. Wood Framing: 0.093 inch (2.4 mm) shank by 0.222 inch (5.6 mm) head by 2 inches (51 mm) corrosion resistant siding nails.
 - 6. Wood Framing: 0.093 inch (2.4 mm) shank by 0.222 inch (5.6 mm) head by 2-1/2 inches (64 mm) corrosion resistant siding nails.
 - 7. Wood Framing: 0.091 inch (2.3 mm) shank by 0.221 inch (5.6 mm) head by 1-1/2 inches (38 mm) corrosion resistant siding nails.
 - 8. Wood Framing: 0.091 inch (2.3 mm) shank by 0.225 inch (5.7 mm) head by 1-1/2 inches (38 mm) corrosion resistant siding nails.

2.4 FINISHES

- A. Factory Primer: Provide factory applied universal primer.
 - 1. Primer: Factory primed by James Hardie.
 - 2. Topcoat: Refer to Section 09900 and Exterior Finish Schedule.
- B. Factory Finish: Refer to Exterior Finish Schedule.
 - 1. Product: ColorPlus Technology by James Hardie.
 - 2. Definition: Factory applied finish; defined as a finish applied in the same facility and company that manufactures the siding substrate.
 - 3. Process:
 - a. Factory applied finish by fiber cement manufacturer in a controlled environment within the fiber cement manufacturer's own facility utilizing a multi-coat, heat cured finish within one manufacturing process.
 - b. Each finish color must have documented color match to delta E of 0.5 or better between product lines, manufacturing lots or production runs as measured by photospectrometer and verified by third party.
 - 4. Protection: Factory applied finish protection such as plastic laminate that is removed once siding is installed
 - 5. Accessories: Complete finishing system includes pre-packaged touch-up kit provided by fiber cement manufacturer. Provide quantities as recommended by manufacturer.
- C. Factory Finish Color for Trim, Soffit and Siding Colors:
 - 1. Alpine Frost JH50-10.
 - 2. Arctic White JH10-20.
 - 3. Autumn Tan JH20-20.
 - 4. Boothbay Blue JH70-20.
 - 5. Chestnut Brown JH80-30.
 - 6. Cobble Stone JH40-10.
 - 7. Countrylane Red JH90-20.
 - 8. Evening Blue JH70-30.
 - 9. Frosted Green JH60-20.
 - 10. Harris Cream JH80-10.
 - 11. Heathered Moss JH50-20.
 - 12. Iron Gray JH90-30.
 - 13. Khaki Brown JH20-30.
 - 14. Light Mist JH70-10.
 - 15. Monterey Taupe JH40-20.

16. Mountain Sage JH50-30.
17. Navajo Beige JH30-10.
18. Parkside Pine JH60-30.
19. Sail Cloth JH20-10.
20. Sandstone Beige JH30-20.
21. Soft Green JH60-10.
22. Timber Bark JH40-30.
23. Traditional Red JH90-10.
24. Tuscan Gold JH80-20.
25. Woodland Cream JH10-30.
26. Woodstock Brown JH30-30.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B.
 1. Install water-resistive barriers and claddings to dry surfaces.
 2. Repair any punctures or tears in the water-resistive barrier prior to the installation of the siding.
 3. Protect siding from other trades.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Install a water-resistive barrier is required in accordance with local building code requirements.
- D. The water-resistive barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements.
- E. Install Engineered for Climate™ HardieWrap™ weather barrier in accordance with local building code requirements.
- F. Use HardieWrap™ Seam Tape and joint and laps.
- G. Install HardieWrap™ flashing, and HardieWrap™ Flex Flashing

3.3 INSTALLATION - HARDIEPLANK HZ5 LAP SIDING AND ARTISAN HZ5 LAP SIDING

- A. Install materials in strict accordance with manufacturer's installation instructions.
- B. Starting: Install a minimum 1/4 inch (6 mm) thick lath starter strip at the bottom course of the wall. Apply planks horizontally with minimum 1-1/4 inches (32 mm) wide laps at the top. The bottom edge of the first plank overlaps the starter strip.
- C. Allow minimum vertical clearance between the edge of siding and any other material in strict accordance with the manufacturer's installation instructions.
- D. Align vertical joints of the planks over framing members.

- E. Maintain clearance between siding and adjacent finished grade.
- F. Locate splices at least one stud cavity away from window and door openings.
- G. Wind Resistance: Where a specified level of wind resistance is required Hardieplank lap siding is installed to framing members and secured with fasteners described in Table No. 2 in National Evaluation Service Report No. NER-405.
- H. Locate splices at least 12 inches (305 mm) away from window and door openings.

3.4 INSTALLATION - HARDIE HZ5 SHINGLESIDE CLADDING

- A. Install materials in strict accordance with manufacturer's installation instructions.
- B. Substrate: Install a minimum 7/16 inch (11 mm) thick OSB wall sheathing or equivalent braced walls complying with applicable building codes.
- C. Starting: Install a minimum 1/4 inch (6 mm) thick lath starter strip at the bottom course of the wall.
- D. Maintain clearance between siding and adjacent finished grade.
- E. Apply starter course of 10 inches (254 mm) shingles or 9-1/2 inches (241 mm) lap siding overlapping the starter strip.
- F. Apply subsequent courses horizontally with a minimum 10 inch overlap at the top and a minimum 2 inch (51 mm) side lap. The bottom edge of the first two courses overlaps the starter strip.
- G. Fasten between 1/2 inch (13 mm) and 1 inch (25 mm) in from the side edge and between 8-1/2 inches (216 mm) and 9 inches (229 mm) up from the shingle bottom edge.
- H. Allow minimum vertical clearance between the edge of siding and any other material in strict accordance with the manufacturer's installation instructions.
- I. Ensure vertical joints of overlapping shingle course do not align.
- J. Wind Resistance: Where a specified level of wind resistance is required, Hardie Shingle siding is installed to substrate and secured with a minimum two fasteners described in Table No. 6, 7 and 8 in National Evaluation Service Report No. NER-405.

3.5 INSTALLATION - HARDIETRIM HZ5 BOARDS

- A. Install materials in strict accordance with manufacturer's installation instructions. Install flashing around all wall openings.
- B. Fasten through trim into structural framing or code complying sheathing. Fasteners must penetrate minimum 3/4 inch (19 mm) or full thickness of sheathing. Additional fasteners may be required to ensure adequate security.
- C. Place fasteners no closer than 3/4 inch (19 mm) and no further than 2 inches (51 mm) from side edge of trim board and no closer than 1 inch (25 mm) from end. Fasten maximum 16 inches (406 mm) on center.

- D. Maintain clearance between trim and adjacent finished grade.
- E. Trim inside corner with a single board trim both side of corner.
- F. Outside Corner Board Attach Trim on both sides of corner with 16 gage corrosion resistant finish nail 1/2 inch (13 mm) from edge spaced 16 inches (406 mm) apart, weather cut each end spaced minimum 12 inches (305 mm) apart.
- G. Allow 1/8 inch gap between trim and siding.
- H. Seal gap with high quality, paint-able caulk.
- I. Shim frieze board as required to align with corner trim..
- J. Fasten through overlapping boards. Do not nail between lap joints.
- K. Overlay siding with single board of outside corner board then align second corner board to outside edge of first corner board. Do not fasten HardieTrim boards to HardieTrim boards.
- L. Shim frieze board as required to align with corner trim.
- M. Install HardieTrim Fascia boards to rafter tails or to sub fascia.

3.6 FINISHING

- A. Finish unprimed siding with a minimum one coat high quality, alkali resistant primer and one coat of either, 100 percent acrylic or latex or oil based, exterior grade topcoats or two coats high quality alkali resistant 100 percent acrylic or latex, exterior grade topcoat within 90 days of installation. Follow paint manufacturer's written product recommendation and written application instructions.
- B. Finish factory primed siding with a minimum of one coat of high quality 100 percent acrylic or latex or oil based exterior grade paint within 180 days of installation. Follow paint manufacturer's written product recommendation and written application instructions.

3.7 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 07 92 13
JOINT SEALERS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes surface preparation, joint sealing, sealants and joint backing.
- B. Related Sections: The following sections contain requirements that relate to this section.
 - 1. Section 08 53 13 – Vinyl Windows
 - 2. Section 09 21 19 – Gypsum Board Assemblies
 - 2. Section 09 65 13 – Resilient Base and Accessories
 - 3. Section 09 21 19 – Resilient Tile Flooring
 - 4. Section 09 91 23 – Interior Painting

1.3 REFERENCES

- A. American Society for Testing and Materials, ASTM.
 - 1. ASTM C920 Specification for Elastomeric Joint Sealants.

1.4 SUBMITTALS

- A. Product Data: Submit data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.
- B. Provide sample installation on site for Architect's inspection and approval.
- C. Certificates: Upon completion of work, furnish written statement signed by the Contractor, applicator, and manufacturer stating sealant application complies with drawings, specifications, and manufacturer's recommendations and was proper and adequate for conditions requiring sealant.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Delivery: Deliver sealants and related accessories in factory sealed, unopened containers bearing manufacturer's name, batch number, and product designation.
- B. Storage: Store in unopened containers. Follow manufacturer's recommendations for storage temperature and shelf life.
- C. Handling: Follow manufacturer's recommendations for handling product containing toxic materials. Keep flammable materials away from heat, sparks, and open flame. Use recommended solvents and cleaning agents for cleaning tools, equipment, and skin.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

1.7 PROTECTION

- A. Use masking tape where required to control lap of materials on adjacent surfaces and remove upon completion.

PART 2 PRODUCTS

2.1 MATERIALS

- A. General
 - 1. Sealant systems shall be compatible with contacting surfaces and premolded joint fillers.
 - 2. Sealant systems shall not stain adjacent exposed surfaces.
 - 3. Manufacturer's standard color range shall permit matching sealants to color of contacting surfaces.

2.2 MANUFACTURER

- A. All sealants and accessory parts shall be as manufactured by Pecora Corp.
- B. Substitutions: As approved by Architect.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

2.3 MATERIALS:

A. General

1. Sealant systems shall be compatible with contacting surfaces and premolded joint filler.
2. Sealant systems shall not stain adjacent exposed surfaces.
3. Manufacturer's standard color range shall permit matching sealants to color of contacting surfaces

B. ELASTOMERIC SEALANTS

1. Sealant Type 1: Multi-component acrylic latex sealant; comply with ASTM C C-834-95: Pecora AC-20 + Silicone.
2. Sealant Type 2: Two-part Polyurethane sealant; comply with Fed Spec TT-S-00227E, Class A, Type II: ASTM C-920, Type M, Grade NS, Class 25, Use M: Pecora Dynatrol II
3. Sealant Type 3: One-part Medium-Modulus Silicone Building Sealant; comply with Fed Spec. TT-S-1543A; TT-s-230C Type II, Class A; CGSB 19-13.M82; ASTM C- 920, Class 25, Type S, Grade NS, use M: Pecora 895

2.4 ACCESSORIES

- A. Primers, sealers, surface conditioners and solvents: As recommended by sealant manufacturer to suit application. Sealants shall be non-staining. Solvents shall be residue free
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- C. Joint Backing: Round foam rod compatible with sealant; ASTM D1056, sponge or expanded rubber; oversized 30 to 50 percent larger than joint width. Incompressible materials or acrylic-, asphalt-, oil-, or solvent containing materials will not be permitted.
- D. Bond Breaker: Polyethylene film, pressure sensitive tape recommended by sealant manufacturer to suit application.
- E. Rags: Dry cleaned white cotton.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Inspect joints and spaces to receive sealant and verify the following:
 - 1. Verify substrate surfaces and joint openings are ready to receive work.
 - 2. Verify surfaces are free from bituminous materials, from release agents, bond breakers, deleterious curing compounds, water repellants, or other surface treatments.
 - 3. Verify metallic surfaces are free from rust, mill, scale, coatings, oil and grease
 - 4. Verify removal of protective materials from aluminum surfaces.
 - 5. Verify concrete, plaster, or masonry surfaces have properly cured.
 - 6. Verify joints and spaces requiring sealing are at correct or normal width.
 - 7. Verify joint backing and release tapes are compatible with sealant.

- B. Do not start application until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Cleaning
 - 1. Remove loose materials and foreign matter which might impair adhesion of sealant.
 - 2. Clean and prime joints.
 - 3. Perform preparation in accordance with ASTM C 1193.

- B. Remove moisture.

- C. Verify proper surface and ambient temperatures.

- D. Primers.
 - 1. Make preliminary tests to insure primers will not stain exposed materials or deteriorate back up material.
 - 2. Prime surfaces immediately prior to sealing
 - 3. Prime concrete, stone, copper, steel and masonry surfaces before installing sealant.

- E. In all other respects, prepare surfaces in accordance with manufacturer's recommendations.

3.3 INSTALLATION

- A. Perform installation in accordance with ASTM C 1193.
- B. Perform acoustical sealant application work in accordance with ASTM C 919.
- C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.
- D. Install bond breaker where joint backing is not used, or where required to confine adhesion of sealant to surface materials.
- E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
- F. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- G. Tooling:
 - 1. Using tooling agent recommended by sealant manufacturer. Neatly tool joints to compress material, improve adhesion to surfaces joined, and achieve slightly concave surface.
 - 2. Repair air pockets exposed by tooling.
 - 3. Use masking tape where required to facilitate tooling and remove upon completion.

3.4 APPLICATION, PENETRATION SEAL

- A. Installation: Comply with the manufacturer's written instructions to properly form and dam penetration openings to produce a tight foamed in place penetration seal. After curing inspect for tightness of seal. Make necessary repairs.
- B. Provide penetration seals at mechanical and electrical duct, pipe and conduit penetrations through floor slabs.

3.5 PATCHING

- A. Patch or replace defective and damaged sealants as directed by the Architect.

3.6 CLEANING

- A. Clean adjacent surfaces soiled in applying sealants in accordance with sealant manufacturer's recommendations.
- B. Remove wet material from adjacent surfaces before it has set.
- C. Do not use cleaning agents.

3.7 SCHEDULE

- A. Sealant Joints:
 - 1. Joints in finish carpentry and trim: Sealant #2
 - 2. Metal/metal joints: Sealant #2
 - 3. Glass/metal joints: Sealant #3
 - 4. Metal/wood joints: Sealant #1

END OF SECTION

SECTION 08 15 00
PLASTIC DOORS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes new entrance doors as shown on the drawings side hinged manufactured by Masonite.
- B. Door system components include: door panel(s), glass inserts, door frame, door hardware, weather seals.
- C. New storm door, by “The Hampton”

1.3 SUBMITTALS

- A. Shop Drawings: Indicate door elevations, with sizes.
- B. Samples: Submit two of door color, and finish.

1.4 QUALITY ASSURANCE

- A. Perform work in accordance with the following:
 - 1. ANSI/NWWDA I.S.1
 - 2. Installed door and panel assembly: Conform to NFPA 80 for fire rated class as indicated on drawings.

1.5 WARRANTY

- A. Provide warranty to the following term:
 - 1. Exterior Doors: One Year
- B. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, telegraphing core construction.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

PART 2 PRODUCTS

2.1 DOOR TYPES

A. Entrance Door:

1. Masonite "Belleville" smooth fiberglass entry door, meeting "Energy Star" rating with metal frame.
2. Or approved equal.

B. Storm Door:

1. "The Hampton" Equal Vertical, white, with tiger-wire stainless steel screen, heavy duty closure and safety chain.
2. Or reviewed equal.

C. Wood Frame:

1. "Endura" frame, with depth to match existing conditions and ADA compliant aluminum sill.

2.2 FABRICATION

- A. Fabricate doors with hardware reinforcement blocking in place.
- B. Factory pre-fit doors for frame opening dimensions identified on shop drawings.
- C. Door shall be fabricated for the door hardware to be installed. The contractor shall coordinate this with the door manufacturer.

2.3 Finish:

- A. All doors will be finished in the field.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install doors in accordance with ANSI/ NWWDA I.S.1.
- B. Adjust door for smooth and balanced door movement.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

C. Use spray foam insulation non-expandable caulking to infill any gaps prior to installing casing.

D. Install new interior and exterior casing.

E. Flashing to prevent water infiltration.

3.2 INSTALLATION TOLERANCES

A. Conform to ANSI/NWWDA requirements for fit and clearance tolerances and maximum diagonal distortion.

END OF SECTION

SECTION 08 53 13
VINYL WINDOWS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Vinyl replacement windows.

1.2 RELATED SECTIONS

- A. Section 03300 - Cast-In-Place Concrete.
- B. Section 04810 - Unit Masonry Assemblies.
- C. Section 06100 - Rough Carpentry.
- D. Section 06200 - Finish Carpentry.
- E. Section 07460 - Siding.

1.3 REFERENCES

- A. American Architectural Manufacturers Association (AAMA):
 - 1. AAMA/WDMA/CSA 101/I.S.2/A440-05, A440-08, and A440-11 - NAFS - North American Fenestration Standard Specification for windows, doors, and skylights.
 - 2. AAMA 701/702 - Combined Voluntary Specifications for Pile Weather strip and Replaceable Fenestration Weather seals.
 - 3. AAMA 902 - Voluntary Specification for Sash Balances.
- B. ASTM International (ASTM):
 - 1. ASTM E 283 - Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen.
 - 2. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.
 - 3. ASTM E 547 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Difference.
 - 4. ASTM E 1886 - Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.
 - 5. ASTM E 1996 - Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes.
 - 6. ASTM E 2190 - Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units.
 - 7. ASTM F 588 - Standard Test Methods for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- C. NFRC 100/200 - Procedures for Determining Fenestration Product U-Factors, Solar Heat Gain Coefficient (SHGc), and Visible Transmittance at Normal Incidence (VT).

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. **Product Data:** Submit the following documents for each type of window.
 - 1. Manufacturer's technical data, product descriptions and installation guides.
 - 2. Elevation for each style window specified indicating its size, glazing type, muntin type and design.
 - 3. Manufacturer's head, jamb and sill details for each window type specified.
- C. **Verification Samples:** Provide operating units of each style window specified.
 - 1. Verification samples may be operating scaled-down mock-ups of actual-size units.
 - 2. Operating hardware such as balances, sash locks and weather-stripping.
 - 3. Verification samples will be returned to manufacturer's representative at project closeout.
- D. **Test Reports:** Submit certified independent testing agency reports indicating window units meet or exceed specified performance requirements.

1.5 QUALITY ASSURANCE

- A. **Manufacturer Qualifications:** Minimum ten years producing vinyl (PVC) windows.
- B. **Installer Qualifications:** Minimum 2 years experience on projects of similar size and acceptable to window manufacturer.
- C. **Source Limitations:** Obtain window units from one manufacturer through a single source.
- D. **Testing:** Provide window units independently tested and found to be in compliance with AAMA/WDMA/CSA 101/I.S.2/A440-05, A440-08, or A440-11 performance standards.
- E. **Code Compliance:** Provide windows that are labeled in compliance with the jurisdiction having authority in the location of the project.
- F. **Mock-Up:** Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship and color are approved by Architect.
 - 3. Refinish mock-up area as required to produce acceptable work.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver windows to project site in undamaged condition; handle windows to prevent damage to components and to finishes.
- B. Store products in manufacturer's unopened packaging, out of direct sunlight or high temperature locations, until ready for installation.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

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 recommended limits.

1.8 WARRANTY

- A. Submit manufacturer's standard warranty against defects in workmanship and materials.
 - 1. Limited Lifetime Limited Transferable warranty on extruded solid vinyl member and component parts. Insulated glass is warranted against material obstruction of transparency resulting from film formation or dust collection on the interior glass surfaces for a period of twenty (20) years. Consult warranty for complete details.
 - 2. Limited 10 Year warranty period for commercial project work such as apartments, housing authorities and other buildings not used by individual homeowners, covering all vinyl, glass and component parts. Consult warranty for complete details.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Harvey Building Products , which is located at: 1400 Main St.; Waltham, MA 02451-9180; Toll Free Tel: 800-598-5400; Tel: 781-398-7800; Fax: 781-398-7749; Email:[request info \(architects@harveybp.com\)](mailto:request_info_architects@harveybp.com); Web:www.harveybp.com
- B. Requests for substitutions will be considered in accordance with provisions of Section 01600. Substitutions must be submitted to Architect two weeks prior to bid opening.

2.2 REPLACEMENT CLASSIC DOUBLE HUNG WINDOWS

- A. Construction:
 - 1. Nominal 0.070 inch (1.8mm) frame thickness polyvinyl chloride (PVC) with miter cut and fusion welded corners. Sash shall be a nominal 0.065 inch (1.7mm) thickness with fusion welded corners.
 - 2. Color: White Vinyl.
 - 3. Glazing: Insulating glass units secured to sash frame using a sealant at the corners and dual durometer glazing bead. Complies with ASTM E 2190.
 - 4. Sash Balances: Factory calibrated block and tackle, complying with AAMA-902. Balance cords shall be anchored to locking terminal housings when the sash is tilted in. The locking terminal and pivot bar system shall provide accurate alignment of the sash and the frame during operation.
 - 5. Sash Locks: Cam type locks anchored with screws driven through the sash rail and into an extruded aluminum reinforcing bar. Double locks when openings are 30 1/4 inches (768mm) wide and greater.
 - 6. Weather Stripping: In compliance with AAMA 701.2.
 - 7. Screens: Extruded aluminum full screen with 18 x 16 charcoal finish fiberglass mesh.
- B. Performance:
 - 1. Structural Rating: H-LC40 (DP40) - Test Size: 46 inches x 77 inches (1168mm x 1956mm) in accordance with AAMA/WDMA/CSA 101/I.S.2/A440-08.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

2. Forced Entry: Type A, Grade 10 in accordance with ASTM F 588.
3. Thermal Transmittance: The following values are in accordance with NFRC 100/200.
 - a. ENERGY STAR® 2X Low-E/Argon No Grid: U-Factor 0.25/ R-Value 4.00/ SHGc 0.30/ VT 0.54.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify rough opening size is of sufficient size to receive window unit and complies with manufacturer's requirements for opening clearances. Verify that sill plate is level.
- B. Notify Architect of unacceptable conditions before proceeding with installation.

3.2 INSTALLATION

- A. Install window unit in accordance with manufacturer's printed instructions including the following:
 1. Apply sealant around perimeter of window unit between nail fin and exterior sheathing of wall. Refer to Division 7 Section "Joint Sealants".
 2. Install window unit square, level and plumb. Center window unit in opening and secure window unit by nailing through nail fin and screw through jambs as indicated in manufacturer's instructions.
 3. Flash window in accordance with AAMA's "Standard Practice for Installation of Windows with a Mounting Flange in Stud Frame Construction".
 4. Insulate between window frame and rough opening with insulation. Refer to Division 7 Section "Building Insulation".

3.3 ADJUSTING

- A. Adjust units for smooth operation without binding or racking. Adjust sash locks and screens for smooth operation.

3.4 CLEANING AND PROTECTION

- A. Clean soiled surfaces and glass prior to substantial completion.
- B. Protect window unit from damage until substantial completion. Repair or replace damaged units.

END OF SECTION

SECTION 08 71 00
DOOR HARDWARE

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes hardware for fiberglass doors entry doors, thresholds, seals, and door gaskets. All hardware to be ADA approved.

1.2 SUBMITTALS

- A. Shop Drawings: Indicate locations and mounting heights of each type of hardware, electrical characteristics and connection requirements.

1.3 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: Submit data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with the following requirements:
 - 1. ANSI/BHMA A156.2, series 4000 Grade 2 UL Listed.
- B. Coordination: Coordinate work of this section with other directly affected sections requiring any integral reinforcement for door hardware.
- C. Supplier: Company specializing in supplying Apartment door hardware with minimum three years documented experience, approved by primary hardware manufacturers.

1.5 MAINTENANCE SERVICE

- A. Provide service and maintenance services of door closers for one year from Date of Substantial Completion.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- B. Provide special wrenches and tools applicable to each different or special hardware component.

PART 2 PRODUCTS

2.1 DOOR HARDWARE

- A. Manufacturers:
 - 1. Arrow.
 - 2. Substitutions: Not Permitted.
- B. Hinge Manufacturers:
 - 1. Mckinney.
 - 2. Stanely.
 - 3. Substitutions: Not Permitted.
- C. Lockset, Latch Set, Dead Bolt and Cylinder Manufacturers:
 - 1. Arrow RL01 Passage set 626, US26D, 26D, Satin Chrome Plated with UL dead Latch & R61 Strike.
 - 2. Arrow E61 Series deadlocks with dead bolt, 626, US26D, 26D, Satin Chrome Plated with #346 strike.
 - 3. Substitutions: Not Permitted.
- D. Door Viewers:
 - 1. Penrod M25926 Dull Chrome.
 - 2. Substitutions: Not Permitted.

2.2 COMPONENTS

- A. General Hardware Requirements: Where not specifically indicated, comply with applicable ANSI A156 standard for type of hardware required. Provide each type of hardware with accessories as required for applications indicated and for complete, finished, operational doors.
 - 1. Templates: Furnish templates or physical hardware items to door and frame manufacturers sufficiently in advance to avoid delay in Work.
 - 2. Reinforcing Units: Furnished by door and frame manufacturers; coordinated by hardware supplier or hardware manufacturer.
 - 3. Fasteners: Furnish as recommended by hardware manufacturer and as required to secure hardware.
 - a) Finish: Match hardware item being fastened.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- B. Hinges and Pivots: ANSI A156.1, full mortise type, template type, ANSI A156.7, complying with following general requirements unless otherwise scheduled.
 - 1. Widths: Sufficient to clear trim projection when door swings 180 degrees.
 - 2. Number: Provide minimum three hinges to 90 inches high, four hinges to 120 inches high for each door leaf.

- C. Locksets and Latchsets: Provide locksets compatible with specified cylinders. Furnish standard strikes with extended lips to protect trim from being marred by latch bolt verify type of cutouts provided in metal frames.
 - 1. Mortise Locksets and Latchsets: ANSI/BHMA A156.13, Series 1000, and Grade 1 unless otherwise indicated.
 - 2. Bored Cylindrical Locksets and Latchsets: ANSI/BHMA A156.2, Series 4000, Grade 1 unless otherwise indicated.
 - 3. Interconnected Locksets: ANSI/BHMA A156.12, Series 5000, Grade 1 unless otherwise indicated.
 - 4. Auxiliary Locksets: ANSI/BHMA A156.5, Grade 1, mortise dead locks, bored dead locks, rim locks, narrow stile locks unless otherwise indicated.

- D. Cylinders: ANSI/BHMA A156.5, Grade 1, 6 pin type.
 - 1. Keying: Key to existing keying system.
 - 2. Supply keys in the following minimum quantities:
 - a) 5 master keys.
 - b) 3 change keys for each lock.

- E. Push/Pulls, Manual Bolts, Protection Plates, Gasketing, Thresholds, and Trim: Provide as indicated in Schedule, with accessories as required for complete operational door installations.
 - 1. Weatherstripping: Provide continuous weatherstripping at top and sides of exterior doors.
 - 2. Thresholds: Maximum ½ inch height; requirements to ensure accessibility for persons with disabilities.

3. Wall Stops: ANSI/BHMA A156.1, Grade 1, 3 inch wall stop.
4. Floor Stops: ANSI/BHMA A156.1 Grade 1 dome type with no visible screws; provide with accessories as required for applications indicated.

2.3 ACCESSORIES

- A. Lock Trim: Provide levers as selected from manufacturer's full range of levers and roses.
- B. Through Bolts: Through bolts and grommet nuts shall not be permitted on door faces in occupied areas unless no alternative is possible.
 1. Through bolts shall not be used on solid wood core doors.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify doors and frames are ready to receive work and dimensions are as indicated.

3.2 INSTALLATION

- A. Coordinate mounting heights with door and frame manufacturers. Use templates provided by hardware item manufacturer.
- B. Mounting Heights from Finished Floor to Center Line of Hardware Item: Comply with manufacturer recommendations and applicable codes.

END OF SECTION

SECTION 09 65 13
RESILIENT BASE AND ACCESSORIES

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 – Specification sections, apply to work of this section.

1.02 SUMMARY

- A. The work of this Section includes:
1. Installation of rubber / resilient base and accessories.
- B. Related Sections: The following sections contain requirements that relate to this section.
1. Section 09 21 16 Gypsum Board and Accessories
 2. Section 09 65 16 Resilient Tile
- C. References (Industry Standards):
1. American Association of Textile Chemists and Colorists
 - a. AATCC 134 Electrostatic Propensity of Carpets
 2. American National Standards Institute
 - a. ANSI ESD S97.2 Floor Materials and Footwear – Voltage Measurement on a Person
 3. American Society for Testing and Materials
 - a. ASTM C423 Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method
 - b. ASTM C518 Standard Test Method for Steady State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
 - c. ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers – Tension
 - d. ASTM D2047 Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- e. ASTM D2240 Standard Test Method for Rubber Property – Durometer Hardness
- f. ASTM D3389 Standard Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform, Double Head Abrader)
- g. ASTM D6499 Standard Test Method for The Immunological Measurement of Antigenic Protein in Natural Rubber and its Products
- h. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials
- i. ASTM E90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
- j. ASTM E648 Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using Radiant Heat Energy Source
- k. ASTM E662 Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials
- l. ASTM E2179 Standard Test Method for Laboratory Measurement of the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors
- m. ASTM E2180 Standard Test Method for Determining the Activity of Incorporated Antimicrobial Agent(s) in Polymeric or Hydrophobic Materials
- n. ASTM F150 Standard Test Method for Electrical Resistance of Conductive and Static Dissipative Resilient Flooring
- o. ASTM F155 Method of Test for Temper of Strip and Sheet Metals for Electronic Devices
- p. ASTM F386 Standard Test Method for Thickness of Resilient Flooring Materials Having Flat Surfaces
- q. ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
- r. ASTM F925 Standard Test Method for Resistance to Chemicals of Resilient Flooring
- s. ASTM F970 Standard Test Method for Static Load Limit
- t. ASTM F1344 Standard Specification for Rubber Floor Tile
- u. ASTM F1482 Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring
- v. ASTM F1514 Standard Test Method for Measuring Heat Stability of Resilient Flooring by Color
- w. ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing
- x. ASTM F1860 Standard Specification for Rubber Sheet Floor Covering With Backing
- y. ASTM F1861 Standard Specification for Resilient Wall Base

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- z. ASTM F2055 Standard Test Method for Size and Squareness of Resilient Floor Tile by Dial Gage Method
 - aa. ASTM F2169 Standard Specification for Resilient Stair Treads
 - bb. ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using *insitu* Probes
 - cc. ASTM F2199 Standard Test Method for Determining Dimensional Stability of Resilient Floor Tile after Exposure to Heat
 - dd. ASTM F3010 Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings
 - ee. ASTM G21 Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi
- 4. European Norm
 - a. FTM 101 C 4046 Static Decay
 - 5. International Organization for Standardization
 - a. ISO 140 Measurement of sound insulation in buildings and of building elements
 - 6. National Fire Protection Association
 - a. NFPA 253 Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Energy Source
 - b. NFPA 258 Test Method for Specific Density of Smoke Generated by Solid Materials

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's Installation Guide, Maintenance Guide and Safety Data Sheet (SDS) for each material proposed for use.
- B. Samples: Submit two 3 inch by 3 inch samples of each product, in color specified, for verification.

1.04 QUALITY ASSURANCE

- A. Manufacturer: Provide resilient flooring manufactured by a firm with a minimum of 10 years' experience with resilient flooring of type's equivalent to those specified. Manufacturers proposed for use, which are not named in this section, should submit evidence of ability to meet performance requirements specified not less than 10 days prior to bid date.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

1. The manufacturer should have the Quality Management System approved by Lloyd's Register Quality Assurance to the Quality Management System Standard ISO 9001:2000.
2. Color Matching: Provide resilient flooring products, including wall base, accessories and subfloor preparation products from one manufacturer to ensure color matching and compatibility.
3. Manufacturer must be capable of providing technical training and technical field service representation.

B. Installer Qualifications: Installer should be approved for the requirements of the project or INSTALL (International Standards & Training Alliance) resilient certified for the requirements of the project.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in labeled packages. Store and handle in strict compliance with manufacturer's recommendations. Protect from damage due to weather, excessive temperatures, and construction operations.
- B. Deliver materials sufficiently in advance of installation to condition materials to the required temperature for 48 hours prior to installation.

1.06 PROJECT CONDITIONS

- A. Maintain temperature and humidity at service levels or 68° F (20° C), $\pm 5^\circ$ F (3° C), and 50% RH $\pm 10\%$ in areas to receive resilient flooring. Specified temperature should be maintained at least 48 hours before, during, and 72 hours after installation.

1.07 WARRANTY

- A. Provide current, detailed manufacturer's warranty for each flooring product as applicable, including limited wear, defect and conductivity.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURER

- A. Armstrong
- B. The Manufacturer should meet 1.04 A. and have or provide the following:

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

1. ISO 14001 Environmental Management Systems certification.
2. Validation according to the Eco-Management and Audit System (EMAS).
3. Construction waste take back program for the purpose of reducing jobsite waste by taking back their uninstalled waste flooring. Details of the nora program are available at www.nora.com/us.
4. Flooring surfaces that are easily cleaned and do not require coatings and stripping, or use chemicals that may be hazardous to human health.
5. Supply all required products that are CA 01350 compliant.
6. Flooring that is free of anything known to be teratogenic, mutagenic or carcinogenic.
7. Flooring that contains no polyvinyl chloride or plasticizers.
8. Flooring that contains no halogens.
9. Flooring that contains no asbestos.

2.02 RESILIENT WALL BASE / SANITARY BASE / ACCESSORIES

A. Wall Base

1. Product **Butter Cream V6708 to coordinate with flooring**
Name:

PART 3 – RESPONSIBILITIES

3.01 GENERAL CONTRACTOR RESPONSIBILITIES

- A. Supply a safe, climate controlled building and subfloor as detailed in the Installation Guide).
- B. A wooden substrate that is not directly in contact with concrete or soil subfloors on or below grade, even if built on sleepers is required. All suspended wood floors should have an adequate underfloor ventilation system, and a permanently effective vapor retarder should be placed on the ground beneath the air space.
- C. A secure storage area that is maintained permanently or temporarily at ambient service temperature and humidity (except walk in freezers or similar), or 68°F ± 5° F and 50% ± 10% relative humidity, for at least 48 hours prior to and during the application of the flooring, so the flooring contractor can acclimate the flooring materials is required.
- D. An installation area that is weather tight and maintained either permanently or

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

temporarily at ambient service temperature and humidity (except walk in freezers or similar), or $68^{\circ}\text{F} \pm 5^{\circ}\text{F}$ and $50\% \pm 10\%$ relative humidity, for at least 48 hours prior to, during and 72 hours after the application of the flooring is required.

- E. Areas with direct prolonged exposure to sunlight should be protected with the use of Low E glass doors and windows or facades.
- F. Areas of the flooring that are subject to direct sunlight through doors or windows should have them covered using blinds, curtains, cardboard or similar for the time of the installation and 72 hours after the installation to allow the adhesive to cure. Note: These areas should be installed using wet adhesives only.
- G. Prevent all traffic for a minimum of 12 hours and rolling loads for 72 hours to allow the adhesive to cure. If required, after 12 hours protect the flooring from damage during construction operations using Masonite, plywood or a similar product, ensuring first that the flooring surface is free of all debris. Lay panels so that the edges form a butt joint and tape the joint to prevent both movement and debris entrapment underneath them. Inspect immediately before covering and after removal for final acceptance.
- H. Have the flooring cleaned no sooner than 72 hours after the installation or a standard method as detailed in the appropriate Maintenance Guide.

3.02 FLOORING CONTRACTOR RESPONSIBILITIES

- A. Provide trained installers that have at least one of the following:
 - 1. Approved for all of the requirements of the project or INSTALL (International Standards & Training Alliance) certified for the requirements of the project.
 - 2. An effective installation manager, to manage the project, installers, and ensure that all of the required procedures are followed as detailed in the Installation Guide
- B. Acclimate the flooring in the secure storage area provided by the general contractor that is maintained permanently or temporarily at ambient service temperature and humidity (except walk in freezers or similar), or $68^{\circ}\text{F} \pm 5^{\circ}\text{F}$ and 50% relative humidity, for at least 48 hours prior to application.
- C. For wooden subfloors American Plywood Association (APA) underlayment grade plywood should be double sheeted at a suitable thickness (minimum total wood

thickness of 1 1/4 inch) to overlay the wooden substrate and installed as detailed in ASTM F1482 Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring. Please note, as plywood will expand and contract due to changes in moisture content and temperature, nora systems, Inc. cannot accept any liability of the plywood joints telegraphing through the finished floor.

- D. Perform mat bond tests in each major area (1 per ~1,000 sq. ft.) This should consist of the proposed subfloor preparation, mitigation and leveling or smoothing products. A detailed method statement is available in the Installation Guide Do not proceed with installation until all the results of the bond test are acceptable.
- E. Review and comply with all relevant Safety Data Sheets (SDS), local, state and federal regulations.
- F. Clean out and fill or repair any dormant saw cuts and cracks with an appropriate product following the manufacturers written usage instructions. For any expansion (moving) joints, use an industry standard expansion joint assembly.
- G. When required, use a surface applied moisture mitigation system that meets the requirements of ASTM F3010, and following the directions and requirements detailed in the manufacturers written instructions. Provide written confirmation and photographs to the general contractor or end user that the subfloor was prepared correctly prior to the application of the membrane, and that the membrane was applied correctly (without pin-holes) including confirmation of the gallons used and total square feet installed.
- H. When required, use a leveler following the manufacturers written instructions. The surface should be free of dust, solvents, paint, wax, varnish, oil, grease, asphalt, old adhesives, and other extraneous materials that may interfere with the bond. These should be completely removed by mechanical means only. Dustless diamond grinding or bead blasting are the preferred method to remove contaminates and bond breakers, as it also helps to level the concrete.
- I. Prime the subfloor prior to using a suitable leveler. Note: a 1/8 inch minimum thickness is required for the leveler to be considered porous as required.
- J. Vacuum floors immediately prior to installing the flooring to remove all loose particles. If required, only use water based sweeping compounds. Do not use any wax or oil based compounds that leave behind a residue that may interfere with the adhesive bond.

Install resilient flooring, including but not limited to the following, in accordance with the Installation Guide.

1. Do not mix manufacturing batches of a color within the same area.
 2. Do not install resilient flooring over building expansion joints.
 3. Do not install defective or damaged resilient flooring.
 4. Layout resilient flooring to provide ~equal size at perimeter. Adjust layout as necessary to reduce the amount of resilient flooring which is cut to less than half full width.
 5. Lay resilient flooring with arrows in the same direction (excluding borders).
 6. Install resilient flooring without voids at seams. Lay seams together without stress.
 7. Cut/scribe resilient flooring neatly at perimeter and obstructions.
 8. Extend resilient flooring into reveals, closets, and similar openings.
 9. Remove excess adhesive immediately.
 10. Install reducer strips at exposed edges.
- K. When required, install wall base in accordance with manufacturer's Installation Guide. Install in longest practical lengths..
- L. Touch-up and repair any minor damage to eliminate all evidence of repair. Remove and replace work which cannot be satisfactorily repaired.

END OF SECTION

SECTION 09 65 16
RESILIENT FLOORING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 – Specification sections, apply to work of this section.

1.02 SUMMARY

- A. The work of this Section includes:
1. Installation of rubber tile flooring
 2. Installation of rubber wall base
- B. Related Sections: The following sections contain requirements that relate to this section.
1. Section 06 10 00 Rough Carpentry
 2. Section 09 21 16 Gypsum Board Assemblies
- C. References (Industry Standards):
1. American Association of Textile Chemists and Colorists
 - a. AATCC 134 Electrostatic Propensity of Carpets
 2. American National Standards Institute
 - a. ANSI ESD S97.2 Floor Materials and Footwear – Voltage Measurement on a Person
 3. American Society for Testing and Materials
 - a. ASTM C423 Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method
 - b. ASTM C518 Standard Test Method for Steady State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
 - c. ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers – Tension

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- d. ASTM D2047 Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine
- e. ASTM D2240 Standard Test Method for Rubber Property – Durometer Hardness
- f. ASTM D3389 Standard Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform, Double Head Abrader)
- g. ASTM D6499 Standard Test Method for The Immunological Measurement of Antigenic Protein in Natural Rubber and its Products
- h. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials
- i. ASTM E90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
- j. ASTM E648 Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source
- k. ASTM E662 Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials
- l. ASTM E1745 Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs
- m. ASTM E2179 Standard Test Method for Laboratory Measurement of the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors
- n. ASTM E2180 Standard Test Method for Determining the Activity of Incorporated Antimicrobial Agent(s) in Polymeric or Hydrophobic Materials
- o. ASTM F150 Standard Test Method for Electrical Resistance of Conductive and Static Dissipative Resilient Flooring
- p. ASTM F155 Method of Test for Temper of Strip and Sheet Metals for Electronic Devices
- q. ASTM F386 Standard Test Method for Thickness of Resilient Flooring Materials Having Flat Surfaces
- r. ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
- s. ASTM F925 Standard Test Method for Resistance to Chemicals of Resilient Flooring
- t. ASTM F970 Standard Test Method for Static Load Limit
- u. ASTM F1344 Standard Specification for Rubber Floor Tile
- v. ASTM F1482 Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring
- w. ASTM F1514 Standard Test Method for Measuring Heat Stability of Resilient Flooring by Color

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- x. ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing
- y. ASTM F1860 Standard Specification for Rubber Sheet Floor Covering With Backing
- z. ASTM F1861 Standard Specification for Resilient Wall Base
 - aa. ASTM F2055 Standard Test Method for Size and Squareness of Resilient Floor Tile by Dial Gage Method
 - bb. ASTM F2169 Standard Specification for Resilient Stair Treads
 - cc. ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using *insitu* Probes
 - dd. ASTM F2199 Standard Test Method for Determining Dimensional Stability of Resilient Floor Tile after Exposure to Heat
 - ee. ASTM F3010 Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings
 - ff. ASTM G21 Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi European Norm FTM 101 C 4046 Static Decay.
- 4. International Organization for Standardization
 - a. ISO 140 Measurement of sound insulation in buildings and of building elements.
- 5. National Fire Protection Association
 - a. NFPA 253 Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Energy Source
 - b. NFPA 258 Test Method for Specific Density of Smoke Generated by Solid Materials

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's Installation Guide, Maintenance Guide and Safety Data Sheet (SDS) for each material proposed for use.
- B. Samples: Submit two 3 inch by 3 inch samples of each product .

1.04 QUALITY ASSURANCE

- A. Manufacturer: Provide resilient flooring manufactured by a firm with a minimum of 10 years' experience with resilient flooring of type's equivalent to those

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

specified. Manufacturers proposed for use, which are not named in this section, should submit evidence of ability to meet performance requirements specified not less than 10 days prior to bid date.

1. The manufacturer should have the Quality Management System approved by Lloyd's Register Quality Assurance to the Quality Management System Standard ISO 9001:2000.
2. Color Matching: Provide resilient flooring products, including wall base, accessories and subfloor preparation products from one manufacturer to ensure color matching and compatibility.
3. Manufacturer must be capable of providing technical training and technical field service representation.

B. Installer Qualifications: Installer should be approved for the requirements of the project or INSTALL (International Standards & Training Alliance) resilient certified for the requirements of the project.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in labeled packages. Store and handle in strict compliance with manufacturer's recommendations. Protect from damage due to weather, excessive temperatures, and construction operations.
- B. Deliver materials sufficiently in advance of installation to condition materials to the required temperature for 48 hours prior to installation.

1.06 PROJECT CONDITIONS

- A. Maintain temperature and humidity at service levels or 68° F (20° C), $\pm 5^{\circ}$ F (3° C), and 50% RH $\pm 10\%$ in areas to receive resilient flooring. Specified temperature should be maintained at least 48 hours before, during, and 72 hours after installation.

1.07 WARRANTY

- A. Provide current, detailed manufacturer's warranty for each flooring product as applicable, including limited wear, defect and conductivity. Minimum 10 year.

PART 2 - PRODUCTS

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

2.01 ACCEPTABLE MANUFACTURER

- A. Flexitec IVC US, Inc. 101 IVC Drive Dalton, GA. 30721, 1-888-225-82287.
- B. The Manufacturer should meet 1.04 A. and have or provide the following:
 - 1. ISO 14001 Environmental Management Systems certification.
 - 2. Validation according to the Eco-Management and Audit System (EMAS).
 - 3. Construction waste take back program for the purpose of reducing jobsite waste by taking back their uninstalled waste flooring.
 - 4. Flooring surfaces that are easily cleaned and do not require coatings and stripping, or use chemicals that may be hazardous to human health.
 - 5. Supply all required products that are CA 01350 compliant.
 - 6. Flooring that is free of anything known to be teratogenic, mutagenic or carcinogenic.
 - 7. Flooring that contains no polyvinyl chloride or plasticizers.
 - 8. Flooring that contains no halogens.
 - 9. Flooring that contains no asbestos.

2.02 RESILIENT SHEET FLOORING FOR COMMERCIAL TRAFFIC

A. Rubber Sheet Floor

- | | |
|-------------------------------|---|
| 1. Product | Name: Flexitec Majestic Oak 733 |
| 2. ASTM Specification: | ASTM F1303 Standard Specification for Rubber sheet floor, defined as Type I and Grade 1 |
| 3. Limited Wear | 10 years Warranty |
| 4. Material: | Heterogenous sheet floor |
| 5. Color: | Majestic Oak 733 |
| 6. Surface: | Super Guard |
| 7. Back of Tile Sheet/Nosing: | HD Mechanical Backing |
| 8. Material Size: | 13'-2 x 65'-0" |
| 9. Thickness: | 80 Guage |
| 10. Flammability: | Passes |
| 11. Smoke Density: | < 450 is required |
| 12. Slip | ASTM C1028 COF, .007 |

Modernization Work for Kitchen, Window & Siding Replacement at Connecticut Avenue, Stamford, CT

- Resistance:
13. Static Load: ASTM F970, limit 750psi.
14. Light Resistance: ASTM F1515, Passes
15. Heat Resistance: Passes
16. Heat weld seaming: IVC Commercial Solid Weld Rods

PART 3 – RESPONSIBILITIES

3.01 GENERAL CONTRACTOR RESPONSIBILITIES

- A. Supply a safe, climate controlled building and subfloor as detailed in the Installation Guide.
- B. A secure storage area that is maintained permanently or temporarily at ambient service temperature and humidity (except walk in freezers or similar), or 68°F ± 5° F and 50% ± 10% relative humidity, for at least 48 hours prior to and during the application of the flooring, so the flooring contractor can acclimate the flooring materials is required.
- C. An installation area that is weather tight and maintained either permanently or temporarily at ambient service temperature and humidity (except walk in freezers or similar), or 68°F ± 5° F and 50% ± 10% relative humidity, for at least 48 hours prior to, during and 72 hours after the application of the flooring is required.
- D. Areas with direct prolonged exposure to sunlight should be protected with the use of Low E glass doors and windows or facades.
- E. Areas of the flooring that are subject to direct sunlight through doors or windows should have them covered using blinds, curtains, cardboard or similar for the time of the installation and 72 hours after the installation to allow the adhesive to cure. Note: These areas should be installed using wet adhesives only.
- F. Prevent all traffic for a minimum of 12 hours and rolling loads for 72 hours to allow the adhesive to cure. If required, after 12 hours protect the flooring from damage during construction operations using Masonite, plywood or a similar product, ensuring first that the flooring surface is free of all debris. Lay panels so that the edges form a butt joint and tape the joint to prevent both movement and

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

debris entrapment underneath them. Inspect immediately before covering and after removal for final acceptance.

- G. Have the flooring cleaned no sooner than 72 hours after the installation using a standard method as detailed in the appropriate Maintenance Guide.

3.02 FLOORING CONTRACTOR RESPONSIBILITIES

- A. Provide trained installers that have at least one of the following:
 - 1. Approved by the flooring manufacturer for all of the requirements of the project or
INSTALL (International Standards & Training Alliance) certified for the requirements of the project.
 - 2. An effective installation manager, to manage the project, installers, and ensure that all of the required procedures are followed.
- B. Acclimate the flooring in the secure storage area provided by the general contractor that is maintained permanently or temporarily at ambient service temperature and humidity (except walk in freezers or similar), or $68^{\circ}\text{F} \pm 5^{\circ}\text{F}$ and 50% relative humidity, for at least 48 hours prior to application.
- C. For wooden subfloors American Plywood Association (APA) underlayment grade plywood should be double sheeted at a suitable thickness (minimum total wood thickness of 1 1/4 inch) to overlay the wooden substrate and installed as detailed in ASTM F1482 Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring. Please note, as plywood will expand and contract due to changes in moisture content and temperature, the flooring manufacturer cannot accept any liability of the plywood joints telegraphing through the finished floor.
- D. Perform mat bond tests in each major area (1 per ~1,000 sq. ft.) This should consist of the proposed subfloor preparation, mitigation and leveling or smoothing products. Do not proceed with installation until all the results of the bond test are acceptable.
- E. Review and comply with all relevant Safety Data Sheets (SDS), local, state and federal regulations.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- F. Clean out and fill or repair any dormant saw cuts and cracks with an appropriate product following the manufacturers written usage instructions. For any expansion (moving) joints, use an industry standard expansion joint assembly.
- G. When required, use a surface applied moisture mitigation system that meets the requirements of ASTM F3010, and following the directions and requirements detailed in the manufacturers written instructions. Provide written confirmation and photographs to the general contractor or end user that the subfloor was prepared correctly prior to the application of the membrane, and that the membrane was applied correctly (without pin-holes) including confirmation of the gallons used and total square feet installed.
- H. When required, use a leveler following the manufacturers written instructions. The surface should be free of dust, solvents, paint, wax, varnish, oil, grease, asphalt, old adhesives, and other extraneous materials that may interfere with the bond. These should be completely removed by mechanical means only. Dustless diamond grinding or bead blasting are the preferred method to remove contaminates and bond breakers, as it also helps to level the concrete.
- I. Prime the subfloor prior to using a suitable leveler. Note: a 1/8 inch minimum thickness is required for the leveler to be considered porous as required.
- J. Vacuum floors immediately prior to installing the flooring to remove all loose particles. If required, only use water based sweeping compounds. Do not use any wax or oil based compounds that leave behind a residue that may interfere with the adhesive bond.
- K. Install resilient flooring, including but not limited to the following, in accordance with the manufacturers Installation Guide.
 - 1. Do not mix manufacturing batches of a color within the same area.
 - 2. Do not install resilient flooring over building expansion joints.
 - 3. Do not install defective or damaged resilient flooring.
 - 4. Layout resilient flooring to provide ~equal size at perimeter. Adjust layout as necessary to reduce the amount of resilient flooring which is cut to less than half full width.
 - 5. Lay resilient flooring with arrows in the same direction (excluding borders).
 - 6. Install resilient flooring without voids at seams. Lay seams together without stress.
 - 7. Cut/scribe resilient flooring neatly at perimeter and obstructions.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

8. Extend resilient flooring into reveals, closets, and similar openings.
 9. Remove excess adhesive immediately.
 10. Install reducer strips at exposed edges.
-
- L. When required, install wood wall base in accordance with manufacturer's Installation Guide. Install in longest practical lengths.
 - M. When required, heat weld seams using a color coordinated heat welding rod in accordance with the Installation Guide.
 - N. When required, flash cove. Extend flooring up the wall using the boot flash coving method, to the required height. Provide cove stick and suitable capping strip.
 - O. Touch-up and repair any minor damage to eliminate all evidence of repair. Remove and replace work which cannot be satisfactorily repaired.

END OF SECTION

SECTION 09 91 13
INTERIOR PAINTING

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes surface preparation and field application of paints.
- B. Paint the following surfaces:
 - 1. Gypsum Board surfaces (walls, ceilings and soffits), where indicated on drawings.

1.02 SUBMITTALS

- A. Product Data: Submit data on all finishing products. Reference data to Architect's material numbers and painting systems.
- B. Samples: Submit two paper chip samples, 3 inch x 3 inch in size illustrating range of color and gloss available for each surface finishing product scheduled. Identify each sample.
- C. Product List: Complete list of materials proposed to be furnished and applied

1.03 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years experience. Provide primers and undercoats produced by same manufacturer as finish coats. Use only thinners approved by coating manufacturer, and only within recommended limits
- B. Installer: Company specializing in performing Work of this section with minimum three years experience.
- C. Review other sections of the specifications in which primers are specified. Ensure compatibility of total coating systems for each substrate. Upon request of other trades, furnish characteristics of finish coatings, to ensure compatible prime coats are used.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- D. Upon completion certify that the work was performed properly under proper conditions as directed by the manufacturer's representative, using the recommended quantities of the specified materials.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver and store packaged materials in original containers with seals unbroken and labels intact at the time of use.
- B. Store only approved materials at job site. Store and mix only in suitable, ventilated designated area restricted to storage of paint materials and related equipment.
- C. Ensure the safe storage and use of paint materials and the daily safe disposal of waste.

1.05 ENVIRONMENTAL REQUIREMENTS

- A. Store and apply materials in environmental conditions required by manufacturer's instructions.

PART 2 PRODUCTS

2.01 PAINTS AND COATINGS

- A. Manufacturers:
 - 1. Pittsburgh Paint (PPG), Inc.
 - 2. Benjamin Moore Paints, Inc.
 - 3. Sherwin Williams Paint, Co.

2.02 COMPONENTS

- A. Coatings: Primers, undercoats, and finish coats all products of the same manufacturer. Ready mixed except field catalyzed coatings of good flow and brushing properties, capable of drying or curing free of streaks or sags. Employ finish coats compatible with primers and undercoats.
- B. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials required to achieve the finishes specified.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- C. Colors: Colors shall be selected and scheduled by Architect. Provide appropriate and specified paint materials in scheduled colors for each type of substrate.
- D. Obtain Architect's approval for adjustments of colors on job.
- E. Do not reduce any material unless directed by the Architect, or unless recommended by materials manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate conditions are ready to receive Work. Do not proceed until unsatisfactory conditions detrimental to timely and proper completion of the work have been corrected. Application of the first coat constitutes acceptance of surface.
- B. Measure moisture content of porous surfaces using an electronic moisture meter. Do not apply finishes unless moisture content is less than 12 percent.

3.02 PROTECTION

- A. Protect other surfaces from paint and damage.

3.03 PREPARATION

- A. Minor defects and clean surfaces which affect work of this section.
- B. Clean and prepare surfaces in compliance with coating manufacturer's instructions for each substrate condition specified.
- C. Clean and remove active mildew with mildew cleaner.
- D. Provide barrier coats over incompatible primers, or remove incompatible primers and reprime.
- E. Previously painted surfaces shall be cleaned free of dirt, dust, unsound oxidized paint and foreign matter.

3.04 APPLICATION

A. General

1. Apply coatings in conformance with manufacturer's printed directions. Use applicators and techniques best suited for substrate and type of coating.
2. Sand gypsum wallboard surfaces, if required, to achieve required finish. Do not apply coatings over dirt, rust, scale, grease, moisture, scuffs, or to surfaces exhibiting conditions detrimental to the formation of a durable paint film.
3. Give special attention to ensure that surfaces, including edges, corners and crevices, receive a dry film thickness equivalent to that of flat surfaces.
4. Remove, refinish, or repaint work not in compliance with specified requirements
5. Match approved samples for color, texture and coverage. Remove, refinish or recoat work not in compliance with specifications.
6. Apply additional coats when undercoats, or other conditions show through final coat, until coating film is of uniform finish, color and appearance. Ensure that edges, corners, crevices, weld and fasteners receive equivalent dry film thickness to that of flat surfaces. Apply not less than the specified number of coats

B. Scheduling painting

1. Apply first coat to properly prepared gypsum board, and associated trim surfaces as soon as practicable after preparation and before subsequent surface deterioration.
2. Allow sufficient time between coats for proper drying. Do not apply subsequent coat until undercoat has dried firm and does not deform or feel sticky, or when application of another coat causes lifting or loss of adhesion of the undercoat.

C. Prime and finish coats

1. Apply materials at not less than manufacturer's recommended spreading rate. Provide a total dry film thickness of 1 to 1-1/2 mils per coat, unless otherwise directed by manufacturer.
2. Apply a prime coat to all new and repaired gypsum board surfaces after all dirt, oils and grease have been removed.

3. Provide a smooth, opaque finish of uniform finish, color, appearance and coverage. Provide a finish free of cloudiness, spotting, holidays, laps, brush marks, runs, sags and other surface imperfections.
4. Tint pigmented undercoats to approximately same shade as final coat. Perceptibly increase the shade of each successive coat.
5. Match approved samples for color, texture and coverage. Remove, refinish or recoat work not in compliance with specifications.
6. Apply additional coats when undercoats, or other conditions show through final coat, until coating film is of uniform finish, color and appearance. Ensure that edges, corner and crevices receive equivalent dry film thickness to that of flat surfaces. Apply not less than specified number of coats.

D. Gypsum board walls, ceilings and soffits

1. Finish all new gypsum board wall, ceiling and soffit surfaces as identified in contract documents.
2. Finish all existing door & window frames and as identified in contract documents.

3.05 CLEANING

- A. Cleanup: At end of each work day, remove empty cans, rags, rubbish, and other discarded paint materials from the site.
- B. Upon completion of work, remove surplus materials and rubbish, and clean off spilled or spattered paint resulting from this work.
- C. Upon completion of painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping, using care not to scratch or damage adjacent finished surfaces.
- D. Washing finished surfaces
 1. Wash in strict accordance with manufacturer's directions only where required to clean work. Assure washing does not produce surface different from unwashed surface.

3.06 PROTECTION

- A. Protect work of other trades, whether to be painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as acceptable to the Architect.
- B. Provide “wet paint” signs to protect newly painted finishes. Remove temporary protective wrappings provided by others for protection of their work after completion of painting operations.
- C. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.07 PAINT FINISH SCHEDULE

- A. Product designations refer to Pittsburgh Paint (PPG) product. Product numbers indicate type and quality.
- B. 1. All new gypsum board walls, ceiling soffits, cement board, door & window frames, and associated trim as indicated in the contract documents, shall have an **Eggshell Paint** finish.
- C. Paint Material Schedule:
 - 1. New gypsum board wall, ceiling, soffits, door & window frames, and associated trim as indicated in the contract documents.
 - a. First coat: PPG Speedhide Latex undercoat, 6-2 latex Sealer. Prime coat required on new and repaired gypsum board, metal door frames and flush solid core wood doors.
 - b. Finish coats:(2): PPG Latex eggshell 6-411.

END OF SECTION

SECTION 11 35 13
RESIDENTIAL KITCHEN APPLIANCES

PART I GENERAL

1.1 RELATED SECTIONS

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

1.2 SUMMARY

- A. Section includes residential appliances, freestanding and installed
- B. Related Sections: The following sections contain requirements that relate to this section.
 - 1. Section 12 35 31 Casework - Kitchen

1.3 SUBMITTALS

- A. Shop Drawings: Indicate manufacturer and model number.
- B. Product Data: Submit data on each appliance including all features, component profiles, sizes, assembly methods, and finish.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance manufacturers installation instructions
- B. Maintain one copy of each document on site.

PART 2 PRODUCTS

2.1 RESIDENTIAL APPLIANCES

- A. Appliance Manufacturers:
 - 1. General Electric.
 - 2. Substitutions as approved by Architect

2.2 COMPONENTS

- A. Appliances: Standard of Quality shall be General Electric appliances as listed below:
 - 1. Frigidaire 30" free standing electric range
Model # FFEF3005MW Energy Star or equal
 - 2. Refrigerator: Frigidaire 18 Cu. Ft., Top Freezer Refrigerator; Model # FFHI1831QP or equal.
 - 3. Frigidaire Range Hood: FHWC3025MW Over-the-Range with recirculating venting; or equal.

2.3 FACTORY FINISHING

- A. Factory finish; Color White

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify location of each appliance and that adequate space in casework has been provided.
- B. Verify adequacy of backing and location of mechanical and electrical outlets.

3.2 PREPARATION

- A. Provide supplementary support framing.

3.3 INSTALLATION

- A. Set and secure appliances in place rigid, plumb, and level.
- B. Provide cutouts for plumbing and electrical fixtures and fittings.
- C. Use fixture attachments at concealed locations for wall mounted components.
- D. Use concealed joint fasteners to align and secure appliances to adjoining cabinet units and counter tops.
- E. Carefully scribe casework which is against appliances, leaving gaps of 1/32 inch maximum. Use filler strips not additional overlay trim for this purpose.
- F. Secure appliances to floor, walls and casework appropriate anchorage.
- G. Adjust moving or operating parts to function smoothly and correctly.

END OF SECTION

SECTION 12 35 31
CASEWORK – KITCHEN

PART 1 GENERAL

1.1 RELETED SECTIONS

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

1.2 SUMMARY

- A. This section includes wood faced cabinets with boxes constructed of furniture grade plywood and as specified by HUD to meet SEVERE USE CABINETS.
- B. Related Sections: The following sections contain requirements that relate to this section.
 - 1. Section 06 10 00 Rough Carpentry
 - 2. Section 09 21 16 Gypsum Board Assemblies
 - 3. Section 11 35 13 Residential Kitchen Appliances
 - 4. Section 12 36 61 Simulated Stone Countertops

1.3 REFERENCES

- A. American National Standards Institute (ANSI).
- B. Builders Hardware Manufacturers Association (BHMA).
- C. Hardwood Plywood & Veneer Association (HPVA).
- D. Kitchen Cabinet Manufacturers Association (KCMA).
- E. Laminating Materials Association (LMA).

1.4 DEFINITIONS

- A. Exposed Surfaces of Casework: Surfaces visible when doors and drawers are closed, including visible surfaces in open cabinets.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- B. Semi exposed Surfaces of Casework:
 - 1. Surfaces visible when behind opaque doors and drawer fronts are open, including interior faces of doors and interiors and sides of drawers.
 - 2. Bottoms of wall cabinets are defined as semi exposed
- C. Concealed Surfaces of Casework:
 - 1. Surfaces not usually visible after installation, including sleepers, web frames, dust panels, bottoms of drawers, and ends of cabinets installed directly against and completely concealed by walls or other cabinets.
 - 2. Tops of wall cabinets and utility cabinets are defined as concealed.

1.5 SUBMITTALS

- A. Product Data: For the Following:
 - 1. Cabinets.
 - 2. Simulated stone countertops.
 - 3. Solid surfacing material.
 - 4. Cabinet hardware.
- B. Shop Drawings: For cabinets and countertops, include plans, elevations, details, and attachments to other work. Show materials, finishes, filler panels, hardware, edge and backsplash profiles, cutouts for plumbing fixtures, and methods of joining countertops.
- C. Material Samples for Initial Selection: Manufacturer's color charts showing the full range of colors, textures, and patterns available for each type of material exposed to view.
- D. Material Samples for Verification: For the following materials; in sets showing full range of color, texture, and pattern variations expected:
 - 1. Wood-veneered panels with transparent finish, 3 1/4 x 5 3/4 inches, for each species.
 - 2. Solid wood with transparent finish, 50 sq. in., for each species.
 - 3. Simulated stone countertops, 8 by 10 inches .
 - 4. Solid surfacing for material for countertops, 6 inches square.
 - 5. One unit of each type of exposed hardware.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- E. Product Certificates: Signed by manufacturers of casework certifying that products furnished comply with specified requirements.

1.6 QUALITY ASSURANCE

- A. Source Limitations for Cabinets: Obtain cabinets through one source from a single manufacturer
- B. Product Designations: Drawings indicate size, configurations, and finish material of casework by referencing designated manufacturer's catalog numbers. Other manufacturer's casework of similar sizes, similar door and drawer configurations, similar finish materials, and complying with the Specifications may be considered. Refer to Division 1 Section Substitutions.
- C. Quality Standards: Unless otherwise indicated, comply with the following standards:
 - 1. Cabinets: KCMA A161.1.
 - 2. Simulated Stone Countertops: KCMA A161.2.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install residential casework until building is enclosed, wet-work is complete, and HVAC system is operating and will maintain temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Established Dimensions: Where residential casework is indicated to fit to other construction, establish dimensions for areas where casework is to fit. Coordinate construction to ensure that the actual dimensions correspond to established dimensions. Provide fillers and scribes to allow for trimming and fitting.
- C. Field Measurements:
 - 1. For cabinets: Where residential casework is indicated to fit existing construction, verify dimensions of existing construction by field measurements before fabrication and indicate measurements on Shop Drawings. Provide filler and scribe if necessary.
 - 2. Field Measurements for Countertops: Verify dimensions of countertops by field measurements after base cabinets are installed but before countertop fabrication is complete. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

1.8 COORDINATION

- A. Coordinate layout installation of blocking and reinforcement in partitions for support of residential casework.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following and shall meet HUD SEVERE USE CABINETS:

1. Norfolk Severe Use Cabinets
2. Mid America Use Cabinets
3. Evans Cabinet Corporation
4. Armstrong HUD Severe Use Cabinets
5. Sustainability Certifications: ISO14001, KCMA ESP & EPP

- B. Manufacturers: Subject to compliance with specified requirements, provide products by one of the following:

1. Simulated Stone Countertops: Refer to Section 12 36 61

- D. Acceptable Products: Subject to compliance with specified requirements, provide

1. Basics Oak available in assorted finishes
2. Warranty: 1 year

2.2 COLORS, TEXTURES, AND PATTERNS

- A. Colors, Textures, and Patterns: As indicated by referencing manufacturer's designations.
- B. Colors, Textures, and Patterns: As selected by Architect from manufacturer's full range for these characteristics.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

2.3 CABINET MATERIALS

- A. Exposed Materials: Comply with the following to meet HUD SEVERE USE CABINETS:
 - 1. Exposed Wood Species:
 - a. Unless otherwise indicated, do not use two adjacent exposed faces shall be similar that are noticeably dissimilar in color, grain, figure, and or natural character markings.
 - b. Oak
 - 2. Solid Wood: Clear hardwood lumber of species indicated, free of defects, selected for compatible grain and color, kiln dried to 7 percent moisture content.
- B. Semi-exposed Materials: Unless otherwise noted, provide the following to meet HUD SEVERE USE CABINETS:
 - 1. Cabinet grade plywood.
- C. Concealed Materials: Comply with the following to meet HUD SEVERE USE CABINETS:
 - 1. Plywood: Any hardwood or softwood species, with no defects affecting strength or utility.
 - 2. Cabinet grade plywood

2.4 COUNTERTOP MATERIALS

- A. Simulated stone countertop: Refer to section 12 36 61.

2.5 CASEWORK HARDWARE TO MEET HUD SEVERE USE CABINETS

- A. General: Manufacturer's standard units complying with BHMA A156.9, type, material, size, and finish as selected from manufacturer's standard choices.
- B. Hinges: All doors have 2-way European style, fully concealed, self-closing hinges with a105° opening.
NOTE: All butt door cabinets have hinges with 6-way adjustment capability.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- C. Drawer Guides: 75 pound rated drawer guide system, side mounted, 3/4 extension with self-adjusting mounting brackets at rear. Drawer slides are fastened to the drawer box with screws.

2.6 CABINET CONSTRUCTION to meet HUD SEVERE USE CABINETS

- A. Face Style: Reveal overlay: door and drawer faces partially cover body or face frame.
- B. Face Frames: 3/4-inch by 1 1/2-inch solid wood.
- C. Door and Drawer Fronts:
 - 1. Solid wood stiles and rails, 3/4-inch, with 3/16-inch thick, veneer-faced plywood center panels.
 - 2. Colony doors are machined with reverse bevel to eliminate the need for hardware.
- D. Exposed Cabinet Ends:
 - 1. 3/8-inch thick, flush solid oak panel to match cabinet fronts.
- D. Cabinet Tops and Bottoms: 1/2" thick cabinet grade plywood..
- E. Base Unit Top Rails: 1 1/16" x 2 1/4" Douglas fir.
- F. Wall-Hung Unit Top and Bottom Rails: 2 3/4" wide x 3/8" cabinet grade plywood.
- G. Base Unit Back Panels: 1/4"-thick 50 lb. density engineered wood interior covered with M-Guard™, with printed wood grain.
- H. Wall-Hung Unit Backs: 3/8" thick cabinet grade plywood.
- I. Front Face Frame Drawer Rails: 3/4" thick x 1 1/2" wide solid hardwood rail and stile members.
- J. Drawers: 1/2-inch sides, fronts & backs, cabinet grade plywood. Drawer sides are rabbeted to join the drawer fronts and backs and secured with adhesive and staples.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- K. Shelves: 3/4" thick-48 lb. density engineered wood. Full-depth shelves shall be covered on both sides, matching the cabinet interior. Half-depth shelves are laminated on the top surface only and not on the underside. Adjustable shelves are supported by adjustable shelf clips.
- L. Joinery:
 - 1. Wall cabinet back panels shall be retained by a dado in the end panels and secured with adhesive. For extra strength, full-length dados shall be machined in the back panel near the top and bottom edges like the dados in the end panels to accept the top panels and secured with adhesive and staples.
 - 2. Base cabinets: A dado joint and adhesive shall be used to join the bottom to end panels. The upper portion of base cabinets shall be reinforced with 1/2" thick engineered wood corner gussets.
 - 3. The back panel shall be retained by a dado in the end panels secured with adhesive. The top of base and bath cabinets shall have an 1 1/16" x 2 1/4" solid wood screw rail retained by the same groove as the back panel in the end panels and secured with adhesive. The screw rail shall be grooved full length on the underside to accept the top edge of the back panel.
- M. Factory Finishing: To the greatest extent possible, finish casework at the factory. Defer only final touch up until after installation.

3.1 INSTALLATION

- A. Install casework with no variations in flushness of adjoining surfaces; use concealed shims. Where casework abuts other finished work, scribe and cut for accurate fit. Provide filler strips, scribe strips, and moldings in finish to match casework face.
- B. Install casework without distortion so doors and drawers fit openings and are aligned. Complete installation of hardware and accessories as indicated.
- C. Install casework and countertop level and plumb to a tolerance of 1/8-inch in 8 feet.
- D. Fasten cabinets to adjacent units and to backing.
 - 1. Fasten wall cabinets through back, near top and bottom, at ends and not less than 24 inches o.c.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- F. Protect finished surfaces from damage or staining resulting from subsequent work until Date of Substantial Completion. Repair or replace damaged cabinet work, including warped or loose members.

END OF SECTION

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

SECTION 12 36 61
SIMULATED STONE COUNTERTOPS

PART 1 GENERAL

1.1 RELETED SECTIONS

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

1.2 SUMMARY

- A. This section includes simulated quartz countertops and backsplash in kitchen.
- B. Related Sections: The following sections contain requirements that relate to this section.
 - 1. Section 06 10 00 Rough Carpentry
 - 2. Section 09 21 16 Gypsum Board Assemblies
 - 3. Section 11 35 13 Residential Kitchen Appliances
 - 4. Section 12 35 31 Casework - Kitchen

1.3 SUBMITTALS

- A. Product data: for simulated stone countertop specified.
- B. Shop drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices and other components.
 - 1. Show the following:
 - a. Full-size details, edge details, attachments, etc.
 - b. Locations and sizes of furring, blocking, including concealed blocking and reinforcement specified in other Sections.
 - c. Locations and sizes of cutouts and holes for plumbing fixtures, faucets soap dispensers and other items installed in quartz surface.
 - d. Seam locations.
- C. Samples: For each type of product indicated:

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

1. Submit minimum 6-inch by 6-inch sample in specified color.
2. Cut sample and seam together for representation of seaming techniques.
3. Indicate full range of color and pattern variation.
4. Approved samples will be retained as a standard for work.

D. Product data:

1. Indicate product description, fabrication information and compliance with specified performance requirements.

E. Product certificates: For each type of product, signed by product manufacturer.

F. Manufacturer certificates: Signed by manufacturers certifying that they comply with requirements.

G. Maintenance data:

1. Submit manufacturer's care and maintenance data. Maintenance kit for finishes shall be submitted.
2. Include in project closeout documents.

1.4 QUALITY ASSURANCE

A. Qualifications: Shop that employs skilled workers who custom fabricate products similar to those required for this project and whose products have a record of successful in-service performance.

B. Fabricator/installer qualifications: Work of this section shall be by a certified fabricator/installer, certified in writing by the manufacturer.

C. Applicable standards: Standards of the following, as referenced herein:

1. American National Standards Institute (ANSI)
2. American Society for Testing and Materials (ASTM)
3. National Electrical Manufacturers Association (NEMA)
4. NSF International

5. Fire test response characteristics:

- a. Provide with the following Class A (Class I) surface burning characteristics as determined by testing identical products per UL 723

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

(ASTM E 84) or another testing and inspecting agency acceptable to authorities having jurisdiction.

- b. Flame Spread Index: 25 or less.
- c. Smoke Developed Index: 450 or less.

D. Allowable tolerances:

- 1. Variation in component size: $\pm 1/8$ " (3 mm) over a 10' length.
- 2. Location of openings: $\pm 1/8$ " (3 mm) from indicated location.
- 3. Maximum $1/8$ " (3 mm) clearance between quartz surfaces and each wall.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver no components to project site until areas are ready for installation.
- B. Store components indoors prior to installation.
- C. Handle materials to prevent damage to finished surfaces.
 - 1. Provide protective coverings to prevent physical damage or staining following installation for duration of project.

1.6 WARRANTY

- A. Provide manufacturer's 10-year warranty against defects in materials.
 - 1. Warranty shall provide material to repair or replace defective materials.
 - 2. Damage caused by physical or chemical abuse or damage from excessive heat will not be warranted.

1.7 MAINTENANCE

- A. Provide maintenance requirements as specified by the manufacturer.

2.2 PART 2 — PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with the requirements, provide the following product:

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

1. Zodiac® quartz surfaces from DuPont (basis of design)
2. Or equal.

2.2 MATERIALS

- A. Material:
1. Homogeneous quartz surfaces material.
 2. Material shall have minimum physical and performance properties specified.
- B. Thickness:
1. 1-1/8” thick for horizontal installations/applications.
 2. 3/4” thick for horizontal installations/applications.
- C. Edge treatment: beveled
- D. Seam width:
1. <1/8" unless otherwise specified.
- E. Sink mounting: Drop in.
- F. Backsplash/Endsplash: Applied.
- G. Performance characteristics: Zodiac® physical properties data sheet:

Property	Typical Result	Test Procedure
Flexural Strength	>5,300 psi	ASTM D 790
Flexural Modulus	5.3–5.7E ⁶ psi	ASTM D 790
Flexural Elongation	>0.1%	ASTM D 790
Compression Strength (Dry)	~27,000 psi	ASTM C 170
Compression Strength (Wet)	~24,000 psi	ASTM C 170
Hardness	7	Mohs’ Hardness Scale
Thermal Expansion	1.45 x 10 ⁻⁵ in./in./°C	ASTM D 696
Gloss (60° Gardner)	45–50	ANSI Z 124
Colorfastness	Passes	ANSI Z 124.6.5.1
Wear and Cleanability 124.6.5.3	Passes	ANSI Z
Stain Resistance	Passes	ANSI Z 124.6

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

		(stain 5.2, chemical 5.5, cigarette 5.4 resistances)
Fungal and Bacterial Resistance 22	No growth	ASTM G 21 & G
High Temperature Resistance (356°F)	None to slight effect	NEMA LD 3.3.6*
Boiling Water Resistance	None to slight effect	NEMA LD 3.3.5*
Freeze-Thaw Cycling	Unaffected	ASTM C 1026
Point Impact	Passes	ANSI Z 124.6.4.2
Ball Impact	164 inches	NEMA LD 3.3.8*
Slip Resistance 1028	Above 0.80 for textured models	ASTM C
Static Coefficient of Friction (as received)	0.89/0.61 (wet/dry)	ASTM C 1028
Static Coefficient of Friction (with renovator)	0.87/0.65 (wet/dry)	ASTM C 1028
Abrasion Resistance	139	ASTM C 501
Specific Gravity	2.44	ASTM D 792
Density	~2400 kg/m ³	
Water Absorption	0.12%	ASTM C 373
Long- and Short-Term	<0.04%	ASTM D 570
Moisture Expansion	<0.01% on average	ASTM C 370
Toxicity	Passes, LC50=68–128	Pittsburgh Protocol
Flammability	For all colors tested	ASTM E 84, UL 723 and NFPA 255
	(Class I and Class A)	
Flame Spread Index	FSI <10 for 3 cm and <15 for 2 cm	
Smoke Developed Index	SDI <50 for 3 cm and <100 for 2 cm	
Nominal Thickness	2 cm and 3 cm	
Nominal Weight	10 lb./ft. ² (2 cm) 15 lb./ft. ² (3 cm)	

* NEMA results based on the NEMA LD 3-2000

2.3 ACCESSORY PRODUCTS

- A. Joint adhesive: DuPont-approved adhesive to create color-matched seam.

2.4 FACTORY FABRICATION

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- A. Shop assembly
 - 1. Fabricate components to greatest extent practical to sizes and shapes indicated, in accordance with approved shop drawings and manufacturer's printed instructions and technical bulletins.
 - 2. Form joints between components using manufacturer's standard joint adhesive joints.
 - a. Reinforce as required.
 - 3. Provide factory cutouts for plumbing fittings and bath accessories as indicated on the drawings.
 - 4. Rout and finish component edges with clean, sharp returns.
 - a. Rout cutouts, radii and contours to template.
 - b. Smooth edges.

2.5 FINISHES

- A. Select from the manufacturer's standard color chart.
 - 1. Color: To be selected from manufacturers standard colors.

PART 3 — EXECUTION

3.1 INSTALLATION

- A. Install components plumb and level, in accordance with approved shop drawings and product installation details.
 - 1. Tops:
 - a. Flat and true to within 1/8" (3 mm) of a flat surface over a 10' length.
 - b. Allow a minimum of 1/16" to a maximum of 1/8" (3 mm) clearance between surface and each wall.
- B. Form field joints using manufacturer's recommended adhesive, with joint widths no greater than 1/8" (3 mm) in finished work.
 - 1. Keep components and hands clean when making joints.
- C. Sinks: Adhere drop-in sinks/bowls to countertops using manufacturer-recommended adhesives and color-matched silicone sealant.
- D. Provide backsplashes and endsplashes as indicated on the drawings.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

1. Adhere to countertops using manufacturer's standard color-matched silicone sealant.
- E. Keep components and hands clean during installation.
1. Remove adhesives, sealants and other stains.
 2. Components shall be clean on date of substantial completion.
- F. Connections: Make plumbing and electrical connections in accordance with MEP Drawings.

3.2 CLEANING AND PROTECTION

- A. Keep components clean during installation. Remove adhesives, sealants and other stains.
- B. Protect surfaces from damage until date of substantial completion. Replace damaged work.

3.3 SCHEDULE

- A. Countertops: As indicated on contract documents/drawings.

END OF SECTION

SECTION 22 00 00
PLUMBING SYSTEMS

1. GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes general administrative, procedural requirements, material requirements and installation requirements for mechanical plumbing systems. The following items are included in this Section:

1. Submittals.
2. Maintenance Manuals.
3. Cutting and Patching.
4. Domestic Water Distribution Systems.
5. Drainage and Vent Systems.
6. Plumbing Fixtures and Equipment.
7. Supports and Anchors
8. Plumbing System Insulation.
9. Joint Sealers
10. Warrantees

1.3 SUBMITTALS

- A. Provide plumbing related shop drawings, product data, and samples submitted, to allow for required distribution plus two copies of each submittal required, which will be retained by the Mechanical Consulting Engineer.
- B. Supports and Anchors Submittals: Submit the following:
1. Product data, including installation instructions for each type of support and anchor. Submit pipe hanger and support schedule showing Manufacturer's figure number, size, location, and features for each required pipe hanger and support.
 2. UL and FM Compliance: Hangers, supports, and components shall be listed and labeled by UL and FM where used for fire protection piping systems.
- C. Domestic Water Distribution Systems: Submit the following:
1. Product data for each piping specialty and valve specified.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

2. ASME B31.9 "Building Services Piping" for materials, products, and installation. Safety valves and pressure vessels shall bear the appropriate ASME label.
- D. Sanitary Drainage and Vent Systems: Submit the following:
1. Sink drains.
 2. Piping products.
- E. Plumbing Fixtures and Equipment: Submit the following:
1. Submit product data for each type of plumbing fixture specified, including fixture and trim, fittings, accessories, appliances, appurtenances, equipment, supports, construction details, dimensions of components, and finishes.
- F. Plumbing System Insulation: Submit the Following:
1. Product data for each type of mechanical insulation identifying k-value, thickness, and accessories.
- G. Joint Sealers: Submit the Following:
1. Product data for each type of joint sealer used.

1.4 MAINTENANCE MANUALS

- A. Prepare maintenance manuals to include the following information for equipment items:
1. Description of function, normal operating characteristics and limitations, performance curves, engineering data and tests, and complete nomenclature and commercial numbers of replacement parts.
 2. Manufacturer's printed operating procedures to include start-up, break-in, and routine and normal operating instructions; regulation, control, stopping, shutdown, and emergency instructions; and summer and winter operating instructions.
 3. Maintenance procedures for routine preventative maintenance and troubleshooting; disassembly, repair, and reassembly; aligning and adjusting instructions.
 4. Servicing instructions and lubrication charts and schedules.

1.5 QUALITY ASSURANCE

- A. Regulatory Requirements: comply with the provisions of the following:
1. 2018 International Mechanical Code
 2. 2018 International Plumbing Code
 3. Connecticut Building Code
 4. Connecticut Life Safety Code

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

5. 2017 NFPA National Electric Code.

1.6 DEFINITIONS

- A. The term "INDICATED" shall mean "as shown on contract documents (specifications, drawings, and related attachments)".
- B. The term "PROVIDE" shall mean "to furnish, install, and connect completely".

2. PRODUCTS

2.1 DOMESTIC WATER DISTRIBUTION SYSTEMS

- A. Pipe, Tube and Fittings: Refer to Part 3 for identification of systems where the below materials are used.
 - 1. Copper Tube: ASTM B 88, Type L Water Tube, drawn temper.
 - 2. Wrought Copper Solder-Joint Fittings: ANSI B16.22, streamlined pattern.
 - 3. Bronze Flanges: ANSI B16.24, Class 150, raised ground face, bolt holes spot faced.
 - 4. Unions: ASME B16.39, malleable iron, Class 150, hexagonal stock, with ball-and-socket joints, metal-to-metal bronze seating surfaces, female threaded ends. Threads shall conform to ASME B1.20.1.
 - 5. Dielectric Unions: Threaded, solder, or grooved-end connections as required to suit application; constructed to isolate dissimilar metals, prevent galvanic action, and prevent corrosion.
 - 6. Solder Filler Metal: ASTM B 32, 95-5 Tin-Antimony.
 - 7. Gasket Material: Thickness, material, and type suitable for fluid to be handled and design temperatures and pressures.
- B. Valves and Specialties:
 - 1. Flexible Connectors: Stainless-steel bellows with woven, flexible, bronze wire reinforced protective jacket; minimum 150 psig working pressure, maximum 250 deg F operating temperature. Connectors shall have flanged or threaded-end connections to match equipment connected and shall be capable of 3/4-inch misalignment.
 - 2. Ball Valves, 1 Inch and Smaller: Rated for 150 psi saturated steam pressure, 400 psi WOG pressure; two-piece construction; with bronze body conforming to ASTM B 62, standard (or regular) port, chrome-plated brass ball, replaceable "Teflon" or "TFE" seats and seals, blowout-proof stem, and vinyl-covered steel handle.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

2.2 SANITARY DRAINAGE AND VENT SYSTEMS

A. Above Ground Drainage and Vent Pipe and Fittings:

1. PVC, Type DWV Pipe and Fittings: ASTM D2665 pipe and fittings, with solvent cemented joints; DWV plastic fitting patterns shall conform to ASTM D3311. Solvent: ASTM D2564. Piping shall be solid core only.

B. Underground Building Drain Pipe and Fittings:

1. PVC Sewer Pipe and Fittings: Conform to ASTM D2729 for pipe and fittings. Solvent: ASTM D2564.

C. Drainage Piping Specialties: As indicated on drawings.

2.3 PLUMBING FIXTURES AND EQUIPMENT

- ### A. Plumbing Fixtures and Equipment: Provide plumbing fixtures and trim, fittings, other components, and supports as indicated on the contract drawings.

2.4 SUPPORTS AND ANCHORS

- ### A. Manufactured Units: Hangers and support components shall be factory fabricated of materials, design, and manufacturer complying with MSS SP-58. Components shall have galvanized coatings where installed for piping and equipment that will not have field-applied finish. Pipe attachments shall have nonmetallic coating for electrolytic protection where attachments are in direct contact with copper tubing.

2.5 PLUMBING SYSTEM INSULATION

- ### A. Insulation General: Conform to the following characteristics for insulation including facings, cements, and adhesives, when tested according to ASTM E 84, by UL or other testing or inspecting organization acceptable to the authority having jurisdiction. Label insulation with appropriate markings of testing laboratory.
1. Interior Insulation: Flame spread rating of 25 or less and a smoke developed rating of 50 or less.
 2. Exterior Insulation: Flame spread rating of 75 or less and a smoke developed rating of 150 or less.
- ### B. Preformed Glass Fiber Pipe Insulation: ASTM C 547, Class 1, rigid pipe insulation, jacketed.
1. Inorganic glass fibers, bonded with a thermosetting resin.

2. Jacket: All-purpose, factory-applied, laminated glass-fiber-reinforced, flame-retardant kraft paper and aluminum foil having self-sealing lap.
3. Thermal Conductivity: 0.26 average maximum at 75 deg F mean temperature.
4. Density: 10 average maximum.
5. PVC Fitting Covers: Factory-fabricated fitting covers manufactured from 20-mil-thick, high-impact, ultra-violet-resistant PVC.

2.6 JOINT SEALERS

- A. Provide 3M Fire Protection Products. Joint sealer products shall be tested in accordance with ASTM E-119, ASTM E-814 and ASTM E-84. All products shall not contain asbestos or PCB's. All joint sealers shall be installed in U.L. listed configurations.

3. EXECUTION

3.1 ROUGH-IN

- A. Verify final locations for rough-ins with field measurements and with the requirements of the actual equipment to be connected.

3.2 MECHANICAL INSTALLATIONS

- A. General: Sequence, coordinate, and integrate the various elements of mechanical systems, materials, and equipment. Comply with the following requirements:
 1. Coordinate mechanical systems, equipment, and materials installation with other building components.
 2. Verify all dimensions by field measurements.
 3. Arrange for chases, slots, and openings in other building components during progress of construction, to allow for mechanical installations.
 4. Where mounting heights are not detailed or dimensioned, install systems, materials, and equipment to provide the maximum headroom possible.
 5. Install systems, materials, and equipment to conform with approved submittal data, including coordination drawings, to greatest extent possible. Conform to arrangements indicated by the Contract Documents, recognizing that portions of the Work are shown only in diagrammatic form. Where coordination requirements conflict with individual system requirements, refer conflict to the Architect.
 6. Install systems, materials, and equipment level and plumb, parallel and perpendicular to other building systems and components, where installed exposed in finished spaces.
 7. Install mechanical equipment to facilitate servicing, maintenance, and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations. Extend grease fittings to an accessible location.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

8. Install access panel or doors where units are concealed behind finished surfaces.

3.3 CUTTING AND PATCHING

- A. General: Perform cutting and patching in accordance with the following requirements:
 1. Protection of Installed Work: During cutting and patching operations, protect adjacent installations.
 2. Provide and maintain temporary partitions or dust barriers adequate to prevent the spread of dust and dirt to adjacent areas.
 3. For existing buildings, patch existing finished surfaces and building components using new materials matching existing materials
 4. For new buildings, patch finished surfaces and building components using new materials specified for the original installation.

3.4 INSTALLATION OF DOMESTIC WATER DISTRIBUTION SYSTEMS

- A. Install Type L, drawn copper tube with wrought copper fittings and solder joints for pipe above ground, within building.
- B. Install CPVC plastic pipe with solvent cement joints, above ground, within building. Install PVC
- C. General Locations and Arrangements: Drawings (plans, schematics, and diagrams) indicate the general location and arrangement of the piping systems. Location and arrangement of piping layout take into consideration pipe sizing and friction loss, expansion, pump sizing, and other design considerations. So far as practical, install piping as indicated.
- D. Install all piping using the following guidelines:
 1. Use fittings for all changes in direction and branch connections.
 2. Install exposed piping at right angles or parallel to building walls. Diagonal runs are not permitted unless expressly indicated.
 3. Install piping free of sags or bends and with ample space between piping to permit proper insulation applications.
 4. Conceal all pipe installations in walls, pipe chases, utility spaces, above ceilings, below grade or floors, unless indicated to be exposed to view.
 5. Install piping tight to slabs, beams, joists, columns, walls, and other permanent elements of the building. Provide space to permit insulation applications, with 1-inch clearance outside the insulation. Allow sufficient space above removable ceiling panels to allow for panel removal.
 6. Locate groups of pipes parallel to each other, spaced to permit applying full

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- insulation and servicing of valves.
7. Fire Barrier Penetrations: Where pipes pass through fire-rated walls, partitions, ceilings, and floors, maintain the fire-rated integrity.
 8. Install piping level with no pitch.
- E. Test water distribution piping as follows: Test for leaks and defects all new water distribution piping systems and parts of existing systems that have been altered, extended or repaired. If testing is performed in segments, submit a separate report for each test, complete with a diagram of the portion of the system tested.
- F. Repair all leaks and defects with new materials and retest system or portion thereof until satisfactory results are obtained.
- G. Clean and disinfect water distribution piping as follows:
1. Purge all new water distribution piping systems and parts of existing systems that have been altered, extended, or repaired prior to use.
 2. Use the purging and disinfecting procedure proscribed by the authority having jurisdiction or, in case a method is not proscribed by that authority, the procedure described in either AWWA C651, or AWWA C652.

3.5 INSTALLATION OF SANITARY DRAINAGE AND VENT SYSTEMS

- A. Pipe Applications - Above Ground, Within Building:
1. Install PVC Type DWV Plastic pipe and fittings for 3 inch and smaller drainage and vent pipe.
- B. Pipe and Tube Joint Construction:
1. PVC DWV Pipe: Joining and installation of PVC drainage pipe and fittings shall conform to ASTM D2665.
- C. Installation:
1. General Locations and Arrangements: Drawings (plans, schematics, and diagrams) indicate the general location and arrangement of the piping systems. Location and arrangement of piping layout take into account many design considerations. So far as practical, install piping as indicated.
 2. Use fittings for all changes in direction and all branch connections.
 3. Install exposed piping at right angles or parallel to building walls. Diagonal runs are not permitted, unless expressly indicated.
 4. Install piping free of sags or bends and with ample space between piping to permit proper insulation applications.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

5. Conceal all pipe installations in walls, pipe chases, utility spaces, above ceilings, below grade or floors, unless indicated to be exposed to view.
 6. Install piping tight to slabs, beams, joists, columns, walls, and other permanent elements of the building. Allow sufficient space above removable ceiling panels to allow for panel removal.
 7. Exterior Wall Penetrations: Seal pipe penetrations through exterior walls using sleeves and mechanical sleeve seals. Pipe sleeves smaller than 6 inch shall be steel; pipe sleeves 6 inch and larger shall be sheet metal.
 8. Fire Barrier Penetrations: Where pipes pass through fire rated walls, partitions, ceilings, and floors, maintain the fire rated integrity.
 9. Make changes in direction for drainage and vent piping using appropriate 45 degree wyes, half-wyes, or long sweep quarter, sixth, eighth, or sixteenth bends. Sanitary tees or short quarter bends may be used on vertical stacks of drainage lines where the change in direction of flow is from horizontal to vertical, except use long-turn tees where two fixtures are installed back to back and have a common drain. Straight tees, elbows, and crosses may be used on vent lines. No change in direction of flow greater than 90 degrees shall be made. Where different sizes of drainage pipes and fittings are connected, use proper size, standard increasers and reducers. Reduction of the size of drainage piping in the direction of flow is prohibited.
 10. Install building drain pitched down at minimum slope of 1/4 inch per foot (2 percent) for piping 3 inch and smaller, and 1/8 inch per foot (1 percent) for piping 4 inch and larger.
- D. Piping System Test: Test drainage and vent system in accordance with the procedures of the authority having jurisdiction. Repair all leaks and defects using new materials and retest system or portion thereof until satisfactory results are obtained.
- E. Adjusting and Cleaning: Clean interior of piping system. Remove dirt and debris as work progresses. Clean drain strainers, domes, and traps. Remove dirt and debris

3.6 INSTALLATION OF PLUMBING FIXTURES AND EQUIPMENT

- A. Examination: Examine roughing-in for potable cold water and hot water supplies and soil, waste, and vent piping systems to verify actual locations of piping connections prior to installing fixtures. Examine walls, floors, and cabinets for suitable conditions where fixtures are to be installed.
- B. Install supports for plumbing fixtures in accordance with categories indicated and of type required:
- C. Plumbing Fixture Installation: As follows:
 1. Install plumbing fixtures level and plumb, in accordance with fixture manufacturers'

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- written installation instructions, roughing-in drawings, and referenced standards.
2. Install floor-mounted, floor-outlet water closets with closet flanges and gasket seals.
 3. Fasten wall-hanging plumbing fixtures securely to supports attached to building substrate when supports are specified and to building wall construction where no support is indicated.
 4. Fasten floor-mounted fixtures and special fixtures having holes for securing fixture to wall construction, to reinforcement built into walls.
 5. Fasten wall-mounted fittings to reinforcement built into walls.
 6. Fasten counter-mounting-type plumbing fixtures to casework.
 7. Secure supplies behind wall or within wall pipe space, providing rigid installation.
 8. Set shower receptors and mop basins in leveling bed of cement grout.
 9. Install stop valve in an accessible location in each water supply to each fixture.
 10. Install trap on fixture outlet except for fixtures having integral trap.
 11. Install escutcheons at each wall, floor, and ceiling penetration in exposed finished locations and within cabinets and millwork. Use deep pattern escutcheons where required to conceal protruding pipe fittings.
 12. Seal fixtures to walls, floors, and counters using a sanitary-type, one-part, and mildew-resistant sealant. Match sealant color to fixture color.

D. Adjusting and Cleaning: Perform the following:

1. Operate and adjust faucets and controls. Replace damaged and malfunctioning fixtures, fittings, and controls.
2. Operate and adjust disposers, hot water dispensers, and controls. Replace damaged and malfunctioning units and controls.
3. Adjust water pressure at drinking fountains, electric water coolers, and faucets, shower valves, and flushometers having controls, to provide proper flow and stream.
4. Replace washers of leaking and dripping faucets and stops.
5. Clean fixtures, fittings, and spout and drain strainers with manufacturers' recommended cleaning methods and materials.

3.7 INSTALLATION OF HANGERS AND SUPPORTS

- A. Install hangers, supports, clamps and attachments to support piping properly from building structure; comply with MSS SP-69 and SP-89. Arrange for grouping of parallel runs of horizontal piping supported together on field-fabricated, heavy-duty trapeze hangers where possible. Install supports with maximum spacings complying with MSS SP-69. Where piping of various sizes is supported together by trapeze hangers, space hangers for smallest pipe size or install intermediate supports for smaller diameter pipe as specified above for individual pipe hangers.

- B. Install building attachments within concrete or to structural steel. Space attachments within maximum piping span length indicated in MSS SP-69. Install additional attachments at concentrated loads, including valves, flanges, guides, strainers, expansion joints, and at changes in direction of piping. Install concrete inserts before concrete is placed; fasten insert to forms. Where concrete with compressive strength less than 2,500 psi is indicated, install reinforcing bars through openings at top of inserts.
- C. Install hangers and supports complete with necessary inserts, bolts, rods, nuts, washers, and other accessories.
- D. Install hangers and supports to allow controlled movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends and similar units.

3.8 INSTALLATION OF PLUMBING SYSTEM INSULATION

- A. Surface Preparation: Clean, dry, and remove foreign materials such as rust, scale, and dirt.
- B. Pipe Insulation Installation, General: Unless otherwise indicated, install pipe insulation as follows:
 1. Apply insulation continuously over fittings, valves, and specialties, except as otherwise indicated.
 2. Apply insulation with a minimum number of joints.
 3. Apply insulation with integral jackets as follows:
 4. Longitudinal Seams: Overlap seams at least 1-1/2 inches. Apply insulation with longitudinal seams at bottom of pipe. Clean and dry surface to receive self-sealing lap. Staple laps with outward clinching staples along edge at 4 inches on center.
 5. At penetrations in jackets for thermometers and pressure gages, fill and seal voids with vapor barrier coating.
 6. Repair damaged insulation jackets, except metal jackets, by applying jacket material around damaged jacket. Adhere, staple, and seal. Extend patch at least 2 inches in both directions beyond damaged insulation jacket and around the entire circumference of the pipe.
 7. Interior Walls and Partitions Penetrations: Apply insulation continuously through walls and partitions, except fire-rated walls and partitions. Apply an aluminum jacket with factory-applied moisture barrier over insulation. Extend 2 inches from both surfaces of wall or partition. Secure aluminum jacket with metal bands at both ends. Seal ends of jacket with vapor barrier coating. Seal around penetration with joint sealer. Refer to Division 7 Section "Joint Sealants."
 8. Floor Penetrations: Terminate insulation underside of floor assembly and at floor support at top of floor.
 9. Flanges, Fittings, and Valves - Interior Exposed and Concealed: Coat pipe

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

insulation ends with vapor barrier coating. Apply premolded, precut, or field-fabricated segments of insulation around flanges, unions, valves, and fittings. Make joints tight. Bond with adhesive. Cover insulation, with PVC fitting covers and seal circumferential joints with butt strips

- 10. Hangers and Anchors: Apply insulation continuously through hangers and around anchor attachments. Install saddles, shields, and inserts. For cold surface piping, extend insulation on anchor legs a minimum of 12 inches and taper and seal insulation ends. Inserts and Shields: Cover hanger inserts and shields with jacket material matching adjacent pipe insulation
- C. Glass Fiber Pipe Insulation Installation: Bond insulation to pipe with lagging adhesive. Seal exposed ends with lagging adhesive. Seal seams and joints with vapor barrier compound.
- D. Piping Systems: Unless otherwise indicated, insulate the following piping systems:
 - 1. Domestic cold water.
 - 2. Domestic hot water.
- E. Domestic Cold Water and Storm Water All Sizes: 1/2-inch-thick glass fiber insulation.
- F. Interior domestic hot water:

Pipe Sizes (NPS)	Materials	Thickness In Inches
1/2 To 1-1/2	Glass Fiber	1
Runouts (Max 12 Feet)	Glass Fiber	1/2

3.9 JOINT SEALER INSTALLATIONS

- A. Verify architectural drawings and field conditions to determine where all piping passes through fire/smoke rated walls, ceilings, floors or other building elements that require penetrations to be sealed.
- B. Install all joint sealers as specified by the manufacturer. All joint sealing systems shall be U.L. rated.

END OF SECTION 22 00 00

SECTION 23 00 00
MECHANICAL SYSTEMS

1. GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes general administrative, procedural requirements, material requirements and installation requirements for mechanical HVAC air systems. The following items are included in this Section:

1. Submittals.
2. Maintenance Manuals.
3. Cutting and Patching.
4. HVAC Equipment.
5. Hydronic Piping
6. Ductwork.
7. Ductwork Accessories.
8. Supports and Anchors.
9. Joint Sealers
10. Testing and Adjusting

1.3 SUBMITTALS

- A. Provide mechanical related shop drawings, product data, and samples submitted, to allow for required distribution plus two copies of each submittal required, which will be retained by the Mechanical Consulting Engineer.
- B. HVAC Equipment: Submit the following:
1. Submit product data for equipment specified, including, accessories, appurtenances, equipment, supports, construction details, dimensions of components, and finishes.
- C. Hydronic Piping: Submit the following:
1. Product Data, including rated capacities of selected models, weights (shipping, installed, and operating), furnished specialties and accessories, and installation instructions for each hydronic specialty and special duty valve specified.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

D. Supports and Anchors Submittals: Submit the following:

1. Product data, including installation instructions for each type of support and anchor. Submit pipe hanger and support schedule showing Manufacturer's figure number, size, location, and features for each required pipe hanger and support.
2. UL and FM Compliance: Hangers, supports, and components shall be listed and labeled by UL and FM where used for fire protection piping systems.

E. Joint Sealers: Submit the Following:

1. Product data for each type of joint sealer used.

1.4 MAINTENANCE MANUALS

A. Prepare maintenance manuals to include the following information for equipment items:

1. Description of function, normal operating characteristics and limitations, performance curves, engineering data and tests, and complete nomenclature and commercial numbers of replacement parts.
2. Manufacturer's printed operating procedures to include start-up, break-in, and routine and normal operating instructions; regulation, control, stopping, shutdown, and emergency instructions; and summer and winter operating instructions.
3. Maintenance procedures for routine preventative maintenance and troubleshooting; disassembly, repair, and reassembly; aligning and adjusting instructions.
4. Servicing instructions and lubrication charts and schedules.

1.5 QUALITY ASSURANCE

A. Regulatory Requirements: comply with the provisions of the following:

1. 2018 International Mechanical Code
2. 2018 International Plumbing Code
3. Connecticut Building Code
4. Connecticut Life Safety Code

1.6 DEFINITIONS

- A. The term "INDICATED" shall mean "as shown on contract documents (specifications, drawings, and related attachments)".
- B. The term "PROVIDE" shall mean "to furnish, install, and connect completely".

2. PRODUCTS

2.1 HVAC EQUIPMENT

- A. Provide HVAC equipment and components as indicated on contract drawings.
- B. The contractor may substitute equipment of another manufacturer if it is of equal quality and rating, subject to owner's and engineer's review and acceptance. Where contractor substitutes equipment requiring a different system configuration, he shall be responsible for providing installation shop drawings and all related accessory equipment for a complete system installation.

2.2 HYDRONIC PIPING

A. PIPE AND TUBING MATERIALS

- 1. Drawn Temper Copper Tubing: ASTM B 88, Type L.

B. FITTINGS

- 1. Wrought-Copper Fittings: ANSI B16.22, streamlined pattern.
- 2. Unions: ANSI B16.39 malleable-iron, Class 150, hexagonal stock, with ball-and-socket joints, metal-to-metal bronze seating surfaces; female threaded ends. Threads shall conform to ANSI B1.20.1.
- 3. Solder Filler Metals: ASTM B 32, 95-5 Tin-Antimony, for heating hot water and low-pressure steam piping.
- 4. Gasket Material: thickness, material, and type suitable for fluid to be handled, and design temperatures and pressures.

C. GENERAL DUTY VALVES

- 1. Ball Valves, 1 Inch and Smaller Larger (condenser water, chilled water, heating hot water): Rated for 150 psi saturated steam pressure, 400 psi WOG pressure; two-piece construction; with bronze body conforming to ASTM B 62, standard (or regular) port, chrome-plated brass ball, replaceable "Teflon" or "TFE" seats and seals, blowout-proof stem, and vinyl-covered steel handle. Provide solder ends for condenser water, chilled water, and domestic hot and cold-water service; threaded ends for heating hot water and low-pressure steam.
- 2. Ball Valves, 1-1/4-Inch to 2-Inch Larger (condenser water, chilled water, heating hot water): Rated for 150 psi saturated steam pressure, 400 psi WOG pressure; 3-piece construction; with bronze body conforming to ASTM B 62, conventional port, chrome-plated brass ball, replaceable "Teflon" or "TFE" seats and seals, blowout proof stem, and vinyl-covered steel handle. Provide solder ends for

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

condenser water, chilled water, and domestic hot and cold water service; threaded ends for heating hot water and low-pressure steam.

D. HYDRONIC SPECIALTIES

1. Manual Air Vent: bronze body and nonferrous internal parts; 150 psig working pressure, 225 deg F operating temperature; manually operated with screwdriver or thumbscrew; and having 1/8 inch discharge connection and 1/2 inch inlet connection.
2. Automatic Air Vent: designed to vent automatically with float principle; bronze body and nonferrous internal parts; 150 psig working pressure, 240 deg F operating temperature; and having 1/4 inch discharge connection and 1/2 inch inlet connection.

2.3 DUCTWORK

A. Metal Ductwork General:

1. Sheet Metal Materials: Provide galvanized sheet steel lock-forming quality, ASTM A 527, Coating Designation G 90, mill phosphatized finish for exposed surfaces of ducts exposed to view. Package and mark sheet metal materials as specified in ASTM A 700.
- B. Metal Duct Fabrication: Except as otherwise indicated, fabricate ducts with galvanized sheet steel, in accordance with SMACNA "HVAC Duct Construction Standards."

2.4 SUPPORTS AND ANCHORS

- A. Manufactured Units: Hangers and support components shall be factory fabricated of materials, design, and manufacturer complying with MSS SP-58. Components shall have galvanized coatings where installed for piping and equipment that will not have field-applied finish. Pipe attachments shall have nonmetallic coating for electrolytic protection where attachments are in direct contact with copper tubing.

2.5 JOINT SEALERS

- A. Provide 3M Fire Protection Products. Joint sealer products shall be tested in accordance with ASTM E-119, ASTM E-814 and ASTM E-84. All products shall not contain asbestos or PCB's. All joint sealers shall be installed in U.L. listed configurations.

3. EXECUTION

3.1 ROUGH-IN

- A. Verify final locations for rough-ins with field measurements and with the requirements of

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

the actual equipment to be connected.

3.2 MECHANICAL INSTALLATIONS

- A. General: Sequence, coordinate, and integrate the various elements of mechanical systems, materials, and equipment. Comply with the following requirements:
1. Coordinate mechanical systems, equipment, and materials installation with other building components.
 2. Verify all dimensions by field measurements.
 3. Arrange for chases, slots, and openings in other building components during progress of construction, to allow for mechanical installations.
 4. Where mounting heights are not detailed or dimensioned, install systems, materials, and equipment to provide the maximum headroom possible.
 5. Install systems, materials, and equipment to conform with approved submittal data, including coordination drawings, to greatest extent possible. Conform to arrangements indicated by the Contract Documents, recognizing that portions of the Work are shown only in diagrammatic form. Where coordination requirements conflict with individual system requirements, refer conflict to the Architect.
 6. Install systems, materials, and equipment level and plumb, parallel and perpendicular to other building systems and components, where installed exposed in finished spaces.
 7. Install mechanical equipment to facilitate servicing, maintenance, and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations. Extend grease fittings to an accessible location.
 8. Install access panel or doors where units are concealed behind finished surfaces.

3.3 CUTTING AND PATCHING

- A. General: Perform cutting and patching in accordance with the following requirements:
1. Protection of Installed Work: During cutting and patching operations, protect adjacent installations.
 2. Provide and maintain temporary partitions or dust barriers adequate to prevent the spread of dust and dirt to adjacent areas.
 3. For existing buildings, patch existing finished surfaces and building components using new materials matching existing materials
 4. For new buildings, patch finished surfaces and building components using new materials specified for the original installation.

3.4 INSTALLATION OF HVAC EQUIPMENT

- A. Install HVAC equipment and components as recommended by manufacturer.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

3.5 INSTALLATION OF HYDRONIC PIPING

A. PIPE APPLICATIONS

1. Install Type L, drawn copper tubing with wrought copper fittings and solder joints above ground, within building.

B. PIPING INSTALLATIONS

1. Locations and Arrangements: Drawings (plans, schematics, and diagrams) indicate the general location and arrangement of piping systems. Locations and arrangements of piping take into consideration pipe sizing and friction loss, expansion, pump sizing, and other design considerations. So far as practical, install piping as indicated.
2. Use fittings for all changes in direction and all branch connections.
3. Install exposed piping at right angles or parallel to building walls. Diagonal runs are not permitted, unless expressly indicated.
4. Conceal all pipe installations in walls, pipe chases, utility spaces, above ceilings, below grade or floors, unless indicated to be exposed to view.
5. Install piping tight to slabs, beams, joists, columns, walls, and other permanent elements of the building. Provide space to permit insulation applications, with 1" clearance outside the insulation. Allow sufficient space above removable ceiling panels to allow for panel removal.
6. Locate groups of pipes parallel to each other, spaced to permit applying insulation and servicing of valves.
7. Install drains at low points in mains, risers, and branch lines consisting of a tee fitting, 3/4" ball valve, and short 3/4" threaded nipple and cap.
8. Install piping at a uniform grade of 1 inch in 40 feet upward in the direction of flow.
9. Make reductions in pipe sizes using eccentric reducer fitting installed with the level side up.
10. Install branch connections to mains using Tee fittings in main with take-off out the bottom of the main, except for up-feed risers, which shall have take-off out the top of the main line.
11. Install unions in pipes 2 inch and smaller, adjacent to each valve, at final connections each piece of equipment, and elsewhere as indicated. Unions are not required on flanged devices.
12. Install dielectric unions to join dissimilar metals.
13. Install flanges on valves, apparatus, and equipment having 2-1/2 inch and larger connections.
14. Install flexible connectors at inlet and discharge connections to pumps (except inline pumps) and other vibration producing equipment.
15. Install strainers on the supply side of each control valve; pressure reducing valve,

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- pressure regulating valve, solenoid valve, inline pump, and elsewhere as indicated.
16. Anchor piping to ensure proper direction of expansion and contraction.

C. PIPE JOINT CONSTRUCTION

1. Soldered Joints: Comply with the procedures contained in the AWS "Soldering Manual."
2. Threaded Joints: Conform to ANSI B1.20.1, tapered pipe threads for field cut threads. Join pipe fittings and valves as follows:
 - a. Note the internal length of threads in fittings or valve ends, and proximity of internal seat or wall, to determine how far pipe should be threaded into joint.
 - b. Align threads at point of assembly.
 - c. Apply appropriate tape or thread compound to the external pipe threads (except where dry seal threading is specified).
 - d. Assemble joint wrench tight. Wrench on valve shall be on the valve end into which the pipe is being threaded.
 - e. Damaged Threads: Do not use pipe with threads which are corroded or damaged. If a weld opens during cutting or threading operations, that portion of pipe shall not be use
3. Flanged Joints: Align flanges surfaces parallel. Assemble joints by sequencing bolt tightening to make initial contact of flanges and gaskets as flat and parallel as possible. Use suitable lubricants on bolt threads. Tighten bolts gradually and uniformly using torque wrench.

D. FIELD QUALITY CONTROL

1. Preparation for testing: Prepare hydronic piping in accordance with ASME B 31.9.
2. Testing: Test hydronic piping as specified in ASME B31.9 "Building Services Piping."

3.6 INSTALLATION OF DUCTWORK

- A. Install ducts with the fewest possible joints.
- B. Use fabricated fittings for all changes in directions, changes in size and shape, and connections.
- C. Install couplings tight to duct wall surface with projections into duct at connections kept to a minimum.
- D. Locate ducts, except as otherwise indicated, vertically and horizontally, parallel and perpendicular to building lines; avoid diagonal runs. Install duct systems in shortest

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

route that does not obstruct useable space or block access for servicing building and its equipment.

- E. Install ducts close to walls, overhead construction, columns, and other structural and permanent enclosure elements of building.
- F. Conceal ducts from view in finished and occupied spaces by locating in mechanical shafts, hollow wall construction, or above suspended ceilings. Do not encase horizontal runs in solid partitions, except as specifically shown.
- G. Coordinate layout with suspended ceiling and lighting layouts and similar finished work.
- H. Vacuum ducts systems prior to final acceptance to remove dust and debris.

3.7 INSTALLATION OF HANGERS AND SUPPORTS

- A. Install hangers, supports, clamps and attachments to support piping properly from building structure; comply with MSS SP-69 and SP-89. Arrange for grouping of parallel runs of horizontal piping supported together on field-fabricated, heavy-duty trapeze hangers where possible. Install supports with maximum spacings complying with MSS SP-69. Where piping of various sizes is supported together by trapeze hangers, space hangers for smallest pipe size or install intermediate supports for smaller diameter pipe as specified above for individual pipe hangers.
- B. Install building attachments within concrete or to structural steel. Space attachments within maximum piping span length indicated in MSS SP-69. Install additional attachments at concentrated loads, including valves, flanges, guides, strainers, expansion joints, and at changes in direction of piping. Install concrete inserts before concrete is placed; fasten insert to forms. Where concrete with compressive strength less than 2,500 psi is indicated, install reinforcing bars through openings at top of inserts.
- C. Install hangers and supports complete with necessary inserts, bolts, rods, nuts, washers, and other accessories.
- D. Install hangers and supports to allow controlled movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends and similar units.

3.8 JOINT SEALER INSTALLATIONS

- A. Verify architectural drawings and field conditions to determine where all piping passes through fire/smoke rated walls, ceilings, floors or other building elements that require penetrations to be sealed.
- B. Install all joint sealers as per manufacturer's recommendations. All joint sealing systems shall be U.L. rated.

3.9 TESTING, ADJUSTING AND BALANCING

- A. Test and adjust the following mechanical systems:
 - 1. Hydronic hot water.
 - 2. Verify all air has been removed from the hydronic heating system.
 - 3. Verify bathroom fans are operational and flowing exhaust air.

END OF SECTION 23 00 00

SECTION 26 00 00
ELECTRICAL MATERIAL, METHODS AND REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Instructions to Bidders, The Supplementary General Conditions, and Division 1 General Requirements are part of this Section and shall be binding to the Contractor and/or Subcontractor who performs work under this Division. Note also all addenda.
- B. Other sections of Division 26 T

1.2 SUMMARY

- A. This Section includes general administrative and procedural requirements for electrical installations. The following administrative and procedural requirements are included in this Section to expand the requirements specified in Division 1:
 - 1. Submittals.
 - 2. Coordination drawings.
 - 3. Record documents.
 - 4. Rough-ins.
 - 5. Electrical installations.
 - 6. Cutting and patching.
- B. This section also includes construction materials and methods for electrical work.
- C. Additional work:
 - 1. Unless otherwise indicated, provide a complete and operational electrical system including all necessary material, labor, and equipment.
 - 2. Provide power and control wiring for heating, ventilation and air conditioning system.
 - 3. Provide new lamps for all lighting fixtures installed or relocated by the contractor.
 - 4. For all relocated lighting fixtures, clean lens and housing and relamp with new lamps.
 - 5. The contractor shall obtain all required permits and arrange for all required inspections in accordance with state and local governing authorities.
 - 6. All work shall be done with licensed workmen in accordance with state and local governing authorities.

1.3 DEFINITIONS

- A. The definition of electrical terms used shall be as defined in the 2017 edition of the National Electrical Code (NEC).
- B. The term "INDICATED" shall mean "as shown on contract documents (specifications, drawings, and related attachments)".

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- C. The term "PROVIDE" shall mean "to furnish, install, and connect completely".
- D. The term "SIZE" shall mean one or more of the following: "length, current and voltage rating, number of poles, NEMA size, and other similar electrical characteristics".
- E. The term "SPACE" on panelboard and switchboard schedules shall mean "provide space to install the number of poles and size of the protective device indicated with the all necessary bus and fittings to install the device at some future date.
- F. The term " COORDINATE " shall mean. One or more of the following: “ to manage, interface, communicate, make arrangement, bring into order, administer and handle completely.

1.4 SUBMITTALS

- A. General: Follow the procedures specified in Division 1 Section "SUBMITTALS."
- B. Increase, by the quantity listed below, the number of electrical related shop drawings, product data, and samples submitted, to allow for required distribution plus two copies of each submittal required, which will be retained by the Electrical Consulting Engineer.
 - 1. Shop Drawings - Initial Submittal: 1 additional.
 - 2. Shop Drawings - Final Submittal: 1 additional.
 - 3. Product Data: 1 additional copy of each item.
 - 4. Samples: 1 additional of each type.
- C. Additional copies may be required by individual sections of these Specifications.
- D. Provide shop drawings or catalog cuts for:
 - 1. Panelboards & circuit breakers.
 - 3. Disconnect switches.
 - 4. Wiring devices and plates.
 - 5. Conduits and raceways.
 - 6. Cables and conductors.
 - 7. Lighting fixtures and lamps.
 - 8. Fire alarm system equipment.
 - 9. Call for aid equipment.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to the project properly identified with names, model numbers, types, grades, compliance labels, and other information needed for identification.

1.8 WARRANTIES

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- A. Turn over to the owner all manufacturers warranties for equipment and materials provided.

PART 2 - PRODUCTS

2.1 GENERAL

- A. All equipment and material shall be labeled and listed.
- B. Before selecting material and equipment, and proceeding with work, inspect areas where material and equipment are to be installed to insure suitability, and check needed space for placement, clearances and interconnections.
- C. The Contractor may substitute products of another manufacturer if it is of equal quality and rating, subject to Owner's and Engineer's review and acceptance.

2.2 ELECTRICAL EQUIPMENT

- A. Unless otherwise indicated, all electrical equipment has been based on General Electric company products.
- B. Unless otherwise indicated, all enclosures for equipment provided shall be NEMA Type 1.
- C. Unless otherwise indicated, externally operated safety switches shall be unfused, solid neutral, heavy duty, and selected to meet the load requirements.
- D. All panelboards shall be provided with an equipment grounding bus connected to panelboard enclosure. When schedules on the panelboards provide an additional isolated ground bus which is to be insulated from the enclosure and grounded back to the electrical service, ground using insulated equipment grounding conductor in panelboard feeder.
- E. When a manufacturer recommends an option or accessory item for the installed condition, operation, or environment that is to be experienced, such item shall be supplied at no additional cost to the owner.
- F. As specified under related sections.
- G. As specified on drawings.

2.3 CONDUITS AND RACEWAYS

- A. RSC or IMC unless otherwise indicated: 3/4 inch minimum size.
- B. EMT as indicated: 1/2 inch minimum size.
- C. Rigid PVC, schedule 40: 3/4 inch minimum size
- D. As specified under related sections.
- E. As specified on drawings.

2.4 CABLE AND WIRE

- A. Cable Types (6 AWG or smaller wire size):
 - 1. MC unless otherwise indicated.
 - 2. NM for residential units
- B. Wire types:
 - 1. THHN/THWN or as indicated.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- C. Conductors
 - 1. Copper.
 - 2. 12 AWG unless otherwise indicated

2.5 FITTINGS AND HANGERS

- A. Compatible to conduit or raceway system.
- B. As specified under related sections.
- C. As specified on drawings.

2.6 BOXES

- A. Steel unless otherwise indicated.
- B. Where non-metallic cable or conduit are used, boxes may be nonmetallic.
- C. If exposed to weather provide weather proof.
- D. As specified under related sections.
- E. As specified on drawings.

2.7 DEVICES AND PLATES

- A. Unless otherwise indicated, provide ivory, specification grade, 15 ampere, receptacles and switches. all plates in finished areas to be brushed stainless steel. plates for surface mounted interior boxes in unfinished areas may be stamped steel. plates exposed to weather or water to be metal, weatherproof type.
- B. As specified under related sections.
- C. As specified on drawings.

2.8 OTHER MATERIAL OR EQUIPMENT

- A. As specified under related sections.
- B. As specified on drawings.

PART 3 - EXECUTION

3.1 ROUGH-IN

- A. Verify final locations for rough-ins with field measurements and with the requirements of the actual equipment to be connected.
- B. Refer to equipment specifications in Divisions 2 through 16 for rough-in requirements.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

3.2 ELECTRICAL INSTALLATIONS

1. General: Sequence, coordinate, and integrate the various elements of electrical systems, materials, and equipment. Comply with the following requirements:
2. All work shall be done in accordance with The Connecticut Building Code, The Connecticut Fire Safety Code, and the National Electric Code (NEC) ANSI/NFPA 70 2014 edition.
3. Electrical plans and details, and one line diagrams show the general location and arrangement of the electrical system. they are diagrammatic and do not show all conduit bodies, connectors, bends, fittings, hangers, and additional pull and junction boxes which the contractor must provide to complete the electrical system.
4. Electrical plans and details do not show all interferences and conditions, visible and/or hidden, that may exist; thus requiring the contractor to inspect and survey the space before performing the work.
5. Before proceeding with work, inspect areas where material and equipment are to be installed to insure its suitability, and check needed space for placement, clearances and interconnections.
6. Before cutting or drilling into building elements inspect and layout work to avoid damaging structural elements and building utilities.
7. Coordinate electrical work with owner.
8. Written requests for approval for planned shutdowns or interruption of owner's electric service and equipment shall be made 72 hours prior to the start of the requested shutdown periods.
9. Coordinate electrical work with other divisions of this project.
10. Coordinate electrical systems, equipment, and materials installation with other building components.
11. Verify all dimensions by field measurements.
12. Arrange for chases, slots, and openings in other building components during progress of construction, to allow for electrical installations.
13. Sequence, coordinate, and integrate installations of electrical materials and equipment for efficient flow of the Work. Give particular attention to large equipment requiring positioning prior to closing in the building.
14. Where mounting heights are not detailed or dimensioned, install systems, materials, and equipment to provide the maximum headroom possible.
15. Install systems, materials, and equipment to conform with approved submittal data, including coordination drawings, to greatest extent possible. Conform to arrangements indicated by the Contract Documents, recognizing that portions of the Work are shown only in diagrammatic form. Where coordination requirements conflict with individual system requirements, refer conflict to the owner, Architect and Engineer.
16. Install systems, materials, and equipment level and plumb, parallel and perpendicular to other building systems and components, where installed exposed in finished spaces.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

17. Install electrical equipment to facilitate servicing, maintenance, and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations.
18. Install systems, materials, and equipment giving right-of-way priority to systems required to be installed at a specified slope.
19. Install equipment and material in accordance with manufacturers installation instructions and requirements. If in conflict with contract documents, refer conflict with Engineer.
20. All equipment and material shall be labeled and listed, and installed in accordance with their listing.
21. The measurement from above finished floor (aff) shall be taken from the finished floor surface to the top of wall receptacles and switch boxes, to the center line of wall lighting outlet boxes, to the top of wall mounted equipment enclosures, to the center line of top most switch handle, or to the lowest surface of ceiling lighting fixtures other ceiling mounted equipment.
22. Unless otherwise indicated, wall switch boxes shall be 48 inches AFF.
23. Unless otherwise indicated, receptacles boxes shall be 24 inches AFF.
24. Unless otherwise indicated, the top of wall mounted clothes wash machine receptacles boxes shall be 36 AFF.
25. unless otherwise indicated, the top of wall mounted clothes dryer receptacles boxes shall be 36 AFF.
26. Unless otherwise indicated, all conductors are no. 12 AWG.
27. Conduit size for indicated conductors shall be based on article 310 and Chapter 9 of NEC.
28. In areas where walls are not disturbed or reconstructed; surface metal raceway system may be used to install wall switches, receptacles, and thermostats. surface metal raceway system and boxes must be painted to match wall color.
29. All blank cover plates in finished areas and rooms to be stainless steel.
30. Unless otherwise indicated, exterior underground branch wiring may be installed in rigid nonmetallic conduit (RNC).
31. Unless otherwise indicated, above ground interior branch and control wiring may be installed in EMT.
32. interior concealed branch and control wiring in walls and ceilings using 6 awg and smaller conductors, may be non-metallic cable (type NMB).
33. Interior concealed branch and control wiring in walls and ceilings using 6 AWG and smaller conductors, metal clad cable (type MC) may be used.
34. Unless otherwise indicated, all outlet and switch boxes to switch boxes shall be steel.
35. Unless otherwise indicated, all branch wiring and feeders shall be concealed behind walls, under floors, or above ceiling. Wiring may be exposed in electric, mechanical, and attic spaces.
36. Install electric equipment and material per manufacturer's instructions and use..

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

3.3 CUTTING AND PATCHING

- A. General: Perform cutting and patching in accordance with Division 1 Section "CUTTING AND PATCHING." In addition to the requirements specified in Division 1, the following requirements apply:
1. Perform cutting, fitting, and patching of electrical equipment and materials required to:
 - a. Uncover Work to provide for installation of ill-timed Work.
 - b. Remove and replace defective Work.
 - c. Remove and replace Work not conforming to requirements of the Contract Documents.
 - d. Remove samples of installed Work as specified for testing.
 - e. Install equipment and materials in existing structures.
 - f. Upon written instructions from the Architect/Engineer, uncover and restore Work to provide for Architect/Engineer observation of concealed Work.
 2. Cut, remove, and legally dispose of selected electrical equipment, components, and materials as indicated, including but not limited to removal of electrical items indicated to be removed and items made obsolete by the new Work.
 3. Protect the structure, furnishings, finishes, and adjacent materials not indicated or scheduled to be removed.
 4. Provide and maintain temporary partitions or dust barriers adequate to prevent the spread of dust and dirt to adjacent areas.
 5. Protection of Installed Work: During cutting and patching operations, protect adjacent installations.
 6. Patch existing finished surfaces and building components using new materials matching existing materials and experienced Installers. Installers' qualifications refer to the materials and methods required for the surface and building components being patched.
 - a. Refer to Division 1 Section "DEFINITIONS AND STANDARDS" for definition of experienced "Installer."
 7. Patch finished surfaces and building components using new materials specified for the original installation and experienced Installers. Installers' qualifications refer to the materials and methods required for the surface and building components being patched.
 - a. Refer to Division 1 Section "DEFINITIONS AND STANDARDS" for definition of experienced "Installer."

3.4 ELECTRICAL SCHEDULES

- A. As specified in RELATED SECTIONS or shown on drawings.

END OF SECTION 26000

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

SECTION 26 01 12
TEMPORARY ELECTRICAL DISCONNECTS AND RECONNECTS

PART I GENERAL

1.1 Related Documents

- A. The provisions of the Contract, the General Conditions, the Supplementary Conditions and other Division I Specification Sections, apply to the work in this section.

1.2 Work Included

- A. Temporarily disconnect electrical feed to each outlet/light/exhaust fan/switch as required for the kitchen renovations.
- B. Inspect and repair existing power lines.
- C. Fabrication, installation and flashing of equipment supports.
- D. Reconnection of electrical feed upon completion of new kitchen & bathroom renovations.

1.3 Special Provisions

- A. The Contractor shall employ mechanics licensed in the electrical trade.
- B. The Contractor shall disconnect electrical equipment or feeds only when performing work in the immediate area of the equipment or feed.
- C. Each feed or unit shall be fully operational immediately after reinstallation. Shut down time for each unit shall be limited to an eight (8) hour period unless otherwise agreed by Owner's Representative.
- D. Prior to commencing any disconnects, the Owner shall be given forty-eight (48) hours notice. Notification shall be given through

1.4 Testing

- A. Prior to commencing roofing work, The Contractor shall test circuits in the presence of the Owner's Representative.

Modernization Work for Kitchen, Window
& Siding Replacement at
Connecticut Avenue, Stamford, CT

- B. Deficiencies in operation will be noted in writing and shall become a matter of record.
- C. Upon completion of the reconnection of each item or circuit, it shall be retested by The Contractor in the presence of the Owner's Representative.
- D. Any deficiencies which were not noted in the initial testing shall be corrected by The Contractor at his expense.

PART II PRODUCTS

2.1 Replacement Parts

- A. Any replacement parts or additional materials shall be as recommended by the manufacturer of the unit, or as required by governing codes, and shall match the existing materials as to type, size, thickness and quality.

PART III EXECUTION

3.1 Job Conditions

- A. Do not disconnect electricity without permission of the Owner's representative.

END OF SECTION