

SPECIFICATIONS

for

Port Huron Housing Commission

905 Seventh Street
Port Huron, Michigan, 48060

**Modernization of Six (6) Select Efficiency Apartment Project
Desmond Village Apartments**

MI039

Date: November 15, 2022

ARCHITECT



**10484 Range line road
Berrien Springs, MI. 49103
(269) 277-2876
Indiana
(574) 276-1411**

Project Number: 22115

TABLE OF CONTENTS
Port Huron Housing Commission
Phase 3 - Desmond Village Apartments
Efficiency Apartment Modernizations

BIDDING and CONTRACT REQUIREMENTS

Notice to Bidders-----1
 Instructions to Bidders Form HUD-5369 (10/2002)-----4

FORMS and ENCLOSURES

Bid Form -----1
 Bidding and Bonding Review Supplement-----3
 Wage Rates ----- 7
 Affidavit of Non-Collusion-----1
 Representations, Certifications, and other
 Statements to Bidders form HUD-5369-A -----3
 Certificate of Corporate Principal -----1
 Bidder Affirmative Action and Qualification to bid Form-----2
 Section 3 and Affirmative Action Review Supplement-----3
 Section 3 Business Concern Certificate for Contracting-----4
 Section 3 Preference Certification Form-----1
 Certification of a Drug-Free Environment-----1
 Certification of Previous Participation Form HUD-2530-OHF-----4
 General Conditions for Construction HUD-5370 -----19
 Architect Supplementary Instructions and Explanations-----6

Division 1 - General Requirements

011000 - Summary and Code Review -----3
 012000 - Allowances and Unit Prices ----- 2
 013000 - Administrative Requirements -----3
 014000 - Quality Requirements -----2
 015000 - Temporary Facilities and Controls-----3
 016000 - Product Requirements-----2
 017000 - Execution and Close-out Requirements-----4
 017419 - Construction Waste Management, Disposal and Recycling-----3

Division 2 - Existing Conditions

024119 - Selective Structure Demolition-----2

Division 3 - Concrete

033000 - Cast in place concrete -----3

DIVISION 6 - Wood and Plastics

061000 Rough Carpentry _____ 3

062000 Finish Carpentry _____ 3

064000 Architectural Woodwork _____ 3

064005 Cabinets and Fixtures _____ 5

DIVISION 7 - Thermal and moisture protection

072116 Thermal Insulation _____ 2

076200 Flashing and Sheet Metal _____ 3

079200 Sealants and Caulking _____ 2

DIVISION 8 - Openings

081113 Steel Doors and Frames _____ 9

081416 Solid Core Doors _____ 6

087100 Door Hardware _____ 4

DIVISION 9 - Finishes

092900 Gypsum Board _____ 4

093000 Tiling _____ 3

096519 Resilient Flooring - LVT _____ 6

096813 Carpet Tile _____ 6

099123 Interior Painting _____ 6

DIVISION 10 - Specialties

102800 Washroom Accessories _____ 4

DIVISION 22 - Plumbing

220500 Common work results or plumbing _____ 2

220523 General- Duty valves for plumbing and Piping _____ 1

224000 Plumbing Fixtures _____ 2

DIVISION 26 - Electrical

260500 Common work results for Electrical	3
262416 Panel Boards	2
262726 Wiring Devices	2
265000 Lighting	2

DIVISION 28 - Communications

280500 Common work results for Electronic safety and Security	1
280513 Conductors and Cables for Electronic safety and Security	4

Index of Drawings

G100 – Title Page

C101 – Site Plan

A101- Floor Plan

A201 – Details & Elevations

E101 - Electrical Plan

P101 - Plumbing Plan

Notice to Bidders

The Port Huron Housing Commission, Port Huron, Michigan, will receive sealed bids in its offices at 905 Seventh Street, 48060, Port Huron, Michigan until **1:30 p.m. local time, on December 8, 2022** - . A public opening will follow shortly afterwards. Any bid received after this time will not be considered. All work shall be performed per the plans and specifications prepared by Design House Architects and Designers LLC. Bid work shall consist of Efficiency Apartment Modernization and associated work. All bids shall be executed on forms provided in the specifications or approved equal provided by the bidder.

Each bid must include a "non-collusion" affidavit and fully enclosed HUD 5369-A form, and a Bid Bond in the amount of five (5) percent of the amount of the bid. This bond will be forfeit in case of any failure to enter into the contract at the bid price after notification of acceptance of such bid.

Section 3 Performance as well as all other forms as outlined in the specifications must accompany all bids. Both the Architect and Housing Commission desire all prime contractors submitting bids to encourage all minority subcontractors to perform any portions of the work which will not be performed by the contractors own forces or could be performed by the minority subcontractor. Bidders must submit written evidence that they have solicited quotations from qualified Section 3 subcontractors at the time the bidder submits its bid to the Housing Commission for all portions of work the bidder is not proposing to complete with his forces. The Housing Commission also desire that the prime contractor will make an attempt at the hiring of those housing residents that can perform any function of the work successfully. All bidders shall comply with HUD Section 3 Clause of regulation 24 C.F.R. part 135.

The Port Huron Housing Commission is in no way obligated to accept the lowest or any other bid submitted and reserves the right to reject any and all bids. The Housing Commission also may waive informalities in any bid if it judges to do so and to defer the acceptance or rejection of such bids until the financial arrangements for the project bid are completed.

Plans and Specifications may be obtained from the Port Huron Housing Commission, 905 Seventh Street, 48060 Port Huron, MI., upon email request to receive electronic .pdf format by contacting Mr. Peter Eppley at peppley@phhousing.org

Pre-bid meetings will be held on November 22, 2022 and November 29, 2022 both at 1:30 pm on site located at 721 Pine Street, Desmond Village Community Building, Port Huron, MI.

Contractor awarded project will provide an acceptable Performance and Payment bond equal to 100% of the contracted price. These bonds shall conform to the forms prescribed by the State Board of Accounts.

**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.



Contract Document - BID FORM -Efficiency Apartment Modernization

Project Name: PHASE 3 - Desmond Village Apartments, Port Huron Housing Commission

BASE BID: Six (6) Select Apartments

Completion Time _____ Calendar days

_____ Dollars. \$ _____

The Base Bid shall be prepared to indicate one (1) total lump sum cost to provide all labor, materials and equipment for apartment modernization as described in these construction documents.

Acknowledgement of:

Addenda: _____

Company: _____

By: _____ **Printed Name:** _____

Address: _____

Phone/Fax: _____

E-mail: _____

Contract Document - Bidding and Bonding Supplement - REVIEW

Project Name : Efficiency Apartment Modernization

Bidding Documents

1. The Contractor is required to provide the following completed documents when submitting the finished bid to the PHA. These are:

- Bid form
- Bid Guaranty
- Non - Collusion
- HUD 5369-A
- Certificate of Corporate Principal
- Statement of Bidders Qualifications
- Affirmative Action
- Certificate of a drug free environment
- Section 3 compliance plan
- HUD 2530 - Previous Participation Certificate

All of these forms are included within the Bidding Documents. Any Omitted documents may be accepted by the PHA if the documents are deemed within HUD guidelines by the PHA. The U.S. Department of Housing and Urban Development, Low-Rent Public Housing instructions to bidders - form HUD-5369 (10/2002) and form HUD-5369(A) are supplemented by the items shown above. It is also understood that the General Conditions of the contract for this work is HUD - 5370 (11/2006) which is also included herein for the contractors use.

General Bidding discussion

2. The contractor will provide the PHA and Architect the following:

- A single lump-sum bid for all base bid proposals.
- A bid properly and completely executed on the form provided, sealed, endorsed and delivered to the PHA.
- A bid of firm price. No bids will be accepted with "escalation clauses" or similar language that would cause the PHA to be liable for additional cost outside of the lump-sum bid.
- A bid shall include on the bid form provided any and all Alternates as indicated in the specifications of this work.
- A bid so delivered will not be withdrawn for a period of forty-five (45) calendar days after the receipt of such bid.

Signing of Bidding Documents

3. INDIVIDUAL SIGNING - The bid submitted must be signed by the person making the bid.

PARTNERSHIP SIGNING - The bid shall be signed by ALL of the partners or by their Attorney-in-fact. The power of attorney must be attached to the submitted bid if an Attorney-in-fact has signed for those individuals of the partnership.

CORPORATION SIGNING - The bid shall be signed by the president or other authorized officer. The signature shall be the authorized officer shall be manually written below the corporate name and attested and stamped by the secretary of the corporation. (see item no. 1, Certificate of Corporate Principal form.)

Bidding Scope Familiarity

4. ANY and ALL Bidders of the work contained in these documents must make themselves familiar with the work. Bids shall be construed to cover all the work specified for the class of work bid upon whether or not enumerated or described in the bid. The bidders are required to inform themselves fully of all conditions relating to the construction, labor, staging areas , storage availability, and other considerations necessary to perform the work. This can be done in several ways including:

- Clarification of any meaning, potential error , discrepancies or omissions of the contract/construction documents by **contacting the Architect**. Requests for such clarification must be received at least ten (10) working days before bid opening. The clarifications will be issued in **written form only** to all prospective bidders by the Architect.
- Clarification of any conditions that may affect the bid by visiting and thoroughly examining the site and buildings located thereon. The bid submitted will reflect any and all such existing conditions and dimensions necessary for complete work. There will be no change in contract cost due to the contractor (s) failure to inspect the site and building conditions.

Completion Date / Liquidated Damages

5. The completion time to finish this project is one hundred- twenty (120) calendar days per two apartment units, (120) days if award includes unit pricing. This time will commence with the **Notice to Proceed**. The actual work shall commence no later than two (2) weeks after notification to the successful bidder. The Contractor will provide a progress schedule to the Owner and Architect showing completion times and dates for major portions of work and the final completion date for all work. A bar chart is acceptable and must be included in your bid documents. No bid will be accepted without this necessary information as the owner will need it to evaluate your bid. **Liquidated damages** amounts will be based upon calendar days past the set contract time where the work or any portion thereof, including general site clean-up and repair, remains incomplete. The amount of **\$200.00 per day** will be deducted from the money due the contractor not as a penalty but as damages to pay for additional administration and inspection by the owner and Architect as well as non-use of all facilities by the tenants of such buildings where the work is being completed. (HUD handbook 7485.1 REV. 3, paragraph 9-24)

Bidding Allowances - Cash/Contingencies & Unit Costs

6. There will be no allowances designated for unpredictable or unforeseen items of work **nor** established within the contract documents for inclusion in the lump sum to cover the cost of prescribed items not specified in detail. Change orders will be provided for any variation between the contact sum and the finally determined cost of prescribed items. (See Change Orders within the Architectural Supplementary Instructions and Explanations.) Unit Costs can be found on the Bid Form.

Bidding Wage Rates and SALES TAX

7. Each employee of the successful Bidders work force or Subcontractors work force engaged in work on this project will be paid the prevailing wage rate as required by the Department of Housing and Urban Development. the Contractor is referred to the General Wage Decision MI40012 Dated August 1, 2014. Per the Davis-Bacon Preemption Rule any State determined prevailing wage that exceeds the Federal rate shall be inappropriate and not enforced. (See Federal Register, Volume 53, No. 154, August 10, 1988.) The Contractor is responsible for any and all taxes pertaining to the project.

BONDS, Guarantees and Retainage

7. The **Retainage** withheld shall be 10% on the contractors progress payments as described in the owner-contractor agreement. The bid **Guaranty** must accompany all bids or the bid will be rejected by the PHA. The amount of the Guaranty shall be no less than 5% of the total amount of the bid. The bidder may make such payment by Bid Bond secured by a Guarantee Company or Surety Company. He may also pay by Certified Check, or Bank Draft. All such Guaranty must be acceptable to the PHA and the Guarantee/Surety company must be authorized to do business in Michigan as well as acceptable to HUD. No Individual Sureties will be considered. A list of acceptable companies approved to act as Surety on Bonds securing government contracts can be found in U.S. Treasury Circular no. 570, published by the **Federal Register**. The Guaranty must be made payable to **The Port Huron Housing Commission**. No cash deposits will be accepted. The bid Guaranty will insure the full and complete execution of the contract and the furnishing of The Performance and Material Bonds. Performance bonds shall be in the amount equal to 100% of the contracted price. This is as security for the performance of all contract provisions, payment of all persons performing labor and furnishing materials in connection with such work. The covering of all Guarantees are also considered a part of this bond. The Bonds may be paid as follows:

- **Performance Bond and Labor and Material Payment Bond** - 100% of the contract price
 - **Separate Performance and Payment Bonds** (as required by law) - 50% or more of contract price
-

"General Decision Number: MI20220022 09/16/2022

Superseded General Decision Number: MI20210022

State: Michigan

Construction Type: Residential

County: St Clair County in Michigan.

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

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	<ul style="list-style-type: none">. Executive Order 14026 generally applies to the contract.. The contractor must pay all covered workers at least \$15.00 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 2022.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	<ul style="list-style-type: none">. Executive Order 13658 generally applies to the contract.. The contractor must pay all covered workers at least \$11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be

adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Modification Number	Publication Date
0	01/07/2022
1	02/18/2022
2	02/25/2022
3	06/24/2022
4	07/15/2022
5	08/05/2022
6	09/16/2022

* ASBE0025-001 06/01/2022

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 36.63	32.91

BRMI0001-004 06/01/2020		

	Rates	Fringes
TILE SETTER.....	\$ 35.71	20.45

CARP1234-004 08/01/2021		

	Rates	Fringes
CARPENTER, Includes Floor Laying-Carpet (Excludes Formwork)		
Multi-family condominiums...	\$ 26.90	14.15
Single-family homes and detached condominiums.....	\$ 26.41	15.78

ELEC0058-004 09/29/2021		

	Rates	Fringes
ELECTRICIAN, Includes Low Voltage Wiring.....	\$ 30.12	14.57

ELEV0036-004 01/01/2022

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 57.35	36.885+a+b

FOOTNOTE:

Vacation Pay: 8% with 5 or more years of service, 6% for 6 months to 5 years service. Paid Holidays: New Years Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day and Friday after, and Christmas Day.

ENGI0325-004 06/01/2022

	Rates	Fringes
OPERATOR: Power Equipment		
GROUP 1.....	\$ 46.44	24.95
GROUP 2.....	\$ 44.94	24.95
GROUP 3.....	\$ 43.44	24.95
GROUP 4.....	\$ 43.14	24.95
GROUP 5.....	\$ 42.32	24.95
GROUP 6.....	\$ 41.46	24.95
GROUP 7.....	\$ 40.49	24.95

FOOTNOTES:

Tower cranes: to be paid the crane operator rate determined by the combined length of the mast and the boom. If the worker must climb 50 ft. or more to the work station, \$.25 per hour additional.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Crane with boom and jib or leads 400' or longer

GROUP 2: Crane with boom and jib or leads 300' or longer

GROUP 3: Crane with boom and jib or leads 220' or longer

GROUP 4: Crane with boom and jib or leads 140' or longer

GROUP 5: Crane with boom and jib or leads 120' or longer

GROUP 6: Regular crane operator

GROUP 7: Backhoe/Excavator; Bobcat/Skid Loader; Bulldozer; Grader/Blade; Scraper; Loader

IRON0025-004 06/01/2019

	Rates	Fringes
IRONWORKER, STRUCTURAL.....	\$ 36.77	29.03

LAB00334-020 06/01/2022

	Rates	Fringes
Landscape Laborer		
GROUP 1.....	\$ 23.82	7.60
GROUP 2.....	\$ 21.60	7.60

LANDSCAPE LABORER CLASSIFICATIONS

GROUP 1: Landscape specialist, including air, gas and diesel equipment operator, lawn sprinkler installer, skidsteer (or equivalent)

GROUP 2: Landscape laborer: small power tool operator, material mover, truck driver and lawn sprinkler installer tender

LAB01075-004 06/01/2021

	Rates	Fringes
LABORER		
Common or General; Formwork; Mason Tender - Cement/Concrete.....	\$ 28.66	16.50

PAIN1474-005 06/01/2010

	Rates	Fringes
PAINTER: Brush and Roller.....	\$ 23.79	12.02

PLUM0098-002 06/01/2022

	Rates	Fringes
PLUMBER (Excluding HVAC Pipe Installation).....	\$ 27.06	23.52

PLUM0636-001 06/05/2022

	Rates	Fringes
PIPEFITTER (HVAC Pipe Installation Only).....	\$ 41.61	29.35

ROOF0149-013 06/01/2019		

	Rates	Fringes
ROOFER.....	\$ 27.53	17.53

SHEE0080-002 07/01/2022		

	Rates	Fringes
SHEET METAL WORKER, Includes HVAC Duct and Unit Installation.....	\$ 28.67	9.50

TEAM0247-003 06/01/2018		

	Rates	Fringes
TRUCK DRIVER Pickup.....	\$ 26.71	0.70+a

PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. If any of the above holidays fall on a Sunday, the following Monday shall be considered the holiday and, if work is performed, the rate shall be double time.

FOOTNOTE:
a. \$456.70 per week, plus \$67.10 per day.

SUMI2010-020 09/16/2010

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER....	\$ 19.27	5.85
GLAZIER.....	\$ 23.00	8.17
LABORER: Pipelayer.....	\$ 17.99	5.46
SPRINKLER FITTER (Fire Sprinklers).....	\$ 22.32	4.51

TRUCK DRIVER: Dump Truck.....\$ 17.00 5.71

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

=====

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 <https://www.dol.gov/agencies/whd/government-contracts>.

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 National Office because National Office has 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.

=====

END OF GENERAL DECISIO"

Contract Document - Non-Collusive Affidavit - EXAMPLE

Project Name : Efficiency Apartment Modernization

The undersigned bidder or bidders agent, says that he has not, nor any member or agent of his company, corporation or partnership represented by him, entered into any combination, collusion or agreement with any person relative to the price to be bid anyone at such letting not to prevent any person from bidding nor to induce anyone to refrain from bidding. Further, this bid is made without reference to any other bid without understanding or combination with another person in reference to this bid. He further states that no person, firms, or other entity have or will indirectly receive any rebate, gift, or commission or thing of value on account of such award of bid.

Oath and Affirmation

I, _____ affirm under the penalties of perjury that all facts and information shown herein are true and correct to the best of my knowledge and belief.

DATE _____

Name of Organization _____

BY: _____

Acknowledged by

_____ being duly sworn, deposes and says he is
_____ of the above named organization and that the statements contained in the foregoing bid, certification and affidavit are true and correct.

Subscribed and sworn to me on (DATE): _____

Commission expiration date: _____

County of Residence: _____

**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)

- | | |
|---|---|
| <input type="checkbox"/> Black Americans | <input type="checkbox"/> Asian Pacific Americans |
| <input type="checkbox"/> Hispanic Americans | <input type="checkbox"/> Asian Indian Americans |
| <input type="checkbox"/> Native Americans | <input type="checkbox"/> 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)

Contract Document - CERTIFICATE as to Corporate Principal - EXAMPLE

Project Name : Efficiency Apartment Modernization

I, _____ certify that I am the
_____ Secretary of the
corporation named as Principal in or within the Bond/Bid; that _____
who signed the said Bond/Bid on behalf of the Principal was then _____
of said corporation; that I know his signature, and his signature is genuine; and that said Bond/Bid was
duly signed, sealed and attested for in behalf of said corporation by authority of its governing body.

SEAL _____

Contract Document - Bidder Affirmative Action and Qualification to bid form

Project Name : Efficiency Apartment Modernization

The undersigned bidder or bidders agent, by filling out the below information states that he/she is aware that unless this form is complete and signed by said bidder or bidders agent that the entire proposal made by this bidder or agent will not be considered for any or all portions of work included within the project manual. All Affirmative Action employees will be verified during construction.

Affirmative Action Section

1. Do you employ any black, Hispanic, oriental or female persons, and if so how many presently? Please explain whether yes or no.

2. Do you intend to hire minority contractors to help complete this work partially or in its entirety? Please explain whether yes or no.

3. Are you encouraging minority building subcontractors or laborers to submit proposals or job applications as a part of your schedule of values or work force on this bid. Please explain whether yes or no. If yes, please provide us with the name and addresses of those Subcontractors/laborers.

Contractor Qualifications Section

1. How many years _____ has this company been in business? How many years _____ has the corporate principal(s) been engaged in construction of this type or similar? Please provide name of past company entity, work contracted, material vendors used and Housing authority worked for.

2. Have you ever been unable to fulfill a contract entered into with a Housing Authority or similar entity? If yes please explain. Complete your description with dates, names, and type of work contracted for.

3. Has your company filed for bankruptcy in the past 10 years?

YES NO

4. Please show a minimum of Six (4) jobs of same or similar scope of the work included in this Project Manual where you guaranteed your work for a minimum of two (2) years or according to the statute of Limitations of such work and agreed to return to the owner to repair said work at no expense to the owner. Please include type of work, name and phone of owner, and date of work completed.

1. _____
2. _____
3. _____
4. _____

Company: _____

By: _____

(name and title of official completing this form)

Address: _____

Contract Document - Section 3 and Affirmative Action Supplemental - REVIEW

Project Name : Efficiency Apartment Modernization

Affirmative Action Review

1. Important review elements for the bidder regarding Affirmative Action are:

- The Prime Contractor submitting the bid for work shall encourage minority contractors to present bids to perform any work not performed by Prime Contractors own forces.
- Written evidence must be provided the PHA that the Prime Contractor has actively solicited quotations from Minority Subcontractors for all work not performed by its own forces.
- If requested by the PHA, the successful bidder will provide a "Written Affirmative Action Plan" for the above solicitation.
-
- Certificate of Corporate Principal
- Statement of Bidders Qualifications
- Affirmative Action
- Certificate of a drug free environment
- Section 3 compliance plan
- HUD 2530 - Previous Participation Certificate

The owner or PHA as well as the Architect look favorably on the bidder's efforts to pursue Affirmative action within their organization and provide tangible results of such efforts. The importance of opportunities to train and employ lower income residents of the project or in the project vicinity is substantial. Contracting work to those business concerns that can provide subcontract work and are located in the project area or nearby and/or are owned by residents of the project area are equally important. Employers must also make every effort to ensure that employees and applicants for their own workforce are not discriminated against due to their race, creed, color, sex or national origin. All bidders must include the **Contract Document - Bidder Affirmative Action and Qualification to bid form** included in the specifications. All other bids will be considered invalid.

Section 3 Review

2. The work to be performed in this contract shall be a program with direct Federal Financial Assistance through the Department of Housing and Urban Development. As such the project 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 to lower income residents in the area or project location and contracts for work in

connection with the project be also awarded to those business concerns located similarly. Other important parts of Section 3 that bidders must comply with are:

- The successful parties to this contract are to comply with the provisions of Section 3 and all regulations set forth in 24 PART CFR 135, as well as any applicable rules and orders of the Department of Housing and Urban Development. They must also certify and agree that they are under no handicap or other business agreement that would prevent them from complying.
- The Contractor shall also post copies, in public locations of his intent to hire those Section 3 residents as well as to any labor organization or representative of such potential workers.
- The contractor will also include the Section 3 clause in every subcontract for work in connection with the project. Further, the contractor will not subcontract with any subcontractor upon knowledge that the same has been found in violation of regulations set forth in 24 PART CFR 135. Finally, the contractor will not enter into any contract until such subcontractor provides a statement of their ability to comply with such requirements of these regulations.
- All sanctions specified by the grant or loan agreement will apply and be binding on upon the applicant or recipient, its contractors and subcontractors, successors and assigns. Such sanctions are specified in 24 CFR PART 135. All bidders should make themselves aware of the extent of these rules.
- The Contractor will complete the Compliance form included in these specification prior to the commencement of work on this project.

Section 3 Definitions simplified

3. Section 3 Business Concern - A business that is 51% owned by Section 3 Residents or whose full-time employees include those persons, at least 30% of which are currently Section 3 Residents or have within the last 3 years from the date of their employment been Section 3 residents. It may also be considered a Section 3 Business concern if there is a verifiable plan to commit in excess of 25% of the dollar award of all subcontracts to businesses that qualify as Section 3 businesses.

Section 3 Resident - A resident of the housing Commission where the work is to be completed or a resident of another Housing Commission. A resident may also comply with Section 3 requirements if they reside in the metropolitan area of the project or non-metropolitan county and their income qualifies as low or very low.

Section 3 Compliance, 12 U.S.C. 1701u (Section 3)

4. The PHA and this project are covered by the provisions of 12 U.S.C. 1701u (Section 3) which allow a preference in the award of a Section 3 contract to a qualified Section 3 business concern with the highest priority ranking and with the lowest responsive bid if that bid is:

- Within the maximum total contract price established in the contracting party's budget for the project for which the bids are taken.

- The bid for work is not more than a specific amount **above/higher** than the lowest responsive bid from any responsible bidder. This specific amount is as follows and will be discussed per the Port Huron Housing Commission:

- a. Lowest bid is less than \$100,000 - then the preference amount can be 10% higher or \$9,000.
 - b. Lowest bid is at least \$100,000 but less than \$200,000 - the amount can be 9% or \$16,000
 - c. Lowest bid is at least \$200,000 but less than \$300,000 - the amount can be 8% or 21,000
 - d. Lowest bid is at least \$300,000 but less than \$400,000 - the amount can be 7% or \$24,000
 - e. Lowest bid is at least \$400,000 but less than \$500,000 - the amount can be 6% or \$25,000
 - f. Lowest bid is at least \$400,000 but less than \$500,000 - the amount can be 5% or \$40,000
 - g. Lowest bid is at least \$500,000 but less than \$1 Million - the amount can be 4% or \$60,000
 - h. Lowest bid is at least \$1 Million but less than \$2 Million - the amount can be 3% or \$80,000
 - i. Lowest bid is at least \$2 Million but less than \$3 Million - the amount can be 2% or \$105,000
 - J. Lowest bid is at least \$7 Million or more - the amount can be 1.5% with no dollar limit.
-

Section 3 Business Concern Certification for Contracting

Instructions: Enter the following information and select the criteria that applies to certify your business' Section 3 Business Concern status. Or you may self-register in the HUD Business registry at <http://www.hud.gov/Sec3Biz>.

Business Information _____

Name of Business _____

Address of Business _____

Name of Business Owner _____

Phone Number of Business Owner _____

Email Address of Business Owner _____

Preferred Contact Information

Same as above

Name of Preferred Contact _____

Phone Number of Preferred Contact _____

Type of Business (select from the following options):

Corporation Partnership Sole Proprietorship Joint Venture

Select from ONE of the following three options below that applies:

At least 51 percent of the business is owned and controlled by low- or very low-income persons (Refer to income guidelines).

At least 51 percent of the business is owned and controlled by current public housing residents or residents who currently live in Section 8-assisted housing.

Over 75 percent of the labor hours performed for the business over the prior three-month period are performed by Section 3 workers (Refer to definition).

Business Concern Affirmation

I affirm that the above statements (on the frontside of this form) are true, complete, and correct to the best of my knowledge and belief. I understand that businesses who misrepresent themselves as Section 3 business concerns and report false information to the Housing Commission may have their contracts terminated as default and be barred from ongoing and future considerations for contracting opportunities. I hereby certify, under penalty of law, that the following information is correct to the best of my knowledge.

Print Name: _____

Signature: _____ Date: _____

*Certification expires within three years of the date of signature. Information regarding Section 3 Business Concerns can be found at 24 CFR 75.5.

<p>FOR ADMINISTRATIVE USE ONLY</p> <p>Is the business a Section 3 business concern based upon their certification?</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>EMPLOYERS MUST RETAIN THIS FORM IN THEIR SECTION 3 COMPLIANCE FILE FOR FIVE YEARS.</p>

Section 3 Income Limits

Eligibility Guidelines

The worker's income for fiscal year 2022 must be at or below **\$50,150** for an individual (household of 1) regardless of actual household size.

Section 3 Worker Definition:

- A low or very low-income resident (the worker's income for the previous or annualized calendar year is below the income limit established by HUD); or
- Employed by a Section 3 business concern; or
- A YouthBuild participant.

Targeted Section 3 Worker Definition:

- Employed by a Section 3 business concern or
- Currently meets or when hired met at least one of the following categories as documented within the past five years:
 - A resident of public housing; or
 - A resident of other public housing projects or Section 8-assisted housing; or
 - A YouthBuild participant

Exhibit 2

Section 3 Worker and Targeted Section 3 Worker Self-Certification

The purpose of HUD's Section 3 program is to provide employment, training and contracting opportunities to low-income individuals, particularly those who are recipients of government assistance for housing or other public assistance programs. **Your response is voluntary, confidential, and has no effect on your employment.**

A Section 3 worker seeking certification shall self-certify and submit this form to the recipient contractor or subcontractor, that the person is a Section 3 worker or Targeted Section 3 Worker as defined in 24 CFR Part 75.

Employee Name: _____

1. Are you a resident of public housing or a Housing Choice Voucher Holder (Section 8)? YES NO

2. Are you a resident of the St Clair County? YES NO

3. Is your annual individual income less than \$50,150 per year? YES NO

Select from *ONE* of the following two options below:

I qualify as a (defined on the reverse side of this form):

- Section 3 Worker (as defined on the Section 3 Worker Certification Form)

- Targeted Section 3 Worker (as defined on the Section 3 Worker Certification Form)

Employee Affirmation

I affirm that the above statements (on frontside of this form) are true, complete, and correct to the best of my knowledge and belief. I hereby certify, under penalty of law, that the following information is correct to the best of my knowledge.

Employee Address: _____

Print Name: _____ Date Hired: _____

Signature: Date: _____

FOR ADMINISTRATIVE USE ONLY

Is the employee a Section 3 worker based upon their self-certification? YES NO

Is the employee a Targeted Section 3 worker based upon their self-certification? YES NO

Was this an applicant who was hired as a result of the Section 3 project? YES NO

If Yes, what is the name of the company? _____

What was the date of hire? _____

EMPLOYERS MUST RETAIN THIS FORM IN THEIR SECTION 3 COMPLIANCE FILE FOR FIVE YEARS.

Section 3 Income Limits

Eligibility Guidelines

The worker's income for fiscal year 2022 must be at or below **\$50,150** for an individual (household of 1) regardless of actual household size.

Section 3 Worker Definition:

- A low or very low-income resident (the worker's income for the previous or annualized calendar year is below the income limit established by HUD); or
- Employed by a Section 3 business concern; or
- A YouthBuild participant.

Targeted Section 3 Worker Definition:

- Employed by a Section 3 business concern or
- Currently meets or when hired met at least one of the following categories as documented within the past five years:
 - A resident of public housing; or
 - A resident of other public housing projects or Section 8-assisted housing; or
 - A YouthBuild participant

**CERTIFICATION FOR BUSINESS CONCERNS SEEKING SECTION 3
PREFERENCE IN CONTRACTING AND DEMONSTRATION OF CAPABILITY**

Name of Business _____

Address of Business _____

Type of Business: Corporation Partnership
 Sole Proprietorship Joint Venture

Attached is the following documentation as evidence of status:

For Business claiming status as a Section 3 resident-owned enterprise:

- | | |
|--|---|
| <input type="checkbox"/> Copy of resident lease | <input type="checkbox"/> Copy of receipt of public assistance |
| <input type="checkbox"/> Copy of evidence of participation
in a public assistance program | <input type="checkbox"/> Other evidence |

For business entity as applicable:

- | | |
|---|---|
| <input type="checkbox"/> Copy of Articles of Incorporation | <input type="checkbox"/> Certificate of Good Standing |
| <input type="checkbox"/> Assumed Business Name Certificate | <input type="checkbox"/> Partnership Agreement |
| <input type="checkbox"/> List of owners/stockholders and
% ownership of each | <input type="checkbox"/> Corporation Annual Report |
| <input type="checkbox"/> Organization chart with names and titles
and brief function statement | <input type="checkbox"/> Latest Board minutes appointing officers |
| | <input type="checkbox"/> Additional documentation |

For business claiming Section 3 status by subcontracting 25 percent of the dollar awarded to qualified Section 3 business:

- List of subcontracted Section 3 business(es) and subcontract amount

For business claiming Section 3 status, claiming at least 30 percent of their workforce are currently Section 3 residents or were Section 3 eligible residents within 3 years of date of first employment with the business:

- | | |
|--|--|
| <input type="checkbox"/> List of all current full-time employees | <input type="checkbox"/> List of employees claiming Section 3 status |
| <input type="checkbox"/> PHA/IHA Residential lease less than 3
years from day of employment | <input type="checkbox"/> Other evidence of Section 3 status less than 3
years from date of employment |

Evidence of ability to perform successfully under the terms and conditions of the proposed contract:

- Current financial statement
- Statement of ability to comply with public policy
- List of owned equipment
- List of all contracts for the past two years

Authorizing Name and Signature

(Corporate Seal)

Attested by: _____

Contract Document - Certification of a Drug Free work environment - EXAMPLE

Project Name : Efficiency Apartment Modernization

The undersigned bidder ,if successful, will be undertaking work for The Albion Housing Commission. This work is being funded by the Federal Government. As a part of such work a certification that the successful bidders workplace will be a drug free environment.

Name of Contractor _____ Certifies the following:

1. A notification will be given **ALL** employees, prior to the start of such, work stating that it is unlawful to distribute, dispense, possess or otherwise manufacture controlled substances at the PHA workplace environment. The notification will specify any or all actions that will be taken if a violation occurs.
2. An awareness program that informs the employees regarding the firms policy, dangers, penalties, and assistance programs should also be established.
3. Any employee convicted of a criminal drug statute must notify their employer within five days after the conviction. This must be part of the general notification mentioned in no. 1 above. Further, the Regional office of HUD must be notified of such a conviction within ten days after such conviction.
4. Within 30 days the employer must take appropriate action against the employee, up to termination or enrollment in an approved Federal, State or local agency rehabilitation program.
5. This Certification is binding for **ALL** sites where work will be undertaken by the contractor and his workforce.

Company: _____

By: _____ (printed AND signed)

(name and title of official completing this form)

Address: _____

Date: _____ **Phone number** _____

Schedule A: List of Previous Projects and Section 8 Contracts. By my name below is the complete list of my previous projects and my participation history as a principal; in Multifamily Housing programs of HUD/FmHA, State, and Local Housing Finance Agencies. **Note:** Read and follow the instruction sheet carefully. Abbreviate where possible. Make full disclosure. Add extra sheets if you need more space. Double check for accuracy. If you have no previous projects write, by your name, "**No previous participation, First Experience.**"

1. List each Principal's Name (list in alphabetical order, last name first)	2. List Previous Projects (give the I.D. number, project name, city location, & government agency involved if other than HUD)	3. List Principals' Role(s) (indicate dates participated, and if fee or identity of interest participant)	4. Status of Loan (current, defaulted, assigned, or foreclosed)	5. Was Project ever in Default, during your participation? Yes <input type="checkbox"/> No <input type="checkbox"/> If "Yes," explain	6. Last Mgmt. and/or Physical Inspectn Rating and

Part II – For HUD Internal Processing Only

Received and checked by me for accuracy and completeness; recommend approval or transferral to Headquarters as checked below:

Date (mm/dd/yyyy)	Telephone Number and Area Code	<input type="checkbox"/> A. No adverse information; form HUD-2530 approval is recommended. <input type="checkbox"/> B. Name match in system	<input type="checkbox"/> C. Disclosure of Certification problem <input type="checkbox"/> D. Other, our memorandum is attached.
Staff	Processing and Control	Director of Housing / Director, Multifamily Division	
Supervisor	Approved <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>		Date (mm/dd/yyyy)

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

Carefully read these instructions and the applicable regulations. A copy of those regulations published at 24 C.F.R. 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. If you have many projects to list (20 or more) and expect to be applying frequently for participation in HUD projects, you should consider filing a Master List. See Master List instructions below under "Instructions for Completing Schedule A."

Carefully read the certification before you sign it. Any questions regarding the form or how to complete it can be answered by your HUD Office Multifamily Housing Representative.

Purpose: 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.

Who Must Sign and File Form HUD-2530: Form HUD-2530 must be completed and signed by all parties applying to become principal participants 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 arms 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.

Exception for Corporations – 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 full disclosure.

Exemptions – 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.

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

Review of Adverse Determination: If approval of your participation in a HUD project is denied, withheld, or conditionally granted on the basis of your record of previous participation, you will be notified by the HUD Office. You may request reconsideration 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.

Specific Line Instructions:

Reason for submitting this Certification: e.g., refinancing, management, change in ownership, transfer of physical assets, etc.

Block 1: 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.

Block 2: 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 all 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 of the site location.

Block 3: Fill in the dollar amount requested in the proposed mortgage, or the annual amount of rental assistance requested.

Block 4: 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."

Block 5: Fill in the section of the Housing Act under which the application is filed.

Block 7: Definitions of all those who are considered principals and affiliates are given above in the section titled "Who Must Sign and File...."

Block 8: Beside the name of each principal, fill in the role that each will perform. The following are possible roles that the principals may perform: Sponsor, Owner, Prime Contractor, Turnkey Developer, Managing Agent, Packager, Consultant, General Partner, Limited Partner (include percentage), Executive Officer, Director, Trustee, Major Stockholder, or Nursing Home Administrator. Beside the name of each affiliate, write the name of the person or firm of affiliation, such as "Affiliate of Smith Construction Co."

Block 9: Fill in the percentage of ownership in the proposed project that each principal is expected to have. Also specify if the participant is a general or limited partner. Beside the name of those parties who will not be owners, write "None."

Block 10: Fill in the Social Security Number or IRS employer number of every party listed, including affiliates.

Instructions for Completing Schedule A:

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 **must** be 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. To avoid duplication of disclosure, list the project and then the entities or individuals involved in that project. You may use the name or a number code to denote the entity or individual that participated. The number code can then be used in column 3 to denote role.

Column 2 List the project or contract identification of each previous project. **All previous projects must be included or your certification cannot be processed.** Include the name of all projects, the cities in which they are located and the government agency (HUD, USDA-FmHA or State or local housing finance agency) that was involved. At the end of your list of projects, draw a straight line across the page to separate your record of projects from that of others signing this form who have a different record to report.

Column 3 List the role(s) of your participation, dates participated, and if fee or identity of interest with owners.

Column 4 Indicate the current status of the loan. Except for current loans, the date associated with the status is required. Loans under a workout arrangement are considered assigned. An explanation of the circumstances surrounding the status is required for all non-current loans.

Column 5 Explain any project defaults during your participation.

Column 6 Enter the latest Management and/or Physical Inspection Review rating. If either of the ratings are below average, the report issued by HUD is required to be submitted along with the applicant's explanation of the circumstances surrounding the rating.

No Previous Record: Even if you have never participated in a HUD project before, you must complete form HUD-2530. If you have no record of previous projects to list, fill in your name in column 1 of Schedule A, and write across the form by your name - "No previous participation, first experience."

Master List System: If you expect to file this form frequently and you have a long list of previous projects to report on Schedule A, you should consider filing a Master List. By doing so, you will avoid having to list all your previous projects each time you file a new application.

To make a Master List, use form HUD-2530. On page 1, in block 1, enter (in capital letters) the words "**Master List**." In blocks 2 through 6 enter in "N.A." meaning Not Applicable. Complete blocks 7 through 10.

In the box below the statement of certification, fill in the names of all parties who wish to file a Master List together (type or print neatly). Beside each name, every party must sign the form. In the box titled "Proposed Role" fill in "N.A." Also, fill in the date you sign the form

and provide a telephone number where you can be reached during the day. No determinations will be made on these certifications.

File one copy of the Master List with each HUD Office where you do business and mail one copy to the following address:

**HUD-2530 Master List
Participation and Compliance
Division - Housing
U.S. Department of Housing and
Urban Development
451 Seventh Street, S.W.
Washington, D.C. 20410**

Once you have filed a Master List, you do not need to complete Schedule A when you submit form HUD-2530. Instead, write the name of the participant in column 1 of Schedule A and beside that write "See Master List on file."

Also give the date that appears on the Master List that you submitted. Below that, report all changes and additions that have occurred since that date. Be sure to include any mortgage defaults, assignments or foreclosures not listed previously.

If you have withdrawn from a project since the date the Master List was filed, be sure to name the project. Give the project identification number, the month and year your participation began and/or ended.

Certification:

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 certification, fill in the name of all principals and affiliates (type or print neatly). Beside the name of each principal and affiliate, each party must sign the form, 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"). Beside each signature, fill in the role of each party (the same as shown in block 8). In addition, each person who signs the form should fill in the date that he or she signs, as well as providing a telephone number where he or she can be reached during business hours. By providing a telephone number where you can be reached, you will help to prevent any possible delay caused by mailing and processing time in the event HUD has 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 and strike through those parts that differ with your record, then sign and certify to that remaining part which does describe you or your record.

Attach a signed letter, note or an explanation of the items you have struck out on the certification and report the facts of your correct record. Item A(2)(e) relates to felony convictions within the past 10 years. If you have been convicted of a felony within 10 years, strike out all of A(2)(e) on the certificate and attach your statement giving your 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 standpoint 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 who will honor their legal, financial and contractual obligations.

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

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

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

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. 11/30/2023)

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

Public reporting burden for this collection of information is estimated to average 1 hour. This includes the time for collecting, reviewing, and reporting the data. The information requested is required to obtain a benefit. This form includes those clauses required by OMB's common rule on grantee procurement, implemented at HUD in 2 CFR 200, and those requirements set forth in Section 3 of the Housing and Urban Development Act of 1968 and its amendment by the Housing and Community Development Act of 1992, implemented by HUD at 24 CFR Part 135. The form is required for construction contracts awarded by Public Housing Agencies (PHAs). The form is used by Housing Authorities in solicitations to provide necessary contract clauses. If the form were not used, PHAs would be unable to enforce their contracts.. There are no assurances of confidentiality. HUD may not conduct or sponsor, and an applicant is not required to respond to a collection of information unless it displays a currently valid OMB control number.

Clause		Page	Clause		Page
1.	Definitions	2	Administrative Requirements		
2.	Contractor's Responsibility for Work	2	25.	Contract Period	9
3.	Architect's Duties, Responsibilities and Authority	2	26.	Order of Precedence	9
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	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	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	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 Terms and Conditions (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

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 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:Á

(a) Placing qualified small and minority businesses andÁ women's business enterprises on solicitation lists;Á

(b) Ensuring that small and minority businesses andÁ women's business enterprises are solicited wheneverÁ they are potential sources;Á

(c) Dividing total requirements, when economically feasible,Á into smaller tasks or quantities to permit maximumÁ participation by small and minority businesses andÁ women's business enterprises;Á

(d) Establishing delivery schedules, where the requirementsÁ of the contract permit, which encourage participation byÁ small and minority businesses and women's businessÁ enterprises; andÁ

(e) Using the services and assistance of the U.S. SmallÁ Business Administration, the Minority BusinessÁ Development Agency of the U.S. Department ofÁ Commerce, and State and local governmental smallÁ business agencies.Á

39. Equal Employment Opportunity

During the performance of this contract, the ContractorÁ Ü^||^| agrees as follows:Á

(a) The ContractorÜ^||^| shall not discriminate against anyÁ employee or applicant for employment because of of race color, religion, sex, sexual orientation, gender identity, disability, or national origin.Á

(b) The ContractorÜ^||^| shall take affirmative action to Á ensure thatÁ applicants are employed, and that employees Á are treatedÁ during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, disability, or national origin. Such actionÁ shall include, but not be limited to, (1) employment, (2)Á upgrading demotion, (4) transfer, (5) recruitment orÁ recruitment advertising, (6) layoff or termination, (7) rates/ of pay or other forms of compensation, and (8) selectionÁ for training including apprenticeship. Á

(c) The Contractor shall agree to post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer setting forth the provisions of this nondiscrimination clause.

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

(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 that the Contractor is in non-compliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor/seller may be declared ineligible for further Government 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, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(i) The contractor/seller will include the provisions of paragraphs (a) through (h) 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 sub[contractor/seller] or vendor. The [contractor/seller] will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the [contractor/seller] becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the [contractor/seller] may request the United States to enter into such litigation to protect the interests of the United States.

(j) Compliance with the requirements of this clause shall be to the maximum extent consistent with, but not in derogation of, compliance with section 7(b) of the Indian Self-Determination and Education Assistance Act and the Indian Preference clause of this contract.

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

(a) The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

(b) The parties to this contract agree to comply with HUD's regulations in 24 CFR Part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the Part 135 regulations.

(c) The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

(d) The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR Part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR Part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR Part 135.

(e) The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR Part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR Part 135.

(f) Noncompliance with HUD's regulations in 24 CFR Part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

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

41. Interest of Members of Congress

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

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

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

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

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

44. Royalties and Patents

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

45. Examination and Retention of Contractor's Records

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

46. Labor Standards - Davis-Bacon and Related Acts

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

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

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

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

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

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

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

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

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

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

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

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

47. Non-Federal Prevailing Wage Rates

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

48. Procurement of Recovered Materials.

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

Contract Document - Architectural Supplementary Instructions and Explanations

Project Name : Efficiency Apartment Modernization

1. Change Orders

ALL change orders authorizing a change in the work or an adjustment in the contract amount or change in contract time must be approved by the Owner and Architect. A change order can be signed by the Architect alone, provided he has written authority from the owner. The contract sum and the contract time may ONLY be changed only by change order.

2. Changes in the work

The contractor will provide the Architect with a proposal to modify work. The Architect and Owner will then decide whether to proceed with a change order for the proposed work. If the contractor claims that an adjustment in the contract sum is a result of an instruction received by either the Architect or Owner the contractor must provide a sufficient breakdown of such amounts in detail to allow the owner to determine an increase or decrease in the direct cost of the work. Work claimed by subcontracts to the Prime contractor will also be supported in a similar price breakdown in detail. Limitations will apply to the contractors as shown below:

- a. Prime Contractor profit and overhead markup will not exceed five (5) percent of the subcontractor work charged for in the change order.
- b. Subcontractor profit charged for in the change order as direct costs will not exceed an additional twelve (12) percent.
- c. Prime Contractor profit charged for in the change order as direct cost where contractor work force, not subcontractor, is employed will not exceed an additional twelve (12) percent.
- d. Owner credits shown on change orders will not include contractor overhead and profit. The net profit due the Owner will confirmed by the Architect. In the case of a dual change order including both credits and additions if the aggregate is a net increase. and the work affected is a single line item, then only will profit and overhead be due the Owner in the amount for the change in work.

3. Insurance Review for Construction

- a. **Evidence of Insurance** - Where the construction work is to be performed by contract, the PHA shall obtain from each contractor and subcontractor certificates of insurance, identifying the project number(s), the name, and address of the insurance company, the policy number, the amount of insurance and the effective date and the expiration date of the policy. The certificates of insurance also

shall indicate that the insurance company shall give the Agency 30 days prior to notice of any cancellation or non-renewal in the contractor's policy.

b. **Noncompliance.** The PHA shall monitor the insurance policies obtained by contractors and subcontractors to ensure the coverage required by the modernization contract is kept in force until the contractor's work is accepted by the PHA. The PHA shall notify the contractor to stop work if the required insurance coverage is not in force at the time the work begins or if the coverage expires before the work is accepted. The PHA shall also notify the contractor that any such work stoppage is an infraction of the contract and that the contractor is liable for any losses or delays.

c. The Contractor shall provide as follows:

1. **Workmen's Compensation and Occupation Disease Insurance** - The Contractor shall provide workmen's compensation and occupational disease insurance as required by law including employer's liability. Such policy shall specifically include coverage in the state in which the work is to be performed. The employer's liability limit shall be a minimum of \$100,000.

2. **General Liability Insurance** - The Contractor shall maintain a comprehensive general liability form of insurance with minimum limits of \$1,000,000.00 per person bodily injury, \$2,000,000 per occurrence bodily injury and \$500,000.00 per occurrence property damage.

The policy shall include contractor's operations coverage, Contractor's protective liability on a "blanket" basis to cover the operations of any Subcontractor and completed operations coverage. Blanket broad form contractual liability coverage shall be obtained specifically to include coverage for the "hold harmless" clause contained elsewhere in the contract and this shall appear on the certificate. Personal injury liability including employees is to be provided. Broad form property damage liability including completed operations shall also be provided. Coverage is to be provided under the comprehensive general liability policy for explosion, collapse and underground liability for those Contractors doing excavation or underground work.

3. **Automobile Insurance** - Contractors shall maintain a comprehensive automobile form of insurance with minimum limits of \$500,000 per person bodily injury, \$1,000,000.00 per occurrence bodily injury and \$100,000.00 per occurrence property damage. The automobile insurance must include coverage for all owned, non-owned, and hired automobiles.

4. **Umbrella Liability Insurance** - An umbrella policy shall be furnished in the minimum amount of \$1,000,000.00. The above underlying primary limits of liability for both comprehensive general liability and comprehensive automobile liability may be reduced only if an excess umbrella policy is obtained with a minimum limit of \$2,000,000.00 and then only to the extent required for primary coverage under such excess contract.

5. **Aircraft Liability Insurance** - If any aircraft is to be used by the Contractor in connection with this contract either as a conveyance to and from the location of the job site or for use in the

course of construction, liability insurance in the amounts acceptable to the Owner shall be obtained by the Contractor and this liability coverage shall be shown on the insurance certificate.

If the contractor will not be using aircraft as described above, then the Contractor shall have the following statement on his certificate of insurance:

"No aircraft is intended for use and said insurance for same is not required."

6. **Property/Builder's Risk Insurance** - The contractor shall maintain Builder's Risk Insurance referenced on HUD Form 5370, "General Conditions of the Contract for Construction" and as noted herein.

Maintain "All Risk" (Builder's Risk Completed Value Form Insurance) insurance which shall include, but not be limited to, fire, lightning, extended coverage peril, vandalism and malicious mischief, collapse, water damage from bursting pipes, and theft of building material from the job site upon the modernization/renovation which is the subject of this contract. Coverage shall extend to materials stored off site or in route to the site, purchased solely for the named product.

Coverage shall include items of labor and materials connected therewith whether in or within 100 feet of the structure insured, materials in place or to be used as part of the permanent construction, including surplus material, protective fences, bridges or temporary structures, miscellaneous materials and supplies incidental to the work, and such scaffolding, staging, towers, forms, and equipment as are not owned or rented by the Contractor, the cost of which is included in the cost of the work.

The policy shall insure the Contractor and shall also include the interest of the owner during course of construction until completed and accepted by the Owner. Coverage shall not be voided by partial occupancy until the work is completed and accepted by the Owner.

Loss, if any, is to be adjusted both within and payable to the Owner as trustees for the insured as their interest may appear, except in such cases as may require payment of all or a portion of such insurance to be made to the mortgagee, as his interest may appear. Any deductibles shall be paid by the Contractor.

7. **Proof of Carriage of Insurance** - The contractor shall not commence work under this contract until he has obtained all insurance required, as specified herein, and has filed with the Architect two (2) certificates of insurance described herein, evidenced in the carriage of insurance and the requisite amount placed with satisfactory state licensed carriers, and countersigned by a resident agent.

Should any coverage approach expiration during the contract period, it shall be renewed prior to its expiration and certificates again filed with the Architect. Said certificates are to contain the following:

"It is hereby agreed that the owner shall be notified ten (10) days prior to cancellation of any insurance, material alteration and/or election not to review."

All insurance shall be maintained in full force and effect until the contract has been fully and completely performed.

All such policies and insurance shall name the Owner as additional named insured as pertains to work performed at this project and a certificate endorsing the same shall be forwarded to the Architect. Specifically coverage shall include lead-based paint abatement and shall not contain a "Pollution Exclusion."

d. **Owner's Insurance** - The Owner shall maintain such liability insurance as will protect him from his contingent liability to others for damages because of bodily injury, including theft and property damages which may arise from operations under any contracts that may be awarded as specified herein.

Reference pages 0120-1,A. "Contractor's Insurance" for insurance coverage to be maintained by Contractor which may affect Owner under this paragraph.

4. Definitions - PHA, Housing Commission, Owner, are all the same entity as referred to in these contract and construction documents.

5. Occupational Safety and Health Act

The contractor awarded this project is under the procedures and regulations of the Williams-Steiger Occupational Safety and Health Act and must implement those same. Neither the Owner nor the Architect are responsible for the enforcement, or actions arising from any violation or non-action of the contractor thereof.

6. Liens

The contractor or Subcontractor is prohibited from placing a mechanics lien on the Housing Commission properties within this project. Pursuant to state statutes, real property of Housing Commission is exempt from levy or sale by execution of judicial process.

7. Lists of Subcontractors / Suppliers

The contractor shall submit a list of all subcontractors and suppliers along with a schedule of cost for the Owner and Architects review. Any that are not acceptable to either will be replaced prior to the commencement of the work.

8. Liquidated Damages

Any extensions of the contract time not approved by the Housing Commission will accrue a penalty amount per calendar day. This amount is established and shown in the construction contract. This amount may be waived and additional time granted if the scope of work has materially changed during

the contract period. All Contractor requested time extensions must be done through Change order only. The contractor is solely responsible for completing the project within the established time shown in the contract documents unless time extensions are authorized by the Owner and the Architect. The contractor will be liable for damages to the owner resulting from such delays as provided in HUD handbook 7485.1 REV. 3, paragraph 9-24. The amount of damages assessed per day is shown in the contract documents.

9. Material Storage

Any material storage off the Housing construction site must be verified and documented by the Owner and Architect and insured adequately for replacement values by the contractor prior to any progress payment from within the contractor schedule of values. If it is deemed for the sake of the contract amount that material be purchased and stockpiled to avoid future price increases during the duration of the contract the contractor must store such materials appropriately to avoid any and all theft or degrade of those materials prior to use. (see Division 7 - 073113 - Asphalt Shingles).

10. Punch or Inspection List /Project Close-out

A final inspection shall be made by the Architect at the conclusion of work to determine its compliance with the contract requirements. A Substantial completion inspection will also be made. Any and all items not found in compliance on the Inspection list will be corrected by the contractor prior to submittal of final payment to Owner. Final payment will be paid will be paid sixty (60) days from acceptance of work. The payment will be withheld if any of the following documents are not delivered to the Owner and Architect for inspection and filing. These are:

Final Request for Payment

Final Waiver of Lien

AIA Document G706 - Contractor affidavit of payment of debts and claims

AIA Document G706A - Contractors affidavit of release of liens

AIA Document G707 - Consent of surety to final payment

Contractor Affidavit of Completion

Occupancy permit (as necessary)

Contractor warranty (1 or 2 year per Owner requirement)

HUD Certificate and release

PROJECT CLOSE-OUT ITEMS

Manufacturer's Warranties

Operation/Maintenance manuals

Record Drawings (see no. 12)

11. Recycling /Waste removal and project staging areas

The contractor shall submit to the Owner and Architect his plan for recycling and waste removal on a daily basis from the actual construction areas. Waste shall be kept in a separate but adjacent area to all recycling materials. This, ideally should be adjacent to a central staging area(s) to separate waste from actual construction locations. Recycling materials of paper, metal, glass, and plastics should be kept in separate containment. Waste containment should have lockable lids. The Owner's representative will

verify removal of construction debris on a daily basis and note this. The Staging area(s) should be close to roadways where material delivery and pickup can be best expedited and not interfere with resident or subcontractor work.

12. Record Drawings

The contractor shall provide the owner and Architect with two (2) sets of original prints that have been revised to show significant changes made during the construction process. These changes must be in a color evident to show locations and so noted to describe the change.

13. Superintendent/Clerk

Any initial selection or change in the Contractor's on-Site Superintendent must be approved in writing by the Architect and Housing Commission representative. This will include reviewing the superintendent's qualifications. No verbal approvals will be acceptable.

14. Making the jobsite available/Owner Responsibility

The PHA will make all buildings available to the contractor so that the schedule agreed upon can be accommodated. (See Contract Document - Bidding and Bonding Review Supplement.)

The PHA will notify all tenants in a timely fashion so work pathways and vacancies can be made available to the contractor as needed.

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 PROJECT INFORMATION

- A. Project: Efficiency Apartment Modernization. All drawings and general specifications of the contract as well as all Division 01 sections apply to this section.
- B. Project Location: Desmond Apartments, 721 Pine Street
Port Huron, Michigan, 48060
- C. Owner: Port Huron Housing Commission, 905 Seventh Street, Port Huron, Michigan, 48060.
- D. Architect: Design House Architects and Designers LLC
- E. The Work consists of Phase 3 - Efficiency Apartment Modernization Six (6) Select units.
- F. Code review - Limited Scope Work. Michigan Building Code 2015

1.2 WORK RESTRICTIONS

- A. Contractor's Use of Premises: During construction, Contractor will have necessary use of all buildings and surrounding areas to complete work as indicated on drawings and noted and described within the specifications. The contractor will perform the following:
 - 1. Contractor can occupy premises locations as necessary during construction. Perform construction only during normal working hours of 8:00 am to 5:00 pm Monday thru Friday, other than holidays, unless otherwise agreed to in advance by Owner.
 - 2. Clean up work areas at the end of each work period.
 - 3. Driveways, Walkways, and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - 4. Contractor will not allow alcoholic substances or Illegal drugs on the premises at any time. Any employee to be found under the influence of either shall be removed as necessary by appropriate authorities.
 - 5. There shall be no weapons on the project site beyond those used by security forces employed to provide such security as necessary for the completion of the project. These forces shall be approved by the Housing Authority as necessary or not.
 - 6. The OWNER will have full occupancy of the existing building and environments for the duration of time which this contracted work involves. The contractor is asked at all times to verify and coordinate with the owner on such usages to minimize any conflicts thereof.

- B. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor-air intakes.

1.3 WORK STAGING PLANNING

- A. This project will necessarily, due to no known constraints, need to provide work on those buildings immediately.
 - 1. Apartment adaption's can commence as per contractor workforce considerations. All work staging and contractor planning will be reviewed with Owner and Architect prior to commencement of work.
 - 2. Contractor should consider the purchase and stockpiling of materials, adequately protect his lump sum bid with the time-table given for completion and other conditions that may affect his timetable.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012000 - ALLOWANCES and UNIT PRICES

PART 1 - GENERAL

1.1 ALLOWANCES - N/A

1.2 UNIT PRICES

- A. Unit price is a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.
- B. Unit prices include all necessary material, plus cost for delivery, installation, insurance, and taxes, overhead, and profit.
- C. The Owner reserves the right to reject Contractor's measurement of work in place that involves Unit Prices and to have the work re-measured by an independent authority acceptable to the contractor. The Owner will provide such at their own expense.

1.3 ALTERNATES

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

PART 2 - PRODUCTS (Not Used)

PART 3 - UNIT COSTS

3.1 SCHEDULE OF UNIT COSTS

- A. Unit Price no. 1: The contractor shall provide the cost for labor and material for Modernization of Peru Village Apartment units C1 and C2 if contracted for in 2017. This is an ADD above what may be included in the base bid.

- B. The unit price will be initially considered an ADD to the contract and is dependent upon units chosen for completion by the Agency at their discretion.

3.2 SCHEDULE OF ALTERNATES (Not Used)

END OF SECTION 012000

SECTION 013000 - ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 PROJECT MANAGEMENT AND COORDINATION

- A. Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work.
- B. Requests for Information (RFIs): On discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI. Use AIA Document G716-2004 or other form approved by Architect and Owner.
- C. Schedule and conduct progress meetings at Project site at appropriate intervals. Notify Owner and Architect of meeting dates and times. Require attendance of each subcontractor or other entity concerned with current progress or involved in planning, coordination, or performance of future activities or special installations.
 - 1. Architect will record minutes and distribute to everyone concerned, including Owner and Architect.

1.2 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 1. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including re-submittals.
 - 2. Submit three copies of each action submittal. Architect will return two copies.
 - 3. Submit two copies of each informational submittal. Architect will not return copies.
 - 4. Architect will discard submittals without review received from sources other than Contractor.
- B. Place a permanent label or stamp on each submittal for identification. Provide a space approximately on label or beside stamp to record Contractor's review and approval markings and action taken by Architect. Include the following information on the label:
 - 1. Project name.
 - 2. Date.
 - 3. Name and address of Contractor.
 - 4. Name and address of subcontractor or supplier.
 - 5. Number and title of appropriate Specification Section.
- C. Identify deviations, if applicable, from the Contract Documents on submittals.
- D. Contractor's Construction Schedule Submittal Procedure: Submit two copies of schedule within seven (7) days after date established for Commencement of the Work.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

- A. Product Data: Mark each copy to show applicable products and options. Include the following:
 - 1. Manufacturer's written recommendations, product specifications, and installation instructions.
 - 2. Wiring diagrams showing factory-installed wiring.
 - 3. Printed performance curves and operational range diagrams.
 - 4. Testing by recognized testing agency.
 - 5. Compliance with specified standards and requirements.
- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data. Submit on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches . Include the following:
 - 1. Dimensions and identification of products.
 - 2. Fabrication and installation drawings and roughing-in and setting diagrams.
 - 3. Wiring diagrams showing field-installed wiring.
 - 4. Notation of coordination requirements.
 - 5. Notation of dimensions established by field measurement.
- C. Samples: Submit Samples for review of kind, color, pattern, and texture and for a comparison of these characteristics between submittal and actual component as delivered and installed. Include name of manufacturer and product name on label.
 - 1. If variation is inherent in material or product, submit at least three sets of paired units that show variations.

2.2 INFORMATIONAL SUBMITTALS

- A. Qualification Data: Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- B. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

2.3 DELEGATED DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit three copies of a statement, signed and sealed by the responsible design

professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

2.4 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type schedule within 10 days of date established for the Notice to Proceed from Owner.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.

PART 3 - EXECUTION

3.1 SUBMITTAL REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Architect will review each action submittal, make marks to indicate corrections or modifications required, will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
- C. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

3.2 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
 1. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. Distribute copies of approved schedule to Owner, Architect, subcontractors, testing and inspecting agencies, and parties identified by Contractor with a need-to-know schedule responsibility. When revisions are made, distribute updated schedules to the same parties.

END OF SECTION 013000

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements. All testing shall be the responsibility of the contractor.
 - 1. Testing and inspecting services shall be performed by independent testing agencies.
- B. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements, comply with the most stringent requirement. Refer uncertainties to Architect for a decision.
- C. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum. The actual installation may exceed the minimum within reasonable limits. Indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision.
- D. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections as necessary. Include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, and telephone number of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 6. Names of individuals making tests and inspections.
 - 7. Description of the Work and test and inspection method.
 - 8. Complete test or inspection data, test and inspection results, an interpretation of test results, and comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - 9. Name and signature of laboratory inspector.
 - 10. Recommendations on retesting and re-inspecting.
- E. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, notices, receipts for fee payments, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.
- F. Testing Agency Qualifications: An independent agency with the experience and capability to conduct testing and inspecting indicated; and where required by authorities having jurisdiction, that is acceptable to authorities.

- G. Retesting/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- H. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
 - 1. Promptly notify Architect and Contractor of irregularities or deficiencies in the Work observed during performance of its services.
 - 2. Do not release, revoke, alter, or increase requirements of the Contract Documents or approve or accept any portion of the Work.
 - 3. Do not perform any duties of Contractor.
- I. Associated Services: Cooperate with testing agencies and provide reasonable auxiliary services as requested. Provide the following:
 - 1. Access to the Work.
 - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 - 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 - 4. Facilities for storage and field curing of test samples.
 - 5. Security and protection for samples and for testing and inspecting equipment.
- J. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.
- K. Special Tests and Inspections: Owner will engage, if necessary and outside of the initial scope of work a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014000

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Use Charges: Installation and removal and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated.
- B. Water and Electric Power: Available from Owner's existing system without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- C. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- D. Accessible Temporary Egress: Comply with applicable provisions in ICC/ANSI A117.1.

PART 2 - PRODUCTS

2.1 MATERIALS: If used for material storage.

- A. Chain-Link Fencing: Minimum 2-inch , 0.148-inch thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet high with galvanized-steel pipe posts and top and bottom rails.
- B. Wood Enclosure Fence: Plywood, 6 feet high, framed with four 2-by-4-inch rails, with preservative-treated wood posts spaced not more than 8 feet apart.

2.2 TEMPORARY FACILITIES

- A. Provide field offices, storage and fabrication sheds, and other support facilities as necessary for construction operations. Store combustible materials apart from building. Provide onsite according to "Staging" plan where materials may be stockpiled.

2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
 - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.

2. Heating Units: Listed and labeled for type of fuel being consumed, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
3. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return-air grille in system and remove at end of construction.

PART 3 - EXECUTION

3.1 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities.
- C. Heating: Provide temporary heating required for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
- D. Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions, and security at locations where materials may be stored. (See 011000-SUMMARY, 1.3 Work Staging Planning.)

3.2 SUPPORT FACILITIES INSTALLATION

- A. Install project identification and other signs in locations approved by Owner to inform the public and persons seeking entrance to Project.
- B. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction.

3.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- B. Furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering work environments and tear-off drop areas except by entrance gates.

- C. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- D. Provide temporary enclosures for protection of exposed construction or interiors (if replacing roof sheathing), in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weather tight enclosure for building exterior.

3.4 MOISTURE AND MOLD CONTROL

- A. Before installation of weather barriers, protect materials from water damage and keep porous and organic materials from coming into prolonged contact with concrete work, new or existing.
- B. After installation of replacement sheathing but before full coverage of roofing felts and shingles protect as follows:
 - 1. Discard any water-damaged and wet material and material that begins to grow mold.
 - 2. Allow installed wet materials and sheathing adequate time to dry before being enclosing with felts, self-adhering sheet underlayment and shingles.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion.

END OF SECTION 015000

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
- B. Comparable Product Requests:
 - 1. Submit request for consideration of each comparable product. Do not submit unapproved products on Shop Drawings or other submittals.
 - 2. Identify product to be replaced and show compliance with requirements for comparable product requests. Include a detailed comparison of significant qualities of proposed substitution with those of the Work specified.
 - 3. Architect will review the proposed product and notify Contractor of its acceptance or rejection.
- C. Basis-of-Design Product Specification Submittal: Show compliance with requirements.
- D. Compatibility of Options: If Contractor is given option of selecting between two or more products, select product compatible with products previously selected.
- E. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - 2. Deliver products to Project site in manufacturer's original sealed container or packaging, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 3. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
 - 4. Store materials in a manner that will not endanger Project structure.
 - 5. Store products that are subject to damage by the elements, under cover in a weather tight enclosure above ground, with ventilation adequate to prevent condensation.
- F. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. Provide products that comply with the Contract Documents, are undamaged, and are new at the time of installation.
 - 1. Provide products complete with accessories, trim, finish, and other devices and components needed for a complete installation and the intended use and effect.
 - 2. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
- B. Product Selection Procedures:
 - 1. Where Specifications name a single manufacturer and product, provide the named product that complies with requirements.
 - 2. Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements.
 - 3. Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered.
 - 4. Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements for "comparable product requests" for consideration of an unnamed product.
 - 5. Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered.
 - 6. Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements for "comparable product requests" for consideration of an unnamed manufacturer's product.
 - 7. Where Specifications name a single product, or refer to a product indicated on Drawings, as the "basis-of-design," provide the named product. Comply with provisions for "comparable product requests" for consideration of an unnamed product by another manufacturer.
- C. Where Specifications require "match Architect's sample," provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
- D. Unless otherwise indicated, Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017000 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 CLOSEOUT SUBMITTALS

- A. Record Drawings: Maintain a set of prints of the Contract Drawings as record Drawings. Mark to show actual installation where installation varies from that shown originally.
 - 1. Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
- B. Operation and Maintenance Data: Submit one copy of manual. Organize data into three-ring binders with identification on front and spine of each binder, and envelopes for folded drawings. Include the following:
 - 1. Manufacturer's operation and maintenance documentation.
 - 2. Maintenance and service schedules.
 - 3. Maintenance service contracts.
 - 4. Emergency instructions.
 - 5. Spare parts list.
 - 6. Wiring diagrams.
 - 7. Copies of warranties.

1.2 CLOSEOUT PROCEDURES

- A. Substantial Completion: Before requesting Substantial Completion inspection, complete the following:
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. Advise Owner of pending insurance changeover requirements.
 - 3. Submit specific warranties, maintenance service agreements, and similar documents.
 - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 5. Submit record Drawings, operation and maintenance manuals and similar final record information.
 - 6. Deliver tools, spare parts, extra materials, and similar items.
 - 7. Make final changeover of permanent locks and deliver keys to Owner.
 - 8. Complete startup testing of systems.
 - 9. Remove temporary facilities and controls.
 - 10. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
 - 11. Complete final cleaning requirements, including touchup painting.
 - 12. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

- B. Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will proceed with inspection or advise Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will advise Contractor of items that must be completed or corrected before certificate will be issued.
- C. Request inspection for Final Completion, once the following are complete:
 - 1. Submit a copy of Substantial Completion inspection list stating that each item has been completed or otherwise resolved for acceptance.
 - 2. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- D. Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
- E. Submit a written request for final inspection for acceptance. On receipt of request, Architect will proceed with inspection or advise Contractor of unfulfilled requirements. Architect will prepare final Certificate for Payment after inspection or will advise Contractor of items that must be completed or corrected before certificate will be issued.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance.
 - 1. Verify compatibility with and suitability of substrates.
 - 2. Examine roughing-in for mechanical and electrical systems.
 - 3. Examine walls, floors, and roofs for suitable conditions.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Take field measurements as required to fit the Work properly. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication.
- D. Verify space requirements and dimensions of items shown diagrammatically on Drawings.

3.2 CONSTRUCTION LAYOUT AND FIELD ENGINEERING

- A. Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the existing drawings and "As-built" documents accordingly.
- B. Engage a land surveyor to lay out the Work using accepted surveying practices.

3.3 INSTALLATION

- A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated. Make vertical work plumb and make horizontal work level.
 - 1. Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections to form hairline joints.
 - 2. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
 - 3. Maintain minimum headroom clearance in occupied spaces and in unoccupied spaces.
- B. Comply with manufacturer's written instructions and recommendations.
- C. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- D. Use products, cleaners, and installation materials that are not considered hazardous.
- E. Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place. Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed.

3.4 CUTTING AND PATCHING

- A. Provide temporary support of work to be cut. Do not cut structural members or operational elements without prior written approval of Architect.
- B. Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.
- C. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
 - 1. Restore exposed finishes of patched areas and extend finish restoration into adjoining construction in a manner that will minimize evidence of patching and refinishing.
 - 2. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.

3.5 CLEANING

- A. Clean Project site and work areas daily, including common areas. Dispose of materials lawfully.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
 - 3. Remove debris from concealed spaces before enclosing the space.

B. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion:

1. Remove labels that are not permanent.
2. Clean transparent materials, including mirrors. Remove excess glazing compounds. Replace chipped or broken glass.
3. Clean exposed finishes to a dust-free condition, free of stains, films, and foreign substances. Sweep concrete floors broom clean.
4. Vacuum carpeted surfaces and wax resilient flooring.
5. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication. Clean plumbing fixtures. Clean light fixtures, lamps, globes, and reflectors.
6. Clean Project site, yard, and grounds, in areas disturbed by construction activities. Sweep paved areas; remove stains, spills, and foreign deposits. Rake grounds to a smooth, even-textured surface.

3.6 DEMONSTRATION AND TRAINING

A. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system. Include a detailed review of the following:

1. Include instruction for basis of system design and operational requirements, review of documentation, emergency procedures, operations, adjustments, troubleshooting, maintenance, and repairs.

END OF SECTION 017000

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT , DISPOSAL AND RECYCLING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Performance Requirements: Achieve end-of-Project rates for salvage/recycling of 25% percent by weight of total nonhazardous solid waste generated by the Work. This is a goal.

1.2 SUBMITTALS

- A. Waste Management Plan: Submit plan within seven days of date established for commencement of the Work.
- B. Waste Reduction Progress Reports: Submit concurrent with each Application for Payment. Include total quantity of waste, total quantity of waste salvaged and recycled, and percentage of total waste salvaged and recycled.
- C. Records of Donations and Sales: Receipts for salvageable waste donated or sold to individuals and organizations. . Indicate whether organization is tax exempt.
- D. Recycling and Processing Facility Records: Manifests, weight tickets, receipts, and invoices.
- E. Landfill and Incinerator Disposal Records: Manifests, weight tickets, receipts, and invoices.
- F. Waste Management Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Administrative Requirements." Review methods and procedures related to waste management.
- G. Waste Management Plan: Develop a waste management plan consisting of waste identification, waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
 - 1. Salvaged Materials for Reuse: Identify materials that will be salvaged and reused.
 - 2. Salvaged Materials for Sale: Identify materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
 - 3. Salvaged Materials for Donation: Identify materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
 - 4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
 - 5. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan.

PRODUCTS (Not Used)

PART 2 - EXECUTION

2.1 PLAN IMPLEMENTATION

- A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
- B. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
- C. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

2.2 SALVAGING DEMOLITION WASTE

- A. Salvaged Items for Reuse in the Work: Clean salvaged items and install salvaged items to comply with installation requirements for new materials and equipment.
- B. Salvaged Items for Sale and Donation: is not permitted on Project site.
- C. Salvaged Items for Owner's Use: Clean salvaged items and store in a secure area until delivery to Owner.
- D. Doors and Hardware: Brace open end of door frames. Except for removing door closers, leave door hardware attached to doors.
- E. Equipment: Drain tanks, piping, and fixtures. Seal openings with caps or plugs.
- F. Plumbing Fixtures: Separate by type and size.
- G. Lighting Fixtures: Separate lamps by type and protect from breakage.

2.3 RECYCLING WASTE

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Packaging:
 - 1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
 - 2. Polystyrene Packaging: Separate and bag materials.
 - 3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
 - 4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- C. Site-Clearing Wastes: Chip brush, branches, and trees on-site.

- D. Asphaltic Concrete Paving: Grind asphalt to maximum 1-1/2-inch size.
- E. Asphaltic Concrete Paving: Break up and transport paving to asphalt-recycling facility.
- F. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.
 - 1. Pulverize concrete to maximum 1-1/2-inch size.
- G. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.
 - 1. Pulverize masonry to maximum 1-inch size.
 - 2. Clean and stack undamaged, whole masonry units on wood pallets.
- H. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.
- I. Metals: Separate metals by type.
- J. Asphalt Shingle Roofing: Remove and dispose of nails, staples, and accessories.
- K. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.
- L. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.
- M. Metal Suspension System: Separate metal members including trim, and other metals from acoustical panels and tile and sort with other metals.
- N. Carpet and Pad: Roll large pieces tightly after removing debris, trash, adhesive, and tack strips.
 - 1. Store clean, dry carpet and pad in a closed container or trailer provided by Carpet Reclamation Agency or carpet recycler.
- O. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.
- P. Conduit: Reduce conduit to straight lengths and store by type and size.

2.4 DISPOSAL OF WASTE

- A. Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
- B. Do not burn waste materials.

END OF SECTION 017419

SECTION 024119 - SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Items indicated to be removed and salvaged remain Owner's property. Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner . Include fasteners or brackets needed for reattachment elsewhere if applicable to finished work.
- B. Comply with EPA regulations and hauling and disposal regulations of authorities having jurisdiction. Comply with ANSI A10.6 and NFPA 241.
- C. Pre-demolition Photographs: Show existing conditions of adjoining construction and site improvements, including finish surfaces. Submit before Work begins.
- D. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- E. It is not expected that hazardous materials will be encountered in the Work. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

DEMOLITION - ALL Apartment Wall locations and associated walls as shown on drawings and other components as necessary to complete work.

3.1

- A. Requirements for Building Reuse: See all Reports and Drawings for Demolition items.
 - 1. Maintain existing building structure. Do not demolish such existing construction beyond indicated limits of replacement as shown in Drawings.
 - 2. Maintain existing interior nonstructural elements (interior walls, doors, floor coverings, and ceiling systems) not indicated to be demolished; do not demolish such existing construction beyond indicated limits.
- B. Maintain services/systems indicated to remain and protect them against damage during selective demolition operations. Before proceeding with demolition, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of the building.

- C. Locate, identify, shut off, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
- D. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
- E. Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
- F. Provide temporary weather protection to prevent water leakage and damage to structure and interior areas.
- G. Protect walls, ceilings, floors, and other existing finish work that are to remain. Erect and maintain dustproof partitions. Cover and protect furniture, furnishings, and equipment that have not been removed.
- H. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction.
- I. Promptly remove demolition waste materials from Project site and legally dispose of them. Do not burn demolished materials.
- J. Clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing before demolition operations began.

END OF SECTION

SECTION 033000 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data.
- B. Ready-Mixed Concrete Producer Qualifications: ASTM C 94/C 94M.
- C. Comply with ACI 301, "Specification for Structural Concrete"; ACI 117, "Specifications for Tolerances for Concrete Construction and Materials"; and CRSI's "Manual of Standard Practice."

PART 2 - PRODUCTS - Curing, Sealing, Topping Materials

2.1 MATERIALS

- A. Portland Cement: ASTM C 150, Type I or II.
- B. Fly Ash: ASTM C 618, Type C or F.
- C. Aggregates: ASTM C 33, uniformly graded.
 - 1. Maximum Aggregate Size for Concrete in Insulating Concrete Forms: 1/4 inch.
- D. Synthetic Fiber: ASTM C 1116/C 1116M, Type III, polypropylene fibers, 1/2 to 1-1/2 inches
- E. Air-Entraining Admixture: ASTM C 260.
- F. Vapor Retarder: Reinforced sheet, ASTM E 1745, Class A.
- G. Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.
- H. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- I. Clear, Waterborne, Membrane-Forming Curing Compound: W.R. Meadows 1300-Clear or equal, ASTM C 309, Type 1, Class A. As per drawings.
- J. Clear, Waterborne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A. As per drawings.
- K. Slab mix: SAKRETE SAND MIX or equal- At Shower drain work.

2.2 MIXES

- A. Comply with ACI 301 requirements for concrete mixtures.
- B. Normal-Weight Concrete: Prepare design mixes, proportioned according to ACI 301, as follows:
 - 1. Minimum Compressive Strength: 3500 psi at 28 days.
 - 2. Maximum Water-Cementitious Materials Ratio: 0.50.
 - 3. Slump Limit: 4 inches.
 - 4. ACI 301 sets air content depending on severity of exposure conditions of concrete. Air content in second sentence in first subparagraph below is maximum recommended by ACI 302.1R for trowel-finished slabs.
 - 5. Air Content: Maintain within range permitted by ACI 301. Do not allow air content of floor slabs to receive troweled finishes to exceed 3 percent.
 - 6. For concrete exposed to deicing chemicals, limit use of fly ash to 25 percent replacement of portland cement by weight and granulated blast-furnace slag to 40 percent of portland cement by weight; silica fume to 10 percent of portland cement by weight.
- C. Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and ASTM C 1116.
 - 1. When air temperature is above 90 deg F reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 CONCRETING

- A. Construct formwork according to ACI 301 and maintain tolerances and surface irregularities within ACI 347R limits of Class C, 1/2 inch for other concrete surfaces.
- B. Place vapor retarder on prepared subgrade, with joints lapped 6 inches and sealed.
- C. Install construction, isolation, and contraction joints where indicated. Install full-depth joint-filler strips at isolation joints.
- D. Place concrete in a continuous operation and consolidate using mechanical vibrating equipment.
- E. Protect concrete from physical damage, premature drying, and reduced strength due to hot or cold weather during mixing, placing, and curing.
- F. Formed Surface Finish: Smooth-formed finish for concrete exposed to view, coated, or covered by waterproofing or other direct-applied material; rough-formed finish elsewhere.
- G. Slab Finishes: Comply with ACI 302.1R for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces. Provide the following finishes:
 - 1. Scratch finish for surfaces to receive mortar setting beds and Topping Slabs.
 - 2. Float finish for interior steps and ramps and surfaces to receive waterproofing, roofing, or other direct-applied material.
 - 3. Trowel or fine-broom finish for surfaces to receive thin-set tile.

- H. Cure formed surfaces by moist curing for at least seven days.
- I. Begin curing concrete slabs after finishing. Apply membrane-forming curing and sealing compound to concrete. See Drawings.
- J. Protect concrete from damage. Repair surface defects in formed concrete and slabs.

END OF SECTION 033000

DIVISION 6 - WOOD and PLASTICS

- 06100 Rough Carpentry
- 06200 Finish Carpentry
- 06400 Architectural Woodwork
- 06405 Cabinets and Fixtures

SECTION 06100 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide wood, nails, bolts, screws, fasteners, nailer plates, and other rough hardware, and other items needed, and perform rough carpentry for construction shown on the Drawings, as specified herein, and as needed for a complete and proper installation.
 - 1. Provide blocking as required.
 - 2. Other as noted.

- B. Related work:
 - 1. Documents affecting the work of this Section include, but are not limited to, General Conditions, and Sections in Division 1 of these Specifications.

1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

- B. Codes and standards:
 - 1. In addition to complying with the pertinent codes and regulations of governmental agencies having jurisdiction, unless otherwise specifically directed or permitted by the Architect comply with the latest editions of the following:
 - a. "Product Use Manual" of the Western Wood Products Association for selection and use of products included in that manual;

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Comply with pertinent provisions of Section 01620.

- B. Protection:
 - 1. Deliver the materials to the job site and store, in a safe area, out of the way of traffic, and shored up off the ground surface.
 - 2. Identify framing lumber as to grades, as store each grade separately from other grades.
 - 3. Protect metals with adequate waterproof outer wrapping.
 - 4. Use extreme care in off loading of lumber to prevent damage, splitting, and breaking of materials.

PART 2 - PRODUCTS

2.1 GRADE STAMPS

- A. Identify framing lumber by grade stamp.

2.2 MATERIALS

- A. Provide materials in the quantities needed for the Work shown on the drawings, and meeting or exceeding the following standards of quality:
 1. Treated lumber, as necessary, shall be S4S, CA-B pressure treated No. 1 southern yellow pine, KDAT 19%, retention percentage/pcf as approved by the treatment manufacturer for ground contact. This will be used for wall plates at moist locations.
 2. Rough bucks, studs, plates, and headers, shall be No. 2, Spruce-Pine-Fir, KD19%.

2.3 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory sub-surface conditions are corrected.

3.2 DELIVERIES

- A. Stockpile materials sufficiently in advance of need to assure their availability in a timely manner for this Work.
- B. Make as many trips to the job site as are needed to deliver materials of this Section in a timely manner to ensure orderly progress of the Work.

3.3 COMPLIANCE

- A. Do not permit materials not Complying with the provisions of this Section to be brought onto or to be stored at the job site.
- B. Promptly remove non-complying materials from the job site and replace with materials meeting the requirements of this Section.

3.4 WORKMANSHIP

- A. Produce joints which are tight, true, and well nailed or screwed, with members assembled in accordance with the Drawings and with pertinent codes and regulations.
- B. Selection of lumber pieces:
 - 1. Carefully select the members.
 - 2. Select individual pieces so that knots and obvious defects will not interfere with placing bolts or proper nailing, and will allow making of proper connections.
 - 3. Cut out and discard defects which render a piece unable to serve its intended function.
 - 4. Lumber may be rejected by the Architect, whether or not it has been installed, for excessive warp, twist, bow, crook, wane, checking, mildew, fungus, or mold, as well as for improper cutting and fitting.
 - 5. Do not shim any framing component.

3.5 GENERAL FRAMING

- A. General:
 - 1. Set horizontal and sloped members with crown up.
 - 2. Align adjacent timbers with 1/8" of plane.
 - 3. Provide solid blocking at all plywood panel perimeters.

3.6 FASTENING

- A. Nailing:
 - 1. Use only galvanized common wire nails or spikes of the dimension shown on the Nailing Schedule, except where otherwise specifically noted on the Drawings.
 - 2. For conditions not covered in the Nailing Schedule provide penetration into the piece receiving the point of not less than 1/2 the length of the nail or spike, provide, however, that 16d nails may be used to connect two pieces of 2" (nominal) thickness.
 - 3. Nail without splitting wood.
 - 4. Re-bore as required.
 - 5. Remove split members and replace with members complying with the specified requirements.
- B. Bolting:
 - 1. Drill holes 1/16" larger in diameter than the bolts being used.
 - 2. Drill straight and true from one side only.
 - 3. Do not bear bolt heads on wood, but use washers under head and nut where both bear on wood, and use washers under all nuts.
- C. Screws:
 - 1. For lag screws and wood screws, pre-bore holes same diameter as root of threads, enlarging holes to shank diameter for length of shank.

END OF SECTION

SECTION 06200 - FINISH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide wood, nails, bolts, screws, and other items needed, and perform finish carpentry for construction shown on the Drawings, as specified herein, and as needed for a complete and proper installation at all Shelf, ledger, and cabinet locations.
- B. Related work:
 - 1. Documents affecting the work of this Section include, but are not limited to, General Conditions, and Sections in Division 1 of these Specifications.
 - 2. Section 06100 - Rough Carpentry.
 - 3. Section 06405 – Cabinets and Fixtures

1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Comply with pertinent provisions of Section 01620.

PART 2 - PRODUCTS

2.1 GRADE STAMPS

- A. Identify lumber by grade stamp of the authority listed.
- B. Identify plywood as to species, grade, and glue type by the stamp of the American Plywood Association.

2.2 MATERIALS

- A. Provide materials in the quantities needed for the Work shown on the drawings, and meeting or exceeding the following standards of quality:

2.3 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 WORKMANSHIP

- A. Produce joints which are true, tight, and well nailed with all members assembled in accordance with the drawings.
- B. Jointing:
 - 1. Make joints to conceal shrinkage; miter exterior joints; cope interior joints; miter or scarf end-to-end joints.
 - 2. Install trim in pieces as long as possible, jointing only where solid support is obtained.
- C. Fastening:
 - 1. Install items straight, true, level, plumb, and firmly anchored in place.
 - 2. Where blocking or backing is required, coordinate as necessary with other trades to ensure placement or required backing and blocking in a timely manner.
 - 3. Nail trim with finish nails of proper dimension to hold the member firmly in place without splitting the wood.
 - 4. On exposed work, set nails for putty.
 - 5. Screw, do not drive, wood screws; except that screws may be started by driving and then screwed home.

3.3 INSTALLATION OF OTHER ITEMS

- A. Install items in strict accordance with the Drawings and the recommended methods of the manufacturer as approved by the Architect, anchoring firmly into position at the prescribed locations, straight, plumb, and level.

3.4 FINISHING

- A. Sandpaper finished wood surfaces, if applicable, thoroughly as required to produce a uniformly smooth surface, always sanding in the direction of the grain; except do not sand wood which is designed to be left rough.

3.5 CLEANING UP

- A. Keep the premises in a neat, safe, and orderly condition at all times during execution of this portion of the Work, free from accumulation of sawdust, cut-ends, and debris.
- B. Sweeping:
 - 1. At the end of each working day, and more often if necessary, thoroughly sweep surfaces where refuse from this portion of the Work has settled.
 - 2. Remove the refuse to the area of the job site set aside for its storage.
 - 3. Upon completion of this portion of the Work, thoroughly broom clean all surfaces.

END OF SECTION

SECTION 06400 - ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide architectural woodwork where shown on the Drawings, as specified herein, and as needed for a complete and proper installation.
 - 1. The owner will Provide wood base to be installed as per drawings. Save and reuse as possible.
- B. Related work:
 - 1. Documents affecting the work of this Section include, but are not limited to, General Conditions, and Sections in Division 1 of these Specifications.

1.2 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Product data: Within 30 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
 - 1. Materials list of items proposed to be provided under this Section;
 - 2. Shop Drawings in sufficient detail to show fabrication, installation, anchorage, and interface of the work of this Section with the work of adjacent trades;
 - 3. Samples of the proposed materials;

1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Codes and standards:
 - 1. In addition to complying with pertinent codes and regulations of governmental agencies having jurisdiction, comply with "Quality Standards" of the Architectural Woodwork Institute for the grade or grades specified.
 - 2. ANSI Z-124.1,2,3,4 & ANSI A-112.19.7 & 8.
 - 3. Provide certification to applicable standards.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Comply with pertinent provisions of Section 01620.

1.5 WARRANTY

- A. Manufacturer is to provide 1 year warranty .

PART 2 - PRODUCTS

2.1 GENERAL

- A. Provide architectural woodwork in the dimensions and arrangements shown on the Drawings, and in the standards and finishes described below.

2.2 OTHER MATERIALS

- A. Provide other materials, not specifically described, but required for a complete and proper installation, as selected by the Contractor and subject to the approval of the Architect.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected. Correct all sub-surface conditions prior to installment of finished wall and floor surfaces and vanities.

3.2 FIELD MEASUREMENTS

- A. Take necessary measurements on the field to assure proper dimensions for the work of this Section.

3.3 FABRICATION

- A. Fabricate the work of this Section in strict accordance with the approved Shop Drawings and the referenced standards.

3.4 INSTALLATION

- A. Install the work of this Section in strict accordance with the approved Shop Drawings and the referenced standards, anchoring all items firmly into position for long life under hard use. All fasteners are to be concealed.

3.5 COMPLIANCE

- A. The Owner reserves the right to request and pay for an inspection under the Quality Certification Program of the International Cast Polymer Alliance.
- B. In the event such inspection determines that the work of this Section does not comply with the specified requirements, immediately remove the non-complying items and

immediately replace them with items complying with the specified requirements, all at no additional cost to the Owner, and promptly reimburse the Owner for all costs associated with the inspections.

END OF SECTION.

SECTION 06405 - CABINETS AND FIXTURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide cabinetry and countertop where shown on the Drawings, as specified herein, and as needed for a complete and proper installation.
 - 1. Install Bathroom lavatories as shown on drawing schedules. See fixture schedule for blocking and other internal wall locations.
- B. Related work:
 - 1. Documents affecting the work of this Section include, but are not limited to, General Conditions, and Sections in Division 1 of these Specifications.

1.2 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Product data: Within 30 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
 - 1. Materials list of items proposed to be provided under this Section;
 - 2. Shop Drawings in sufficient detail to show fabrication, installation, anchorage, and interface of the work of this Section with the work of adjacent trades;
 - 3. Samples of the proposed materials;
 - 4. Evidence satisfactory to the Architect that the work of this Section will be fabricated by a member of the Architectural Woodwork Institute.
 - 5. Sample base and wall cabinets complete including all hardware, finishes, countertop, fasteners, etc.

1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Codes and standards:
 - 1. Comply with FHA and HUD 'severe use' classification. Provide written confirmation.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Comply with pertinent provisions of Section 01620.

PART 2 - PRODUCTS

2.1 GENERAL

A. Provide cabinets and countertops in the dimensions and arrangements shown on the Drawings, and in the standards and finishes described below and/or as per manufacturer standards.

B. Cabinet Construction:

1. Face frames or stiles: All to be per "Smart" "Ultimate/Max Construction" specifications and/or as per specifications shown below.
 - a. Cabinets shall be constructed with front frame members of solid lumber, kiln dried suitable for natural finish and of 3/4" nominal thickness.
 - b. All frame members shall be mortised and tenoned with joints glued and stapled.
 - c. Stiles shall be min. 1-1/2" wide, mulls min. 3" wide, and rails min. 1-3/4" wide.
2. End panels:
 - a. End panels for concealed cabinet ends shall be 5 ply, 1/2" softwood exterior plywood.
 - b. End panels for exposed cabinet ends shall be 5 ply, 1/2" rotary veneer exterior plywood.
 - c. All end panels shall be dadoed to receive backs, shelves, bottoms, and wall tops. d. All end panels shall be let into face frame rails.
3. Shelves, if any:
 - a. 1/2" thick, 2-2 grade hardwood plywood rotary sawn oak veneer with exterior glue and solid wood banded exposed edges.
 1. Base cabinet middle shelf is to be fixed, full depth, with pull out shelf above.
 2. Base cabinets bottoms are to have pull out shelves above.
 3. Wall cabinet shelves are to be fixed, and full depth.
 4. Provide same as shelves for wall cabinets tops and bottoms.
 5. Pull out shelves to have rotary sawn veneer plywood as per shelves, with 1-1/4 tall x 1/4" thick solid wood perimeters, with eased edges.
4. Backs:
 - a. Cabinet backs of 1/4" softwood exterior plywood shall be attached to minimum 3/4" x 3-1/2" solid wood hanging rails which shall be mortised to receive back and bottom.
 - b. Provide 3/4"x3-1/2" solid lumber installation cleat running continuous at the top and bottom of wall cabinets, bottom of base cabinets.
 - c. Provide 3/4"x7-1/4" solid lumber installation cleat running continuous at the bottom of base cabinets.
5. Doors:
 - a. Doors of 3/4" solid wood lumber rails and stiles, style and color to be selected by owner. Routed solid wood panels. Edge glue panel boards.
 - b. Fill and sand edges smooth prior to finishing. c. Provide (2) dimpled rubber bumpers per door.
6. Base bottoms:
 - a. Base cabinet bottoms of 1/2" veneer plywood w/ exterior glue shall be let into ends and back rails and shall be supported by 1"x6" pressure treated lateral braces at 24" O.C. and on ends.

- b. Toe kick boards are to be 3/4" CCA pressure treated solid lumber.
- 7. Drawers, if any:
 - a. Drawers shall be constructed as specified. Sides and backs shall be 5/8" solid pine lumber dovetailed into joints.
 - b. Back of drawer shall be dadoed into sides, and drawer backs, sides, and fronts shall be dadoed to receive drawer bottoms.
 - c. All drawer bottoms to be 1/4" softwood plywood.
 - d. Drawer fronts are to be as for doors.
 - e. Provide (2) dimpled rubber bumpers per drawer. 8.

Finish:

- a. Exposed surfaces and interiors of cabinets shall be factory finished consisting of stain, sealer, and varnish coats, lightly sanded between applications.
 - b. Color is to be "Carmel" water resistant powder coated.
 - c. Finish exposed ends of all top sections, including removable top sections and adjacent sections exposed by that removal with plastic laminate to match top. Finish exposed ends of splashes in like manner.
 - d. Splashes to be 4" high above countertop surface.
9. Hardware:
- a. Hinges: Heavy duty, self closing, wrap around type, corrosion resistant, manufacturer's standard.
 - b. Provide (2) rubber or elastomeric bumpers for each door and drawer. Bumpers are to be located and of sufficient thickness to prevent doors and drawers from hitting the face of their respective cabinet frames.
 - c. Door and Drawer Pulls: 4" brushed stainless steel 1/4" diameter wire pulls.
10. Fillers and Moldings:
- a. Provide as required for a completed and finished installation, and to insure proper drawer and door opening clearances.

D.APPROVED MANUFACTURERS:

- 1. Cabinets:
 - a. Smart Cabinetry - "Lexington" ,Maple, contact: Williams Distributing
- 2. Countertops: Post formed with integral 4" back splash
 - a. Formica, Wilsonart over MDF substrate. Glue and dado all joints.
 - b. Others as approved by Owner and Architect prior to bidding.
 - c. Lowered work space countertop with large radius to be "shop made" with square edge with 4" separate backsplash.

2.2 OTHER MATERIALS

- A. Provide other materials, not specifically described, but required for a complete and proper installation, as selected by the Contractor and subject to the approval of the Architect.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 PREPARATION FOR INSTALLATION

- A. Coordinate as required with other trades to assure proper and adequate provisions in the work of those trades for interface with the work of this Section.
- B. Make necessary measurements in the field to assure proper dimensions for the work of this Section.
- C. Prior to start of installation, verify that the work of other trades is sufficiently complete to properly permit this installation to proceed.

3.3 INSTALLATION

- A. Install the work of this Section at the locations shown on the Drawings, and in accordance with the approved Shop Drawings.
 - 1. Scribe units to wall, floor, and other surfaces as appropriate, with not more than 1/32" clear between the cabinet or fixture and the abutting permanent surface, and with no change of clearance in excess of 0.01" in and 4".
 - 2. Set each unit square, level, plumb, and aligned within a tolerance of one in 1000 vertically and horizontally, and within 1/4" of the designated location for free-standing work.
 - 3. Install in strict accordance with the approved Shop Drawings and the referenced standards, anchoring all items firmly into position for long life under hard use.
- B. Coordinate the time of installation with availability of other trades to make required utility connections.
 - 1. Provide access panels as needed for connection and maintenance of utilities.
 - 2. Test each plumbing and electrical item through at least 5 operating cycles, and adjust as needed to achieve optimum operation.
- C. Upon completion of installation, thoroughly clean each item by use of only such cleaning materials as are recommended by the manufacture of the item being cleaned.
- D. Touch-up scratches and abrasions to be completely invisible to the unaided eye from a distance of five feet. Doors warped more than 1/8" out of plane must be replaced.

END OF SECTION

SECTION 072100 - THERMAL INSULATION

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data for all insulation areas.

PART 2 - PRODUCTS

2.1 INSULATION PRODUCTS

- A. Surface-Burning Characteristics: ASTM E 84, and as follows:
 - 1. Flame-Spread Index: 25 or less where exposed; otherwise, as indicated in Part 2 "Insulation Products" Article.
 - 2. Smoked-Developed Index: 450 or less.
 - 3. Usually select Type IV in first paragraph below if extruded polystyrene is used.
- B. Molded-Polystyrene Board Insulation: ASTM C 578, with flame-spread index of 75 or less.
- C. Flexible Glass-Fiber-Board Insulation: ASTM C 612, Type IA or ASTM C 553, Types I, II, and III; faced; nominal density of 1.5 lb/cu. ft. with flame-spread index of 25 or less.
- D. Glass-Fiber-Board Insulation: ASTM C 612, Type IA or Types IA and IB, foil faced, nominal density of 2.25 lb/cu. ft. with flame-spread index of 25 or less.
- E. Slag-Wool-Fiber/Rock-Wool-Fiber Board Insulation: ASTM C 612, foil faced on 1 side; nominal density of 4 lb/cu. ft. with flame-spread index of 25 or less.
- F. Mineral-Fiber-Blanket Insulation: ASTM C 665, Type III, Class A, foil faced on 1 side with fibers manufactured from glass, slag or rock wool, with flame-spread index of 25 or less.
- G. Cellulosic-Fiber Loose-Fill Insulation: ASTM C 739; chemically treated for flame-resistance, processing, and handling characteristics.
- H. Glass-Fiber Loose-Fill Insulation: ASTM C 764, Type 1, pneumatic application, with flame-spread index of 25 or less.
- I. Self-Supported, Spray-Applied, Cellulosic Insulation: ASTM C 1149, wood-based cellulosic fiber, Type I, applied with liquid adhesive, chemically treated for flame-resistance, processing, and handling characteristics.

2.2 ACCESSORIES

- A. Vapor Retarder: Fire-retardant, reinforced polyethylene 6 mils thick.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install insulation in areas and in thicknesses indicated or required to produce R-values indicated. Cut and fit tightly around obstructions and fill voids with insulation.
- B. Except for loose-fill insulation and insulation that is friction fitted in stud cavities, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.
- C. Place loose-fill insulation to comply with ASTM C 1015.
 - 1. Comply with the CIMA's Special Report #3, "Standard Practice for Installing Cellulose Insulation."
- D. Extend vapor retarder to extremities of areas to be protected from vapor transmission. Secure in place with adhesives or other anchorage. Locate seams at framing members, overlap, and seal with tape.

END OF SECTION 072100

SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data, Shop Drawings, and Samples.
- B. Comply with SMACNA's "Architectural Sheet Metal Manual." Conform to dimensions and profiles shown unless more stringent requirements are indicated.
- C. Coordinate installation of sheet metal flashing and trim with interfacing and adjoining construction to provide a leak proof, secure, and noncorrosive installation.

PART 2 - PRODUCTS

2.1 SHEET METAL

- A. Aluminum Sheet: ASTM B 209 , alloy as standard with manufacturer for finish required, not less than 0.032 inch thick with mill finish.
 - 1. Finish: Manufacturer's standard to match existing as necessary for replacement at rake and eave locations where damage may occur with shingle and drip edge replacement at time of tear-off and re-shingle.
- B. Stainless-Steel Sheet: ASTM A 240/A 240M, Type 304, with No. 2D finish; not less than 0.016 inch thick as necessary at locations that may be affected by tear-off and re-shingle.
- C. Zinc-Tin Alloy-Coated Stainless Steel: ASTM A 240/A 240M, Type 304, fully annealed stainless-steel sheet to match as necessary at locations that may be affected by tear-off and re-shingle.

2.2 ACCESSORIES

- 1. Exposed Fasteners: Heads matching color of sheet metal roofing using plastic caps or factory-applied coating.
 - 2. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.
 - 3. Fasteners for Copper: Copper, hardware bronze, or Series 300 stainless steel.
 - 4. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
 - 5. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.
 - 6. Fasteners for Zinc-Tin Alloy-Coated Stainless-Steel Sheet: Series 300 stainless steel.
 - 7. Fasteners for Metallic-Coated Steel Sheet: Hot-dip galvanized steel or Series 300 stainless steel.
- B. Solder for Copper: ASTM B 32, Grade Sn50.

- C. Solder for Stainless Steel: ASTM B 32, Grade Sn60, with acid flux of type recommended by stainless-steel sheet manufacturer.
- D. Solder for Zinc-Tin Alloy-Coated Stainless Steel: ASTM B 32, 100 percent tin.
- E. Butyl Sealant: ASTM C 1311, solvent-release butyl rubber sealant.
- F. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D 1187.

2.3 FABRICATION

- A. Fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of the item indicated.
- B. Expansion Provisions: Where lapped expansion provisions cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints.
- C. Fabrication Tolerances: Fabricate sheet metal flashing and trim that is capable of installation to tolerances specified in MCA's "Guide Specification for Residential Metal Roofing."

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with SMACNA's "Architectural Sheet Metal Manual." Allow for thermal expansion; set true to line and level. Install Work with laps, joints, and seams permanently watertight and weatherproof; conceal fasteners where possible.
- B. Sealed Joints: Form non-expansion, but movable, joints in metal to accommodate elastomeric sealant to comply with SMACNA standards.
- C. Fabricate nonmoving seams in sheet metal with flat-lock seams. For aluminum, form seams and seal with epoxy seam sealer. Rivet joints for additional strength as necessary.
- D. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Edges of sheets to be soldered to a width of 1-1/2 inches, except where pre-tinned surface would show in finished Work.
 - 1. Do not solder metallic-coated steel and aluminum sheet.
 - 2. Do not pretin zinc-tin alloy-coated stainless steel.
 - 3. Do not use torches for soldering. Heat surfaces to receive solder and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.
- E. Aluminum Flashing and Trim: Coat back side of aluminum flashing and trim with bituminous coating where it will contact wood, ferrous metal, or cementitious construction.

- F. Separate dissimilar metals with a bituminous coating or polymer-modified, bituminous sheet underlayment.

END OF SECTION 076200

SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data and color Samples.
- B. Environmental Limitations: Do not proceed with installation of joint sealants when ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.

PART 2 - PRODUCTS

2.1 JOINT SEALANTS

- A. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under service and application conditions.
- B. Sealant for Use in Interior Joints in Ceramic Tile and Other Hard Surfaces in Kitchens and Toilet Rooms and Around Plumbing Fixtures:
 - 1. Single-component, mildew-resistant silicone sealant, ASTM C 920, Type S; Grade NS; Class 25; for Use NT; formulated with fungicide.
- C. Sealant for Interior Use at Perimeters of Door and Window Frames:
 - 1. Acrylic latex or siliconized acrylic latex, ASTM C 834, Type OP, Grade NF.
- D. Acoustical Sealant:
 - 1. Non-sag, paintable, non-staining latex sealant complying with ASTM C 834 that effectively reduces airborne sound transmission as demonstrated by testing according to ASTM E 90.

2.2 MISCELLANEOUS MATERIALS

- A. Provide sealant backings of material that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.
- D. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with ASTM C 1193.
- B. Install sealant backings to support sealants during application and to produce cross-sectional shapes and depths of installed sealants that allow optimum sealant movement capability.
- C. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- D. Acoustical Sealant Installation: At sound-rated assemblies and elsewhere as indicated, seal perimeters, control joints, openings, and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions. Comply with ASTM C 919.

END OF SECTION 079200

SECTION 08 11 13- STEEL DOORS AND FRAMES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Flush Steel Doors.
- B. Steel frames.
- C. Hollow Metal Framing Systems.

1.2 RELATED SECTIONS

- A. Section 08 14 00 - Wood Doors.
- B. Section 08 71 00 - Door Hardware.
- C. Section 09 90 00 - Painting and Coating.

1.3 REFERENCES

- A. ANSI/NFPA 80 - Standard for Fire Doors and Windows.
- B. ANSI/DHI A 115.IG - Installation Guide for Doors and Hardware.
- C. ANSI/BHMA A 156 - Specifications for Hardware Preparations in Standard Steel Doors and Frames.
- D. ANSI/BHMA A156.7 - Hinge Template Dimensions.
- E. ANSI A 250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors and Hardware Reinforcing.
- F. ANSI/SDI A 250.8 - SDI-100 Recommended Specifications for Standard Steel Doors and Frames.
- G. ANSI A 250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.
- H. ANSI A 250.11 - Recommended Erection Instructions for Steel Frames.
- I. ANSI/UL 10C - Standard for Safety for Positive Pressure Fire Tests of Door Assemblies.
- J. ICC 500 Standard for the Design and Construction of Storm Shelters.
- K. ASTM - American Society for Testing and Materials
- L. ASTM A 366/A 366M - Standard Specification for Steel, Sheet, Carbon, Cold-Rolled, Commercial Quality.
- M. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

- N. ASTM A 924 - Specification for General Requirements for Steel Sheet, Metallic Coated by the Hot Dip Process.
- O. ASTM A 1008/1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable.
- P. ASTM E 90 - Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions.
- Q. ASTM E 152 - Standard Methods of Fire Tests of Door Assemblies.
- R. ASTM E 413 - Classification for Rating Sound Insulation.
- S. SDI - Steel Door Institute
- T. SDI-111 - Recommended Standard Details for Steel Doors & Frames.
- U. NAAMM/HHMA-820 TN01 - Grouting Hollow Metal Frames
- V. NAAMM/HMMA - Hollow Metal Manufacturers Association
- W. NAAMM/HHMA-820 TN03 - Guidelines for Glazing of Hollow Metal Transom, Sidelight and Windows
- X. NAAMM/HMMA-840 - Guide Specification for Installation and Storage of Hollow Metal Doors and Frames.
- Y. NFPA 252 - Standard Method of Fire Tests of Door Assemblies.
- Z. Federal Emergency Management Agency (FEMA) 361 Guidelines.
- AA. UL - Building Materials Directory; Underwriters Laboratories Inc.
- BB. WH - Certification Listings; Warnock Hersey International Inc.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00.
- B. Product Data: Manufacturer's standard details and catalog data indicating compliance with referenced standards, and manufacturer's installation instructions.
- C. Certificates:
 1. Manufacturer's certification that products comply with referenced standards.
 2. Evidence of manufacturer's membership in the Steel Door Institute.
- D. Shop Drawings: Door, frame, and hardware schedule in accordance with SDI 111D. Show types, quantities, dimensions, specified performance, and design criteria, materials and similar data for each opening required.
 1. Indicate frame configuration, anchor types and spacing, location of cutouts for hardware, reinforcement, to ensure doors and frames are properly prepared and coordinated to receive hardware.
 2. Indicate door elevations, internal reinforcement, closure method, and cutouts for glass lights and louvers.

- E. Samples: 18 by 24 inches (457 by 610 mm) cut away sample door with provisions for lockset, hinge and corner section of frame.

1.5 QUALITY ASSURANCE

- A. Supplier: A direct account of the manufacturer who has on permanent staff, an Architectural Hardware Consultant (AHC), a Certified Door Consultant (CDC) or an Architectural Openings Consultant (AOC), who will be available to consult with the Architect and Contractor regarding matters affecting the door and frame openings.
- B. Fire Rated Doors and Frames: Underwriters' Laboratories and Warnock Hersey, labeled fire doors and frames:
 - 1. Label fire doors and frames in accordance with Underwriters Laboratories standard UL10C Positive Pressure Fire Tests of Door Assemblies.
 - 2. Construct and install doors and frames to comply with current issue of NFPA 80.
 - 3. Manufacture Underwriters' Laboratories labeled doors and frames under the UL Follow Up Service (FUS) and in strict compliance to UL procedures, and provide the degree of fire protection, heat transmission and panic loading capability indicated by the opening class.
 - 4. Manufacture Intertek Testing Services / Warnock Hersey labeled doors and frames under the ITS/WH factory inspection program and in strict compliance to ITS/WH procedures, and provide the degree of fire protection capability indicated by the opening class.
 - 5. Manufacture FM labeled doors and frames under the FM factory inspection program and in strict compliance to FM procedures, and provide the degree of fire protection, heat transmission and panic loading capability indicated by the opening class.
 - 6. Affix a physical label or approved marking to each fire door or fire door frame, at an authorized facility as evidence of compliance with procedures of the labeling agency. Label embossment is not permitted.
 - 7. Conform to applicable codes for fire ratings. It is the intent of this specification that hardware and its application comply or exceed the standards for labeled openings. In case of conflict between types required for fire protection, furnish type required by NFPA and UL.
 - 8. Fire door assemblies in exit enclosures and exit passageways; maximum transmitted temperature end point rating of not more than 250 degrees F (121 degrees C) above ambient at the end of 30 minutes of the standard fire test exposure.
- C. Manufacturer Qualifications: Member of the Steel Door Institute.
- D. Installer: Minimum five years documented experience installing products specified this Section.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Handle, store and protect products in accordance with the manufacturers printed instructions and ANSI/SDI A250.10 and NAAMM/HMMA 840.
- B. Store doors vertically in a dry area, under a proper vented cover. Place on 4 inch (102 mm) high wood sills to prevent rust or damage. Provide 1/4-inch (6 mm) space between doors to promote air circulation.
- C. Store frames in an upright position with heads uppermost under cover. Place on 4 inch (102 mm) high wood sills to prevent rust and damage. Store assembled frames five units

maximum in a stack with 2 inch (51 mm) space between frames to promote air circulation.

- D. Do not use non-vented plastic or canvas shelters to prevent rust or damage.
- E. Should wrappers become wet, remove immediately.

1.7 COORDINATION

- A. Coordinate Work with other directly affected sections involving manufacture or fabrication of internal cutouts and reinforcement for door hardware, electric devices and recessed items.
- B. Coordinate Work with frame opening construction, door and hardware installation.
- C. Sequence installation to accommodate required door hardware.
- D. Verify field dimensions for factory assembled frames prior to fabrication.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Steelcraft or Architect approved equal.
11819 N. Pennsylvania St.; Carmel, IN 46032; Toll Free Tel: 877-578-1247;
- B. Provide all steel doors and frames from a single manufacturer.

2.2 DOORS

- A. General: Construct exterior/interior doors to the following designs and gages:
 - 1. Interior Doors: Cold-rolled steel, ASTM A 1008/A 1008M:
 - a. Thickness:
 - 1) 20 gage (0.8 mm).
 - 2) 18 gage (1 mm).
 - 2. Interior Doors: Zinc-Iron Alloy-Coated galvanized steel, ASTM A 653, Class A60:
 - a. Thickness:
 - 1) 20 gage (0.8 mm).
 - 2) 18 gage (1 mm).
 - 3. Doors and frames shall have no less than 45min. rating for 1 hr. corridor wall locations.
 - 4. Include galvanized components and internal reinforcements.
 - 5. Prime Finish Doors: Clean, phosphatize and factory prime painted doors indicated on Door Schedule as HM.
 - 6. Hardware Reinforcements:
 - a. Hinge reinforcements for full mortise hinges: minimum 7 gage (4.7 mm).
 - b. Lock reinforcements: minimum 16 gage (1.3 mm).
 - c. Closer reinforcements: minimum 14 gage (1.7 mm) steel, 20-inch (508 mm) long.
 - d. Galvanized doors: include galvanized hardware reinforcements.
 - e. Projection welded hinge and lock reinforcements to the edge of the door.
 - f. Provided adequate reinforcements for other hardware as required.
- B. Full Flush Doors:

1. Acceptable Product: Steelcraft L Series.
 - a. Performance:
 - 1) Physical performance: 5 million cycles per ANSI A250.4.
 - 2) Sound attenuation (gasketed):
 - a) Honeycomb core, 35 STC.
 - b) Polystyrene core, 25 STC.
 - 3) Thermal performance (gasketed), ASTM C1363.
 - a) Honeycomb core, 0.653 U-factor.
 - b) Polystyrene core, 0.48 U-factor.
 - c) Polyurethane core, 0.498 U-factor.
 - 4) Thermal performance (gasketed), ASTM C236.
 - a) Honeycomb core, 0.363 U-factor.
 - b) Polystyrene core, 0.263 U-factor.
 - c) Polyurethane core, 0.09 U-factor.
2. Acceptable Product: Steelcraft B Series.
 - a. Performance:
 - 1) Physical performance: 3 million cycles, ANSI A250.4
 - 2) Sound attenuation (gasketed), 40 STC
 - 3) Thermal performance (gasketed): ASTM C1363: 0.69 U-factor
 - 4) Thermal performance (gasketed): ASTM C 236: 2.29 U-factor
3. Door Thickness: 1-3/4 inches (45 mm).
4. Door faces reinforced and sound deadened as follows:
 - a. Honeycomb Core: Reinforced, stiffened, sound deadened and insulated with impregnated Kraft honeycomb core completely filling the inside of the doors and laminated to inside faces of both panels using contact adhesive applied to both panels and honeycomb core.
 - b. Polystyrene Core: Full 1-3/4 inches (45 mm) thick rigid polystyrene, adhered to inside of door faces and polystyrene core with waterproof adhesive for bond strength and rust prevention.
 - c. Polyurethane Core: Full 1-3/4 inches (45 mm) thick rigid polyurethane, adhered to inside of door faces and polyurethane core with waterproof adhesive for bond strength and rust prevention.
 - d. Steel Stiffened Core: Vertical stiffeners, hat-shaped, minimum 20 gage (0.8 mm) steel, type same as face sheet material, spaced 6 inches (150 mm) apart and welded to inside of face sheets 5 inches (127 mm) on center; full-thick glass fiber insulation between stiffeners.
5. Vertical edge seams: Provide doors with continuous vertical mechanical inter-locking joints at lock and hinge edges. Finish edges as follows:
 - a. Visible Interlocked Edge: Continuous vertical mechanical interlocking joints with visible edge seams and continuous bead of structural epoxy in internal vertical connection
 - b. Filled Vertical Edges (F): Continuous vertical mechanical interlocking joints with internal epoxy seal; edge seams epoxy filled and ground smooth.
 - c. Welded Vertical Edges (W): Continuous vertical mechanical interlocking joints; edge seams welded, epoxy filled, and ground smooth.
6. Bevel hinge and lock door edges 1/8 inch (3 mm) in 2 inches (50 mm). Square edges on hinge and/or lock stiles are not acceptable.
7. Reinforce top and bottom of doors with galvanized 14 gage (1.7 mm), welded to both panels.
8. Fire Rating: Supply door units bearing Labels for fire ratings indicated in Door Schedule for the locations indicated. See 2.2 A.3 above.

2.3 DOOR FRAMES

- A. General: Construct exterior/interior metal door frames to the following designs and gages;
 - 1. Interior Frames in stud wall construction: cold rolled steel, ASTM A 1008/A 1008M.
 - a. Thickness:
 - 1) 18 gage (1 mm).
 - 2) 16 gage (1.3 mm).
 - 2. Interior KD Drywall Frames (Slip-On construction): cold rolled steel, ASTM A 1008/A 1008M.
 - a. Thickness:
 - 1) 18 gage (1 mm).
 - 2) 16 gage (1.3 mm).
 - 3. Include galvanized components and internal reinforcements with galvanized frames.
- B. Flush Steel Frames:
 - 1. Acceptable Product: Steelcraft F-Series.
 - a. Performance:
 - 1) Physical performance: 5 million cycles per ANSI A250.4
 - 2. Acceptable Product: Steelcraft MU-Series.
 - a. Performance:
 - 1) Physical performance: 5 million cycles per ANSI A250.4
 - 3. Construction: Three-piece knock-down frames; mitered joints, with locking tab at each head and jamb intersection.
 - 4. Construction: Factory-welded three sided frames.
 - a. Face welded: Weld miter joints between head and jamb faces completely along their length either internally or externally. The remaining elements of the frame profile (soffit, stop and rabbets) are not welded. Grind and finish face joints smooth.
 - b. Full profile welded:
 - 1) Weld miter joints between head and jamb faces completely along their length either internally or externally.
 - 2) Internally weld perimeter profile joints full length of soffit and rabbets with hairline seams on external meeting surfaces. Grind and finish face joints smooth.
 - 5. Profile: Frame to wrap hall wall and or:
 - a. 2 inches (51 mm) face dimension with 5/8 inch (16 mm) high stop, and types and throat dimensions indicated on the Door Schedule.
 - b. 1 inch (25 mm) face dimension with 5/8 inch (16 mm) high stop, and types and throat dimensions indicated on the Door Schedule.
 - c. Custom special face dimension with 5/8 inch (16 mm) high stop, and types and throat dimensions indicated on the Door Schedule.
 - 6. Provide following reinforcement and accessories:
 - a. Preparation for 4-1/2 inches (114 mm) high, standard weight, or heavy weight, full mortise hinges; with plaster guard. Minimum 7 gauge (4.7 mm) steel.
 - b. Hinge Preparation for 5 inch (127 mm) high, universal standard weight, or heavy weight, full mortise hinges; with plaster guard. Minimum 7 gauge (4.7 mm) steel.
 - c. Provide high frequency hinge reinforcement for top hinge on all exterior, cross corridor, and stairwell frames in accordance with SDI 111-H, Example A Application where full mortise hinges are specified.

- d. Preparation for continuous hinge reinforcement. Minimum 7 gauge (4.7 mm) steel.
 - e. Strike preparation (single doors) for 4-7/8 inch (123 mm) universal strike; with plaster guard. Minimum 16 gauge (1.3 mm) steel.
 - f. Closer preparation minimum 14 gauge (1.7 mm) steel.
 - g. Silencers. Prepare frames to receive inserted type door silencers, 3 per strike jamb on single doors, and 2 per head for pair of doors. Stick-on silencers are not permitted.
- 7. Fire Rating: Supply frame units bearing Labels for fire ratings indicated in Door Schedule for the locations indicated.
 - 8. Finish: Factory prime finish in accordance with ANSI A 250.10.
- C. Steel Frames for Drywall:
- 1. Acceptable Product: Steelcraft-DW Series.
 - 2. Performance:
 - a. Physical performance: 2 million cycles per ANSI A250.4
 - 3. Acceptable Product: Steelcraft K-Series.
 - 4. Construction: Three-piece knock-down frames; mitered joints, with locking tab at each head and jamb intersection.
 - 5. Profile:
 - a. Profile: 2 inches (51 mm) face dimension, 1/2 inch (13 mm) backbend with 5/16 inch (8 mm) return, 5/8 inch (16 mm) high stop, types and throat dimensions indicated.
 - 6. Provide following reinforcement and accessories:
 - a. Hinge preparation for 4-1/2 inches (114 mm) high, full mortise hinges, 0.134 inch (3.4 mm) or 0.180 inch (4.6 mm) leaf thickness.
 - b. Hinge preparation for 5 inches (127 mm) high full mortise hinges, 0.134 inch (3.4 mm) or 0.180 inch (4.6 mm) leaf thickness.
 - c. Strike preparation (single doors) for 4-7/8 inch (125 mm) universal strike; with plaster guard.
 - d. Closer reinforcement: minimum 14 gage (1.7 mm) steel.
 - e. Projection weld hinge and strike reinforcements to the door frame.
 - f. Provide metal plaster guards for all mortised cutouts.
 - g. Include galvanized hardware reinforcements in all galvanized frames.
 - h. Silencers. Prepare frames to receive inserted type door silencers, 3 per strike jamb on single doors, and 2 per head for pair of doors. Stick-on silencers are not permitted.
 - 7. Anchors: Locate adjustable anchors in each jamb 4 inches (102 mm) from the top of the door opening to hold frame in rigid alignment.
 - a. Provide security anchor at strike jambs on all frames 7 foot 6 inches (2286 mm) high and over.
 - b. Base Anchors for DW Series: Lock-in type; adjustable for stud depth.
 - c. Base Anchors for K Series: Exposed fastener type; recessed hole at base of jamb for countersunk fastener installation.
 - 8. Fire Rating: Supply frame units bearing Labels for fire ratings indicated in Door Schedule for the locations indicated.
 - 9. Finish: Factory prime finish.

2.4 ACCESSORIES

- A. Anchors: Manufacturer's standard framing anchors, specified in manufacturer's printed

installation instructions for project conditions.

- B. Door Bottom:
 - 1. Acceptable Product: Steelcraft Fas-Seal Door Bottom.
 - 2. Characteristics: Electrometric, continuous strip, screw-attached to recessed bottom door channel for concealed installation; double-sealing; acceptable for fire-rated doors up to 3 hour rating.
- C. Plaster Guards: Same material as door frame, minimum 24 gage (0.5 mm) minimum; provide for all strike boxes.
- D. Silencers: Resilient rubber, Inserted type, three per strike jamb for single openings and two per head for paired openings. Stick-on silencers shall not be permitted except on hollow metal framing systems.

2.5 FABRICATION

- A. Steel Frames:
 - 1. Three-piece knock-down frames: Head and jamb intersecting corners die-cut, mitered at 45 degrees, with locking tabs for rigid connection when assembled.
 - 2. Factory-welded frames: Head and jamb intersecting corners mitered at 45 degrees, with back welded joints ground smooth.
 - a. Continuous face weld the joint between the head and jamb faces along their length either internally or externally. Grind, prime paint, and finish smooth face joints with no visible face seams.
 - b. Externally weld, grind, prime paint, and finish smooth face joints at meeting mullions or between mullions and other frame members per a current copy of ANSI/SDI A250.8.
 - c. Provide temporary steel spreaders (welded to the jambs at each rabbet of door openings) on welded frames during shipment. Remove temporary steel spreaders prior to installation of the frame.
 - 3. Provide cutouts and reinforcements required for electrical and security components specified elsewhere in this specification.

2.6 FINISHES

- A. Chemical Treatment: Treat steel surfaces to promote paint adhesion.
- B. Factory Prime Finish: Meet requirements of ANSI A 250.10.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that project conditions are acceptable before beginning installation of frames.
 - 1. Verify that completed openings to receive knock-down wrap-around frames are of correct size and thickness.
 - 2. Verify that completed concrete or masonry openings to receive butt type frames are of correct size.
- B. Do not begin installation until conditions have been properly prepared.
- C. Correct unacceptable conditions before proceeding with installation.

3.2 INSTALLATION

- A. Install doors and frames in accordance with manufacturer's printed installation instructions and with Steel Door Institute's recommended erection instructions for steel frames ANSI A250.11 and NAAMM/HMMA 840.
- B. Fire Doors and Frames: Install in accordance with ANSI/NFPA 80.
- C. Remove temporary steel spreaders prior to installation of frames.
- D. Set frames accurately in position; plumb, align and brace until permanent anchors are set. After wall construction is complete, remove temporary wood spreaders.
 - 1. Field splice only at approved locations indicated on the shop drawings.
 - 2. Weld, grind, and finish as required to conceal evidence of splicing on exposed faces.
- E. Provide full height 3/8 inch (9.5 mm) to 1-1/2 inch (38 mm) thick strip of polystyrene foam blocking at frames requiring grouting where continuous hinges are specified. Apply the strip to the back of the frame, where the hinge is to be installed, to facilitate field drilling or tapping.

3.3 FIELD QUALITY CONTROL

- A. Fire-Rated Door Assembly Testing:
 - 1. Upon completion of the installation, test each fire door assembly to confirm proper operation of its closing device and verify that it meets all criteria of a fire door assembly per NFPA 80 2007.
 - 2. Record shall list the fire door assembly and include the door number with an itemized list of hardware set components for each door opening and location in the facility.

3.4 ADJUST AND CLEAN

- A. Adjust doors for proper operation, free from binding or other defects.
- B. Clean and restore soiled surfaces. Remove scraps and debris and leave site in a clean condition.
- C. Prime Coat Touch-Up: Immediately after erection, sand smooth rusted or damaged areas of prime coat, and apply touch-up of compatible air-drying primer.

3.5 PROTECTION

- A. Protect installed products and finished surfaces from damage during construction.

END OF SECTION

SECTION 081416 - FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 SUMMARY

- A. Related Documents:
 - 1. Drawings and general provisions of the Subcontract apply to this Section.
 - 2. Review these documents for coordination with additional requirements and information that apply to work under this Section.
- B. Section Includes:
 - 1. Flush solid core wood doors, Heavy duty Pocket door frames.
- C. Related Sections:
 - 1. Division 01 Section "General Requirements."
 - 2. Division 08 Section "Hardware".

1.2 REFERENCES

- A. General:
 - 1. The following documents form part of the Specifications to the extent stated. Where differences exist between codes and standards, the one affording the greatest protection shall apply.
 - 2. Unless otherwise noted, the referenced standard edition is the current one at the time of commencement of the Work.
 - 3. Refer to Division 01 Section "General Requirements" for the list of applicable regulatory requirements.
- B. ASTM E90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
- C. National Fire Protection Association (NFPA) 80: Fire Doors and Windows.
- D. NFPA Standard 252: Fire Tests for Door Assemblies.
- E. Underwriters Laboratories (UL) Standard 10B: Fire Tests of Door Assemblies.
- F. UL Standard 10C: Positive Pressure Fire Tests of Door Assemblies.
- G. Window and Door Manufacturers' Association (WDMA) Industry Standard I.S.1 Series - Industry Standard for Wood Flush Doors.
- H. Woodwork Institute (WI): Manual of Millwork Standards , Section 12.

1.3 SUBMITTALS

- A. Product Data: Manufacturer's product literature, specifications and installation instructions.
- B. Certifications: Certification of compliance with applicable requirements of WDMA I.S.1 and WIC.
- C. Closeout Submittals: Warranty.

1.4 QUALITY ASSURANCE

- A. Comply with requirements of WDMA I.S.1 and WIC. Where conflicts occur, the more stringent shall apply.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle wood doors in accordance with requirements of WIC and manufacturer's recommendations.
- B. Do not deliver or install doors until conditions for temperature and relative humidity have been stabilized in accordance with WIC requirements.

1.6 WARRANTY

- A. Provide for replacing, re-hanging and refinishing wood doors exhibiting manufacturing or material defects.
- B. Warranty Period:
 - 1. Interior Doors: Life of the original installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS:DOORS

- A. Masonite, "Legacy" molded wood grain, solid core door, pre-finished
 - 1. Bathroom- Flush, White" Finish, Accessories – 24x32 poly-vinyl, white kick plate, both (2) sides
 - 2. Closet – Flush panel, white, similar to bathroom door

2.3 MATERIALS

- A. Solid Core Flush Wood Doors:
 - 1. WIC Custom grade, 1 ¾ inches thick, staved lumber or particleboard core, 5-ply construction.
 - 2. Face Veneer: Medium density overlay (MDO) for painted finish.
 - 3. Face Veneer: White birch for transparent/stain finish, matched.
 - 4. Adhesive: interior Doors - Type II.
 - 5. Blocking for Hardware: Provide blocking for closers on all doors whether or not closers are scheduled for doors that are to be replaced with pre-hung frames. N/A at metal frames.

2.4 FABRICATION

- A. Fabricate doors in accordance with requirements of specified standards.
 - 1. Factory prefit wood doors.
 - 2. Shop prepare doors to receive hardware; refer to Division 08 Section "Door Hardware"- for hardware requirements, templates, and locations.
 - a. Factory machine doors for mortise hardware as applicable.
 - 3. Provide maximum allowable edge strips of wood species to match face veneers.
- B. Finish: Factory finish in accordance with WI System 5, transparent sealer, clear, satin sheen.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine frames and conditions under which doors are to be installed. Proceed with the work only when frames and conditions are satisfactory.

3.2 INSTALLATION

- A. Install doors in accordance with reference standards and with manufacturer's recommendations and instructions.
 - 1. Coordinate installation of doors with frames specified in Division 08 Section "Door Hardware"
- B. Re-hang or replace doors which do not operate or swing freely.
- C. Protection: Protect wood surfaces after installation. At Substantial Completion, doors shall be without indication of use, deterioration, or damage.

END OF SECTION 081416

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

- A. Related Documents:
 - 1. Drawings and general provisions of the Subcontract apply to this Section.
 - 2. Review these documents for coordination with additional requirements and information that apply to work under this Section.
- B. Section Includes:
 - 1. Provide hardware for wood Bi-Fold closet and Pocket doors.
- C. Related Sections:
 - 1. Division 01 Section "General Requirements."
 - 2. Division 06 "Wood and Plastics".
 - 3. Division 08 Section "Flush Wood Doors".

1.2 REFERENCES

- A. General:
 - 1. The following documents form part of the Specifications to the extent stated. Where differences exist between codes and standards, the one affording the greatest protection shall apply.
 - 2. Refer to Division 01 Section "General Requirements" for the list of applicable regulatory requirements.
- B. Builders Hardware Manufacturers Association (BHMA).
- C. BHMA A156 Series 1 through 21 (Hardware).
- D. Door and Hardware Institute (DHI).
- E. DHI A1 15 and A115W Doors and Frames.
- F. Steel Door Institute (SDI).

1.3 SUBMITTALS

- A. Submit under provisions of Division 01 Section "General Requirements."
- B. Product Data: Along with schedule, submit catalog cuts and item description for each item of hardware. Submit copies separately bound and referenced to hardware schedule.
- C. Samples: Submit samples of hardware for approval of function, design and finish. Samples will be returned to Subcontractor if requested.
- D. Closeout Submittals: Manufacturer's parts list and maintenance instructions for each type of hardware supplied and tools necessary for proper maintenance of hardware.

1.4 QUALITY ASSURANCE

- A. Hardware Supplier: Recognized builders' hardware supplier with minimum five years successful experience in scheduling and furnishing hardware.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Arrange work and secure delivery of hardware so that Work will progress without delay or interruption.
- B. Delivery: Deliver hardware in manufacturer's original packages, marked for intended opening and with hardware schedule item number.
- C. Pack complete with necessary screws, bolts, keys, instructions, and installation templates if necessary for spotting mortise tools.
- D. Upon delivery, furnish complete list of hardware for checking, clearly marked to correspond with each package and hardware schedule item number. Review list for completeness and accuracy.
- E. Template Hardware: Supply templates to door and frame manufacturers for proper and accurate sizing and locations of hardware cutouts.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Furnish hardware made of new material by approved manufacturers, including electrical components. Remanufactured or retrofitted hardware is not permitted and, if submitted, supplied or installed, will be rejected and replaced with no delay in schedule and at no additional cost to LBNL.
- B. Review Drawings for hardware locations and door types. Where not fully covered in Hardware Schedule, comply with the following general requirements. Inform Project Manager where conflicts occur.
- C. Hardware Finish: BHMA 625 (US 26) bright chrome plated, or as Owner selected. Fasteners to match hardware finish.
- D. Reinforcing Units: Furnished by door manufacturer, coordinated by hardware manufacturer.
- E. Concealed Hardware: Furnish items which must be concealed within metal work to metal door and frame manufacturer.
- F. Fasteners: Furnish as recommended by manufacturer and as required to securely install hardware.
 1. Furnish hardware fastened to concrete or masonry with expansion sleeve anchors
 2. Through bolts are not permitted on wood or metal doors.
 3. Furnish fasteners for items applied to gypsum board sufficiently long to provide solid connection to framing or backing.

2.2 HINGES: CLOSET BI-FOLD

- A. Manufacturers: McKinney, Hager or approved equal. McKinney products are listed to establish style and function required, unless noted otherwise for replacement wood doors.

- B. Hinges per Door Leaf: Provide minimum 3 hinges to 90 inches high, 4 hinges to 120 inches high, plus 1 additional hinge for each additional 30 inches or fraction thereof, unless otherwise indicated.
- C. Hinge Size: Hinge sizes given are based on 1-3/4 inch thick doors. Follow manufacturer's instructions if thicker doors are used. Provide 4-1/2 by 4-1/2 inches for doors 37 inches wide or less, 5 by 4-1/2 inches for doors 37 inches to 48 inches wide.
 - 1. Provide widths sufficient to clear trim projection when door swings 180 degrees.
 - 2. Provide ball bearings, with non-removable pins on out-swinging doors and non rising loose pins on in-swinging doors.
- D. Finish:
 - 1. Interior Hinges: BHMA 625 - Polished chrome or per owner selection to match existing reused locksets.
- E. Hinge Schedule:
 - 1. H1 - TA2314 Standard weight exterior; TA2734 - Standard weight interior.
 - 2. H2 - Bathroom Door - Double acting 6"spring hinge by Global Door controls, #DH-TAN5006-GVDH

2.3 LOCKSETS

- A. Typical Unless Noted Otherwise: Owner to reuse existing locksets.
- B. Bathroom Door: SCHLAGE- "Dummy" Lever handle #F170ACC6262 RH or LH
SCHLAGE- Deadbolt, one-sided, no exterior trim #B580626 verify LH or RH
- C. Strikes: Furnish standard strikes with extended lips where required to protect trim or frame from being marred by latch bolt. Verify type of cutouts provided in metal frames.
- D. Backset: 2-3/4 inch unless noted otherwise.

2.4 THRESHOLDS: INTERIORS

- A. Manufacturers: Pemko, Reese, or equal. Pemko products are listed to establish style and function required, unless otherwise noted.
- B. Finish: Mill finish aluminum or as chosen by Architect and Owner.
- C. Width: Match door frames.
- D. Interior Threshold Schedule:
 - 1. T1 "Floor plate" type, 1/4 inch (6mm) thick grooved aluminum, with 196A sloping edge each side.
 - 2. T2 14/1A.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Inspect doors, frames and other surfaces to receive items of finish hardware and report any defects, which might adversely affect the installation and function of the hardware.
- B. Commencing work implies acceptance of surfaces as satisfactory.

3.2 COORDINATION

- A. Coordinate fabrication of work or material to receive hardware including doors and frames, internal reinforcement for door hardware. No extra cost will be allowed because of changes or corrections necessary to facilitate the proper installation of hardware.

3.3 INSTALLATION

- A. Install hardware specified under this Section.
- B. Install hardware in accordance with manufacturers' instructions and recommendations.
- C. Fit hardware prior to painting/staining, then remove prior to painting/staining doors and frames; reinstall after complete.
- D. Accessibility: Comply with all state and federal requirements for accessibility.
- E. Mounting Heights Above Finished Floor:
 - 1. Hinges:
 - a. Top: Frame manufacturer's standard, but not greater than 10 inches from head of frame to center line of hinge.
 - b. Bottom: Frame manufacturer's standard, but not greater than 12-1/2 inches from floor to center line of hinge.
 - c. Intermediate: Equally spaced between top and bottom hinges and from each other.
 - 2. Locks and Latches: 38 inches to center line of lever.
 - 3. Door pulls, Push-Pull Bars, Push Plates, as needed: 42 inches to center of pull, bar or plate.

3.4 ADJUSTMENT

- 1. Adjust locks, and critical operation hardware as necessary after installation.

END OF SECTION 087100

SECTION 092900 - GYPSUM BOARD

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Resistance-Rated Assemblies: Provide materials and construction identical to those tested in assemblies per ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.
- B. STC-Rated Assemblies: Provide materials and construction identical to those tested in assemblies per ASTM E 90 and classified per ASTM E 413 by a qualified independent testing and inspecting agency.

2.2 PANEL PRODUCTS

- A. Provide in maximum lengths available to minimize end-to-end butt joints.
- B. Interior Gypsum Board: ASTM C 36/C 36M or ASTM C 1396/C 1396M, in thickness indicated, with manufacturer's standard edges. Regular type unless otherwise indicated, Foil backed where indicated, Type X where indicated, Type as required for specific fire-resistance-rated assemblies, Sag-resistant type for ceiling surfaces. See Drawing notes as applicable.
- C. Water-Resistant Gypsum Backing Board: ASTM C 630/C 630M or ASTM C 1396/C 1396M, in thickness indicated. Regular type unless otherwise indicated, Type X where required for fire-resistance-rated assemblies and where indicated.
- D. Cementitious Backer Units: ANSI A118.9.

2.3 ACCESSORIES

- A. Trim Accessories: ASTM C 1047, formed from galvanized or aluminum-coated steel sheet, rolled zinc, plastic, or paper-faced galvanized-steel sheet. For exterior trim, use accessories formed from hot-dip galvanized-steel sheet, plastic, or rolled zinc.
 - 1. Provide cornerbead at outside corners unless otherwise indicated.

2. Provide LC-bead (J-bead) at exposed panel edges.
 3. Provide control joints where indicated.
- B. Joint-Treatment Materials: ASTM C 475/C 475M.
1. Joint Tape: Paper unless otherwise recommended by panel manufacturer.
 2. Joint Compounds: Setting-type taping compound and drying-type, ready-mixed, compounds for topping. Use setting-type compounds at exterior soffits.
 3. Skim Coat: For final coat of Level 5 finish, use drying-type, all-purpose compound
 4. Cementitious Backer Unit Joint-Treatment Materials: Products recommended by cementitious backer unit manufacturer.
- C. Acoustical Sealant for Exposed and Concealed Joints: Nonsag, paintable, nonstaining latex sealant complying with ASTM C 834.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install gypsum board to comply with ASTM C 840.
1. Isolate gypsum board assemblies from abutting structural and masonry work. Provide edge trim and acoustical sealant.
 2. Single-Layer Fastening Methods: Fasten gypsum panels to supports with screws.
 3. Multilayer Fastening Methods: Fasten base layers with screws, and face layers to base layers with adhesive and supplementary fasteners.
- B. Install cementitious backer units to comply with ANSI A108.11.
- C. Fire-Resistance-Rated Assemblies: Comply with requirements of listed assemblies.
- D. Finishing Gypsum Board: ASTM C 840.
1. At concealed areas, unless a higher level of finish is required for fire-resistance-rated assemblies, provide Level 1 finish: Embed tape at joints.
 2. At substrates for tile, provide Level 2 finish: Embed tape and apply separate first coat of joint compound to tape, fasteners, and trim flanges.
 3. Unless otherwise indicated, provide Level 4 finish: Embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges.
 4. Where indicated, provide Level 5 finish: Embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges. Apply skim coat to entire surface.
- E. Glass-Mat, Water-Resistant Backing Panels: Finish according to manufacturer's written instructions.
- F. Cementitious Backer Units: Finish according to manufacturer's written instructions.

- G. Texture Finish Application: Mix and apply finish using powered spray equipment, to produce a uniform texture free of starved spots or other evidence of thin application or of application patterns.

END OF SECTION 092900

SECTION 093000 - TILING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data for each type of product indicated and Samples for tile and grout.
- B. Obtain tile of each type and color or finish from same production run for each contiguous area
- C. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use.

PART 2 - PRODUCTS

2.1 PORCELAIN TILE

- A. Porcelain tile that complies with Standard grade requirements in ANSI A137.1, "Specifications for Porcelain Tile."
- B. Tile Type PT: Factory-mounted glazed impervious natural clay or porcelain cushion-edged ceramic mosaic tile.
 - 1. Products:
 - a. Daltile - "Avondale" series, Color- "Chateau Creme" #AD01 .
 - 2. Module Size: 12x12 inch bath floor as shown on drawings.
 - 3. Surface: Slip resistant abrasive admixture.
 - 4. Finish: opaque glazed.
 - 5. Color and Pattern: As selected by Architect and owner.
 - 6. Grout Color: As selected by Architect and owner.
 - 7. Trim Units: Coordinated with sizes and coursing of adjoining flat tile and matching characteristics of adjoining flat tile:
 - a. Base: Bull-nosed.
 - b. Base Cap for Portland Cement Mortar Installations: Bullnose.
 - c. Base Cap for Thin-Set Mortar Installations: Surface Bullnose.
 - d. Wainscot Cap for Portland Cement Mortar Installations: Bullnose.
 - e. Wainscot Cap for Thin-Set Mortar Installations: Surface Bullnose.
 - f. External Corners for Portland Cement Mortar Installations: Bullnose.
 - g. External Corners for Thin-Set Mortar Installations: Surface Bullnose.
 - h. Internal Corners: Field-buttet square corners. For coved base and cap, use angle pieces designed to fit with stretcher shapes.

2.2 INSTALLATION MATERIALS

- A. Cementitious Backer Units: ANSI A118.9 or ASTM C 1325, 1/2 inch thick.
- B. Fiber-Cement Underlayment: ASTM C 1288, 1/2 inch thick.
- C. VOC Limit for Adhesives and Fluid-Applied Waterproofing Membranes: 65 g/L when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- D. Setting and Grouting Materials: Comply with material standards in ANST's "Specifications for the Installation of Ceramic Tile" that apply to materials and methods indicated.
 - 1. Thin-Set Mortar Type: Latex-portland cement.
 - a. Products: Per Manufacturer.
 - 2. Grout Type: Water-cleanable epoxy unless otherwise indicated.
 - a. Products: Per Manufacturer.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with TCA's "Handbook for Ceramic Tile Installation" for TCA installation methods specified in tile installation schedules. Comply with parts of ANSI A108 Series "Specifications for Installation of Ceramic Tile" that are referenced in TCA installation methods, specified in tile installation schedules, and apply to types of setting and grouting materials used.
- B. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.
- C. Lay tile in grid pattern unless otherwise indicated. Align joints where adjoining tiles on floor, base, walls, and trim are the same size.
- D. Install cementitious backer units or fiber-cement underlayment and treat joints according to ANSI A108.11.
- E. Where indicated, prepare substrates to receive waterproofing by applying a reinforced mortar bed that complies with ANSI A108.1A and is sloped 1/4 inch per foot toward drains.
- F. Install waterproofing to comply with ANSI A108.13.

- G. Do not install tile over waterproofing until waterproofing has cured and been tested to determine that it is watertight.
- H. Install stone thresholds in same type of setting bed as adjacent floor unless otherwise indicated. At locations where mortar bed (thickset) would otherwise be exposed above adjacent floor finishes, set thresholds in latex-portland cement mortar (thin set).
- I. Interior Floor Tile Installation Method(s):
 - 1. Over Concrete Subfloors: TCA F112 (cement mortar bed bonded to concrete) or TCA F113 (thin-set mortar) [TCA F114 (cement mortar bed with cleavage membrane, epoxy grout) as shown on drawing.
 - 2. Over Waterproof Membranes on Concrete Subfloors: TCA F121 (cement mortar bed) or TCA F122 (thin-set mortar).

END OF SECTION 093000

SECTION 09 65 19.23 - Resilient Tile Flooring

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Flooring and accessories as shown on the drawings and schedules and as indicated by the requirements of this section. All flooring and accessories to be provided by owner. Contractor shall provide quantity, needed in a timely fashion to maintain all installation schedule and adherence to all other sections within this section.
- B. Related Documents
 - 1. Drawings and General Provisions of the Contract (including General and Supplementary Conditions and Division 1 sections) apply to the work of this section.
- C. Related Sections:
 - 1. Division 3 Concrete
 - 2. Division 6 Wood and Plastics
 - 3. Division 7 Thermal and Moisture Protection

1.02 REFERENCES

- A. ASTM International:
 - 1. ASTM E 648 Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source
 - 2. ASTM E 662 Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials
 - 3. ASTM F 710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
 - 4. ASTM F 1482, Standard Guide to Wood Underlayment Products Available for Use Under Resilient Flooring
 - 5. ASTM F 1700 Standard Specification for Solid Vinyl Tile
 - 6. ASTM F 1861 Standard Specification for Resilient Wall Base
 - 7. ASTM F 1869 Standard Test Method for Measuring Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
 - 8. ASTM F 2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes
- B. National Fire Protection Association (NFPA):
 - 1. NFPA 253 Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source
 - 2. NFPA 258 Standard Test Method for Measuring the Smoke Generated by Solid Materials

1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide flooring which has been manufactured, fabricated and installed to performance criteria certified by manufacturer without defects, damage, or failure.
 - 1. Mock-Up Size: [Specify mock-up size].
 - 2. Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required.
 - 3. Incorporation: Mock-up may be incorporated into the final construction with Owner's approval.
- B. Sequencing and Scheduling
 - 1. Install flooring and accessories after the other finishing operations, including painting, have been completed. Close spaces to traffic during the installation of the flooring.
 - 2. Do not install flooring over concrete slabs until they are sufficiently dry to achieve a bond with the adhesive, in accordance with the manufacturer's recommended bond, moisture tests and pH test.

1.04 SUBMITTALS

- A. Submit shop drawings, seaming plan, coving details, and manufacturer's technical data, installation and maintenance instructions for flooring and accessories.
- B. Submit the manufacturer's standard samples showing the required colors for flooring and applicable accessories.
- C. Submit Safety Data Sheets (SDS) available for flooring product, adhesives, patching/leveling compounds, floor finishes and cleaning agents.
- D. If required, submit the manufacturer's certification that the flooring has been tested by an independent laboratory and complies with the required fire tests.
- E. Closeout Submittals: Submit the following:
 - 1. Operation and Maintenance Data: Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and Operation Data) Section. Include methods for maintaining installed products, and precautions against cleaning materials and methods detrimental to finishes and performance.
 - 2. Warranty: Warranty documents specified herein

1.05 QUALITY ASSURANCE

- A. Single-Source Responsibility: provide types of flooring and accessories supplied by one manufacturer, including leveling and patching compounds, and adhesives.
- B. Select an installer who is competent in resilient solid vinyl tile flooring.
 - 1. Confirm installer's certification by requesting their credentials
- C. Fire Performance Characteristics: Provide resilient tile flooring with the following fire performance characteristics as determined by testing material in accordance with ASTM test methods indicated below by a certified testing laboratory or other testing agency acceptable to authorities having jurisdiction:

1. ASTM E 648 (NFPA 253) Critical Radiant Flux of 0.45 watts per sq. cm. or greater, Class I
2. ASTM E 662 (NFPA 258) (Smoke Generation) Maximum Specific Optical Density of 450 or less

1.06 DELIVERY, STORAGE AND HANDLING

- A. Comply with Division 1 Product Requirements Sections
- B. Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Deliver materials in good condition to the jobsite in the manufacturer's original unopened containers that bear the name and brand of the manufacturer, project identification, and shipping and handling instructions.
- D. Store materials in a clean, dry, enclosed space off the ground, protected from harmful weather conditions and at temperature and humidity conditions recommended by the manufacturer. Protect adhesives from freezing. Store flooring, adhesives and accessories in the spaces where they will be installed for at least 48 hours before beginning installation.

1.07 PROJECT CONDITIONS

- A. Maintain a minimum temperature in the spaces to receive the flooring and accessories of 65°F (18°C) and a maximum temperature of [100°F (38°C)][85°F (29°C)] for at least 48 hours before, during, and for not less than 48 hours after installation. Thereafter, maintain a minimum temperature of 55°F (13°C) in areas where work is completed. Protect all materials from the direct flow of heat from hot-air registers, radiators, or other heating fixtures and appliances. 1.08 LIMITED WARRANTY
- A. Resilient Flooring: Submit a written warranty executed by the manufacturer, agreeing to repair or replace resilient flooring that fails within the warranty period.
- B. The Limited Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

1.09 MAINTENANCE

- A. Extra Materials: Deliver extra materials to Owner. Furnish extra materials from same production run as products installed. Packaged with protective covering for storage and identified with appropriate labels.
 1. Quantity: Furnish quantity of flooring units equal to 5% of amount installed.
 2. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra material.

PART 2 - PRODUCTS

2.01 MANUFACTURER

- A. Resilient tile flooring, wall base, adhesives and accessories: INTERFACE

2.02 RESILIENT TILE FLOORING MATERIALS

- A. Provide Interface Modular tile - Luxury Solid Vinyl Tile. A003
 - 1. Description: A layered construction consisting of a tough, clear, Ceramor coating protecting a solid commercial grade backing. Luxury Solid Vinyl Tile shall conform to the requirements of ASTM F 1700, "Standard Specification for Solid Vinyl Tile", Class III, Type B – Embossed Surface.
 - 2. Pattern and Color: color selected from the range currently available from Interface.
 - 3. Size: 19.69" x 19.69" nominal
 - 4. Wear layer thickness: 22Mil
 - 5. Thickness: 4.5mm

2.03 PRODUCT SUBSTITUTION

- A. No substitutions permitted.

2.05 ADHESIVES

- A. Floating Floor - Tac Tiles - Glue Free Installation.

2.06 ACCESSORIES

- A. For patching, smoothing, and leveling monolithic subfloors of concrete, provide a Cement-Based Patch, Underlayment and Embossing Leveler. Submit product sheet to Architect.
- B. For sealing joints between the top of wall base or integral cove cap and irregular wall surfaces such as masonry, provide plastic filler applied according to the manufacturer's recommendations.
- C. Provide transition/reducing strips tapered to meet abutting materials if needed at Tile locations.
- D. Provide resilient edge strips of width shown on the drawings, of equal gauge to the flooring, homogeneous vinyl or rubber composition, tapered or bullnose edge, with color to match or contrast with the flooring, or as selected by the Architect from standard colors available.
- E. Provide metal edge strips of width shown on the drawings and of required thickness to protect exposed edges of the flooring. Provide units of maximum available length to minimize the number of joints. Use butt-type metal edge strips for concealed anchorage, or overlap-type metal edge strips for exposed anchorage. Unless otherwise shown, provide strips made of extruded aluminum with a mill finish.

PART 3 - EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, including technical bulletins, product catalog, installation instructions, and product carton instructions for installation and maintenance procedures as needed.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify substrate conditions (which have been previously installed under other sections) are acceptable for product installation in accordance with manufacturer's instructions (i.e. moisture tests, bond test, pH test, etc.).
- B. Visually inspect flooring materials, adhesives and accessories prior to installation. Flooring material with visual defects shall not be installed and shall not be considered as a legitimate claim.
- C. Examine subfloors prior to installation to determine that surfaces are smooth and free from cracks, holes, ridges, and other defects that might prevent adhesive bond or impair durability or appearance of the flooring material.
- D. Inspect subfloors prior to installation to determine that surfaces are free from curing, sealing, parting and hardening compounds; residual adhesives; adhesive removers; and other foreign materials that might prevent adhesive bond. Visually inspect for evidence of moisture, alkaline salts, carbonation, dusting, mold, or mildew.
- E. Report conditions contrary to contract requirements that would prevent a proper installation. Do not proceed with the installation until unsatisfactory conditions have been corrected.
- F. Failure to call attention to defects or imperfections will be construed as acceptance and approval of the subfloor. Installation indicates acceptance of substrates with regard to conditions existing at the time of installation.

3.03 PREPARATION

- A. Subfloor Preparation: Smooth concrete surfaces, removing rough areas, projections, ridges, and bumps, and filling low spots, control or construction joints, and other defects with Fast-Setting Cement-Based Patch and Underlayment Cement-Based Patch, Underlayment and Embossing Leveler as recommended by the flooring manufacturer
- B. Subfloor Cleaning: The surface shall be free of dust, solvents, varnish, paint, wax, oil, grease, sealers, release agents, curing compounds, residual adhesive, adhesive removers and other foreign materials that might affect the adhesion of resilient flooring to the concrete or cause a discoloration of the flooring from below. Remove residual adhesives as recommended by the flooring manufacturer. Remove curing and hardening compounds not compatible with the adhesives used, as indicated by a bond test or by the compound manufacturer's recommendations for flooring. Avoid organic solvents. Spray paints, permanent markers and other indelible ink markers must not be used to write on the back of the flooring material or used to mark the concrete slab as they could bleed through, telegraphing up to the surface and permanently staining the flooring material. If these contaminants are present on the substrate they must be mechanically removed prior to the installation of the flooring material.
- C. Concrete pH Testing: Perform pH tests on concrete floors regardless of their age or grade level. All test results shall be documented and retained.

3.04 INSTALLATION OF FLOORING

- A. Install flooring in strict accordance with the latest edition of INTERFACE LVT GUIDELINES. Install flooring wall to wall before the installation of floor-set cabinets, casework, furniture, equipment, movable partitions, etc. Extend flooring into toe spaces, door recesses, closets, and similar openings as shown on the drawings.
- B. Scribe, cut, and fit to permanent fixtures, columns, walls, partitions, pipes, outlets, and built-in furniture and cabinets.

3.05 INSTALLATION OF ACCESSORIES

- A. Apply wall base to walls, columns, casework, and other permanent fixtures in areas where top-set base is required. Install base in lengths as long as practical, with inside corners fabricated from base materials that are mitered or coped. Tightly bond base to vertical substrate with continuous contact at horizontal and vertical surfaces.
- B. Fill voids with plastic filler along the top edge of the resilient wall base or integral cove cap on masonry surfaces or other similar irregular substrates.

3.07 PROTECTION

- A. Protect installed flooring as recommended by the flooring manufacturer against damage from rolling loads, other trades, or the placement of fixtures and furnishings.

B. END OF SECTION

SECTION 096813 - TILE CARPETING

GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data and Samples.
- B. Extra Materials: Deliver to Owner carpet tiles equal to 5 percent of each type and color carpet tile installed, packaged with protective covering for storage.

PART 2 - PRODUCTS

2.1 CARPET TILE

- A. Products: Basis of design to be Interface - "Modular", no glue type.
- B. Product, pattern, and color Per owner choice.
- C. Fiber Content: Stain master Nylon or equal per Interface standard.
- D. Face Construction: Tufted or Loop pile or as per Interface product chosen.
- E. Density: 6000 oz/cubic yard or more.
- F. Pile Thickness: Per weight for finished carpet tile per ASTM D 6859.
- G. Surface Pile Weight: 25 oz. + per sq. yd. min. excluding weight of backings.
- H. Primary Backing: "Glas-Bac" Manufacturer's standard material.
- I. Anti-Stain: Protekt as per manufacturer.
- J. Size: 18"x18", 24" x 24" or Per owner choice.
- K. Critical Radiant Flux Classification: per ASTM E 648.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with CRI 104.
- B. Installation Method: As recommended by manufacturer.
- C. Install borders parallel to walls and

1. If possible, seams should be kept to a minimum.
2. Seams should run the length of the area.
3. Main traffic should run along the seam rather than across the seam.
4. Seams should be away from areas subject to pivoting traffic.
5. Seams should not be perpendicular to doorway openings.

END OF SECTION 096813

SECTION 099123 - INTERIOR and EXTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes surface preparation and the application of paint systems on interior substrates and walls and as needed for Alum. Canopy and door replacement adjacent surfaces.
 - 1. metals.
 - 2. Wood.
 - 3. Gypsum board. Repainting of existing surfaces as shown on Drawings and noted.

1.3 DEFINITIONS

- A. Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523, a satin-like finish to match existing color and applications.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements and application instructions.
- B. Samples for Initial Selection: For each type of topcoat product.

1.5 CLOSEOUT SUBMITTALS

- A. Coating Maintenance Manual: Provide coating maintenance manual including area summary with finish schedule, area detail designating location where each product/color/finish was used, product data pages, material safety data sheets, care and cleaning instructions, touch-up procedures, and color samples of each color and finish used.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Paint: 5 percent of each material and color applied.

1.7 QUALITY ASSURANCE

- A. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Final approval of color selections will be based on mockups.
 - a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Handling: Deliver products to Project site in an undamaged condition in manufacturer's original sealed containers, complete with labels and instructions for handling, storing, unpacking, protecting, and installing. Packaging shall bear the manufacturer's label with the following information:
- B. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.
 1. Maintain containers in clean condition, free of foreign materials and residue.
 2. Remove rags and waste from storage areas daily.

1.9 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F.
- B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. * Basis-of-Design Product: Subject to compliance with requirements, provide Company products indicated or comparable product from one of the following:
 1. Sherwin Williams, Sheerscrub Supreme, Interior Latex Eggshell *
 2. BEHR - Premium plus - Interior Satin enamel
 3. Glidden - Premium Interior Satin
 4. Approved equal or as per owner previous use.
- B. Source Limitations: Obtain paint materials from single source from single listed manufacturer.
 1. Manufacturer's designations listed on a separate color schedule are for color reference only and do not indicate prior approval.

2.2 PAINT, GENERAL

- A. Material Compatibility:
 1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

- B. VOC Content: Products shall comply with VOC limits of authorities having jurisdiction[and, for interior paints and coatings applied at Project site, the following VOC limits, exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA Method 24)].
 - 1. Flat Paints and Coatings: 50 g/L.
 - 2. Nonflat Paints and Coatings: 150 g/L.
 - 3. Dry-Fog Coatings: 400 g/L.
 - 4. Primers, Sealers, and Undercoaters: 200 g/L.
 - 5. Anticorrosive and Antirust Paints Applied to Ferrous Metals: 250 g/L.
 - 6. Zinc-Rich Industrial Maintenance Primers: 340 g/L.
 - 7. Pretreatment Wash Primers: 420 g/L.
- C. Colors: As selected by Owner from manufacturer's full range.
 - 1. from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Substrate Conditions:
 - 1. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 - a. Wood: 15 percent.
 - b. Gypsum Board: 12 percent.
 - c. Plaster: 12 percent.
 - 2. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.
- C. Proceed with coating application only after unsatisfactory conditions have been corrected; application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.

- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.
- D. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.
- E. Aluminum Substrates: Remove loose surface oxidation.
- F. Wood Substrates:
 - 1. Scrape and clean knots, and apply coat of knot sealer before applying primer.
 - 2. Sand surfaces that will be exposed to view, and dust off.
 - 3. Prime edges, ends, faces, undersides, and backsides of wood.
 - 4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."
 - 1. Use applicators and techniques suited for paint and substrate indicated.
 - 2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
 - 3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
 - 4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
 - 5. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.
- B. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- C. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
 - 1. Paint the following work where exposed in occupied spaces:
 - a. Equipment, including panelboards.
 - b. Uninsulated metal piping.
 - c. Uninsulated plastic piping.
 - d. Pipe hangers and supports.

- e. Metal conduit.
 - f. Plastic conduit.
 - g. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
 - h. Other items as directed by Architect.
2. Paint portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets that are visible from occupied spaces.

3.4 FIELD QUALITY CONTROL

1. Contractor shall touch up and restore painted surfaces damaged by testing.
2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 INTERIOR PAINTING SCHEDULE

- A. All systems shown will apply only to the extent they are shown and noted on drawings. Additional systems shown within apply only to the extent that such work requiring these systems may be added to the work but are not a part of the present work items.
- B. Metal Substrates (Aluminum, Steel, Galvanized Steel):
 1. Latex System:
 - a. Prime Coat: Primer, rust-inhibitive, water based: S-W Pro Industrial Pro-Cryl Universal Primer, B66-310 Series, at 5.0 to 10 mils wet, 2.0 to 4.0 mils dry.
 - b. Intermediate Coat: Water-based acrylic, interior, matching topcoat.
 - c. Topcoat: Water-based acrylic, satin: S-W Pro Industrial Acrylic Semi-Gloss Coating, B66-650 Series, at 2.5 to 4.0 mils dry, per coat.
 2. Water-Based Light Industrial Coating System:

- a. Prime Coat: Primer, rust-inhibitive, water based: S-W Pro Industrial Pro-Cryl Universal Primer, B66-310 Series, at 5.0 to 10.0 mils wet, 2.0 to 4.0 mils dry.
 - b. Intermediate Coat: Light industrial coating, interior, water based, matching topcoat.
 - c. Topcoat: Light industrial coating, interior, water based, eggshell: S-W Pro Industrial Pre-Catalyzed Water Based Epoxy, K45-151 Series, at 4.0 mils wet, 1.5 mils dry, per coat.
 - d. Topcoat: Light industrial coating, interior, water based, semi-gloss: S-W Pro Industrial Pre-Catalyzed Water Based Epoxy, K46-151 Series, at 4.0 mils wet, 1.5 mils dry, per coat.
- C. Wood Substrates: Including exposed wood items not indicated to receive shop-applied finish.
- 1. Latex System:
 - a. Prime Coat: Primer sealer, latex, interior: S-W PrepRite ProBlock Primer Sealer, B51-620 Series, at 4.0 mils wet, 1.4 mils dry.
 - b. Intermediate Coat: Latex, interior, matching topcoat.
 - a. Topcoat: Latex, interior, Satin : S-W ProMar 200 Zero VOC Latex Eg-Shel, B20-2600 Series, at 4.0 mils wet, 1.7 mils dry, per coat.
 - 2. Acrylic/Alkyd System:
 - a. Prime Coat: Primer sealer, latex, interior: S-W Premium Wall & Wood Primer, B28W8111, at 4.0 mils wet, 1.8 mils dry.
 - b. Intermediate Coat: Water-based acrylic-alkyd, interior, matching topcoat.
 - c. Topcoat: Water-based acrylic-alkyd, satin , interior: S-W ProMar 200 Waterbased Acrylic-Alkyd Semi-Gloss, B34-8200 Series, at 4.0 mils wet, 1.7 mils dry, per coat.
- D. Gypsum Board Substrates:
- 1. Latex System: To match existing conditions. Cleanable.
 - a. Prime Coat: Primer, latex, interior: S-W ProMar 200 Zero VOC Latex Primer, B28W2600, at 4.0 mils wet, 1.5 mils dry.
 - b. Intermediate Coat: Latex, interior, matching topcoat.
 - c. Topcoat: Latex, interior, Satin : S-W ProMar 200 Zero VOC Latex Flat, B30-2600 Series, at 4.0 mils wet, 1.6 mils dry, per coat.
 - d. Topcoat: Latex, interior, Satin : S-W ProMar 200 Zero VOC Latex Low Sheen Enamel, B24-2600 Series, at 4.0 mils wet, 1.6 mils dry, per coat.

END OF SECTION 099123

SECTION 102800 - WASHROOM ACCESSORIES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Washroom accessories as scheduled and indicated on the Drawings.

1.2 RELATED REQUIREMENTS

- A. Section 061000 - Rough Carpentry, coordination with blocking.
- B. Section 092000 - Plaster and Gypsum Board, coordination with blocking.
- C. Section 093000 - Tiling, coordination with layout and installation.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's data sheets for each product specified, including the following:
 - 1. Installation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Cleaning and maintenance instructions.
 - 4. Replacement parts information.
- B. Schedule: Submit a toilet accessory schedule, indicating the type and quantity to be installed in each washroom. See Drawings.
- C. Country of Origin: Manufacturer must supply, with first submittal, Country of Origin information for each type of washroom accessory for this project.

1.4 QUALITY ASSURANCE

- A. Manufacturer: Provide products manufactured by a company with a minimum of 10 years successful experience manufacturing similar products.
- B. Single Source Requirements: To the greatest extent possible provide products from a single manufacturer.
- C. Accessibility Requirements: Comply with requirements applicable in the jurisdiction of the project, including but not limited to ADA and ICC/ANSI A117.1 requirements as applicable.
- D. Hazardous Materials: Comply with EU Directive "Restrictions of Hazardous Substances (RoHS) requirements."

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store and handle materials and products in strict compliance with manufacturer's instructions and recommendations. Protect from damage.

1.6 WARRANTY

- A. Manufacturer's Warranty for Washroom Accessories: Manufacturer's standard 1 year warranty for materials and workmanship.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Basis of Design Products: Based on the quality and performance requirements of the project, specifications are based upon: Bobrick or as shown on individual accessories.
- B. Substitutions: The Architect will consider products of comparable manufacturers as a substitution, pending the contractor's submission of adequate documentation of the substitution in accordance with procedures in Division 1 of the Project Manual. Documentation shall include a list of five similar projects of equivalent size where products have been installed for a minimum of two years, and manufacturer's certification that products are fabricated in the United States.

2.2 TOILET ACCESSORY SCHEDULE

- A. ADA Heavy Duty:
 - 1. Concealed Mounting Grab Bar – 1-1/2 inch diameter - See Drawing Schedule.
 - 2. Angle-Frame Mirror - See Drawing Schedule.
 - 3. Toilet Tissue Dispenser - See Drawing Schedule.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install products in strict compliance with manufacturer's written instructions and recommendations, including the following:
 - 1. Verify blocking has been installed properly.
 - 2. Verify location does not interfere with door swings or use of fixtures.
 - 3. Comply with manufacturer's recommendations for backing and proper support.
 - 4. Use fasteners and anchors suitable for substrate and project conditions
 - 5. Install units rigid, straight, plumb, and level, in accordance with manufacturer's installation instructions and approved shop drawings.
 - 6. Conceal evidence of drilling, cutting, and fitting to room finish.
 - 7. Test for proper operation.

3.2 CLEANING AND PROTECTION

- A. Clean exposed surfaces of compartments, hardware, and fittings using methods acceptable to the manufacturer.

B. Touch-up, repair or replace damaged products until Substantial Completion.

END OF SECTION

SECTION 220500 - COMMON WORK RESULTS FOR PLUMBING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data on all fixtures and materials.

PART 2 - PRODUCTS

2.1 SLEEVES

- A. Mechanical Sleeve Seals: Modular rubber sealing element unit, designed for field assembly, to fill annular space between pipe and sleeve.
- B. PVC Pipe: ASTM D 1785, Schedule 40.

2.2 GROUT

- A. Description: ASTM C 1107, Grade B, nonshrink and nonmetallic, dry hydraulic-cement grout.

2.3 MOTORS - If applicable

- A. Motor Characteristics:
 1. Motors Smaller Than 1/2 HP: Single phase.
 2. Frequency Rating: 60 Hz.
 3. Voltage Rating: NEMA standard voltage for circuit voltage to which motor is connected.

2.4 HANGERS AND SUPPORTS

- A. Hanger and Pipe Attachments: Factory fabricated with galvanized coatings; nonmetallic coated for hangers in direct contact with copper tubing.
- B. Powder-Actuated Fasteners: Threaded-steel stud, with pull-out and shear capacities appropriate for supported loads and building materials where used.
- C. Mechanical-Expansion Anchors: Insert-wedge-type, zinc-coated steel, with pull-out and shear capacities appropriate for supported loads and building materials where used.

PART 3 - EXECUTION

3.1 MOTOR INSTALLATION - if applicable

- A. Anchor motor assembly to base, adjustable rails, or other support, arranged and sized according to manufacturer's written instructions.

3.2 GENERAL PIPING INSTALLATIONS

- A. Install piping free of sags and bends.
- B. Install fittings for changes in direction and branch connections.
- C. Install sleeves for pipes passing through concrete walls and concrete floor slabs.
- D. Exterior Wall, Pipe Penetrations: Mechanical sleeve seals installed in steel or cast-iron pipes for wall sleeves.
- E. Comply with requirements in Division 07 Section "Penetration Firestopping" for sealing pipe penetrations in fire-rated construction.
- F. Install dielectric coupling and nipple fittings to connect piping materials of dissimilar metals in water piping.

3.3 GENERAL EQUIPMENT INSTALLATIONS

- A. Install equipment to allow maximum possible headroom unless specific mounting heights are not indicated.
- B. Install equipment level and plumb, parallel and perpendicular to other building systems and components, unless otherwise indicated.
- C. Install mechanical equipment to facilitate service, maintenance, and repair or replacement of components. Connect equipment for ease of disconnecting, with minimum interference to other installations.
- D. Install equipment to allow right of way for piping installed at required slope.

END OF SECTION 220500

SECTION 220523 - GENERAL-DUTY VALVES FOR PLUMBING PIPING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data.
- B. NSF Compliance: NSF 61 for valve materials for potable-water service.

PART 2 - PRODUCTS

2.1 GENERAL-DUTY VALVES

- A. Valve Sizes: Same as upstream piping unless otherwise indicated.
- B. End Connections: Threads shall comply with ANSI B1.20.1. Flanges shall comply with ANSI B16.1 for cast-iron valves and with ANSI B16.24 for bronze valves. Solder-joint connections shall comply with ANSI B16.18.
- C. One-Piece, Copper-Alloy Ball Valves: Brass or bronze body with chrome-plated bronze ball, PTFE or TFE seats, and 400-psig (2760-kPa) minimum CWP rating.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Use ball valves for shutoff duty.
- B. Locate valves for easy access and provide separate support where necessary.
- C. Install valves for each fixture.
- D. Install valves in a position to allow full stem movement.

END OF SECTION 220523

SECTION 224000 - PLUMBING FIXTURES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data for each type of plumbing fixture, including trim, fittings, accessories, appliances, appurtenances, equipment, and supports.
- B. Regulatory Requirements: Comply with requirements in ICC A117.1, "Accessible and Usable Buildings and Facilities for plumbing fixtures for people with disabilities.
- C. Regulatory Requirements: Comply with requirements in Public Law 102-486, "Energy Policy Act," about water flow and consumption rates for plumbing fixtures.

PART 2 - PRODUCTS

2.1 **See Plumbing Schedule on drawings**

PART 3 - EXECUTION

3.1 INSTALLATIONS

- A. Install fitting insulation kits on fixtures for people with disabilities at all lavatories.
- B. Install fixtures with flanges and gasket seals.
- C. Install tanks for accessible, tank-type water closets with lever handle mounted on wide side of compartment.
- D. 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.
- E. Fasten floor-mounted fixtures to substrate. Fasten fixtures having holes for securing fixture to wall construction, to reinforcement built into walls.
- F. Fasten wall-mounted fittings to reinforcement built into walls.
- G. Fasten counter-mounting plumbing fixtures to casework.
- H. Secure supplies to supports or substrate within pipe space behind fixture.
- I. Set shower drain in leveling bed of cement grout.

- J. Install individual supply inlets, supply stops, supply risers, and tubular brass traps with cleanouts at fixture.
- K. Install water-supply stop valves in accessible locations.
- L. Install traps on fixture outlets. Omit traps on fixtures having integral traps.
- M. Install escutcheons at wall, floor, and ceiling penetrations in exposed, finished locations and within cabinets and millwork. Use deep-pattern escutcheons where required to conceal protruding pipe fittings.
- N. Seal joints between fixtures and walls, floors, and counters using sanitary-type, one-part, mildew-resistant, silicone sealant. Match sealant color to fixture color.
- O. Install piping connections between plumbing fixtures and piping systems and plumbing equipment. Install insulation on supplies and drains of fixtures for people with disabilities.

END OF SECTION 224000

SECTION 260500 - COMMON WORK RESULTS FOR ELECTRICAL

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals:
 - 1. Product Data: For all materials and fixtures.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- C. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 RACEWAYS

- A. Raceways:
 - 1. EMT: ANSI C80.3, zinc-coated steel, with setscrew or compression fittings.
 - 2. ENT: NEMA TC 13, complying with UL 1653.
 - 3. IMC: ANSI C80.6, zinc-coated steel, with threaded fittings.
 - 4. RNC: NEMA TC 2, Type EPC-40-PVC, with NEMA TC3 fittings.
 - 5. Raceway Fittings: Specifically designed for raceway type used in Project.
- B. Surface Raceways:
 - 1. Plastic: PVC, extruded and fabricated to size and shape indicated in color selected, with snap-on cover and mechanically coupled connections with plastic fasteners.

2.2 CONDUCTORS AND CABLES

- A. Conductors:
 - 1. Conductors, No. 10 AWG and Smaller: Solid or stranded copper.
 - 2. Conductors, Larger Than No. 10 AWG: Stranded copper.
 - 3. Insulation: Thermoplastic, rated at 75 deg C minimum.
 - 4. Wire Connectors and Splices: Units of size, ampacity rating, material, type, and class suitable for service indicated.
- B. Cable Type NM-B and Type NMC-B Cable: Comply with UL 719 with Type THHN/THWN conductors complying with UL 83.
- C. Cable Type SEU: Comply with UL 854 with Type THHN/THWN conductors complying with UL 83.

2.3 GROUNDING MATERIALS

- A. Ground system to existing ground.

2.4 SLEEVES FOR RACEWAYS AND CABLES

- A. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.

PART 3 - EXECUTION

3.1 GENERAL ELECTRICAL EQUIPMENT INSTALLATION REQUIREMENTS

- A. Install electrical equipment to allow maximum possible headroom unless specific mounting heights that reduce headroom are indicated.
- B. Install electrical equipment to provide for ease of disconnecting the equipment with minimum interference to other installations.
- C. Install electrical equipment to allow right of way for piping and conduit installed at required slope.
- D. Install electrical equipment to ensure that connecting raceways, cables, wireways, cable trays, and busways are clear of obstructions and of the working and access space of other equipment.
- E. Comply with NECA 1.

3.2 RACEWAY AND CABLE INSTALLATION

- A. Indoor Raceways Applications:
 - 1. Exposed or Concealed: EMT.
 - 2. Connection to Vibrating Equipment: FMC; in wet or damp locations, use LFMC.
 - 3. Damp or Wet Locations: IMC.
 - 4. Boxes and Enclosures: Metallic, NEMA 250, Type 1, unless otherwise indicated.
- B. Conceal raceways and cables, unless otherwise indicated, within finished walls, ceilings, and floors.
- C. Install raceways and cables at least 6 inches (150 mm) away from parallel runs of flues and steam or hot-water pipes. Locate horizontal raceway runs above water and steam piping.

WIRING METHODS

- D. Feeders and Branch Circuits Concealed in Ceilings, Walls, Partitions: Nonmetallic-sheathed cable, Type NM or NMC.

3.3 GROUNDING

1. Utilize existing grounding system.

3.4 IDENTIFICATION

A. Equipment Identification Labels:

1. Equipment to Be Labeled:
 - a. Panelboards and enclosures.

B. Verify identity of each item before installing identification products.

3.5 FIRESTOPPING

- A. Apply fire-stopping to electrical penetrations of fire-rated floor and wall assemblies to restore original fire-resistance rating of assembly. Comply with requirements in Division 07 Section "Penetration Fire-stopping."

END OF SECTION 260500

SECTION 262416 - PANELBOARDS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- C. Comply with NEMA PB 1.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS FOR PANELBOARDS

- A. Fabricate and test panelboards according to IEEE 344 to withstand seismic forces defined in Division 26 Section "Common Work Results for Electrical."
- B. Enclosures: Flush-mounted cabinets; NEMA 250, [Type 1]
 - 1. Front: Secured to box with concealed trim clamps.
 - 2. Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.
- C. Incoming Mains Location: bottom.
- D. Phase, Neutral, and Ground Buses: Hard-drawn copper, 98 percent conductivity.
- E. Conductor Connectors: Suitable for use with conductor material and sizes.
 - 1. Material: Hard-drawn copper, 98 percent conductivity.
 - 2. Main and Neutral Lugs: Mechanical type.
 - 3. Ground Lugs and Bus Configured Terminators: Mechanical type.
 - 4. Feed-Through Lugs: Compression type, suitable for use with conductor material. Locate at opposite end of bus from incoming lugs or main device.
- F. Service Equipment Label: NRTL labeled for use as service equipment for panelboards with one or more main service disconnecting and overcurrent protective devices.
- G. Future Devices: Mounting brackets, bus connections, filler plates, and necessary appurtenances required for future installation of devices.
- H. Panelboard Short-Circuit Current Rating: Rated for series-connected system with integral or remote upstream overcurrent protective devices and labeled by an NRTL. Include size and type

of allowable upstream and branch devices, and listed and labeled for series-connected short-circuit rating by an NRTL.

- I. Panelboard Short-Circuit Current Rating: Fully rated to interrupt symmetrical short-circuit current available at terminals.

2.2 DISTRIBUTION PANELBOARDS

- A. Doors: Omit in fused-switch panelboards.
- B. Mains: Lugs only.
- C. Branch Overcurrent Protective Devices: For Circuit-Breaker Frame Sizes 125 A and Smaller: Plug-in circuit breakers.
- D. Branch Overcurrent Protective Devices: Fused switches.

2.3 LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS

- A. Mains: Circuit breaker.
- B. Branch Overcurrent Protective Devices: Plug-in circuit breakers, replaceable without disturbing adjacent units.
- C. Doors: Concealed hinges; secured with flush latch with tumbler lock; keyed alike.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Receive, inspect, handle, store and install panelboards and accessories according to NECA 407.
- B. Comply with mounting and anchoring requirements specified in Division 26 Section "Common Work Results for Electrical."
- C. Mount top breaker 48" above finished floor.
- D. Arrange conductors into groups; bundle and wrap with wire ties.
- E. Create a directory to indicate installed circuit loads. Use a computer or typewriter to create directory.

END OF SECTION 262416

SECTION 262726 - WIRING DEVICES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- C. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 DEVICES

- A. Convenience Receptacles: NEMA WD 1, NEMA WD 6, Configuration 5-20R, and UL 498.
- B. Duplex GFCI Convenience Receptacles: 125 V, 20 A, straight blade, feed-through type. NEMA WD 1, NEMA WD 6, UL 498, and UL 943, Class A, and include indicator light that is lighted when device is tripped.
- C. Duplex TVSS Convenience Receptacles: Straight blade, 125 V, 20 A; NEMA WD 6 Configuration 5-20R.
- D. Wall-Box Dimmer Switches: Modular, full-wave, solid-state units with integral, quiet on-off switches, with audible frequency and EMI/RFI suppression filters.
 - 1. Control: Continuously adjustable slider; with single-pole or three-way switching to suit connections. Comply with UL 1472.
 - 2. LED Lamp Dimmers: 120 V; control shall follow square-law dimming curve. On-off switch positions shall bypass dimmer module.
- E. Telephone Outlet: Single RJ-45 jack for terminating 100-ohm, balanced, 4-pair UTP; TIA/EIA-568-B.1; complying with Category 5e. Comply with UL 1863.
- F. Combination TV and Telephone Outlet: Single RJ-45 jack for 100-ohm, balanced, 4-pair UTP; TIA/EIA-568-B.1; complying with Category 5e; and one Type F coaxial cable connector.
- G. Wall Plates, Finished Areas: Smooth, high-impact thermoplastic fastened with metal screws having heads matching plate color .
- H. Finishes:
 - 1. Wiring Devices Connected to Normal Power System: Ivory unless otherwise indicated or required by NFPA 70 or device listing.

2. Wiring Devices Connected to Emergency Power System: Red.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with NECA 1, including the mounting heights listed in that standard, unless otherwise noted.
- B. Install devices and assemblies plumb, level, and square with building lines.
- C. When mounting into metal boxes, remove the fiber or plastic washers used to hold device mounting screws in yokes, allowing metal-to-metal contact.
- D. Install unshared neutral conductors on line and load side of dimmers.
- E. Mount devices flush, with long dimension vertical, and grounding terminal of receptacles on top unless otherwise indicated. Group adjacent devices under single, multigang wall plates.

END OF SECTION 262726

SECTION 265000 - LIGHTING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data for each luminaire, including lamps.
- B. Fixtures, Emergency Lighting Units, Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- C. Comply with IEEE C2, "National Electrical Safety Code."
- D. Coordinate ceiling-mounted luminaires with ceiling construction, mechanical work, and security and fire-prevention features mounted in ceiling space and on ceiling.

PART 2 - PRODUCTS

2.1 LIGHTING FIXTURES AND COMPONENTS, GENERAL REQUIREMENTS

- A. Recessed Fixtures: Comply with NEMA LE 4 for ceiling compatibility for recessed fixtures.
- B. LED Fixtures: Comply with UL 1598. Where LER is specified, test according to NEMA LE 5A.

2.2 REQUIREMENTS FOR INDIVIDUAL LIGHTING FIXTURES

- A. Fixture See Light Fixture Schedule on the plans - as applicable
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings comparable product by one of the following:
 - a. Lithonia Lighting
 - 2. Voltage: 120V ac.
 - 3. Mounting: Semi-recessed Ceiling, Surface wall.
 - 4. Nominal Dimensions: see drawings
 - 5. Lamps: LED, 3000k

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Set units level, plumb, and square with ceiling and walls, and secure.
- B. Support for Semi-recessed Fixtures:
 - 1. Install ceiling support system as required to mount fixtures.

END OF SECTION 265000

SECTION 280500 - COMMON WORK RESULTS FOR ELECTRONIC SAFETY AND SECURITY

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data.
- B. Comply with NFPA 70.

PART 2 - PRODUCTS

- A: Reinstall existing nurse-call devices to new locations - as applicable.
- B. Reinstall existing intercom panel to new location.

PART 3 - EXECUTION

3.1 GENERAL ELECTRONIC SAFETY AND SECURITY EQUIPMENT INSTALLATION REQUIREMENTS

- A. Install electronic safety and security equipment to allow maximum possible headroom unless specific mounting heights that reduce headroom are indicated.
- B. Install electronic safety and security equipment to provide for ease of disconnecting the equipment with minimum interference to other installations.
- C. Install electronic safety and security equipment to allow right of way for piping and conduit installed at required slope.
- D. Install electronic safety and security equipment to ensure that connecting pathways and cables are clear of obstructions and of the working and access space of other equipment.

3.2 FIRESTOPPING

- A. Apply fire-stopping to electronic safety and security penetrations of fire-rated floor and wall assemblies to restore original fire-resistance rating of assembly. Comply with requirements in Division 07 Section "Penetration Fire-stopping."

END OF SECTION 280500

SECTION 280513 - CONDUCTORS AND CABLES FOR ELECTRONIC SAFETY AND SECURITY

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data and Shop Drawings.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

PART 2 - PRODUCTS

2.1 PATHWAYS

- A. Support of Open Cabling: NRTL labeled for support of Category 5e cabling, designed to prevent degradation of cable performance and pinch points that could damage cable.
 - 1. .
- B. Conduit and Boxes: Comply with Division 26 Section "Common Work Results for Electrical."
 - 1. Minimum Outlet Box Size: 2 inches (50 mm) wide, 3 inches (75 mm) high, 2-1/2 inches (64 mm) deep.

2.2 UTP CABLE

- A. Description: 100 ohm, four-pair UTP, covered with a blue thermoplastic jacket.
 - 1. Comply with ICEA S-90-661 for mechanical properties.
 - 2. Comply with TIA/EIA-568-B.1 for performance specifications.
 - 3. Comply with TIA/EIA-568-B.2, Category 5e.
 - 4. Listed and labeled by an NRTL acceptable to authorities having jurisdiction as complying with UL 444 and NFPA 70 for the following types:
 - a. Communications, General Purpose: Type CM or CMG
- B. UTP Cable Connecting Hardware: IDC type, using modules designed for punch-down caps or tools. Cables shall be terminated with connecting hardware of the same category or higher.

2.3 COAXIAL CABLE

- A. General Coaxial Cable Requirements: Broadband type, recommended by cable manufacturer specifically for broadband data transmission applications. Coaxial cable and accessories shall have 75-ohm nominal impedance with a return loss of 20 dB maximum from 7 to 806 MHz.

B. RG-11/U: NFPA 70, Type CATV.

1. No. 14 AWG, solid, copper-covered steel conductor.
2. Gas-injected, foam-PE insulation.
3. Double shielded with 100 percent aluminum polyester tape and 60 percent aluminum braid.
4. Jacketed with sunlight-resistant black PVC or PE.
5. Suitable for outdoor installations in ambient temperatures ranging from minus 40 to plus 85 deg C.

C. NFPA and UL Compliance: CATV Cable, Type CATV shall be listed and labeled by an NRTL acceptable to authorities having jurisdiction as complying with UL 1655, and with NFPA 70 "Radio and Television Equipment" and "Community Antenna Television and Radio Distribution" articles.

D. Coaxial-Cable Connectors: Type BNC, 75 ohms.

2.4 LOW-VOLTAGE CONTROL CABLE

A. Paired Lock Cable: NFPA 70, Type CMG.

1. One pair, twisted, No. 16 AWG, stranded (19x29) tinned copper conductors.
2. PVC insulation.
3. Unshielded.
4. PVC jacket.
5. Flame Resistance: Comply with UL 1581.

2.5 CONTROL CIRCUIT CONDUCTORS

A. Class 1 Control Circuits: Stranded copper, Type THHN-THWN, complying with UL 83, in raceway.

2.6 SMOKE/FIRE-ALARM WIRE AND CABLE

A. General Wire and Cable Requirements: NRTL listed and labeled as complying with NFPA 70, Article 760.

B. Signaling Line Circuits: Twisted, shielded pair, not less than No. 18 AWG

1. Circuit Integrity Cable: Twisted shielded pair, NFPA 70 Article 760, Classification CI, for power-limited fire alarm signal service Type FPL. NRTL listed and labeled as complying with UL 1424 and UL 2196 for a 2-hour rating.

C. Non-Power-Limited Circuits: Solid-copper conductors with 600-V rated, 75 deg C, color-coded insulation.

1. Low-Voltage Circuits: No. 16 AWG, minimum.
2. Line-Voltage Circuits: No. 12 AWG, minimum.

PART 3 - EXECUTION

3.1 INSTALLATION OF PATHWAYS

- A. Cable Trays: Comply with NEMA VE 2 and TIA/EIA-569-A-7.
- B. Comply with TIA/EIA-569-A for pull-box sizing and length of conduit and number of bends between pull points.
- C. Comply with requirements in Division 26 Section "Common Work Results for Electrical." for installation of conduits and wire-ways.

3.2 WIRING METHODS

- A. Wiring Method: Conceal conductors and cables in accessible ceilings, walls, and floors where possible.

3.3 INSTALLATION OF CONDUCTORS AND CABLES

- A. Comply with NECA 1.
- B. General Requirements for Cabling:
 - 1. Comply with TIA/EIA-568-B.1.
 - 2. Comply with BICSI ITSIM, Ch. 6, "Cable Termination Practices."
 - 3. Bundle, lace, and train conductors to terminal points without exceeding manufacturer's limitations on bending radii, but not less than radii specified in BICSI ITSIM, "Cabling Termination Practices" Chapter. Install lacing bars and distribution spools.
 - 4. Pulling Cable: Comply with BICSI ITSIM, Ch. 4, "Pulling Cable." Monitor cable pull tensions.
- C. UTP Cable Installation: Comply with TIA/EIA-568-B.2.

3.4 FIRESTOPPING

- A. Fire-stopping: Comply with requirements in Division 07 Section "Penetration Firestopping."
- B. Comply with TIA-569-B, Annex A, "Firestopping."
- C. Comply with BICSI TDMM, "Firestopping Systems" Article.

3.5 GROUNDING

- A. For communications wiring, comply with ANSI-J-STD-607-A and with BICSI TDMM, "Grounding, Bonding, and Electrical Protection" Chapter.

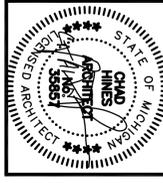
- B. For low-voltage wiring and cabling, comply with requirements in Division 26 Section "Grounding and Bonding for Electrical Systems."

3.6 IDENTIFICATION

- A. Identify system components, wiring, and cabling complying with TIA/EIA-606-A.

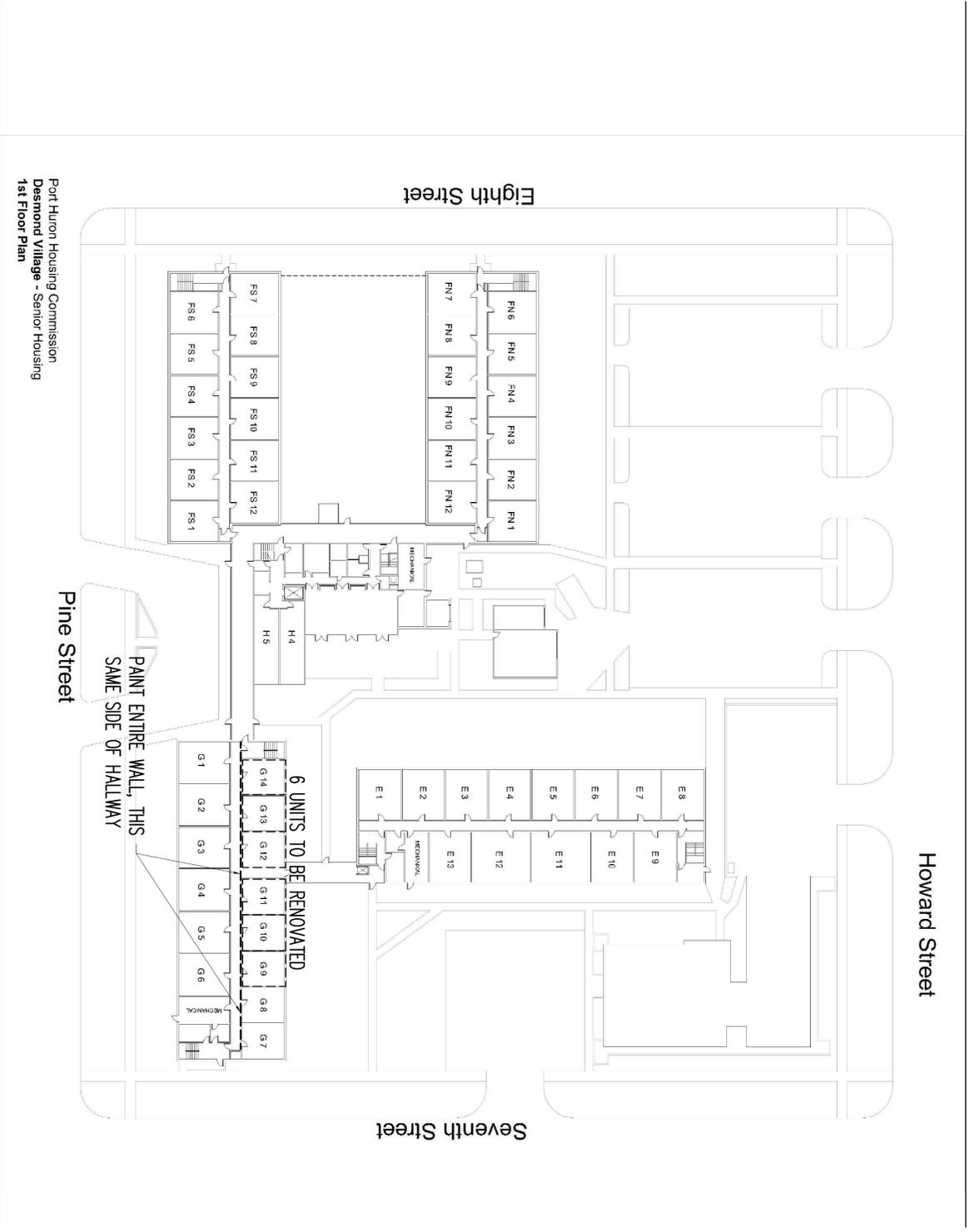
END OF SECTION 280513

DATE:	November 15, 2022
FILE:	20115.DWG
DRAWN BY:	RAM
CHECKED BY:	CRH
REVISIONS:	



IN MICHIGAN:
10484 RANGELINE ROAD
BERRIEN SPRINGS, MI.
269-277-2876

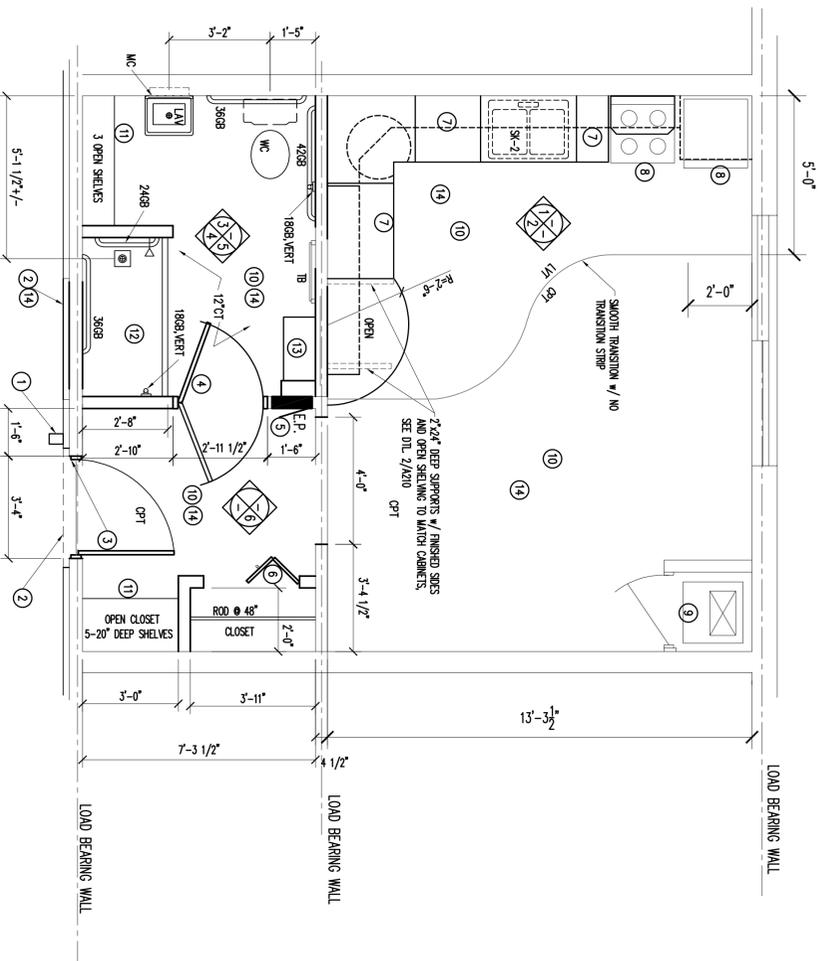
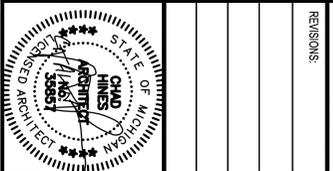
IN INDIANA:
5668 REDWOOD ROAD
PLYMOUTH, IN.
574-276-1411



DESMOND VILLAGE SITE PLAN
SCALE: NONE

BASE BID:
MODERNIZE SIX (6) SELECT APTS.:
#99, G10, G11, G12, G13 & G14
W/ RENOVATING ONLY 2 AT A TIME

C101	PHASE 2 - EFF. APT. MODERNIZATION DESMOND & PERU VILLAGE
	905 SEVENTH STREET PORT HORON, MICHIGAN



NOTE:
VERIFY ALL APARTMENT LAYOUT AS SELECT UNITS
MAY BE "MIRRORED" TO THIS LAYOUT

NEW FLOOR PLAN

SCALE: 3/8" = 1'-0"

CONSTRUCTION GENERAL NOTES

- DIMENSIONS SHOWN ON PLANS ARE FROM FACE OF FINISH TO FACE OF FINISH WALLS.
- ORIGINAL DRAWINGS AND/OR ON SITE MEASUREMENTS WERE USED AS A REFERENCE FOR RENOVATION DETAILS AND DIMENSIONS. THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES AND SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO RENOVATION WORK.
- REMOVE NECESSARY BLOCKING AS REQUIRED FOR PROPER INSTALLATION OF CABINETS, COUNTERTOPS, SINK BASINS, ETC. PER AIA REQUIREMENTS.
- REPAIR AND/OR REPLACE ANY EXISTING MATERIALS OR SURFACES TO REMAIN THAT BECOME DAMAGED DUE TO CONSTRUCTION OPERATIONS.
- PATCH, CHALK AND/OR REPAIR ALL NEW OR EXISTING PENETRATIONS IN WALLS PRIOR TO CABINET INSTALLATION AS REQUIRED AT ALL LOCATIONS IN ORDER TO MAINTAIN WATER-TIGHT, PEST BARRIER.
- REMOVE FLOOR PANELS AS REQUIRED TO OBTAIN FINISHED APPEARANCE TO CABINETS. FLOOR WORKS MAY VARY FROM UNIT TO UNIT.
- REPLACE ALL GYP. BRD. ON ALL EXISTING WALLS OR CEILINGS THAT WAS REMOVED AS NEEDED DURING THE DEAD PHASE.
- SOME BASE CABINETS MAY REQUIRE ALTERATIONS FOR PLUMBING.
- CONTRACTOR TO FIELD VERIFY ALL MEASUREMENTS PRIOR TO INSTALLING ANY CABINETS AND NOTIFY OWNER AND ARCHITECT OF ANY DISCREPANCIES.
- CONTRACTOR TO INSTALL OWNER PROVIDED WOOD BASE THROUGHOUT APARTMENT. PAINTED BY GC.
- BUILDING WILL BE OCCUPIED BUT APARTMENTS WILL BE VACANT THEREFORE TAKE CARE TO LIMIT DUST AND OTHER CONSTRUCTION FROM IMPACTING TO OTHER APARTMENTS.
- PERSONAL AFFAIRS PRIOR TO CONTRACTOR STARTING DEAD WORK.
- CHALK TIPS AND ALL EDGES OF NEW COUNTERTOPS AND SINKS OF CABINETS WHERE THEY CONTACT WALLS AND FLOORS.
- CLEAN ENTIRE APARTMENT INCLUDING ALL SURFACES, WALLS, CABINETS, PLUMBING FIXTURE, COUNTERTOPS, ETC. PRIOR TO TURNING APARTMENT BACK OVER TO OWNER.
- OWNER WILL PROVIDE FINISH WOOD BASE TO MATCH EXISTING. CONTRACTOR TO CUT, INSTALL AND PAINT AS NEEDED. WHITE.

TYP. KEY NOTES:

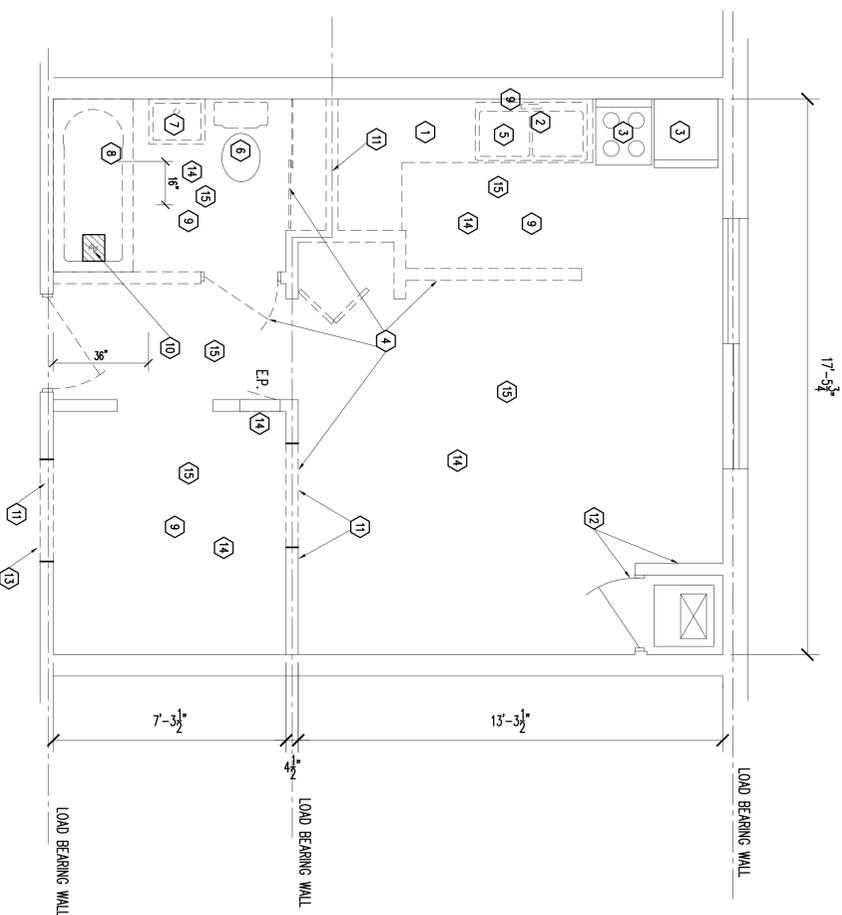
- RELOCATE EXISTING ROOM NUMBER SIGN
- REWORK EXISTING CORRIDOR CHAIR RAILING TO ACCOMMODATE NEW DOOR LOCATION
- NEW 1 3/4"-20x6" 1 HR. FIRE RATED DOOR BEHIND EXISTING LOCKSET & ELECTRIC STRIKE PER SELF-CLOSING HINGES
- NEW 2'-0"x6'-8" DOOR, FLUSH, WHITE, WOOD GRAIN, SOLID CORE & HARDWARE. FULL ACTING SINK, 1/2" THICK
- NEW ELECTRIC PANEL, SEE E101
- NEW 3'-0"x6'-8" BR-FIN SOLID CORE, FLUSH PANEL DOOR W/ 4" WIRE PULL HARDWARE
- NEW KITCHEN CABINETS & COUNTERTOPS
- APPLIANCES PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR
- NO WORK REQUIRED IN MECHANICAL CLOSET
- NEW FLOORING THROUGHOUT ENTIRE APARTMENT, TILE, LVT OR CORET SQUARES, ALL PROVIDED BY OWNER.
- NEW OPEN, PRE-FINISHED WOOD SHELVING, WHITE.
- NEW SHOWER BASE W/ (3) PIECE SHOWER WALLS BY STEERING, BASE & WALLS- "TENSABLE"
- NEW 12'24"x24"x8" WALL CABINET W/D. 24"HT. W/ SECOND 24" TALL CABINET ABOVE, SEE S/2001.
- REPAINT ENTIRE APARTMENT, WALLS AND CEILINGS TOUCH UP PAINT THE CORRIDOR WALLS AFFECTED.

WALL LEGEND

EXISTING WALLS TO REMAIN, REMOVE EXIST GYP. BRD. AS NEEDED FOR NEW CONSTRUCTION
EXISTING WALLS TO BE REMOVED, COMPLETE
NEW 3 1/2" WD. STUD WALLS W/ 1/2" GYP BRD. EACH SIDE. NOMINAL 4 1/2" WALL THICKNESS

FLOORING LEGEND

LVT LUXURY VINYL TILE PROVIDED BY OWNER CONTRACTOR TO INSTALL, COOR. QUANTITY
CPT CARPET SQUARES PROVIDED BY OWNER CONTRACTOR TO INSTALL, COOR. QUANTITY
CT CERAMIC TILE PROVIDED BY G.C., BATHROOM ONLY 12" ON FLOOR.



DEMO PLAN

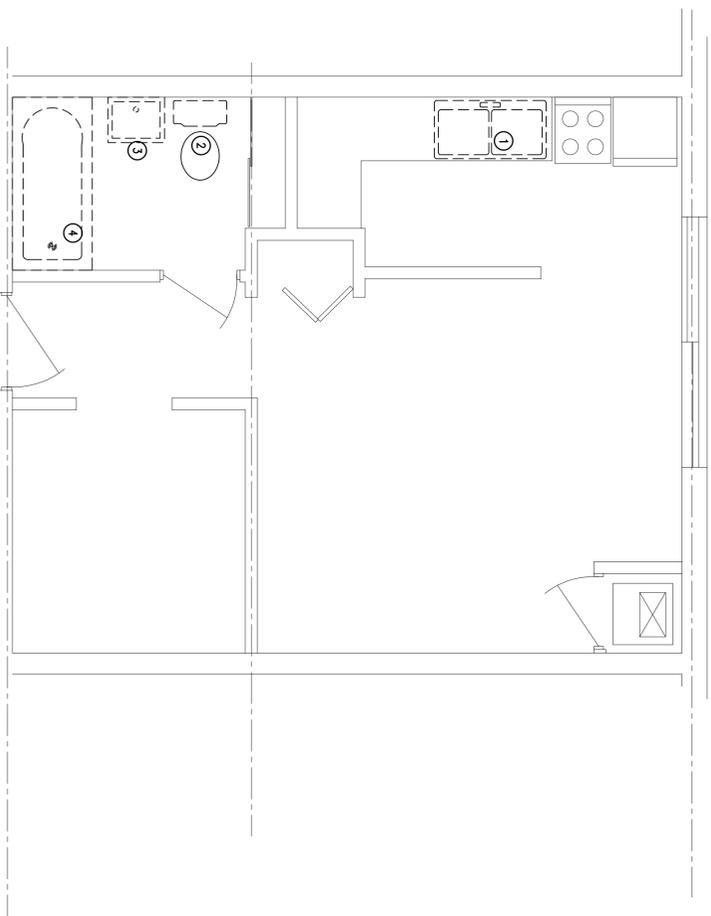
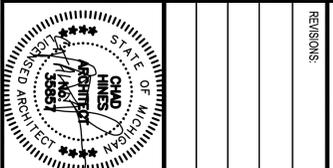
SCALE: 3/8" = 1'-0"

DEMOLITION GENERAL NOTES

- REMOVE ALL KITCHEN CABINETS, COUNTERTOPS, SINK, FAUCET AND ASSOC. PIPING, ETC. TO PREP FOR NEW KITCHEN RENOVATION WORK.
- REPAIR PATCH AND/OR REPLACE EXISTING FLOOR, WALL AND /OR CEILING FINISHES TO BE REMOVED OR CONTIGUOUS TO RENOVATION WORK FOR CONSISTENT FINISH ACCEPTABLE TO THE ARCHITECT AND OWNER.
- ALL REMOVED ITEMS INDICATED TO BE REMOVED (SUCH AS CABINETRY, SINKS, FIXTURES, ETC.) SHALL BE REMOVED FROM SITE AND DISPOSED OF THROUGH PROPER MEANS COORDINATE WITH OWNER ITEMS TO BE SALVAGED AND DELIVER TO OWNER PER OWNER DIRECTION.
- CONTRACTOR TO MAINTAIN A DAILY CLEANING PROCESS AND TO KEEP DUST AND DEBT INTO OTHER AREAS.
- WHILE APARTMENTS WILL BE VACANT DURING DEMOLITION, THE BUILDING WILL BE OCCUPIED. SET CONDUCT DEMOLITION WORK IN A MANNER WHICH WILL MINIMIZE THE NEED FOR DISRUPTION OF OTHER TENANTS.
- PROVIDE TEMPORARY BARRIERS AND OTHER FORMS OF PROTECTION TO PROTECT THE OWNER'S PERSONNEL AND GENERAL PUBLIC FROM HAZARD DUE TO DEMOLITION WORK. DO NOT BLOCK CORRIDORS OR PATHS OF EGRESS.
- EXPECT TO REMOVE ELECTRICAL, MECHANICAL AND OTHER SIGN ITEMS WITHIN THE DEMOLITION AREA. REMOVE THESE ITEMS AS REQUIRED TO PREP FOR NEW TRADES. REMOVE ITEMS SHOULD BE STORED & CLEANED PRIOR TO DEMOLITION. SEE E101 FOR ADDITIONAL NOTES RELATIVE TO DEMOLITION OF MECHANICAL/ELECTRICAL ITEMS.
- ANY ITEMS TO REMAIN, I.E. FIXTURES, ETC. TO BE PROTECTED, IF DAMAGED TO BE REPLACED AT NO ADDITIONAL COST TO OWNER.
- ALL DIMENSIONS SHOWN ARE TO FINISHED 1/2" GYP. BRD. SURFACES, NOT STUD WALLS.
- OWNER WILL REMOVE SELECT SALVAGE ITEMS PRIOR FROM TO WORK BEGINNING.

TYP. DEMOLITION KEY NOTES:

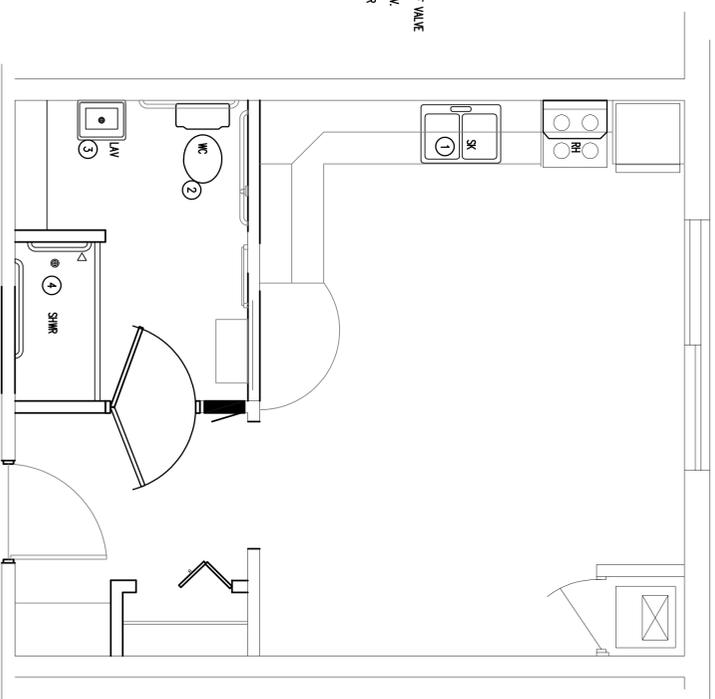
- REMOVE ALL KITCHEN CABINETS AND COUNTERTOPS.
- REMOVE EXISTING SINK, FAUCET, AND ASSOCIATED PIPING.
- OWNER TO REMOVE, STORE, AND REINSTALL REFRIGERATOR AND STOVE.
- REMOVE EXISTING WALLS, DOORS, CEILING GYP. BRD.
- REMOVE EXISTING CARBIDE DISPOSAL COMPLETE, REMOVE OUTLET & SWITCH.
- REMOVE & STORE EXISTING WATER CLOSET & CLEAN AND PREP FOR REINSTALLATION
- REMOVE EXISTING LAVATORY SINK, FAUCET, CABINET, ETC. COMPLETE & PREP FOR NEW WALL HANG LAVATORY SINK.
- REMOVE EXISTING TUB, SURROUND, ETC. COMPLETE. PREP DRAIN FOR NEW ROLL-IN SHOWER
- REMOVE ALL EXISTING GYP. BRD. AS NEEDED ON WALLS SHOWN TO REMAIN, EXPOSING FRAMING.
- REMOVE DRAIN AS NEEDED FOR NEW SHOWER BASE. FIELD VERIFY.
- PROPERLY SUPPORT LOAD BEARING WALL(S) AS NEEDED DURING DEMOLITION WORK.
- WALLS TO REMAIN, PAINTING ONLY RED. ON MECHANICAL CLOSET ROOM WALLS.
- WOODY EXISTING CORRIDOR RAILING ACCORDING TO NEW DOOR OPENING & IN-FILL RAILING TO MATCH EXISTING PROFILE AND FINISH WHERE EXISTING DOOR REMOVED.
- REMOVE EXISTING ELECTRIC PANEL ALONG WITH ALL LIGHT FIXTURES, RECEPTS, ETC. SEE E101
- REMOVE ALL EXISTING FLOORING, CARPETS, TILES, ETC. FIELD VERIFY.



EXISTING MECH/PLUMB PLAN
SCALE: 3/8" = 1'-0"

TYP. PLUMBING KEY NOTES:

- REMOVE EXISTING KITCHEN SINK & ASSOCIATED PIPING & PREP FOR NEW SINK
- REMOVE EXISTING TOILET, STOVE, CLEAN & REINSTALL w/ NEW SUPPLY PIPING AND SHUT-OFF VALVE
- REMOVE EXISTING LAVATORY/CABINET & ASSOCIATED PIPING & PREP FOR NEW WALL HUNG LAV.
- REMOVE EXISTING BATHING & ASSOCIATED PIPING & PREP FOR NEW SHOWER BASE & SHOWER WALLS. ADJUST DRAIN FOR NEW SHOWER. SEE DTLS. A201



NEW MECH/PLUMB PLAN
SCALE: 3/8" = 1'-0"

PLUMBING DEMOLITION NOTES

- CONTRACTOR SHALL BE AWARE THAT THE APERTURES SHALL REMAIN OCCUPIED DURING CONSTRUCTION. COORDINATE AND SCHEDULE ALL WORK WITH THE OWNER AND ALL AFFECTED TRADES
- EXISTING PIPING IS NOT SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE EXACT LOCATIONS AND SIZES OF ALL EXISTING PIPING.
- ALL EXISTING PLUMBING FIXTURES NOT LISTED SHALL BE REMOVED AND CAPPED. ALL UNUSED PIPING LOCATED IN DEMOLISHED WALLS AND AT CEILING SHALL BE REMOVED AND CAPPED.
- ALL EXISTING PIPING WHERE CONCEALED MAY REMAIN. WHERE EXISTING PLUMBING LINES ARE IN CONTACT WITH NEW CONSTRUCTION, CAP AND REMOVE.

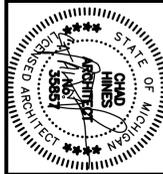
PLUMBING GENERAL NOTES

- ALL WORK SHALL BE IN ACCORDANCE W/ APPLICABLE CODES, FIXTURE MANUFACTURERS REQUIREMENTS.
- COORDINATE ALL ROUGH IN REQUIREMENTS OF EQUIPMENT W/ OWNER & SUPPLIER.
- PROVIDE PVC (SCHED 40) ADJUSTABLE 1/2" RAPE, DRAIN HANG, LEVER HANDED BALL TYPE STOP VALVE, CHROME PLATED BRANDED SUPPLIES & ALL ASSOCIATED FITTINGS FOR COMPLETE INSTALLATION OF ALL FIXTURES & EQUIPMENT. NEW QUARTER TURN BALL TYPE SHUT-OFF VALVES OR STOPS SHALL BE INSTALLED AT ALL FACETS. CHROME ESCUTCHEONS TO BE INSTALLED ON ALL SHUT-OFF VALVES & WASTE PIPING.
- PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE INSTALLATION OF ALL FIXTURES. PROVIDE ANY REQUIRED PIPING TRANSITIONS, FITTINGS, REDUCERS, & ACCESSORIES AS REQUIRED TO MAKE CONNECTIONS.
- CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN STOP DRAWINGS & PLUMBING REQUIREMENTS FOR ALL FIXTURES/EQUIPMENT SUPPLIED BY OWNER OR OTHERS.
- ALL SHUT-OFF VALVES SHALL BE MOUNTED IN ACCESSIBLE LOCATIONS.
- FIXTURE SHALL INCLUDE DRAINING, FAUCET AND ALL FITTINGS, WHETHER SEPARATELY LISTED.
- ANY CUT-OUTS, MODIFICATIONS TO CABINETS TO BE REPLACED WITH APPROPRIATE ESCUTCHEON, COVER PLATE, ETC. APPROVED BY OWNER AND ARCHITECT.

NOTE: PRODUCT SUBSTITUTALS REQUIRED ON ALL FIXTURES

PLUMBING FIXTURE SCHEDULE

FIXTURE MARK	LOCATION	FIXTURE NAME	FIXTURE DESCRIPTION	MANUFACTURER	MODEL NO.	REMARKS
LAV	BATHROOM	SINGLE SINK	WALL HUNG LAV. SINK, WHITE, VIT. CHINA, PROVIDE UNIFORM WALL CARRIER, FINISH UNIFORM. HGT. @ 34" AFF. "CHESAPEAKE" 4" CENTERS, 16"20"	KOHLER	K-1729	PROVIDE NEW SS BRANDED SUPPLIES & PVC DRAIN PIPING INCLUDING NEW QUARTER TURN SHUT-OFF VALVES. EXTEND NEW TAIL PIPES TO GOOD SOUND WASTE PIPING
	BATHROOM	SINK FAUCET	ADA, SINGLE LEVER, CHROME FINISH FAUCET, 4" CENTERS, 3 HOLE, REAR MOUNTED ALL METAL DRAIN, POP-UP FITTING, PLATED FINISH & STOPPER	DELTA	B501LF	PROVIDE NEW SS BRANDED SUPPLIES & PVC DRAIN PIPING INCLUDING NEW QUARTER TURN SHUT-OFF VALVES. NEW TAIL PIPES TO GOOD SOUND WASTE PIPING
	BATHROOM	PIPE ENCLOSURE	ADA, 1/4" SPEED UP PIPE PROTECTION, WHITE, ONE PIECE MOUNTED TO THE WALL AND UNDERBARE OF SINK, STAIN RESISTANT FIN.	TRIEBERO	2018-KO-C	PRE-CUT FOR THE KOHLER LAV SPECIFIED. ANCHOR w/ SS FASTENERS PROVIDED.
	BATHROOM	SHOWER HEAD	ADA, SLEDE BAR/SHW BAR HAND HEAD SHOWER HEAD	DELTA	51900	CENTER MOUNT BAR ON SHOWER WALL
	BATHROOM	SHOWER VALVE	SINGLE LEVER, CHROME FINISH, SOLID BRASS BODY TUB & SHOWER CONTROL VALVE w/ MOUNTING VALVE ADJUSTABLE	DELTA	1323	OFFSET CONTROLS FOR ADA. INSTALLED WITH NEW HAND HEAD SHOWER HEAD
	BATHROOM	BASE & WALLS	BASE: 32"60" PRE-FORMED COMPOSITE MATERIAL, MOUNTED CORNER SHELVES 3" FREE TAG WALLS 27" TALL, SOLID MARBLE MATERIAL, WHITE	STERLING "ESCHERLÉ"	72180110-0	REMOVE EX. TUB DRAIN PIPING TO ACCOMMODATE NEW SHOWER BASE. INSTALL AS DIRECTED PER MAN. PROVIDE SOLID SUBSTRATE AT WALLS AS NEEDED.
SK	KITCHEN	DBL. SINK	ADA, 21" O.A. S. STL. TYPE 304 STP FINISH 2 x 5 3/8" DEEP, 8" CENTERS - 3 HOLES, UNDERCOUNTER FOR SINK	ELKAY	GCRC33321	PROVIDE NEW SS BRANDED SUPPLIES & PVC DRAIN PIPING INCLUDING NEW QUARTER TURN SHUT-OFF VALVES & 2" COUMD BRASS. REMOVE CHROME ESCUTCHEON SAVING TO OWNER.
	KITCHEN	SINK FAUCET	ADA, SINGLE LEVER, CHROME FINISH FAUCET, 8" CENTERS, 3 HOLES, 8" SINK SPOUT, WASHERS/SS, REAR MOUNTED	DELTA	#100LF-WF	NEW DRAIN AND TAIL PIPES TO EXISTING GOOD SOUND WASTE PIPING.
RH	KITCHEN RANGE	RANGE HOOD	24" UNDER CABINET, ADJUSTES RANGE HOOD, 2 SPEED FAN w/ SEPARATE LIGHT CONTROL, STAINLESS STEEL	BROAN	#412404	PROVIDE 1/2" O.D. LAMP, PROVIDE "MORSETECK" HIGH EFF. CHAHOOM FILTER. PROVIDE WALL SWITCHING FOR ADA COMPLIANCE FROM EXISTING CIRCUIT.
WC	BATHROOM	WATER CLOSET	GENERAL FIXTURES W/O NEW MAX RING, FLANGE, SUPPLY PIPING AND NEW SHUT-OFF VALVE. E.T. REQUIREMENTS	EXISTING	-	PROVIDE NEW SS BRANDED SUPPLY AND NEW QUARTER TURN SHUT-OFF VALVE.



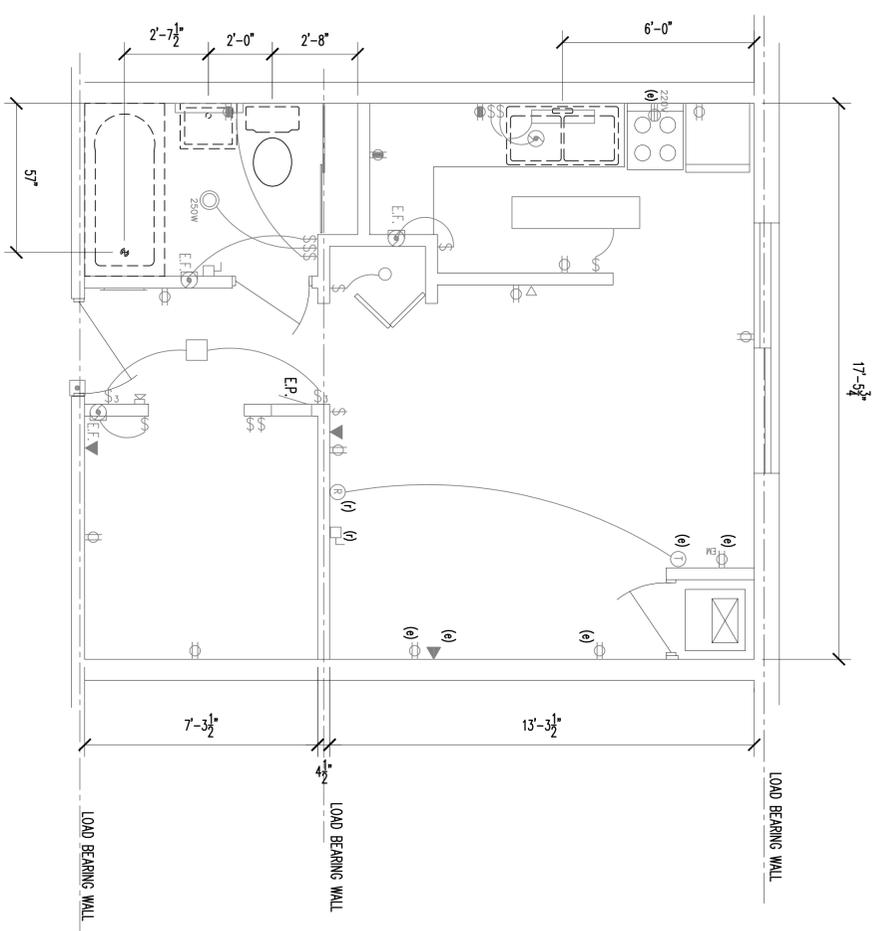
IN MICHIGAN:
 10484 RANGELINE ROAD
 BERRIEN SPRINGS, MI.
 269-277-2876

IN INDIANA:
 5668 REDWOOD ROAD
 PLYMOUTH, IN.
 574-276-1411

PHASE 2 - EFF. APT. MODERNIZATION
DESMOND & PERU VILLAGES
 905 SEVENTH STREET PORT HORON, MICHIGAN

ELECTRICAL PLAN

E101

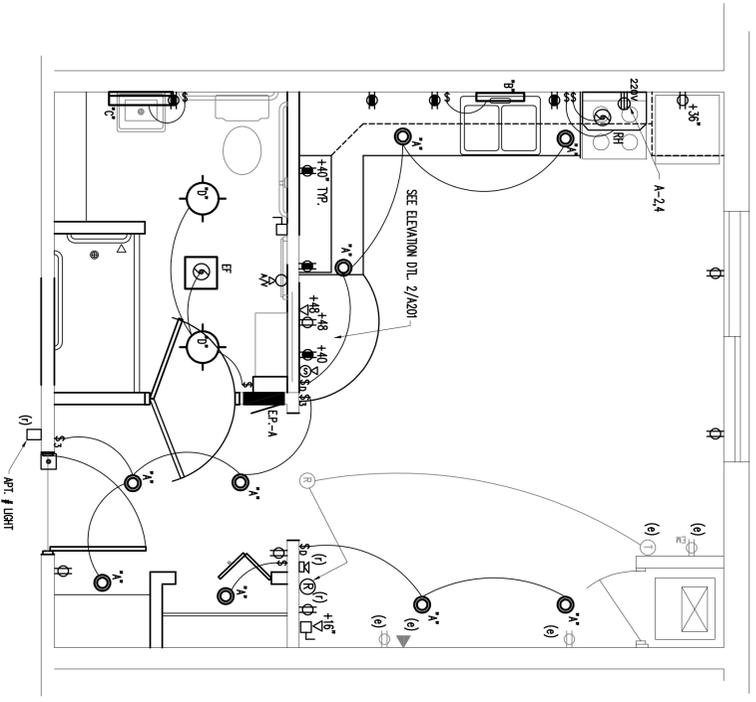


EXISTING ELECTRICAL PLAN
 SCALE: 3/8" = 1'-0"

ELECTRICAL GENERAL NOTES

- ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (N.E.C.), MANUFACTURERS AND OWNERS REQUIREMENTS AND INSTALLATION INSTRUCTIONS.
- ALL WIRING SHALL COPPER.
- WIRING DEVICES AND COVER PLATES SHALL BE COMMERCIAL GRADE, INDUSTRY COLOR.
- DISCONNECT AND REMOVE WIRING DEVICES, ELECTRICAL EQUIPMENT, CONDUIT AND GROUNDING AS REQUIRED FOR REMOVAL AND INSTALLATION OF NEW CONSTRUCTION, RELOCATE OR REPLACE ITEMS AS NOTED. CUT BACK TIERS SO THAT TIERS DO NOT INTERFERE WITH NEW CONSTRUCTION.
- EXTEND, REPLACE OR RELOCATE ALL CIRCUITING REQUIRED FOR INSTALLATION OF NEW OR RELOCATED WIRING DEVICES AND ELECTRICAL EQUIPMENT.
- BUILDING SHALL REMAIN OCCUPIED DURING CONSTRUCTION. WHILE APARTMENTS WILL BE VACANT, CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL WORK AND SHUT DOWN OF ANY CIRCUITS OR SYSTEMS WITH OWNER.
- PENETRATIONS, CUTTING AND TEAR OUT OF EXISTING WALLS, FLOORS AND CEILINGS SHALL BE KEPT TO A MINIMUM. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING AND REPAIRING ALL SURFACES TO MATCH SURROUNDING SURFACES.
- OWNER WILL BE RESPONSIBLE FOR WIRING NEW APARTMENT TO EXISTING BUILDING FIRE ALARM SYSTEM E.T.C. TO COORDINATE THIS WORK WITH OWNER.
- ANY/ALL EXISTING ELECTRIC WALL HEATERS IN BATHROOMS TO BE REMOVED COMPLETE, CIRCUITING, CONDUITS, ETC.
- SMOKE DETECTOR SYSTEM IN APARTMENT IS LOCAL ONLY TO THE APARTMENT. A/V DEVICE IN BATHROOM IS A REMOTE ALARM ONLY W/ NO DETECTION BUT INTERCONNECTED TO LIVING ROOM SMOKE DETECTOR.
- ANY ELECTRICAL WORK ON "COMMON" WALL BETWEEN APTS. TO BE MEET CURRENT FIRE RATING.

SYMBOL LEGEND	
	EXISTING
	NEW
	DUPLEX RECEPTACLE AT 12" AFF. UNLESS NOTED OTHERWISE
	220V RECEPT. 2" AFF. COOR. PLUG TYPE W/ OWNER
	DUPLEX RECEPTACLE, W/RO TO EMERGENCY GENERATOR
	SINGLE POLE SWITCH, 3" AFF. TRP.
	THREE-WAY SWITCH
	SINGLE POLE SWITCH WITH GROUND
	TELEPHONE OUTLET, 4" AFF.
	APRT. SMOKE DETECTOR, WALL MTD., HARDWIRED & BATT. BACK-UP. BRL. MODEL#ZT0088.
	BATHROOM - AUTO/YSIAL ALARM ONLY. W/RO TO NEW SMOKE DETECTOR, BRN 3177
	CABLE TV OUTLET, 4" AFF.
	INTER-COM PANEL (RELOCATED 4" AFF.)
	THERMOSTAT
	REMOTE SENSOR FOR T-510A, 4" AFF.
	"A/V" DEVICE IN BATHROOM TO BE RELOCATED
	ELECTRIC STOVE, EXTEND EXISTING TO NEW LOCATION
	EQUIPMENT MOTOR
	EXISTING DEVICE TO REMAIN
	RELOCATE EXISTING DEVICE TO NEW LOCATION



NEW ELECTRICAL PLAN
 SCALE: 3/8" = 1'-0"

PANEL MARK: E.P.-A		MOUNTING: <input type="checkbox"/> SURFACE <input checked="" type="checkbox"/> FLUSH		MAIN LUG: EXIST. 100 AMP		VOLTAGE: 120/240		
PANEL NAME: APT		FEDER: EXISTING		FEDER: EXISTING		1 PHASE 3 WIRE		
LOCATION: APARTMENT ENTRY		FROM: EXIST. COOR. PANEL		NO. OF SPACES: 12				
LINE A	LINE B	LOAD DESCRIPTION	OUTLET (PANEL) (LBS) (FEET) (AMP)	SPACES	REMARKS	VA LOAD	VA LOAD	
		KITCHEN, GRS	X 1 20 1 3	2				
		BATH, KIT, HALL, BEDROOM, LTV	X 1 15 5	6				
		BATHROOM, GRS	X 1 20 7	8				
		LIVING ROOM	X 1 20 9	10				
		SPACE	X 1 20 11	12				
SERVITOL								
TOTAL PANEL LOAD =								

LIGHT FIXTURE SCHEDULE

FIXTURE	MANUFACTURER	CATALOG NO.	LAMPS	MOUNTING	LOCATION/REMARKS
A	UNIQMA LIGHTING	PMAL 7 B 30 WHITE	LED, 30K	CEILING	DAMAGE IN KITCHEN & LIVING ROOM, ENTRY, CLOSET
B	PROVIDED BY OWNER			UNDERCABINET	WIRE TO WALL SWITCH
C	UNIQMA LIGHTING	PMAL 2A1 MWLT 30K BK	LED, 24", 30K	WALL/SURFACE	BATHROOM, AND TOP @ 7" AFF
D	UNIQMA LIGHTING	PMAL 13 B 30 DIMA WL	LED, 13"X2, 30K	CEILING/SURFACE	BATHROOM CEILING, LABELED FOR M.T. LOCATION